Commonwealth of Kentucky

Sport Fish Restoration Grant F-50, Segment 27

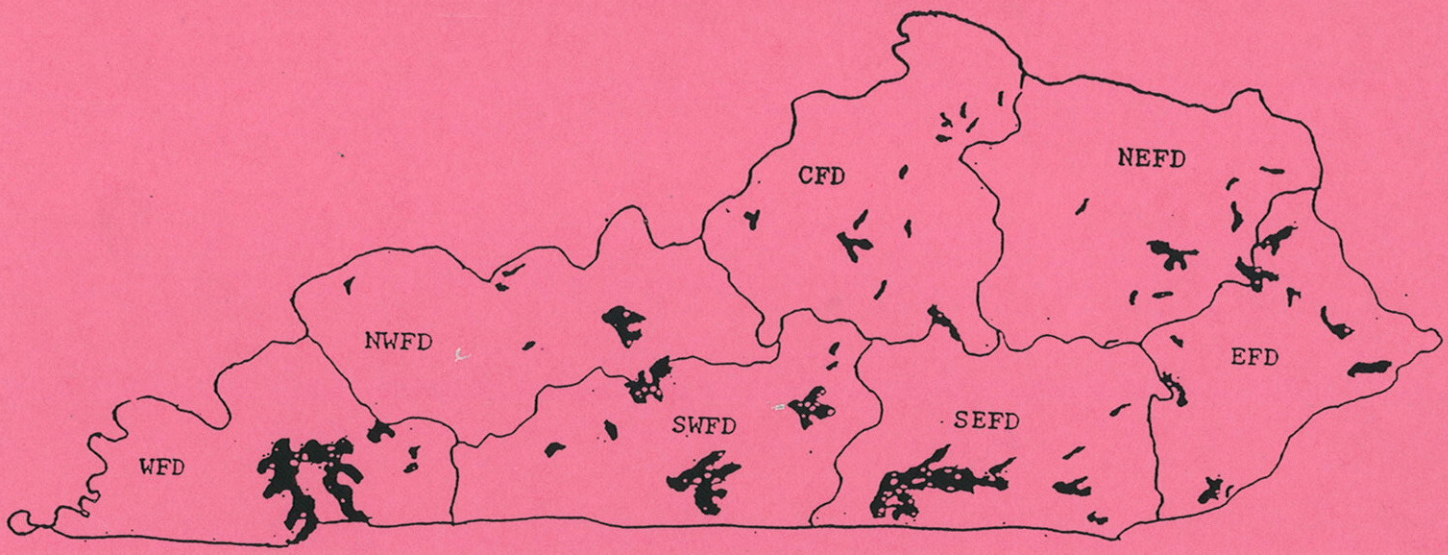
Date: 30 June 2005

Period: 01 April 2004
Through
31 March 2005

ANNUAL PERFORMANCE REPORT

District Fisheries Management

Part 1
Project 1: Lake and Tailwater Fishery Surveys



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Project 1 Lake and Tailwater Fishery Surveys

State: Kentucky Project No.: F-50-27

Grant Title: District Fisheries Management

Grant Period Covered: 1 April 2004 through 31 March 2005

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 2005
Work accomplishment: 31 March 2005

C. SIGNIFICANT DEVIATIONS

None.

D. REMARKS

See accompanying report.

E. COST

$ 1,242,075

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WESTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Kentucky Lake

During May 2004, 905 (90.5 f/h) black bass were collected by diurnal electrofishing from standardized sampling locations on Kentucky Lake (Table 1). The catch rate of largemouth bass < 8.0 in was 17.7 f/h (Table 2). An objective in the Kentucky Lake Fish Management Plan (KLFMP) for the largemouth bass population is to maintain a catch rate of at least 20.0 f/h that are < 8.0 in. The average for the past 22 years is 20.7 f/h. The high number reported in 2001, 2000 year-class, have now grown into the ≥ 15 in group. The catch rate of harvestable-size (≥15.0 in) largemouth bass was 18.1 f/h. The KLFMP objective for largemouth bass ≥15.0 in is to maintain a catch rate of at least 18.0 f/h. Table 3 lists the PSD and RSD values for all bass collected. The values for largemouth bass are within the targeted ranges (PSD, 55-75 and RSD_{15}, 20-40) suggested in the KLFMP. An assessment for largemouth bass was used to evaluate this population (Table 4). The largemouth bass population has been rated "good" during the past five years. This year's score was lower due to poor recruitment as measured by the catch of age 1 bass.

During October 2004, 695 (115.8 f/h) black bass were collected by diurnal electrofishing at two locations that had been previously sampled during the spring (Table 5). Length and weight data were recorded from all bass collected to calculate relative weight values (Table 6). Length-weight equations for black bass species at Kentucky Lake are:

Largemouth bass	Log_{10} (weight) = -3.43420 + 3.11185 x Log_{10} (length)
Smallmouth bass	Log_{10} (weight) = -3.13510 + 2.77541 x Log_{10} (length)
Spotted bass	Log_{10} (weight) = -3.39847 + 3.07641 x Log_{10} (length)

During July 2004, 132 (31.0 f/h) smallmouth bass were collected by nocturnal electrofishing. Samples were taken along the main-lake shoreline on the eastside of Kentucky Lake where gravel bars and rocky shoreline are prevalent. The KLFMP objective for the catch rate of smallmouth bass < 8 in is to maintain a minimum population density of 35.0 f/h. The average for fourteen years of data is 41.1 f/h (Table 7). Another objective is to maintain PSD and RSD_{14} values, calculated from smallmouth bass collected during spring sampling, within given ranges (PSD, 35-55 and RSD_{14}, 15-35). This years PSD value (67) is high due to the low number of small size bass being collected. The RSD_{14} value was 33, and within range of the objective. However, both of these values had 95% confidence errors of approximately ± 25, since there was a catch of only 26 smallmouth bass.

During July 2004, sauger were collected by nocturnal electrofishing during the same collection period as smallmouth bass. A total of 67 sauger were collected at a rate of 11.2 f/h (Figure 1). Almost 64% of these fish collected were between 10 to 12 in. The catch rate of harvestable-size (≥14.0 in) sauger was 0.8 f/h. In 2003, this catch rate was 1.1 f/h.

Trap nets were fished for crappie in Blood River, Jonathan Creek and Sledd Creek embayments for a total of 116 net-days (nd) during October. This sampling effort yielded 3,761 crappie (34.2 f/nd); of which 6.2 f/nd (19%) were white crappie and 26.2 f/nd (81%) were black crappie (Table 8). The number of black crappie has dominated the trap net catch for the past 8 years (Figure 2). The number of crappie ≥ 8.0 in made up 42% (14.4 f/nd) of the sample (Table 9). The KLFMP objective for crappie is to maintain a catch rate of at least 6.5 f/nd for crappie ≥8.0 in and 2.0 f/nd for crappie ≥10 in. PSD and RSD_{10} values are reported in table 10. Length-weight equations for white and black crappie are listed below. Weight increased slightly for both species of crappie collected from 2003 to 2004.

White crappie	Log_{10} (weight) = -3.55802 + 3.21510 x Log_{10} (length)
Black crappie	Log_{10} (weight) = -3.61160 + 3.35215 x Log_{10} (length)

Otoliths were collected from 182 black crappie and 127 white crappie to make age and growth determinations (Tables 11 and 12). The growth of age 2 white crappie, at time of capture, was identical to previous years, while the average length of age 2 black crappie was less than previous years (Table 9). The KLFMP

objective for age-2 crappie growth is to maintain an average length of 9.5 in. Age frequencies and CPUE by age classes are reported in tables 13 and 14. The assessment of the crappie population is reported in Table 15. Table's 15a and 15b report the assessments for white and black crappie, respectively. Combined, the crappie population at Kentucky Lake rated "good". This is mainly due to the 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. Annual mortality was calculated to be 47.7% for age 2 and older crappie using catch curve analysis (Z = 0.6485). Annual mortality between 2003 and 2004 for 5 years classes of crappie are listed in Table 16.

Length-weight data and otoliths were collected from redear sunfish captured in trap nets during the fall crappie sampling. A total of 63 redear sunfish were collected in 87 net days (0.7 f/nd) (Table 17). Age determinations were made from 30 otoliths collected (Table 18). In 2005, redear sunfish will be placed on the list of sport fish, which gives them protection from commercial harvest, gigging and bowfishing.

Blue and channel catfish were collected using trotlines (tl) during May 2004. This was the first year that the catfish population was sampled. Data collected was used to determine CPUE, length frequency, age and growth, and mortality. A total of 205 catfish were collected at a rate of 13.7 f/tl. CPUE of blue and channel catfish was 7.7 and 5.9 f/tl, respectively (Table 19). No catfish < 14 in were collected, this is most likely the result of gear selectivity towards larger individuals. Relative weight values of both blue and channel catfish indicate excellent health and are listed in Table 20. The length-weight equations for blue and channel catfish are:

Blue catfish	$Log_{10}(weight) = -3.87497 + 3.35527 \times Log_{10}(length)$
Channel catfish	$Log_{10}(weight) = -3.60191 + 3.13899 \times Log_{10}(length)$

Age and growth determinations were made from otoliths removed from 55 blue catfish and 42 channel catfish. Growth of blue catfish appears to be good, with fish reaching 15.0 in as early as age-3 (Table 21). Catch of blue catfish ages 5 and 6 dominated the overall catch, comprising 67% of the total catch of blue catfish (Table 22). Growth of channel catfish appears to be slower than blue catfish (Table 23). Channel catfish reach 15.0 in as early as age-4. Catch of channel catfish ages 6 - 8 dominated the overall catch, comprising 78% of the total catch of channel catfish (Table 24). Alternative sampling schemes will need to be considered in order to obtain better measures of recruitment and abundance of younger catfish.

Kentucky Lake Creel Survey

A random, non-uniform probability, roving creel survey was conducted on the Kentucky portion (51,000 a) of Kentucky Lake from 1 March to 31 October 2004. This area of the lake was divided into ten creel areas (Appendix A). The survey was conducted five days per week, six hours per day. The overall temporal sampling scheme was twenty days per month, consisting of six weekend days and fourteen weekdays. One hour each day was randomly chosen to conduct an angler count. Varying time period probabilities were assigned to each month's six-hour time period. Higher geographic probabilities were assigned to Blood River, Jonathan Creek and Sledd Creek/Kentucky Dam areas from March to May, and October, than were assigned to the other seven areas. Lower probabilities were assigned to these three areas from June to September to more evenly distribute angling pressure in the lake during those months. A three-question, angler attitude survey concerning commercial fishing in Kentucky Lake was conducted by the creel clerk during May, June and July (Appendix B).

During the 2004 creel survey the typical angler was a male (83%) resident (55%) who was casting (48%) or still fishing (45%) from a boat (87%) (Table 25). The average fishing trip (3.6 h) was shorter than that reported in 2003 (4.7 h). Anglers made 376,210 trips (7.4 trip/a), and fished for 1,351,675 h (26.5 h/a) during 2004. This effort was much higher than that recorded from the 2003 creel (19.2 h/a). It also exceeded the effort reported in other Kentucky Lake creel surveys in 1984 (19.5 h/a), 1985 (20.8 h/a), 1986 (19.4 h/a), 1987 (21.8 h/a), 1991 (21.2 h/a) and 1998 (6.6 h/a). The estimated number of fish caught during the 2004 creel was 1,629,699 (31.9 f/a) with a harvest estimate of 670,166 (13.1 f/a). This catch rate was higher than those reported in creel surveys conducted in 1985 (17.8 f/a), 1986 (20.9 f/a), 1987 (25.1 f/a), 1991 (23.9 f/a), 1998 (5.7 f/a) and 2003 (25.5 f/a). Total harvest during 2004 increased 34% compared to harvest estimates reported in 2003 (9.8 f/a).

Anglers fishing for black bass accounted for approximately 33% of all fishing trips to Kentucky Lake in 2004 (Table 26). Black bass accounted for 5% of all fish harvested during the 2004 survey. Anglers caught 393,577 black bass (7.7 f/a) and harvested 31, 236 (0.6 f/a). Anglers harvested 1.36 lb/a of black bass, which amounted to

15% of the total weight of harvested fish at Kentucky Lake in 2004. In 2003, harvest of black bass comprised 4% of the total fish harvest, and 11% of the total pounds of fish harvested. Largemouth bass accounted for 88% of the total bass catch, followed by smallmouth bass (9%) and spotted bass (3%). Length frequencies of black bass caught and harvested are listed in table 27.

An objective of the Kentucky Lake Fish Management Plan (KLFMP) for largemouth bass is to maintain an annual catch of ≥45,000 largemouth bass ≥15 in. It was estimated from this survey that 85,174 harvestable-size largemouth bass were caught (Table 28). An estimated 68% of all harvestable-size largemouth bass caught were released. The estimated pounds of largemouth bass harvested in this survey were 1.20 lb/a (0.60 lb/a in 2003). The KLFMP objective from the creel data for smallmouth bass is to maintain an annual catch of ≥5,500 smallmouth bass ≥15 in. A total of 8,211 harvestable-size smallmouth bass were caught during 2004 (64% were released). The harvest rate of smallmouth bass was 0.14 lb/a (Table 26), compared to 0.08 lb/a in 2003. Catch-per-unit-effort of bass by bass anglers was similar from April – October, despite, bass anglers catching more bass during May and June compared to other months (indicating increased effort during May and June) (Table 29).

Crappie anglers accounted for about 32% (42% in 2003) of all fishing trips to Kentucky Lake during the 2004 creel survey (Table 26). Although the estimated number of fishing trips (118,696) for crappie increased by 35% in the 2004 creel, the total number of hours fished for crappie only increased by 3%. Crappie anglers fished for 3.6 h/trip in 2004, compared to 4.7 h/trip in 2003. The estimated catch and harvest rates of crappie were 7.0 and 3.7 f/a, respectively. In 2003, catch and harvest rates of crappie were 9.0 and 4.9 f/a, respectively. In 2004, crappie represented only 28% (50% in 2003) of the total number of fish harvested, and 32% of total weight harvested (48% in 2003). The pounds of crappie harvested were 2.9 lb/a in 2004, compared to 3.6 lb/a in 2003. Total harvest of crappie during 2004 failed to meet the KLFMP objective of ≥3.5 lb/a. During March 2004, 53,542 crappie (1.0 f/a) were caught, compared to 103,000 crappie (3.1 f/a) caught during March 2003 (Table 30). Catch-per-unit-effort in March 2004 declined to 0.7 f/h compared to 1.5 f/h in March 2003. Catch of crappie during April, accounted for approximately 50% of the total crappie caught during the 2004 creel survey.

White crappie accounted for 67% of the total number harvestable size crappie caught in 2004, compared to 72% of the total harvestable size crappie caught in 2003 (Table 31). Harvest rates of white and black crappie were 2.5 and 1.2 f/a, respectively. In 2003, harvest rates of white and black crappie were 3.4 and 1.5 f/a, respectively. Mean length and weight of harvested white and black crappie were similar for both creel survey years. The catch rate of black crappie was higher (0.8 f/h) in the northern geographic area (Area 1) of Kentucky Lake, compared to Jonathan Creek (0.2 f/h) and Blood River (0.3 f/h), in 2004. The catch of black crappie was greater during October (0.4 f/h), compared to April (0.2 f/h).

Approximately 18% of all trips were taken in pursuit of panfish in 2004 (Table 26). The estimated panfish catch was 12.0 f/a, compared to 5.4 f/a in 2003. Panfish comprised almost 50% of the total number of fish harvested in 2004, compared to 28% in 2003. Bluegill and redear sunfish accounted for 82 and 14% of the total number of panfish harvested, respectively. Length frequencies of all panfish harvested or released are reported in Table 27. The only panfish ≥10 in reportedly caught during the 2004 creel was redear sunfish. These larger redear sunfish accounted for approximately 37% of the total number of redear sunfish caught. Catch and harvest rates of panfish were 2.8 and 1.8 f/h during the month of May, respectively (Table 32).

Catfish anglers accounted for 11% of all fishing trips during the 2004 creel survey (Table 26), compared to 8% and 6% of all trips during the 2003 and 1991 creel surveys, respectively. A total of 69,731 catfish were caught, and 79% were harvested (1.1 f/a). In 2003, catfish were harvested at a rate of 0.7 f/a. Although catfish accounted for only 8% of the total number of fish harvested in 2004, they comprised 28% of the total weight of harvested fish. An estimated 131,748 pounds of catfish (2.6 lb/a) were harvested in 2004, compared to 1.8 lb/a in 2003. Channel catfish, blue catfish, and flathead catfish comprised 73, 24, and 3% of the total number of catfish caught, respectively. Length of catfish caught ranged from 4 - 36 in (Table 27). The number of catfish trips reached its peak in May (14,761 trips) (Table 33). Comparably, in 2003, catfish effort was highest in June (4,125 trips).

Fewer than 2% of all fishing trips at Kentucky Lake, during 2004, targeted *Morone* spp (Table 26). The estimated *Morone* catch was 2.7 f/a, which was a slight increase from the 2003 estimate of 2.1 f/a. Yellow bass and white bass comprised 71 and 27% of the total *Morone* catch, respectively. The catch of striped bass and their hybrids was negligible. Anglers harvested 28% of the total number of yellow bass caught, and 48% of the total

number of white bass caught. A total of 37,586 white bass were caught, while 17,979 were harvested during 2004. Total catch of white bass failed to meet the KLFMP objective of ≥50,000 white bass. Although, white bass harvest was up in 2003 and 2004, anglers still consider the fishery to only be "fair" as compared to white bass fishing in the 1980's. Catch rates of *Morone* spp were greatest in August (3.1 f/h) and September (3.7 f/h), while harvest rates were highest in August (2.5 f/h) (Table 34).

Only 619 fishing trips during the 2004 creel survey targeted sauger (Table 26). An estimated total of 8,179 sauger (0.2 f/a) were caught, and 1,605 were harvested (0.03 f/a). This low harvest resulted, in part, because 43% of harvestable-size sauger were released (Table 35). Harvest rates of sauger were similar during the 2003 creel survey (0.02 f/a). The KLFMP objectives for sauger are to maintain a catch of ≥15,000 sauger, maintain an average weight ≥1.0 lb for sauger harvested, and to have a harvest rate ≥0.5 f/h. The first and third objectives were not met. The average weight (1.1 lb) of harvested sauger did meet the KLFMP objective. Catch rates of sauger by sauger anglers was highest during June (0.5 f/h), while harvest rates were highest during August (0.2 f/h).

Lake Barkley

Black bass were collected by diurnal electrofishing on 26-29 April 2004, from standardized sampling sites on Lake Barkley. PSD and RSD values are reported in Table 36. The PSD value of largemouth bass (57) dropped compared to the value (73) recorded in 2003. This decline was the result of decreased CPUE of quality-size (12.0-14.9 in) largemouth bass, 29.3 f/h in 2004 compared to 75.3 f/h in 2003. Despite the higher values observed in 2003, the PSD value of largemouth bass in 2004 fell below the 20-year average (59) for Lake Barkley. The RSD_{15} value (26) increased for the second consecutive year and has exceeded the 20-year average for the first time since 2000. Both PSD and RSD_{15} values met their objective goals (PSD of 55-75 and RSD_{15} of 20-40) established in the Lake Barkley Fish Management Plan (LBFMP).

Table 37 summarizes the length frequency and relative abundance of black bass collected during spring electrofishing by area sampled on Lake Barkley. A total of 1,096 black bass were collected at a rate of 109.6 f/h, compared to 192.6 f/h in 2003. Spotted and smallmouth bass accounted for only 3% of the total black bass sampled and too few individuals are ever collected to accurately yield data reflecting their true population abundance and health. Largemouth bass accounted for 97% of the total catch, and had a catch rate of 106.2 f/h. This catch rate lies well below the 20-year average catch of largemouth bass (145.6 f/h) at Lake Barkley (Table 38). The decline in total CPUE was the result of reduced CPUE of largemouth bass ≤8.0 in and 12.0-14.9 in. The catch rate of largemouth bass ≤8.0 was 11.3 f/h, compared to 41.1 f/h recorded in 2003. In 2004, the CPUE of largemouth bass ≤8.0 in was below the 20-year average (29.2 f/h) and the minimum desired catch rate of 30.0 f/h set in the LBFMP. CPUE of largemouth bass 12.0-14.9 in declined from 75.3 f/h in 2003 to 29.3 f/h in 2004. This decline was the direct result of the poor year-class of largemouth bass produced in 2001 (now recruiting to the 12.0-14.9 inch-class). Catch of harvestable-size (≥15.0 in) largemouth bass declined slightly from 26.9 f/h in 2003 to 24.7 f/h in 2004. Catch of largemouth bass ≥15.0 in failed to meet the objective (25.0 f/h) set in the LBFMP.

The assessment of the largemouth bass fishery at Lake Barkley during 2004 produced a "good" rating (Table 39). The highest ratings continue to be the result of excellent growth (mean length at capture of age-3 bass) and size structure (CPUE of age-1 largemouth bass). The lowest rating was assigned to the recruitment parameter (CPUE of largemouth bass ≤8.0 in) indicating the poor production of the 2003 year-class. Annual mortality between 2003 and 2004 of each age-class (1-6) of largemouth bass is listed in Table 40.

Black bass were sampled in October 2004 to collect length-weight data, relative weight values, and determine the strength of the age-0 cohort (2004 year-class). The length-weight equations of each species of black bass at Lake Barkley are:

Largemouth bass	$Log_{10}(weight) = -3.49728 + 3.17543 \times Log_{10}(length)$
Spotted bass	$Log_{10}(weight) = -3.63823 + 3.27215 \times Log_{10}(length)$
Smallmouth bass	$Log_{10}(weight) = -3.31223 + 2.99152 \times Log_{10}(length)$

Similar to previous years, despite high r^2-values for both spotted ($r^2 = 0.98$) and smallmouth ($r^2 = 0.97$) bass, low overall sample sizes of spotted ($n = 9$) and smallmouth ($n = 20$) bass were collected during the fall sample and therefore caution should be used when interpreting the length-weight equations for both of these species. Length frequency distributions and CPUE of largemouth, smallmouth, and spotted bass are listed in Table 41. Fall

CPUE of largemouth bass was 163.2 f/h, compared to 106.2 f/h recorded during the spring sample. Relative weight values of all size-classes of largemouth bass increased significantly compared to those recorded in 2003, indicating excellent health of the largemouth bass population prior to winter (Table 42). Mean length of the age-0 cohort (2004 year-class) was 5.4 in and ranged in length from 3.2 to 6.7 in by October (Table 43). CPUE of age-0 largemouth bass was approximately 39.8 f/h. CPUE of age-0 largemouth bass ≥5.0 in was 30.4 f/h, and comprised 75% of all age-0 bass collected (suggesting production of a strong 2004 largemouth bass year-class).

Blue and channel catfish were collected using trot-lines (tl) from 17-20 May 2004. This was the first year that catfish were sampled and data collected was used to determine CPUE, length frequency, age and growth, and mortality. A total of 228 catfish were collected at a rate of 16.4 f/tl. CPUE of blue catfish was 8.4 f/tl (Table 44). Approximately 86% of all blue catfish collected were ≥15.0 in, and 56% were ≥20.0 in. CPUE of blue catfish ≥15.0 in and ≥20.0 in was 7.2 and 4.6 f/tl, respectively. Catch of blue catfish ≤8.0 in was extremely low (0.2 f/tl) and is most likely the result of gear selectivity towards larger individuals. CPUE of channel catfish was 7.9 f/tl. Approximately 95% of all channel catfish collected were ≥12.0 in (7.5 f/tl), and 61% were ≥15.0 in (4.8 f/tl). Similar to blue catfish, catch of small channel catfish (≤8.0 in) was extremely low (0.2 f/tl) and is most likely the result of gear selectivity towards larger individuals. Relative weight values of both blue and channel catfish indicate excellent health and are listed in Table 45. The length-weight equations of blue and channel catfish are:

Blue catfish	$Log_{10}(weight) = -3.93323 + 3.38006 \times Log_{10}(length)$
Channel catfish	$Log_{10}(weight) = -3.80475 + 3.27237 \times Log_{10}(length)$

Age and growth determinations were made from otoliths removed from 74 blue catfish and 54 channel catfish. Growth of blue catfish appears to be good, with fish reaching 15.0 in by age-4 (Table 46). Catch of blue catfish ages 5 and 6 dominated the overall catch, comprising 27 and 35% of the total catch, respectively (Table 47). Growth of channel catfish appears to be significantly slower than blue catfish (Table 48). Although channel catfish reach 15.0 in by age-6, back-calculated growth rates indicate that it takes 10+ years for channel catfish to exceed 20.0 in. Similar to blue catfish, catch of channel catfish ages 5 and 6 dominated the overall catch, comprising 30 and 18% of the total catch, respectively (Table 49). Catch of young (ages 1-3) blue and channel catfish was extremely low during 2004 and is most likely the result of gear selectivity towards larger catfish. Alternative sampling schemes will need to be considered in order to obtain better measures of recruitment and abundance of younger catfish.

Smallmouth bass and sauger were sampled by nocturnal electrofishing on 26-27 July 2004. A total of 209 smallmouth bass were collected at a rate of 52.3 f/h (Table 50). This is the first year that CPUE of smallmouth bass at Lake Barkley has increased since 2001. This increase is due to the increased catch of smallmouth bass ≤8.0 in and 8.0-10.9 in. Catch of smallmouth bass ≤8.0 in was 35.3 f/h and comprised the 89% of the total catch. Despite this increase, CPUE of smallmouth bass ≤8.0 in remains below the eight-year average of 44.4 f/h. CPUE of smallmouth bass 8.0-10.9 in was 14.8 f/h and comprised 28% of the total catch. Catch of larger (≥14.0 and ≥17.0 in) smallmouth bass remains extremely low (0.5 and 0.3 f/h, respectively), despite the fact that anglers continue to catch good numbers of harvestable-size smallmouth bass at Lake Barkley. A total of six sauger were collected during the nocturnal sampling effort, resulting in a catch rate of 1.5 f/h.

Trap nets were fished for crappie in Little River, Donaldson Creek and Eddy Creek embayments for a total of 114 net-days (nd) during 1-5 November 2004. A total of 1,112 crappie were collected at a rate of 9.8 f/nd (Table 51). Since Little River and Donaldson Creek are established standardized sampling sites, and low overall catch of crappie from Eddy Creek, only those crappie collected from Little River and Donaldson Creek will be included in further analyses. A total of 942 crappie were collected from Little River and Donaldson Creek at a rate of 12.4 f/nd. Similar to 2003, white crappie accounted for 66% of the total catch (Figure 3) and were collected at a rate of 8.2 f/nd. Black crappie were collected at a rate of 4.2 f/nd. CPUE of harvestable-size (≥10.0 in) crappie was 1.8 f/nd, compared to 2.2 f/nd recorded in 2003 (Table 52). This value is slightly higher than the 20-year average of 1.6 f/nd, however, failed to meet the management objective (2.0 f/nd) set in the LBFMP. Since 2000, black crappie have averaged approximately 43% of the harvestable-size crappie collected from trapnets (Figure 4). CPUE of quality-size (≥8.0 in) crappie was 7.3 f/nd, which greatly exceeds the 20-year average (4.1 f/nd) of Lake Barkley. This is the first year since 1998 that this value has exceeded the management objective (5.0 f/nd) set in the LBFMP. CPUE of quality-size white crappie increased significantly to 5.5 f/nd, compared to the catch rate of 2.3 f/nd recorded in 2003. CPUE of quality-size black crappie (1.8 f/nd) remained similar to that recorded in 2003 (1.6 f/nd). Table 53

lists PSD and RSD_{10} values calculated for both white and black crappie. PSD of white crappie increased significantly from 2003, while the RSD_{10} value declined for the second consecutive year. This decline is attributable to an increase in CPUE of quality-size white crappie, while the CPUE of harvestable-size white crappie remained similar to 2003. The 20-year average PSD and RSD_{10} values of white crappie are 57 and 24, respectively. The PSD and RSD_{10} values of black crappie increased from 2003, with both values being above the 20-year average of 53 and 19, respectively. The RSD_{10} value of black crappie has increased for the second consecutive year. Relative weight values of white and black crappie are listed in Table 54. The length-weight equations of white and black crappie from Lake Barkley are:

White Crappie $\quad Log_{10}(weight) = -3.60119 + 3.32204 \times Log_{10}(length)$
Black Crappie $\quad Log_{10}(weight) = -3.56891 + 3.32587 \times Log_{10}(length)$

Age and growth data was not collected during 2004, however, CPUE of each age-class of white and black crappie was extrapolated using age and growth data collected during 2003. CPUE of age-0 white crappie was 1.7 f/nd (Table 55), significantly less than the 20-year average (4.3 f/nd). Catch of age-1 white crappie (5.1 f/nd) dominated the total catch (comprising 67% of the total catch). CPUE of age-0 black crappie was 1.5 f/nd (Table 56) and comprised 36% of the total catch. The 20-year average CPUE of age-0 black crappie is 1.2 f/nd. Total CPUE of age-1 crappie was 6.3 f/nd, which exceeded the management objective (5.0 f/nd) established in the LBFMP. Annual mortality of crappie in Lake Barkley during 2004, calculated from catch curve analysis, was 57.6% (compared to 60.4% in 2003). Total instantaneous rate of mortality (Z) was 0.8579. Annual mortality between 2003 and 2004 of each age-class (1-6) of crappie is listed in Table 57.

The white and black crappie populations were rated "fair" at Lake Barkley (Table 58). The lowest assessment value for white crappie was the recruitment parameter (CPUE of age-0 white crappie). The highest assessment value continues to be the growth parameter (mean length at capture of age-2 white crappie). The black crappie population received poor assessment values for all parameters, except growth. When both species were combined, the total crappie population received an assessment rating of "good". Tables 59, 60, and 61 list the population assessment scores of white crappie, black crappie, and both white and black crappie populations combined, from 1988-2004.

Kentucky Lake Tailwater (lower Tennessee River)

Sampling in the lower Tennessee River tailwater area below Kentucky Lake dam was not completed this year due to construction of the new lock.

Lake Barkley Tailwater (lower Cumberland River)

Nocturnal electrofishing normally conducted during November to sample sauger and *Morone* spp. from the lower Cumberland River, in the area below Lake Barkley dam, was not conducted during 2004 as a result of abnormally high water level and discharge conditions.

Lake Beshear

Largemouth bass were collected by diurnal electrofishing during May 2004. A total of 171 largemouth bass were collected at a rate of 68.4 f/h (Table 62). CPUE of harvestable-size (≥12.0 in) and ≥15.0 in largemouth bass were 52.0 and 42.4 f/h, respectively (Table 63). One objective in the Lake Beshear Fish Management Plan (LBFMP) is to maintain a catch rate of 40.0 f/h for harvestable size largemouth bass. This objective was met, though the number of bass < 8 in collected was low (4.4 f/h). The management objective is to maintain a catch of 12 f/h for these smaller bass. The average catch rate for the bass <8 in for the past 19 years of data is 7.7 f/h. The low number of smaller bass collected in 2004 lead to higher PSD and RSD_{15} values calculated for the largemouth bass population, 81 and 66 respectively.

Age and growth determinations were made from using this years spring sampling data, and age data collected in 2003. Largemouth bass reach harvestable size as early as age 2, but more commonly by age 3 (Table 64). The largemouth bass population has rated "good" the past three years (Table 65). This rating has been achieved by good growth of bass and a high density of ≥ 15.0 in bass in the population. The catch rate of age 1 bass is very low; though it has historically been low.

During October, largemouth bass were collected by diurnal electrofishing. The catch rate (54.0 f/h) was below that of the spring sample (Table 62). However, the number of bass of < 12.0 inches in the catch was much higher than compared to the spring data. Seventy percent of all the bass were less than 12.0 in, while only 20% of the spring sample was comprised of these smaller bass. Relative weight data suggest that the bass are very healthy in regards to their length-weight ratio. Relative weight values were above 95, except for bass less than 12 in. The relative weight value was 87 for these smaller bass. The length-weight equation for largemouth bass at Lake Beshear is:

$$Log_{10} (weight) = -3.59323 + 3.24465 \times Log_{10} (length)$$

Otoliths were removed from largemouth bass ≤ 8.0 in to determine the mean fall length of the age-0 cohort. The average length of the age-0 bass was 3.8 in. The catch rate for this year class was 17.6 f/h (Table 66).

The channel catfish population was sampled at Lake Beshear using 9 100-hook cheese baited trotlines (tl) for 3 nights during September. The length frequency of channel catfish collected is found in Figure 5. Their catch rate was 13.6 f/tl. The catch rate was down from 25.7 f/tl reported in 2003. In 2004, a 12-inch minimum length limit was imposed for channel catfish. During this sampling, 68% of the catch (9.2 f/tl) were ≥12 in. Relative weights ranged from 84 for channel catfish 11-16 inches to 88 for larger catfish. The length weight equation for channel catfish at Lake Beshear is:

$$Log_{10} (weight) = -3.90549 + 3.30014 \times Log_{10} (length)$$

Age and growth determinations were made using age data collected in 2003. Harvestable size (≥12.0 in) is reached as early as age 2, but more commonly by age 3. Table 67 lists the age frequencies for all channel catfish collected based on the portion that was aged. Approximately 50% of the channel catfish collected were between 1 and 3 years old. Since 2001, the lake has been stocked with 10 channel catfish per acre annually. Prior to this time, the stocking rate was 25 per acre. With the reduced stocking rate, growth of the catfish does appear to have improved as well as size distribution. To maintain their population in Lake Beshear, channel catfish will be stocking at a rate of 10 per acre. As part of the LBFMP, the following parameters of the catfish population were assessed by sampling with trotlines; catch of catfish <8.0 in, ≥12.0 in, and ≥15.0 in (Table 68). Several years of data has been collected, although sampling methods have changed, while trying to determine the best sampling method. An assessment of the catfish population at Lake Beshear is reported in Table 68. In the past 4 years the population has rated "good", while prior to this it rated "fair" and "poor". These ratings were affected by the catch of the sample method used each year, so some bias has occurred in catch rate from year to year.

Lake Pennyrile

Lake Pennyrile was sampled by diurnal electrofishing on 19 April 2004. Largemouth bass were collected at a rate of 119.8 f/h (Table 69). This catch rate was significantly less than that recorded in 2003 (241.0 f/h) (Table 70). The reduced CPUE was most notable in largemouth bass ≤8.0 in and 8.0-11.9 in. CPUE of largemouth bass ≤8.0 in was 27.5 f/h, compared to 96.6 f/h recorded in 2003. Similarly, CPUE of largemouth bass 8.0-11.9 in was 63.7 f/h, compared to 118.8 f/h recorded in 2003. Largemouth bass at Lake Pennyrile are classified as stunted, therefore, the reduction in smaller-size largemouth bass is considered beneficial to the overall health of the population. CPUE of largemouth bass ≥12.0 in was 28.6 f/h, which exceeded the management objective (25.0 f/h) established in the Lake Pennyrile Fish Management Plan (LPFMP). Catch rates of largemouth bass ≥15.0 in improved marginally from 0.9 f/h in 2003 to 2.2 f/h in 2004, however, failed to meet the objective of 5.0 f/h in the LBFMP. This is the second year that a 12.0-15.0 in protective slot limit has been enacted on Lake Pennyrile, however, without an adequate creel survey, it is unknown whether the reduction in smaller size bass is the result of the slot limit. PSD and RSD_{15} values are listed in Table 71, with both values improving significantly from 2003. Despite the improvement, both values still lie well below the management objectives set in the LPFMP for PSD (40-50) and RSD_{15} (10).

Largemouth bass were also sampled on 27 September 2004 to collect length-weight and relative weight values. The length-weight equation of largemouth bass was:

$$Log_{10} (weight) = -3.45263 + 3.05084 \times Log_{10} (length)$$

The catch rate of largemouth bass during the fall sample was 149.0 f/h (Figure 6). Similar to previous years, 96% of all largemouth bass sampled were ≤12.0 in. Relative weight values of all size-classes of largemouth bass were extremely low, indicating poor overall condition (consistent with a stunted population) prior to winter (Table 72).

The largemouth bass population was rated as "poor" during 2004 (Table 73). The lowest ratings were assigned for poor growth (mean length at capture of age-3 bass) and CPUE of bass ≥15.0 in and ≥20.0 in. These low ratings are to be expected as a result of the stunted population present. Table 74 lists CPUE values of each age-class of largemouth bass collected at Lake Pennyrile from 1998-2004. Annual mortality from 2003 and 2004 of each age-class (1-6) of largemouth bass is listed in Table 75.

The catch rate of bluegill was 70.8 f/h (Table 69), and has declined for two consecutive years. The reduction in CPUE was evident in all size-classes of bluegill, except bluegill 6.0-7.9 in (Table 76). The CPUE value of bluegill ≥8.0 in declined to 6.2 f/h, compared to 12.3 f/h recorded in 2003, and failed to meet the objective goal (8.0 f/h) in the LPFMP. PSD and RSD_8 values of bluegill were 43 and 9, respectively (Table 71). PSD values have increased for the second consecutive year and are currently meeting the upper limits (20-40) established in the LPFMP. The RSD_8 value failed to meet the objective (10) set in the LPFMP, as a result of the significant decline in CPUE of bluegill ≥8.0 in. Table 77 lists CPUE of each age-class of bluegill collected from Lake Pennyrile from 2000-2004.

The bluegill population was also sampled on 27 September 2004. The catch rate of bluegill was 202.0 f/h (Table 78), compared to only 70.8 f/h recorded in the spring. Catch of bluegill ≤6.0 in comprised approximately 94% of the total catch. Overall, the bluegill population continues to be rated as "fair" and has shown no signs of improvement since 2000 (Table 79). The lowest ratings continue to be the result of extremely slow growth, most likely due to over-abundance of smaller individuals. A high density of aquatic vegetation in Lake Pennyrile has likely lead to the over abundance of small sunfish, by allowing protection from predation.

The catch rate of redear sunfish declined for the second consecutive year from 103.1 f/h in 2003 to 69.2 f/h in 2004 (Table 69). Similar to the bluegill population, the decline in CPUE was evident in all size-classes, except redear 6.0-7.9 in. CPUE of redear sunfish 6.0-7.9 in increased from 26.2 f/h in 2003 to 40.0 f/h in 2004 (Table 76). CPUE of redear sunfish ≥6.0 in has exceeded the management objective (40.0 f/h) established in the LPFMP since 2002. CPUE of redear sunfish ≥8.0 in failed to meet the management objective (25.0 f/h) for the second consecutive year. PSD and RSD_9 values were 36 and 2, respectively, and have also declined for two consecutive years (Table 71). PSD and RSD_9 values for redear sunfish have failed to meet their management objectives (40 and 10) for two consecutive years. Age and growth data collected in 2002 suggests that redear growth has become extremely slow and now takes 10+ years for redear to reach 10.0 in. Similar data collected in 1998 indicated that redear sunfish reach 10.0 in by age 6.

The redear sunfish population was also sampled on 27 September 2004. The catch rate was 66.7 f/h (Table 78), approximately the same as that recorded during the spring (69.2 f/h). Redear sunfish ≤5.0 in dominated the fall sample and comprised 76% of the total catch, compared to only 29% of the spring catch. The redear sunfish population continues to be rated as "fair" (Table 80), and similar to the bluegill population, has shown no signs of improvement since 2000.

Hematite Lake

Hematite Lake is a 90-acre sub-impoundment of Lake Barkley located within the Land Between the Lakes. This lake was drained in the mid 1990's due to a breach in the levee. In the late 1990's the levee was repaired and the lake was allowed to fill. Since that time the lake has been stocked with largemouth bass, redear sunfish and bluegill collected from Lake Barkley. This lake was once known for its outstanding redear sunfish fishery. The management objective for this lake is to reestablish the redear fishery. In spring of 2002 the lake was sampled by electrofishing. During this study redear sunfish were collected at a catch rate of 159.0 f/h. In 2004, the redear sunfish population was again sampled resulting in a catch rate of 253.9 f/h (Table 81). Fish between 3-6 in dominates the size structure of this population.

Figure 1. Length frequency distribution and CPUE of sauger collected during 6.0 hours of nocturnal electrofishing (12 runs; each 0.50 hours) at Kentucky Lake on 19-22 July 2004 (wfdsmbky.d04).

Inch Class	Freq.	Cum Freq.	Perc.	Cum Perc.	CPUE	Std Error
5	2	2	2.99	2.99	0.33	0.22
6	3	5	4.48	7.46	0.50	0.36
7	0	5	0.00	7.46	0.00	0.00
8	2	7	2.99	10.45	0.33	0.22
9	5	12	7.46	17.91	0.83	0.52
10	20	32	29.85	47.76	3.33	1.62
11	16	48	23.88	71.64	2.67	1.11
12	8	56	11.94	83.58	1.33	0.71
13	6	62	8.96	92.54	1.00	0.39
14	2	64	2.99	95.52	0.33	0.22
15	2	66	2.99	98.51	0.33	0.22
16	0	66	0.00	98.51	0.00	0.00
17	1	67	1.49	100.00	0.17	0.17
					11.15	

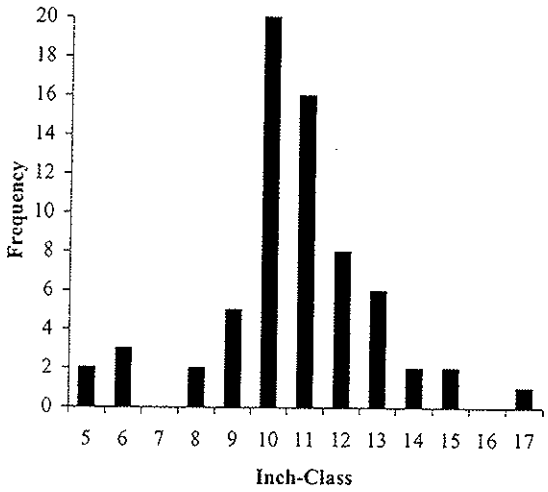


Figure 2. Relative species composition of white and black crappie collected during annual fall trap-netting from 1985-2004 at Kentucky Lake. (Kentucky_Crappie_Database.xls)

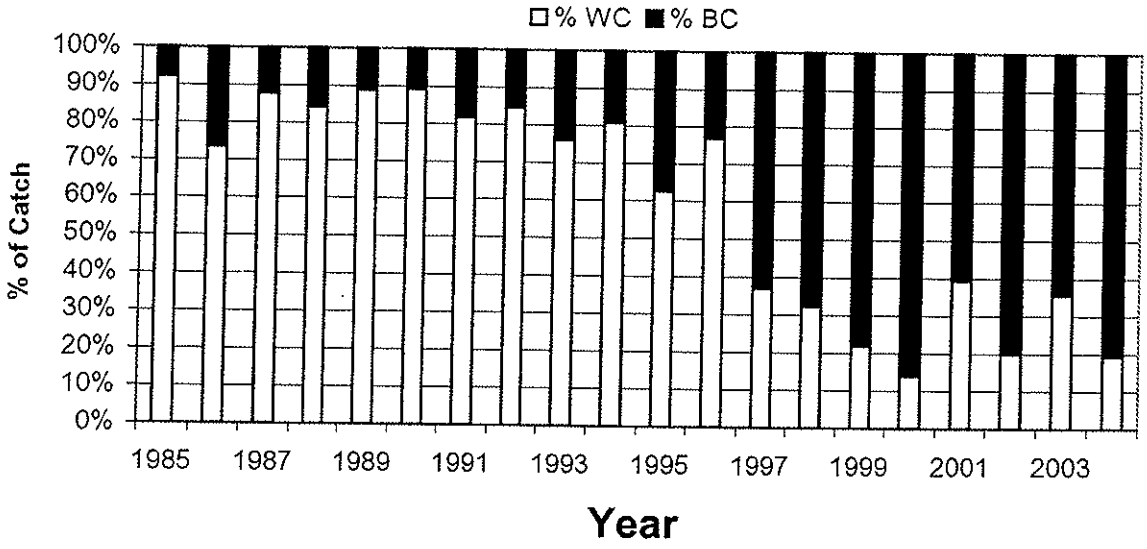
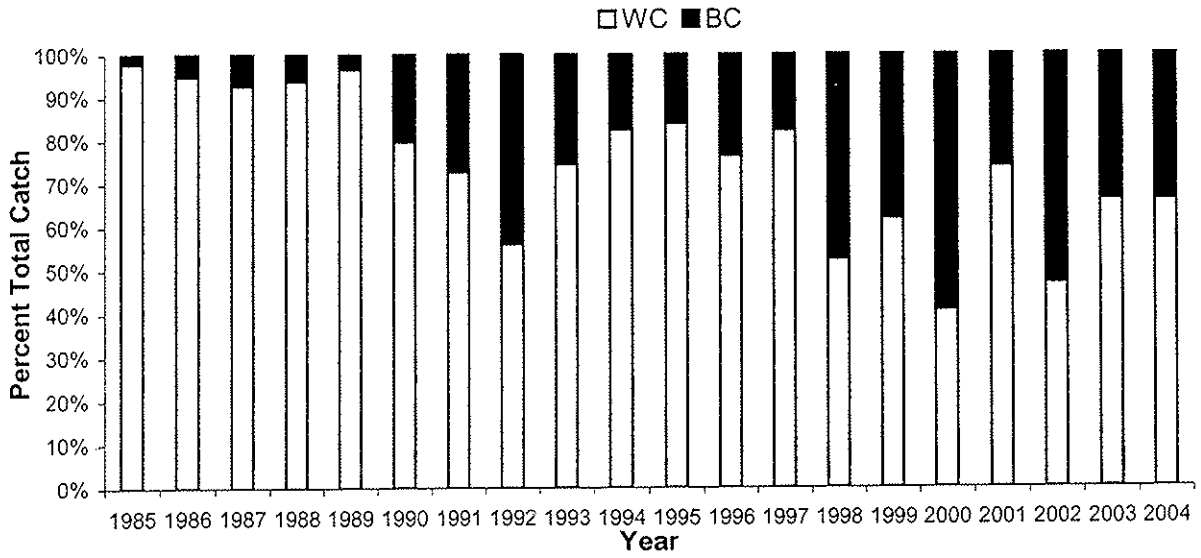
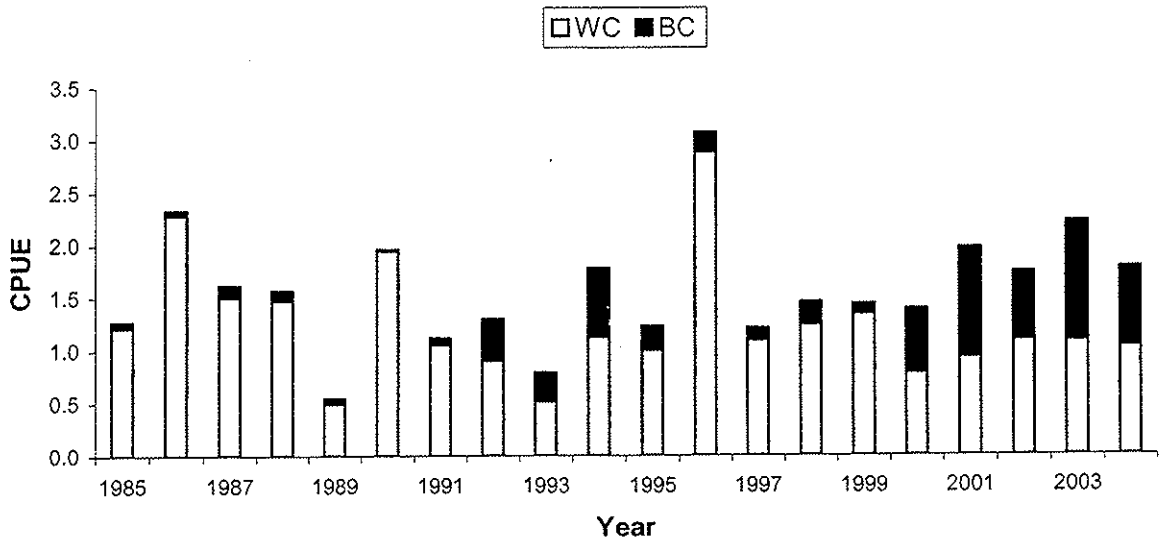


Figure 3. Relative species composition of all sizes of white and black crappie collected during fall trap-netting from 1985-2004 at Lake Barkley.



(Barkley_Crappie_Database.xls)

Figure 4. Relative species composition of white and black crappie ≥10.0 in collected during fall trap-netting from 1985-2004 at Lake Barkley.



(Barkley_Crappie_Database.xls)

Figure 5. Length frequency distribution and CPUE for channel catfish collected by fishing 9 100-hook trotlines baited with cheese bait at Lake Beshear for three nights during September 2004. (wfdcclb.d04)

Inch Class	Freq.	Cum Freq.	Perc.	Cum Perc.	CPUE	Std Error
7	1	1	0.3	0.3	0.04	0.04
8	5	6	1.4	1.6	0.19	0.09
9	13	19	3.5	5.2	0.48	0.13
10	43	62	11.7	16.8	1.59	0.32
11	57	119	15.5	32.3	2.11	0.41
12	53	172	14.4	46.7	1.96	0.47
13	49	221	13.3	60.1	1.81	0.32
14	49	270	13.3	73.4	1.81	0.30
15	23	293	6.3	79.6	0.85	0.17
16	18	311	4.9	84.5	0.67	0.17
17	16	327	4.3	88.9	0.59	0.24
18	14	341	3.8	92.7	0.52	0.13
19	12	353	3.3	95.9	0.44	0.14
20	3	356	0.8	96.7	0.11	0.06
21	7	363	1.9	98.6	0.26	0.10
22	3	366	0.8	99.5	0.11	0.06
23	0	366	0.0	99.5	0.00	0.00
24	1	367	0.3	99.7	0.04	0.04
25	0	367	0.0	99.7	0.00	0.00
26	1	368	0.3	100.0	0.04	0.04
					13.63	

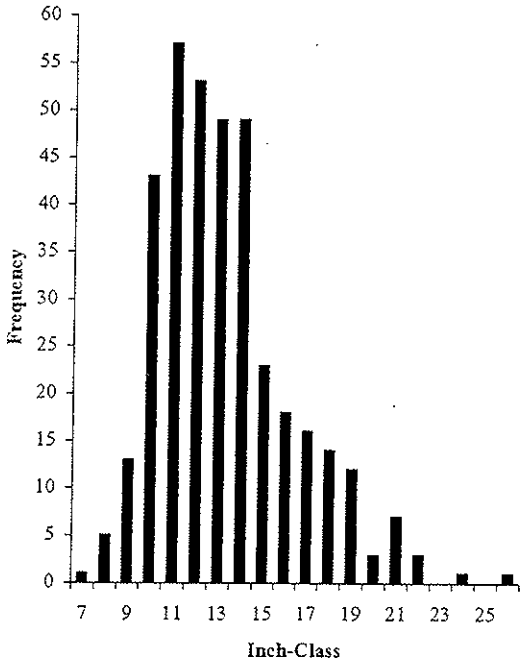


Figure 6. Length frequency distribution and CPUE for largemouth bass collected during 1.00 hour of diurnal electrofishing (6 runs; each 600s) at Lake Pennyrile on 27 September 2004. (wfdwrpb.d04)

Inch Class	Freq.	Cum Freq.	Perc.	Cum Perc.	CPUE	Std Error
1	0	0	0.00	0.00	0.00	0.00
2	0	0	0.00	0.00	0.00	0.00
3	9	9	5.92	5.92	8.82	1.32
4	34	43	22.37	28.29	33.33	6.20
5	25	68	16.45	44.74	24.51	6.34
6	2	70	1.32	46.05	1.96	1.24
7	1	71	0.66	46.71	0.98	0.98
8	13	84	8.55	55.26	12.75	6.34
9	12	96	7.89	63.16	11.76	4.02
10	19	115	12.50	75.66	18.63	5.56
11	18	133	11.84	87.50	17.65	4.80
12	13	146	8.55	96.05	12.75	4.14
13	4	150	2.63	98.68	3.92	1.96
14	1	151	0.66	99.34	0.98	0.98
15	0	151	0.00	99.34	0.00	0.00
16	1	152	0.66	100.00	0.98	0.98
					149.02	21.78

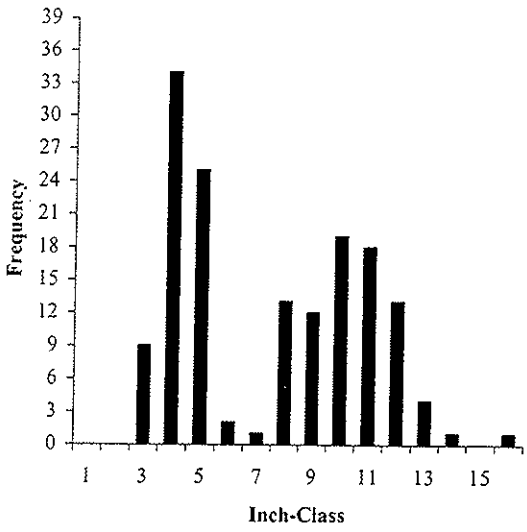


Table 1. Species composition, relative abundance, and CPUE (fish/hour) of black bass collected during 10.0 hours of 30-minute diurnal electrofishing runs for black bass in each area of Kentucky Lake during May 2004.

		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	StdErr
Blood River	Smallmouth bass					1																	1	0.4	0.2
	Spotted bass			1	3				2	1	1	2											10	4.0	0.3
	Largemouth bass	1		5	16	15	6	3	24	26	27	21	17	27	15	11	5	2	2	3	1		227	90.8	6.9
Big Bear	Smallmouth bass				2	2	1				1	1		1									8	3.2	1.0
	Spotted bass					1		2		3	2		2	2	1								13	5.2	1.7
	Largemouth bass		2	5	28	16	5	12	20	26	5	13	19	26	25	14	11	9	4	2	4	1	247	98.8	3.2
Jonathan	Largemouth bass		1	1	2	9	3	5	17	13	9	19	21	24	26	8	5	4	2		2		171	68.4	3.4
Sugar Bay	Smallmouth bass			2	1	3	1		3			2	1		1	1		2					17	6.8	1.1
	Spotted bass			4				1	2	6	5	1	1										20	8.0	1.6
	Largemouth bass			4	22	24	12	13	29	20	2	15	13	12	17	3	4	1					191	76.4	7.3
TOTAL	Smallmouth bass			2	3	6	2		3		1	3	1	1	1	1		2					26	2.6	0.5
	Spotted bass			5	3	1		3	4	10	8	3	3	2	1								43	4.3	0.6
	Largemouth bass	1	3	15	68	64	26	33	90	85	43	68	70	89	83	36	25	16	8	5	7	1	836	83.6	2.9

wfdpsdky.d04

Table 2. Spring diurnal electrofishing CPUE of each size-class of largemouth bass collected at Kentucky Lake during May 2004.

	Inch-class									
	< 8.0 inch		8.0 - 11.9 inch		12.0 - 14.9 inch		≥ 15.0 inch		Total	
Year	CPUE	± 95% CI	CPUE	± 95% CI	CPUE	± 95% CI	CPUE	± 95% CI	CPUE	± 95% CI
1983	3.0	0.0	5.1	0.0	1.3		4.2		16.0	0.0
1984	3.3	2.2	9.2	0.0	6.3	1.4	5.8	1.6	24.6	0.0
1985	6.3	0.0	2.9	0.0	2.0		3.6		15.9	0.0
1986	12.6	3.1	12.1	4.3	10.3	3.9	10.1	2.9	45.1	10.4
1987	36.9	11.4	18.5	5.3	10.1	2.6	11.9	3.5	77.3	17.1
1988	28.9	14.5	38.6	18.6	24.2	8.6	14.3	7.5	106.1	47.4
1989	29.2	12.4	30.0	17.6	23.7	7.6	9.8	3.7	92.8	28.8
1990	6.2	3.1	27.4	6.5	12.5	3.5	14.3	3.5	60.4	11.6
1991	38.5	13.9	14.8	3.3	27.0	4.9	19.4	4.9	99.6	20.2
1992	23.4	9.0	32.4	7.6	17.7	2.7	21.9	3.7	95.4	14.7
1993	33.2	10.6	15.8	3.1	26.9	6.3	31.4	6.3	107.2	18.2
1994	21.0	5.9	25.0	6.3	19.6	3.3	18.4	3.9	84.0	11.2
1995	5.9	2.4	15.3	3.3	19.6	4.9	24.6	4.1	65.4	9.8
1996	11.9	5.1	6.9	1.8	15.6	3.5	27.0	5.1	61.2	9.0
1997	6.7	2.6	7.6	2.2	10.8	3.5	21.4	4.7	46.6	9.2
1998	17.3	3.9	8.2	2.4	9.6	3.3	10.0	3.3	44.8	7.6
1999	18.7	6.5	10.0	3.1	11.4	2.9	11.9	3.3	52.0	9.6
2000	19.4	7.5	13.4	1.8	19.0	3.5	22.5	6.9	74.4	12.2
2001	60.6	14.3	26.3	5.7	12.2	3.1	12.0	2.9	111.0	21.0
2002	32.4	10.6	26.7	4.9	21.8	4.5	12.9	2.2	93.8	11.6
2003	21.8	7.4	24.4	6.5	43.6	10.2	15.6	3.8	105.4	22.3
2004	17.7	5.1	25.1	4.5	22.7	4.2	18.1	3.6	83.6	11.3
Average	20.7		18.0		16.7		15.5		71.0	

(Kentucky/Bass/Database.xls)

Table 3. PSD and RSD values calculated for black bass species collected during spring shoreline electrofishing conducted in each area at Kentucky Lake during May 2004; 95% confidence limits are in parentheses.

Area	Species	No. Fish ≥ 8 in	PSD	(+/- 95%)	RSD[a]	(+/- 95%)
Big Bear Creek	Smallmouth bass	3	75	(+/- 49)		
	Spotted bass	12	58	(+/- 29)		
	Largemouth bass	191	67	(+/- 7)	36	(+/- 7)
Jonathan Creek	Largemouth bass	156	72	(+/- 7)	30	(+/- 7)
Blood River	Spotted bass	6	50	(+/- 44)		
	Largemouth bass	184	57	(+/- 7)	21	(+/- 6)
Sugar Bay	Smallmouth bass	10	64	(+/- 30)	36	(+/- 30)
	Spotted bass	16	44	(+/- 25)		
	Largemouth bass	129	50	(+/- 9)	19	(+/- 7)
TOTAL	Smallmouth bass	13	67	(+/- 24)	33	(+/- 25)
	Spotted bass	34	50	(+/- 17)	9	(+/- 10)
	Largemouth bass	660	62	(+/- 4)	27	(+/- 3)

[a]Largemouth bass = RSD_{15}, Spotted and Smallmouth bass = RSD_{14}

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Table 4. Population assessment determined from largemouth bass based on spring sampling at Kentucky Lake from 2000-2004.

Parameter	2004		2003		2002		2001		2000	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Length at Age 3	13.7	4	13.7	4	13.7	4	14.4	4	13.9	4
Spring CPUE of Age 1 Fish	12.0	1	30.9	2	35.5	2	73.9	4	21.8	2
Spring CPUE 12-14.9-in Fish	22.7	2	43.6	4	21.8	2	12.2	1	19.1	2
Spring CPUE ≥ 15.0-in Fish	18.1	3	15.6	3	12.9	3	12.0	2	22.5	4
Spring CPUE ≥ 20-in Fish	1.3	2	1.0	2	0.9	2	0.4	2	1.5	2
Instantaneous Mortality (z)	0.697		0.728		0.873		0.633		0.576	
Annual Mortality (A)%	50.2		51.7		58.2		46.9		43.8	
Total Score	12		15		13		13		14	
Assessment Rating	G		G		G		G		G	

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

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Table 5. Species composition, relative abundance, and CPUE (fish/hour) of black bass collected during 6.0 hours of 30-minute diurnal electrofishing runs for black bass in each area of Kentucky Lake during October 2004.

		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
Blood River	Smallmouth bass		1	6	8			3	2	1	2		2							1		26	8.7	3.5
	Spotted bass	1	6	9	3			2	1	2	3	1	1	1								30	10.0	2.8
	Largemouth bass	2	42	29	14	13	6	3	6	19	15	36	32	26	23	8	8	5				287	95.7	11.1
Jonathan	Smallmouth bass			1							1	1	1									4	1.3	0.7
	Spotted bass		6	13		1	1	2	2	3	3	7	2	1								41	13.7	4.2
	Largemouth bass		10	14	16	9	6	7	6	21	38	58	42	32	14	14	9	5	1	3	2	307	102.3	4.1
TOTAL	Smallmouth bass		1	7	8			3	2	1	3	1	3							1		30	5.0	2.0
	Spotted bass	1	12	22	3	1	1	4	3	5	6	8	3	2								71	11.8	2.5
	Largemouth bass	2	52	43	30	22	12	10	12	40	53	94	74	58	37	22	17	10	1	3	2	594	99.0	5.7

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Table 6. Number of fish and the relative weight (Wr) for each length group of black bass collected at Kentucky Lake during October 2004; standard errors are in parentheses.

Species	Area	Size Range: 8.0-11.9 in No.	Wr		12.0-14.9 in No.	Wr		≥ 15.0 in No.	Wr	
Largemouth bass	Blood River	43	96	(1.5)	94	91	(1.0)	44	94	(1.4)
	Jonathan Creek	71	95	(1.0)	132	91	(0.7)	48	96	(1.1)
	Total	114	96	(0.8)	226	91	(0.6)	92	95	(0.9)

Species		7.0-10.9 in No.	Wr		11.0-13.9 in No.	Wr		≥ 14.0 in No.	Wr	
Spotted bass	Blood River	5	104	(2.3)	5	94	(3.8)	1	88	
	Jonathan Creek	8	105	(3.7)	12	99	(2.3)	1	95	
	Total	13	105	(2.4)	17	98	(2.0)	2	92	(3.8)
Smallmouth bass	Blood River	6	90	(4.9)	4	85	(4.9)	1	67	
	Jonathan Creek				3	74	(3.1)			
	Total	6	90	(4.9)	7	80	(3.6)	1	67	

wfdwrky.d04

Table 7. Summer nocturnal electrofishing CPUE for each length group of smallmouth bass collected at Kentucky Lake.

Year	Inch Group: ≤8.0 CPUE	StdErr	8.0-11.9 CPUE	StdErr	12.0-14.9 CPUE	StdErr	≥15.0 CPUE	StdErr	Total CPUE	StdErr
1990	4.2	0.8	10.0	1.2	3.5	0.8	2.5	0.4	20.2	2.2
1991	no sample collected									
1992	17.0	5.9	16.0	30.9	4.3	0.6	3.0	0.9	40.3	8.9
1993	15.6	2.9	17.3	4.5	3.1	0.6	2.6	0.6	38.6	7.0
1994	22.0	4.1	22.7	4.1	4.0	0.9	2.7	0.8	51.4	8.0
1995	30.8	4.3	26.7	3.9	4.1	0.7	2.1	0.6	63.8	7.6
1996	54.1	14.3	21.6	5.8	2.6	0.8	1.1	0.3	79.4	18.6
1997	50.2	10.1	8.9	1.4	2.7	0.8	0.7	0.2	62.6	11.1
1998	68.5	12.5	16.8	3.7	2.3	0.5	0.3	0.2	87.9	15.4
1999	48.8	7.9	23.0	6.9	4.0	1.1	0.3	0.2	76.1	9.9
2000	67.8	8.6	7.2	1.2	2.3	0.9	0.5	0.4	77.8	9.3
2001	83.1	16.7	22.7	2.9	1.3	0.4	0.4	0.4	107.5	15.3
2002	50.7	11.6	14.5	4.0	1.5	0.5	0.5	0.4	67.2	11.5
2003	42.0	15.8	13.4	5.1	2.6	1.1	0.0	0.0	58.0	17.0
2004	20.2	4.6	10.7	2.8	1.0	0.4	0.0	0.0	31.0	5.1
Average	41.1		16.5		2.8		1.2		61.6	

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Table 8. Species composition, relative abundance, and CPUE (fish/net night) of crappie collected by trap nets fished during 116 net nights in each area of Kentucky Lake during October 2004.

		Inch Class																
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total	CPUE	StdErr
Blood River	White Crappie	2	17		25	125	41	22	23	21	16	4	1	1		298	7.5	1.1
	Black Crappie	7	16	7	181	162	84	66	83	83	42	9	3			743	18.6	1.6
Jonathan Cr.	White Crappie	7	23	3		84	101	45	38	21	14	6	1		1	344	8.6	1.2
	Black Crappie	17	14		159	914	159	272	265	83	15	1				1,899	47.5	4.9
Sledd Cr.	White Crappie	24	22	19	2	1	1	3	4	1	3					80	2.2	0.4
	Black Crappie	34	31	3	3	23	43	98	73	39	46	4				397	11.0	1.1
TOTAL	White Crappie	33	62	22	27	210	143	70	65	43	33	10	2	1	1	722	6.2	0.6
	Black Crappie	58	61	10	343	1099	286	436	421	205	103	14	3			3,039	26.2	2.3

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Table 9. CPUE for size groups of crappie collected from multiple years of trap netting on Kentucky 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	WC&BC
1985	1.7	0.8	2.5	0.5	0.4	0.9	9.0	8.4	8.4	1.2	5.4	1.6
1986	3.6	2.4	6.1	1.9	1.3	3.2	10.3	10.5	10.6	1.6	0.9	1.3
1987	8.7	1.6	10.4	4.2	0.4	4.6	10.5	9.9	10.5	1.4	1.2	1.4
1988	4.2	0.6	4.9	0.9	0.3	1.3	11.0	10.6	10.5	2.0	0.0	1.7
1989	1.8	0.2	2.0	0.9	0.0	1.0	9.3	9.4	9.9	1.2	0.0	0.9
1990	2.6	0.8	3.4	0.7	0.5	1.2	9.7	10.3	10.6	0.4	0.7	0.4
1991	5.6	0.5	6.1	1.1	0.1	1.2	9.7	8.6	9.4	0.5	0.0	0.4
1992	5.5	1.9	7.4	1.7	0.4	2.1	9.5	8.6	9.3	0.5	0.4	0.5
1993	4.7	1.8	6.5	2.7	0.8	3.5	9.0	8.6	9.7	4.7	8.7	5.6
1994	5.5	0.8	6.3	2.3	0.3	2.6	9.6	8.7	9.4	6.7	13.1	7.9
1995	3.3	1.6	4.9	1.7	0.9	2.6	10.4	9.4	9.9	2.5	2.8	2.7
1996	4.2	3.2	7.4	1.7	0.5	2.2	10.0	9.3	9.7	2.2	1.0	1.6
1997	3.3	5.5	8.8	1.6	0.7	2.3	9.6	8.5	9.0	6.5	4.5	5.2
1998	5.8	11.3	17.1	1.7	1.3	3.0	9.3	9.3	9.3	11.6	7.6	8.6
1999	2.3	12.7	15.0	1.3	1.8	3.1	9.5	8.9	9.1	11.3	8.8	9.2
2000	2.4	10.6	13.0	0.8	2.2	2.9	10.0	8.9	9.4	18.8	6.0	7.6
2001	2.2	12.6	14.8	1.3	3.2	4.5	10.8	9.3	9.8	8.7	8.3	8.3
2002	2.7	8.6	11.3	0.7	4.2	4.9	10.8	9.9	10.4	4.2	9.4	8.3
2003	2.6	6.2	8.8	1.4	1.8	3.1	10.8	9.9	10.4	5.8	4.0	4.2
2004	2.7	11.7	14.4	1.1	3.0	4.1	10.8	9.2	9.7	0.8	0.8	0.8
Average	3.8	4.8	8.6	1.5	1.2	2.7	10.0	9.3	9.8	4.6	4.2	3.9

(Kentucky_Crappie_Database.xls)

Table 10. Proportional stock density (PSD) and relative stock density (RSD10) of white and black crappie collected by trap-nets (116 net-days) at Kentucky Lake during October.

Location	Species	N	PSD	RSD10
Blood River				
	White Crappie	279	31 (± 5)	15 (± 4)
	Black Crappie	713	40 (± 4)	19 (± 3)
Jonathan Creek				
	White Crappie	311	41 (± 6)	14 (± 4)
	Black Crappie	1,868	34 (± 2)	5 (± 1)
Sledd Creek				
	White Crappie	15	73 (± 23)	27 (± 23)
	Black Crappie	329	79 (± 4)	27 (± 5)
Total				
	White Crappie	605	37 (± 4)	15 (± 3)
	Black Crappie	2,910	41 (± 2)	11 (± 1)

Table 11. Mean back-calculated length (in) at each annulus of white crappie collected by fishing trap nets for 116 net days at Kentucky Lake during October 2004.

		Age							
Year-Class	N	1	2	3	4	5	6	7	8
2003	75	4.6							
2002	26	4.4	8.3						
2001	22	4.8	7.9	10.1					
1998	2	4.5	6.9	8.4	9.5	10.6	11.5		
1996	2	4.2	6.6	8.9	10.2	11.5	12.4	13.4	14.4
Mean		4.6	8.0	9.8	9.8	11.0	11.9	13.4	14.4
Number		127	52	26	4	4	4	2	2
Smallest		2.9	5.3	7.5	8.2	9.1	9.9	13.1	14.3
Largest		7.8	10.5	11.4	10.7	12.1	13.2	13.7	14.5
Std. Error		0.1	0.1	0.2	0.6	0.7	0.8	0.3	0.1
Low 95% CI		4.4	7.7	9.5	8.7	9.7	10.4	12.8	14.3
High 95% CI		4.7	8.3	10.1	10.9	12.4	13.4	14.0	14.6

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

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Table 12. Mean back-calculated length (in) at each annulus of black crappie collected by fishing trap nets for 116 net days at Kentucky Lake during October 2004.

		Age									
Year-Class	N	1	2	3	4	5	6	7	8	9	10
2003	66	4.1									
2002	75	3.8	7.3								
2001	32	4.3	7.6	9.6							
2000	1	3.2	4.9	7.9	9.8						
1999	4	4.7	7.8	9.8	11.0	11.8					
1997	3	4.6	6.9	8.4	9.6	10.7	11.5				
1994	1	4.0	6.6	7.9	8.9	9.5	9.8	10.1	10.6	11.1	11.5
Mean		4.1	7.4	9.4	10.2	11.1	11.1	10.1	10.6	11.1	11.5
N		182	116	41	9	8	4	1	1	1	1
Smallest		2.7	4.9	7.8	8.9	9.5	9.8				
Largest		7.3	9.2	11.3	11.6	12.4	12.5				
Std. Error		0.1	0.1	0.1	0.3	0.4	0.6				
Low 95% CI		4.0	7.2	9.2	9.6	10.4	10.0				
High 95% CI		4.2	7.5	9.7	10.8	11.8	12.2				

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

wfdtnagk.d04

Table 13. Age frequencies and CPUE of white crappie collected in trap nets fished for 116 net days in Kentucky Lake during Ocotber 2004. Age data was obtained using otoliths.

	Inch Class																	
Age	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total	%	CPUE	StdErr
0	33	62	22	8											125	17.3	1.08	0.18
1				19	210	143	63	46	18	1					500	69.3	4.32	0.51
2							7	19	9	16	5				56	7.8	0.48	0.07
3									14	16	5	1			36	5.0	0.30	0.05
6									2			1			3	0.4	0.03	0.01
8													1	1	2	0.3	0.02	0.01
Total	33	62	22	27	210	143	70	65	43	33	10	2	1	1	722			
%	5	9	3	4	29	20	10	9	6	5	1	0	0	0		100		

wfdtpntk.d04, wfdtnagk.d04

Table 14. Age frequencies and CPUE of black crappie collected in trap nets fished for 116 net days in Kentucky Lake during Ocotber 2004. Age data was obtained using otoliths.

	Inch Class															
Age	2	3	4	5	6	7	8	9	10	11	12	13	Total	%	CPUE	StdErr
0	58	61	3	25									147	4.8	1.27	0.16
1			7	318	1,038	169	201	84	16	3			1,836	60.4	15.84	1.84
2					61	117	235	303	110	42	2		870	28.6	7.50	0.66
3								34	79	42	8		163	5.4	1.40	0.13
4										4			4	0.1	0.03	0.00
5											4	2	6	0.2	0.05	0.02
6										8		1	9	0.3	0.07	0.01
10										4			4	0.1	0.03	0.00
Total	58	61	10	343	1,099	286	436	421	205	103	14	3	3,039			
%	2	2	0	11	36	9	14	14	7	3	0	0		100		

wfdtpntk.d04, wfdtnagk.d04

Table 15. Population assessment determined from crappie based on fall trap netting at Kentucky Lake from 2000-2004, table 15a - white crappie and table 15b - black crappie.

	2004		2003		2002		2001		2000	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
CPUE of crappie (excluding age 0)	39.43	4	24.08	4	18.98	3	26.50	4	21.44	3
CPUE of age 1 crappie	24.80	4	17.86	4	13.10	4	12.01	4	8.56	3
CPUE of age 0 crappie	1.63	1	15.86	4	3.77	2	51.28	4	1.75	1
CPUE of crappie ≥ 8 inches	14.38	4	8.75	3	11.34	4	14.76	4	12.96	4
Mean age-2 length at capture	9.7	4	10.4	4	10.4	4	9.8	4	9.4	3
Instantaneous Mortality (Z)	0.649		0.709		0.673		0.836		0.885	
Annual Mortality (A)%	47.7		50.8		49.0		56.7		58.7	
Total Score		17		19		17		20		14
Assessment Rating		G		E		G		E		G

Table 15-a. White Crappie

	2004		2003		2002		2001		2000	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
CPUE of crappie (excluding age 0)	7.38	2	3.75	1	3.85	1	3.91	1	2.80	1
CPUE of age 1 crappie	6.20	2	2.34	1	3.30	2	2.34	1	1.01	1
CPUE of age 0 crappie	0.65	1	10.46	4	0.71	1	26.76	4	0.45	1
CPUE of crappie ≥ 8 inches	2.71	2	2.55	2	2.74	2	2.21	2	2.38	2
Mean age-2 length at capture	10.8	4	10.8	4	10.8	4	10.8	4	10.0	4
Instantaneous Mortality (Z)	0.517		0.255		0.360		0.226		0.423	
Annual Mortality (A)%	40.4		22.5		43.3		20.3		34.5	
Total Score		11		12		10		12		9
Assessment Rating		F		F		F		F		F

Table 15-b. Black Crappie

	2004		2003		2002		2001		2000	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
CPUE of crappie (excluding age 0)	32.05	4	20.33	3	15.14	3	22.59	4	18.63	3
CPUE of age 1 crappie	18.60	4	15.53	4	9.80	3	9.67	3	7.56	3
CPUE of age 0 crappie	0.98	1	5.40	2	3.06	2	24.52	4	1.31	1
CPUE of crappie ≥ 8 inches	11.67	4	6.20	3	8.60	3	12.55	4	10.57	3
Mean age-2 length at capture	9.20	3	9.90	4	9.90	4	9.30	3	8.90	2
Instantaneous Mortality (Z)	0.685		0.748		0.716		0.915		0.917	
Annual Mortality (A)%	49.6		52.7		51.1		60.0		60.0	
Total Score		16		16		15		18		12
Assessment Rating		G		G		G		E		G

Rating

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

WFDTPNTK.D04, WFDTPNTK.D03, WFDTPNTK.D02, WFDTPNTK.D01, WFDTPNTK.D00

Table 16. Annual mortality (A) and CPUE of five year classes estimated from crappie captured in trap nets at Kentucky Lake during October 2003 and 2004.

Year Class	Age Intervals	CPUE (2003)	CPUE (2004)	Mortality of Cohort (%)
2002	1+ - 2+	11.98	1.56	33
2001	2+ - 3+	3.48	2.34	33
2000	3+ - 4+	1.56	0.08	95
1999	4+ - 5+	0.65	0.10	85
1998	5+ - 6+	0.36	0.18	52

WFDTPNTK.D03, WFDTNAGK.D03, WFDTPNTK.D04, WFDTNAGC.D04

Table 17. Age frequencies and CPUE of redear sunfish collected in trap nets fished for 87 net days in Kentucky Lake during Ocotber 2004. Age data was obtained using otoliths.

	Inch Class													
Age	2	3	4	5	6	7	8	9	10	11	Total	%	CPUE	StdErr
0	4	12									16	25.4	0.18	0.08
1			1	8							9	14.3	0.10	0.03
2					4	3	1				8	12.7	0.09	0.02
3						6	2	4			12	19.0	0.15	0.03
4						4	3		2		9	14.3	0.10	0.02
5						3	3				6	9.5	0.07	0.01
6								2			2	3.2	0.02	0.01
Total	4	12	1	8	4	16	9	6	2	1	63			
%	6	19	2	13	6	25	14	10	3	2		100		

wfdtpntk.d04, wfdreagk.d04

Table 18. Mean back-calculated length (in) at each annulus of redear sunfish collected in trap nets fished for 87 net days at Kentucky Lake during October 2004.

		Age					
Year-Class	N	1	2	3	4	5	6
2003	3	3.3					
2002	4	3.7	6.0				
2001	9	3.8	6.2	7.7			
2000	8	4.0	5.9	7.3	8.1		
1999	5	3.6	5.6	6.4	7.0	7.4	
1998	1	3.2	6.2	7.3	8.3	8.8	9.2
Mean		3.7	6.0	7.3	7.7	7.7	9.2
Number		30	27	23	14	6	1
Smallest		3.0	5.0	5.8	6.2	6.6	
Largest		4.8	7.0	8.9	10.0	8.8	
Std. Error		0.1	0.1	0.2	0.3	0.4	
Low 95% CI		3.5	5.8	6.9	7.2	7.0	
High 95% CI		3.9	6.2	7.6	8.3	8.4	

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

wfdreagk.d04

Table 19. Length frequency and CPUE (fish/trotline) of blue and channel catfish collected from Kentucky Lake in May 2004 using 5 100-hook trotlines baited with green sunfish for 3 line nights.

	Inch-Class																														Std.
Species	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	Total	CPUE	Error
Blue catfish	1	2		2	2	2	6	11	15	13	14	15	9	8	8	1	2	1		1	1						1	115	7.7	1.2
Channel catfish		3	1	2	5	2	1	10	12	11	14	12	6	7	2	2												90	5.9	1.0

(wfdcftl.d04)

Table 20. Relative weight (Wr) of each length-class of blue and channel catfish collected at Kentucky Lake during May 2004. Fish were collected using trotlines (totaling 15 trotline-nights).

	12.0 - 19.9 in.			20.0 - 29.9 in.			≥ 30.0 in.			Total		
Species	N	Wr	Std. Error	N	Wr	Std. Error	N	Wr	Std. Error	N	Wr	Std. Error
Blue Catfish	9	110.1	9.38	100	110.2	1.6	6	116.4	3.26	115	110.5	1.56
	11.0 - 15.9 in.			16.0 -23.9 in.			≥ 24.0 in.			Total		
	N	Wr	Std. Error	N	Wr	Std. Error	N	Wr	Std. Error	N	Wr	Std. Error
Channel Catfish	3	109.4	9.92	44	109.3	2.58	42	99.7	1.94	89	104.8	1.66

wfdcftlk.d04

Table 21. Mean back-calculated length (in.) at each annulus of blue catfish collected by trotline for 15 line-nights at Kentucky Lake during May 2004, including the range in length of channel catfish at each age and the 95% confidence interval of each age group.

		Age									
Year-Class	N	1	2	3	4	5	6	7	8	9	10
2001	2	6.0	11.9	16.1							
2000	9	6.5	11.5	15.4	20.0						
1999	14	6.0	10.6	14.5	17.9	21.8					
1998	17	6.1	10.4	14.7	18.2	21.4	25.0				
1997	8	5.6	10.2	14.8	18.1	21.2	23.8	26.9			
1996	3	4.8	8.9	13.3	17.2	21.2	24.0	26.5	28.9		
1995	1	4.6	7.9	13.2	16.5	20.5	23.1	26.4	29.7	33.0	
1994	1	5.5	11.0	15.7	18.1	20.4	23.6	26.0	28.3	32.2	34.6
Mean		5.9	10.5	14.7	18.3	21.5	24.5	26.7	29.0	32.6	34.6
Number		55	55	55	53	44	30	13	5	2	1
Smallest		2.7	5.3	9.0	12.7	15.9	21.4	24.5	27.6	32.2	
Largest		10.4	15.4	19.3	23.5	25.3	27.6	28.8	30.5	33.0	
Std. Error		0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.4	
Low 95% CI		5.6	10.0	14.2	17.8	20.9	23.9	26.0	28.0	31.9	
High 95% CI		6.3	11.1	15.3	18.8	22.0	25.0	27.4	30.0	33.4	

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

wfdcflik.d04

Table 22. Age frequencies and CPUE of blue catfish collected from Kentucky Lake in May 2004 using 5 100-hook trotlines baited with green sunfish for 3 line nights. Age data was obtained using otoliths.

	Inch Class																				
Age	15	16	17	18	19	20	21	22	23	24	25	26	27	28	30	33	34	Total	%	CPUE	StdErr
3	1																	1	0.9	0.1	0.1
4			2	2	2	2	4		3									15	13.5	1.0	0.3
5	1					5	4	15	3	2	2							32	28.8	2.1	0.4
6							2		8	9	11	9	3					42	37.8	2.8	0.5
7										2	2		4	5				13	11.7	0.9	0.2
8													1	3	2			6	5.4	0.4	0.1
9																1		1	0.9	0.1	0.1
10																	1	1	0.9	0.1	0.1
Total	2	0	2	2	2	7	10	15	14	13	15	9	8	8	2	1	1	111			
%	2	0	2	2	2	6	9	14	13	12	14	8	7	7	2	1	1		100		

wfdcflik.d04, wfdcfagk.d04

Table 23. Mean back-calculated length (in.) at each annulus of channel catfish collected by trotline for 15 line-nights at Kentucky Lake during May 2004, including the range in length of channel catfish at each age and the 95% confidence interval of each age group.

		Age								
Year-Class	N	1	2	3	4	5	6	7	8	9
2001	2	7.4	11.9	16.8						
2000	2	5.6	11.2	14.8	18.8					
1999	3	7.1	11.9	15.9	19.1	21.8				
1998	19	5.9	10.6	14.2	17.2	20.5	23.5			
1997	7	5.1	8.2	11.5	14.5	17.5	20.1	23.0		
1996	6	5.0	8.1	10.9	13.5	16.1	18.3	20.2	22.7	
1995	3	4.5	8.6	11.2	13.5	16.2	18.6	20.8	22.6	24.9
Mean		5.7	9.9	13.3	16.1	19.0	21.5	21.6	22.6	24.9
Number		42	42	42	40	38	35	16	9	3
Smallest		2.3	5.0	7.3	9.5	11.8	13.4	15.1	16.4	17.7
Largest		9.5	14.2	17.9	20.9	24.4	27.7	28.0	27.1	30.1
Std. Error		0.2	0.4	0.5	0.5	0.6	0.7	1.1	1.3	3.7
Low 95% CI		5.2	9.2	12.4	15.1	17.9	20.3	19.5	20.1	17.6
High 95% CI		6.2	10.6	14.2	17.1	20.1	22.8	23.6	25.2	32.2

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

wfdcftlk.d04

Table 24. Age frequencies and CPUE of channel catfish collected from Kentucky Lake in May 2004 using 5 100-hook trotlines baited with green sunfish for 3 nights. Age data was obtained using otoliths.

	Inch Class																	
Age	15	16	17	18	19	20	21	22	23	24	25	26	27	28	Total	%	CPUE	StdErr
3	3		1												4	4.5	0.2	0.1
4				3	1										4	4.5	0.2	0.1
5					1			3	4						8	9.1	0.5	0.1
6							4	9	7	10	6	2	4		42	47.7	3.1	0.5
7		1		2			3				3	3		2	14	15.9	0.9	0.3
8			1			1	3			4	3		2		14	15.9	0.8	0.2
9												2			2	2.3	0.1	0.0
Total	3	1	2	5	2	1	10	12	11	14	12	7	6	2	88			
%	3	1	2	6	2	1	11	14	13	16	14	8	7	2		100		

wfdcftlk.d04, wfdcfagk.d04

Table 25. Fishery statistics derived from a creel survey at Kentucky Lake (51,000 a) from 1 March through 31 October 2004.

Fishing Trips		
No. of fishing trips (per acre)	376,210	(7.4)
Fishing Pressure		
Total angler-hours (S.E.)	1,351,675	(44,765)
Angler-hours/acre	26.5	
Catch / Harvest		
No. of fish caught (S.E.)	1,629,699	(128,615)
No. of fish harvested (S.E.)	670,166	(66,162)
Lb of fish harvested	469,215	
Harvest Rates		
Fish/hour	0.48	
Fish/acre	13.14	
Pounds/acre	9.20	
Catch Rates		
Fish/hour	1.24	
Fish/acre	31.95	
Miscellaneous Characteristics (%)		
Male	83.11	
Female	16.89	
Resident	55.27	
Non-resident	44.73	
Method (%)		
Still fishing	30.77	
Casting	40.16	
Trolling	1.38	
Fly Rod	0.10	
Spider Rig	5.21	
Crappie Casting	7.93	
Crappie Still fishing	14.44	
Mode (%)		
Boat	87.29	
Bank	8.30	
Dock	4.41	

Table 26. Fish harvest statistics derived from a creel survey at Kentucky Lake (51,000 a) from 1 March - 31 October 2004.

	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	Yellow perch
No. caught	393,577	344,737	35,118	13,722	355,473	238,276	117,197	69,731	50,798	2,091	16,615	227	610,456	499,850	54,190	50,077	3,382	2,957	8,179	10244
(per acre)	(7.72)	(6.76)	(0.69)	(0.27)	(6.97)	(4.67)	(2.30)	(1.37)	(1.00)	(0.04)	(0.33)	t	(11.97)	(9.80)	(1.06)	(0.98)	(0.07)	(0.06)	(0.16)	(0.20)
No. harvested	31,236	27,256	2,930	1,050	190,805	128,716	62,089	55,206	42,129	1,590	11,259	227	333,850	272,598	46,930	11,578	473	2,271	1,605	4,944
(per acre)	(0.61)	(0.53)	(0.06)	(0.02)	(3.74)	(2.52)	(1.22)	(1.08)	(0.83)	(0.03)	(0.22)	t	(6.55)	(5.35)	(0.92)	(0.23)	(0.01)	(0.05)	(0.03)	(0.10)
% of total no. harvested	4.66	4.07	0.44	0.16	28.47	19.21	9.26	8.24	6.29	0.24	1.68	0.03	49.82	40.68	7.00	1.73	0.07	0.34	0.24	0.74
Lb. harvested	69,080	61,277	6,891	912	149,572	102,457	47,115	131,748	89,501	4,475	37,632	140	90,596	63,826	25,110	1,376	113	172	1,581	1,739
(per acre)	(1.36)	(1.20)	(0.14)	(0.02)	(2.93)	(2.01)	(0.92)	(2.58)	(1.76)	(0.09)	(0.74)	t	(1.78)	(1.25)	(0.49)	(0.03)	t	t	(0.03)	(0.03)
% of total lb. harvested	14.72	13.06	1.47	0.19	31.88	21.84	10.04	28.08	19.07	0.95	8.02	0.03	19.31	13.60	5.35	0.29	0.02	0.04	0.34	0.37
Mean length (in)		16.2	17.4	12.8		11.7	11.2		19.5	20.3	20.7	11.0		7.1	9.2	5.8	6.9	5.6	15.0	9.3
Mean weight (lb)		2.21	2.50	0.90		0.78	0.77		2.37	3.59	3.30	0.56		0.22	0.55	0.12	0.24	0.13	1.08	0.38
No. of fishing trips for that species	125,359				118,696			40,059					67,335						619	
% of all trips	33.3				31.6			10.6					17.9						0.2	
Hours fished for that species	450,399				426,460			143,926					241,925						2,225	
(per acre)	(8.83)				(8.36)			(2.82)					(4.74)						(0.04)	
No. harvested fishing for that species	28,698				187,488			41,511					290,168						349	
Lb harvested fishing for that species	63,959				146,640			103,639					78,920						301	
No./hour harvested fishing for that species	0.06				0.47			0.34					1.35						0.14	
% success fishing for that species	12.7				47.6			35.8					44.8						50.0	

t = < 0.005

Table 26 (cont'd.). Fish harvest statistics derived from a creel survey at Kentucky Lake (51,000 a) from 1 March-31 October 2004.

	Morone Group	White bass	Striped bass	Yellow bass	Hybrid Striped bass	Pickerel	Drum	Skipjack herring	Shad	Gar	Golden shiner	Illegal bass	Illegal H. striped bass	Illegal Bl. Crappie	Illegal Wh Crappie	Hybrid sunfish	Anything
No. caught	**139,378**	37,586	2,489	99,078	225	1,144	29,563	7,350	269	397	1,511	880	121	949	422	55	
(per acre)	**(2.73)**	(0.74)	(0.05)	(1.94)	t	(0.02)	(0.58)	(0.14)	(0.01)	(0.01)	(0.03)	(0.02)	t	(0.02)	(0.01)	t	
No. harvested	**46,842**	17,979	849	28,015			1,341	1,307			672	880	121	949	354	55	
(per acre)	**(0.92)**	(0.35)	(0.02)	(0.55)			(0.03)	(0.03)			(0.01)	(0.02)	t	(0.02)	(0.01)	t	
% of total no. harvested	**6.99**	2.68	0.13	4.18			0.20	0.20			0.10	0.13	0.02	0.14	0.05	0.01	
Lb. harvested	**21,737**	12,985	1,904	6,848			1,444	254				927.2	104.40	300.8	132.4		
(per acre)	**(0.43)**	(0.26)	(0.04)	(0.13)			(0.03)	(0.01)				(0.02)	t	(0.01)	t		
% of total lb. harvested	**4.63**	2.77	0.41	1.46			0.31	0.05				0.20	0.02	0.06	0.03		
Mean length (in)		11.7	17.9	8.4			14.1	9.5			8.3	12.4	12.0	9.0	9.0	8.0	
Mean weight (lb)		0.70	2.36	0.23			1.36	0.32				0.97	0.86	0.32	0.37		
No. of fishing trips for that species	**5,848**																**18,295**
% of all trips	**1.6**																**4.9**
Hours fished for that species	**21,010**																**65,730**
(per acre)	**(0.41)**																**(1.29)**
No. harvested fishing for that species	**24,974**																
Lb harvested fishing for that species	**13,867**																
No./hour harvested fishing for that species	**1.56**																
% success fishing for that species	**55.1**																**19.4**

t = < 0.005

Table 27. Length distribution for each species of fish harvested or released (lengths of released fish are estimated) at Kentucky Lake (51,000 a) from the 1 March to 31 October 2004 creel survey.

Species		Inch Class																							
		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									24,941	41,862	37,559	13,595	6,064	4,304	391										
	R		586	4,021	6,702	19,435	16,084	23,875	32,670	2,955	1,200	1,200	92	369	92		276									
Black crappie	H									16,985	27,956	12,922	3,657	568												
	R		218	1,817	2,689	9,738	3,997	14,098	18,385	1,008	1,814	1,075	134	134												
Largemouth bass	H														9,788	9,198	4,304	2,363	759	506	253		84			
	R							9,392	3,795	32,730	8,918	73,998	54,171	76,559	18,968	16,736	9,738	5,376	2,840	2,333	1,014	507	203	203		
Smallmouth bass	H														756	473	567	378	473	189	94					
	R							3,772	922	6,454	1,593	6,790	3,437	3,939	1,512	1,482	556	834	463	648	93			92		
Spotted bass	H										350	210	280	140	70											
	R							892	89	3,034	982	3,034	2,231	1,785	268	178	89			89						
Bluegill	H		112	447	3,356	44,855	120,136	96,422	7,270																	
	R	201	6,634	34,274	89,353	60,708	25,228	10,453	401																	
Redear sunfish	H					627	3,012	10,164	13,552	13,301	5,270	1,004														
	R		421	736	842	1,789	1,263	947	736	421	104															
Longear sunfish	H				2,977	7,829	771																			
	R		4,058	8,808	20,882	4,652		98																		
Warmouth	H				95	95	95	95	93																	
	R		94	751	1,032	469	469	94																		
Green sunfish	H		395	296	889	494	196																			
	R			392	196	98																				
Channel catfish	H										104	1,556	1,660	3,009	3,009	3,736	3,632	4,358	2,179	3,424	3,528	2,490	2,594	3,528	1,141	830
	R			97	97	877	97	1,948	584	779	97	779	195	195	97	292	487	487	195	390		390	195	292	98	
Blue catfish	H								75	300	150	75	375	375	150	600	826	751	225	751	826	1,051	1,126	1,801	300	751
	R					1,488		818	521	893		372	149	74	149			74				149	74	372		74
Flathead catfish	H													454		114	114	114	114	114		227	114			
	R					83		83				83						83						83		
Bullhead	H									57	57	57	56													
White bass	H						415	1,452	622	1,314	1,176	6,085	4,979	1,452	415					69						
	R		64	1,086	447	3,960	2,746	4,471	2,108	2,363	511	1,150	319	192	64			64	62							
Striped bass	H														141	71	212	141	71	71		141				
	R							117			117	233	117	232	206	69	137			137		69		69		
Hybrid striped bass	R							55						54	115											
Yellow bass	H					697	2,282	12,423	7,859	2,535	1,204	1,014														
	R	71	71	1,277	4,043	18,014	8,440	22,411	10,213	5,248	851	284	140													
Sauger	H													903	301	201	200									
	R			191	191	669	96	478		860	191	860	1,812	536	383	153	152									
Yellow perch	H					115	115	575	2,644	1,265	229															
	R		98	393	589	1,178	196	1,963	98	589	98	98														
Pickerel	R											114	114					229		458				114		115
Drum	H							96	96	96	192	287		96	96	96	96					96				
	R			79	79	629	393	2,516	629	2,280	314	3,538	1572	1,965	2,751	1,965	1,572	2,516	79	1,965	393	865	79	1,101	157	393
Skipjack herring	H			475				713			59				59											
	R	57		171	57	1,539	114	570	285	798	114	1,083	228	342	114	399	57	57	58							
Gar	R																			132						
Sturgeon	R						269																			
Golden shiner	H							121	120																	
Other species	H						291	97	96																	
	R						140		699																	
Illegal Black bass	H								88		88	176	264	263												
Illegal H. Striped bass	H											120														
Illegal B.Crappie	H								948																	
Illegal W.Crappie	H							67	354																	

Table 27 (cont'd). Length distribution for each species of fish harvested or released (lengths of released fish are estimated) at Kentucky Lake (51,000 a) from the 1 March to 31 October 2004 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																						128,716
	R																						109,559
Black crappie	H																						62,088
	R																						55,107
Largemouth bass	H																						27,255
	R																						317,481
Smallmouth bass	H																						2,930
	R																						32,187
Spotted bass	H																						1,050
	R																						12,671
Bluegill	H																						272,598
	R																						227,252
Redear sunfish	H																						46,930
	R																						7,259
Longear sunfish	H																						11,577
	R																						38,498
Warmouth	H																						473
	R																						2,909
Green sunfish	H																						2,270
	R																						686
Channel catfish	H	1,038		208			105																42,129
	R																						8,668
Blue catfish	H	375	150	75	75	76																	11,259
	R		74		75																		5,356
Flathead catfish	H	114				111																	1,590
	R										85												500
Bullhead	H																						227
White bass	H																						17,979
	R																						19,607
Striped bass	H																						848
	R	69	67																				1,639
Hybrid striped bass	R																						224
Yellow bass	H																						28,014
	R																						71,063
Sauger	H																						1,605
	R																						6,572
Yellow perch	H																						4,943
	R																						5,300
Pickerel	R																						1,144
Drum	H		93																				1,340
	R		157		234																		28,221
Skipjack herring	H																						1,306
	R																						6,043
Gar	R		132																			133	397
Shad	R																						269
Golden shiner	H																						241
Other species	H																						464
	R																						839
Illegal B. bass	H																						879
Illegal H. Striped bass	H																						120
Illegal B.Crappie	H																						948
IllegalW.Crappie	H																						421

Table 28. Black bass catch and harvest statistics derived from the 1 March to 31 October 2004 creel survey at Kentucky Lake (51,000 a).

	Largemouth bass				Smallmouth bass				Spotted bass			
	Harvest	Catch & release		Total	Harvest	Catch & release		Total	Harvest	Catch & release		Total
Inches		12-14.9	≥15			12-14.9	≥15			12-14.9	≥15	
Total no. of bass	27,256	204,728	57,918	344,737	2,930	14,166	5,281	35,118	1,050	7,050	625	13,722
% of bass harvested by no.	87.3				9.4				3.4			
Total weight of bass (lb)	61,277	193,454	134,955	441,501	6,891	9,212	13,056	37,446	912	5,229	464	10,311
% of bass harvested by weight	88.7				10.0				1.3			
Mean length(in)	16.2				17.4				12.8			
Mean weight(lb)	2.21				2.50				0.90			
Rate (f/hr)	0.023				0.002				0.001			

Table 29. Monthly black bass angling success at Kentucky Lake during the 2004 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	15,331	2,824	7,771	27,919	11,698	0.34	2,362	0.07
Apr	63,101	5,440	20,340	73,079	55,174	0.64	5,129	0.06
May	113,525	6,166	29,633	106,468	107,118	0.81	5,441	0.04
Jun	101,225	6,925	32,617	117,188	96,511	0.67	6,483	0.05
Jul	21,465	2,422	9,580	34,421	20,388	0.50	2,422	0.06
Aug	20,217	1,301	5,532	19,877	15,448	0.70	921	0.04
Sept	29,859	3,024	8,828	31,720	26,559	0.67	3,024	0.08
Oct	28,856	3,134	11,057	39,728	27,027	0.62	2,916	0.07
Total	393,577	31,236	125,359	450,399	359,923		28,698	
Mean						0.64		0.06

Table 30. Monthly crappie angling success at Kentucky Lake during the 2004 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	53,542	27,145	21,918	78,749	52,274	0.70	26,627	0.36
Apr	166,766	106,463	66,105	237,506	166,611	0.71	106,307	0.45
May	37,963	17,772	11,986	43,066	34,458	0.89	16,201	0.42
Jun	8,841	2,947	2,940	10,563	6,924	1.04	2,799	0.42
Jul	7,334	1,817	918	3,297	6,661	2.40	1,547	0.56
Aug	7,480	813	916	3,293	6,450	1.60	597	0.15
Sept	35,248	13,087	5,353	19,232	34,094	1.93	12,868	0.73
Oct	38,300	20,760	8,559	30,753	37,690	1.26	20,542	0.69
Total	355,473	190,804	118,695	426,459	345,162		187,488	
Mean						0.93		0.47

Table 31. Crappie catch and harvest statistics derived from the 1 March to 31 October 2004 creel survey at Kentucky Lake (51,000 a).

	White Crappie				Black Crappie			
	Harvested	Caught & released		Total	Harvested	Caught & released		Total
		8-9.9 in	≥ 10 in			8-9.9 in	≥ 10 in	
Total no. of crappie	128,716	56,545	6,186	238,276	62,089	32,484	4,165	117,197
% of crappie harvested by number	67.5				32.5			
Total weight of crappie (lb)	102,457	9,074	4,369	123,413	47,115	6,554	3,132	60,526
% of crappie harvested by weight	68.5				31.5			
Mean length (in)	11.7				11.2			
Mean weight (lb)	0.78				0.77			
Rate (f/hr)	0.30				0.15			

Table 32. Monthly panfish angling success at Kentucky Lake during the 2004 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	3,227	1,787	911	3,273	520	0.27	231	0.12
Apr	62,634	36,524	6,393	22,968	35,279	1.96	26,576	1.48
May	341,906	209,157	32,630	117,235	291,853	2.79	188,846	1.81
Jun	109,329	55,401	15,527	55,788	91,795	1.88	49,065	1.01
Jul	30,548	8,949	3,891	13,980	23,886	2.30	8,074	0.78
Aug	29,377	11,707	4,141	14,877	24,661	2.15	10,407	0.91
Sept	19,246	2,969	2,477	8,899	11,329	2.26	1,485	0.30
Oct	14,188	7,355	1,366	4,906	9,793	3.17	5,484	1.78
Total	610,456	333,850	67,335	241,925	489,116		290,168	
Mean						2.41		1.35

Table 33. Monthly catfish angling success at Kentucky Lake during the 2004 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	519	346	482	1,733	231	0.16	231	0.16
Apr	5,595	5,284	3,196	11,484	1,243	0.27	1,243	0.27
May	26,719	22,367	14,761	53,035	20,431	0.42	17,409	0.36
Jun	16,945	12,819	10,566	37,962	11,049	0.36	9,724	0.32
Jul	5,787	4,105	4,698	16,881	4,979	0.35	3,566	0.25
Aug	2,710	2,276	2,206	7,926	2,276	0.26	1,951	0.22
Sept	8,193	5,224	3,116	11,195	7,314	0.66	4,949	0.44
Oct	3,264	2,785	1,032	3,710	2,612	0.70	2,438	0.65
Total	69,731	55,205	40,058	143,926	50,135		41,511	
Mean						0.43		0.34

Table 34. Monthly *Morones* angling success at Kentucky Lake during the 2004 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	12,103	4,092	161	578	461	1.51		
Apr	23,158	3,730						
May	7,012	4,111	555	1,994	3,385	1.70	3,264	1.64
Jun	16,797	3,978	1,654	5,942	5,304	1.46	1,768	0.49
Jul	20,253	10,699	1,542	5,539	11,844	1.71	10,632	1.53
Aug	13,767	8,618	984	3,536	7,045	3.10	5,582	2.46
Sept	21,610	5,609	719	2,583	6,544	3.73	2,640	1.50
Oct	24,677	6,006	233	838	1,654	2.50	1,088	1.64
Total	139,378	46,842	5,848	21,010	36,237		24,974	
Mean						2.24		1.56

Table 35. Monthly sauger angling success at Kentucky Lake during the 2004 creel survey.

Month	Total no. of sauger caught	Total no. of sauger harvested	No. of sauger fishing trips	Hours fished by sauger anglers	Sauger caught by sauger anglers	Sauger caught/ hour by sauger anglers	Sauger harvested by sauger anglers	Sauger harvested/ hour by sauger anglers
Mar								
Apr	1,865	155						
May	967	363						
Jun	3,094	737	551	1,981	1,179	0.50	295	0.13
Jul	269	67						
Aug	217	54	68	244	54	0.21	54	0.21
Sept	330	55						
Oct	1,436	174						
Total	8,178	1,605	619	2,225	1,233		349	
Mean						0.43		0.14

Table 36. PSD and RSD values obtained 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 26-29 April 2004. 95% confidence intervals are in parentheses. (wfdpsdb.d04)

Area	Species	No. fish ≥ 8.0 inch	PSD (± 95% CI)	RSD[A] (± 95% CI)
Upper[1]	Largemouth bass	189	55 (7)	19 (5)
	Spotted bass	19	58 (23)	5 (10)
	Smallmouth bass	1	*	*
Middle[2]	Largemouth bass	469	61 (4)	30 (4)
	Spotted bass	5	20 (39)	*
	Smallmouth bass	2	*	*
Lower[3]	Largemouth bass	291	52 (6)	24 (5)
	Spotted bass	4	50 (56)	*
	Smallmouth bass	0		
Total	Largemouth bass	949	57 (3)	26 (2)
	Spotted bass	28	50 (11)	4 (7)
	Smallmouth bass	3	*	*

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

[1] Upper Lake Barkley samples consisted of Demumbers Bay, Nickel Branch, and Willow Creek.

[2] Middle Lake Barkley samples consisted of Little River and Eddy Creek.

[3] Lower Lake Barkley samples consisted of Donaldson Creek, Fords Bay, and Terrapin Creek.

* No fish of sufficient size were collected during sampling.

Table 37. Species composition, relative abundance, and CPUE (fish/hour) of black bass collected during 10.0 hours of diurnal electrofishing (20 runs; each 0.50 hours) in each area of Lake Barkley from 26-29 April 2004. (wfdpsdb.d04)

Area	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	22			
Upper																								
Nickel Branch	Largemouth bass				2	2	5	7	2	2	2	10	4	2		1	1		2			42	84.0	0.0
	Spotted bass						2	1														3	6.0	0.0
	Smallmouth bass								1													1	2.0	0.0
Willow Creek	Largemouth bass			2			2	8	13	3	5	4	10	3	2	2		1				55	110.0	0.0
	Spotted bass						1	2		1												4	8.0	0.0
	Smallmouth bass																					0	0.0	0.0
Demumbers Bay	Largemouth bass		1	8	6	3	10	14	12	7	5	10	18	9	5	3	3		2			116	77.3	6.4
	Spotted bass		1	1			1		1	2	6	1	1									14	9.3	8.4
	Smallmouth bass			1																		1	0.7	0.7
Middle																								
Little River	Largemouth bass			13	15	5	14	33	45	5	19	27	21	25	17	15	5	3	2	3		267	106.8	11.0
	Spotted bass					1	1		1													3	1.2	1.2
	Smallmouth bass								1													1	0.4	0.4
Eddy Creek	Largemouth bass		1	8	9	5	9	29	27	21	18	29	32	26	15	8	13	5	1	2		258	103.2	6.3
	Spotted bass							1			1											2	0.8	0.8
	Smallmouth bass						1															1	0.4	0.4
Lower																								
Donaldson Creek	Largemouth bass	1	2	4	2	8	12	17	18	8	11	11	10	6	10	6	3	3	2			134	134.0	4.0
	Spotted bass						1			1		1										3	3.0	1.0
Fords Bay	Largemouth bass	1	2	1			5	9	9	2	3	9	5	3	1	1	4	1			1	57	114.0	0.0
	Spotted bass								1													1	2.0	0.0
Terrapin Creek	Largemouth bass			3	1	8	16	20	19	6	6	13	11	12	5	3	4	3		2	1	133	133.0	11.0
Total	Largemouth bass	2	6	39	35	31	73	137	145	54	69	113	111	86	55	39	33	16	9	7	2	1062	106.2	5.1
	Spotted bass		1	1		1	6	4	3	4	7	2	1									30	3.0	1.3
	Smallmouth bass			1			1		2													4	0.4	0.2

Table 38. Spring diurnal electrofishing CPUE of each size-class of largemouth bass collected at Lake Barkley during late April/early May.

	Inch-class									
	< 8.0 inch		8.0 - 11.9 inch		12.0 - 14.9 inch		≥ 15.0 inch		Total	
Year	CPUE	Std. Error	CPUE	Std. Error	CPUE	Std. Error	CPUE	Std. Error	CPUE	Std. Error
2004	11.3	1.3	40.9	2.9	29.3	1.6	24.7	2.2	106.2	5.1
2003	41.1	5.2	38.5	3.9	75.3	5.3	26.9	2.3	181.8	10.4
2002	26.4	3.6	49.7	5.9	40.6	4.1	16.3	1.8	133.0	8.5
2001	70.4	8.3	61.2	5.1	31.1	2.5	19.0	1.5	181.7	10.8
2000	32.8	4.2	28.6	2.3	24.7	2.3	27.9	2.4	114.1	6.0
1999	16.3	1.9	21.0	2.2	22.7	2.5	34.0	2.6	93.9	6.0
1998	22.2	4.7	26.2	4.2	28.6	3.0	29.8	3.5	106.8	5.9
1997	7.2	1.0	23.0	2.9	22.4	2.1	35.8	3.3	88.4	5.7
1996	14.4	5.9	36.0	4.0	45.6	7.8	43.2	6.4	139.2	16.6
1995	12.2	2.8	55.6	6.4	42.2	4.3	56.0	5.9	166.0	12.3
1994	49.2	8.4	51.0	6.3	72.8	6.2	36.0	5.3	209.0	19.8
1993	40.2	12.1	65.0	6.0	69.2	6.1	32.2	4.5	206.6	15.2
1992	30.7	4.8	79.0	7.6	20.5	1.7	29.5	2.3	159.7	9.0
1991	57.8	7.6	72.9	7.5	59.4	6.1	34.0	3.9	224.1	16.4
1990	10.4	2.5	47.2	6.9	33.8	5.3	26.6	3.5	118.0	12.9
1989	28.7	8.7	74.6	7.4	34.8	4.2	25.0	4.5	163.2	15.5
1988	39.5	6.6	98.2	12.6	76.9	21.8	29.0	9.5	243.6	45.5
1987	64.9	12.4	84.1	11.2	14.5	3.0	25.9	6.1	189.4	27.7
1986	6.1		7.3		39.0		12.2		64.6	
1985	3.0	1.0	11.6	1.7	4.7	1.0	3.6	1.0	22.9	2.6
Average	29.2		48.6		39.4		28.4		145.6	

(Barkley_LMB_Database.xls)

Table 39. Population assessment of largemouth bass based on spring diurnal electrofishing at Lake Barkley from 1998-2004.

	1999		2000[B]		2001		2002[C]		2003		2004[D]	
Parameter[A]	Actual Value	Score	Actual Value	Score	Actual Value	Score	Actual Value	Score	Actual Value	Score	Actual Value	Score
Growth (Mean length at capture of age-3 LMB)	12.6	4	12.6	4	14.7	4	14.7	4	12.9	4	12.9	4
Recruitment (Spring CPUE of age-1)	17.3	1	37.3	3	81.0	4	28.9	2	59.2	4	29.2	2
Size Structure (Spring CPUE of LMB 12.0-14.9 in.)	22.7	2	24.7	2	31.1	3	40.6	4	75.3	4	29.3	3
Size Structure (Spring CPUE of LMB ≥ 15.0 in.)	34.0	4	27.9	4	19.0	3	16.3	3	27.0	4	24.7	4
Size Structure (Spring CPUE of LMB ≥ 20.0 in.)	4.7	4	2.7	3	1.6	3	1.3	2	1.7	3	1.8	3
Instantaneous Mortality (Z)	0.500				0.692				0.658			
Annual Mortality (A)%	39.4				49.9				48.2			
Total Score		15		15		17		15		19		16
Assessment Rating		G		G		E		G		E		G

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

[B] Age and growth data was not collected during 2000. Age and growth data from 1999 was used as surrogate data.

[C] Age and growth data was not collected during 2002. Age and growth data from 2001 was used as surrogate data.

[D] Age and growth data was not collected during 2004. Age and growth data from 2003 was used as surrogate data.
(Barkley_LMB_Database)

Table 40. Annual mortality (A) between 2003 and 2004, and CPUE (fish/hour) of the last five year-classes of largemouth bass estimated from spring, diurnal electrofishing at Lake Barkley.

Year-Class	Age Intervals	CPUE (2003)	CPUE (2004)[A]	Mortality of Cohort (%)
2002	1+ - 2+	59.04	17.80	70
2001	2+ - 3+	13.11	25.54	-95
2000	3+ - 4+	65.91	23.27	65
1999	4+ - 5+	33.67	5.54	84
1998	5+ - 6+	5.72	3.28	43

[A] Age and growth data was not collected during 2004. Therefore, age and growth data collected during 2003 was used to calculate CPUE of the various age-classes.

Table 41. Species composition, relative abundance, and CPUE (fish/hour) 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 from 13-14 October 2004. (wfdwrb.d04)

		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
Middle																							
Eddy Creek	Largemouth bass	8	10	32	28	21	5	11	31	44	59	40	33	23	10	10	10	2	1	1	379	151.6	14.6
	Spotted bass								2												2	0.8	0.5
	Smallmouth bass		5	4	1		1	1	1		1										14	5.6	3.0
Little River	Largemouth bass	3	26	55	48	37	5	18	33	51	53	34	30	20	10	6	7		1		437	174.8	12.3
	Spotted bass		2	3			1	1													7	2.8	1.9
	Smallmouth bass		1	2						1			1	1							6	2.4	1.2
Total	Largemouth bass	11	36	87	76	58	10	29	64	95	112	74	63	43	20	16	17	2	2	1	816	163.2	9.8
	Spotted bass		2	3			1	1	2												9	1.8	1.0
	Smallmouth bass		6	6	1		1	1	1	1	1		1	1							20	4.0	1.6

Total spring CPUE of largemouth bass = 106.2 f/h (5.1 SE)
Total spring CPUE of spotted bass = 3.0 f/h (1.3 SE)
Total spring CPUE of smallmouth bass = 0.4 f/h (0.2 SE)

Table 42. Number of fish and the relative weight (Wr) values of each size-class of largemouth, spotted, and smallmouth bass collected at Lake Barkley during 5.0 hours (10 runs; each 0.50 hours) of diurnal electrofishing on 13-14 October 2004. (wfdwrb.d04)

		Inch-class											
		8.0 - 11.9 inch			12.0 -14.9 inch			≥15.0 inch			Total		
Species	Area	N	Wr	Std. Error	N	Wr	Std. Error	N	Wr	Std. Error	N	Wr	Std. Error
Largemouth bass	Middle												
	Eddy Creek	91	91.8	1.0	132	93.7	0.7	57	99.4	1.4	280	94.3	0.6
	Little River	107	90.6	0.9	117	95.0	0.9	44	101.6	1.7	268	94.3	0.7
	Total	198	91.2	0.7	249	94.3	0.6	101	100.4	1.1	548	94.3	0.4
		7.0 - 10.9 inch			11.0 - 13.9 inch			≥14.0 inch			Total		
		N	Wr	Std. Error	N	Wr	Std. Error	N	Wr	Std. Error	N	Wr	Std. Error
Spotted bass	Middle												
	Eddy Creek	2	88.6	2.4							2	88.6	2.4
	Little River	2	94.8	10.2							2	94.8	10.2
	Total	4	91.7	4.7							4	91.7	4.7
Smallmouth bass	Middle												
	Eddy Creek	3	85.2	2.7	1	90.0					4	86.4	2.2
	Little River				1	80.7		2	95.2	2.6	3	90.4	5.1
	Total	3	85.2	2.7	2	85.3	4.1	2	95.2	2.6	7	88.1	2.4

Table 43. Indices of year-class strength at age 0 and age 1 and mean length (in) of largemouth bass collected in the fall during electrofishing sampling at Lake Barkley.

	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
2001	5.4		21.2	4.0	16.0		32.6[C]	3.4
2002	5.3		26.7	2.4	10.1		59.0	6.4
2003	5.1		35.2	4.4	20.9		29.2[D]	2.4
2004	5.4	0.8	39.8	5.8	30.4	4.3	*	

[A] Data collected by fall (October) diurnal electrofishing. Mean lengths were determined by analysis of scales, removed from a subsample of LMB < 8.0 in, and extrapolated to the entire catch of the fall sample.

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

[C] Age and growth data was not collected during the spring of 2002. Age and growth data collected during the spring of 2001 and 2003 was used to determine CPUE of each individual age-class.

[D] Age and growth data was not collected during the spring of 2004. Age and growth data collected during the spring of 2003 will be used to determine CPUE of each individual age-class.

* Data will be collected during the spring, diurnal electrofishing sample of 2005.

Table 44. Length frequency and CPUE (fish/trotline) of blue, channel, and flathead catfish collected by trotline at Lake Barkley from 17-20 May 2004. A total of 14 trotline nights were conducted. (wfdcatb.d04)

Species	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	Total	CPUE	Std. Error
Blue catfish		3		1	3	4	2	3	4	11	7	7	7	10	10	14	1	5	11	6	4	1	1		1		1	117	8.4	0.9
Channel catfish	1	2	1	1		11	18	9	12	16	8	4	5	8	5		4	2	1	1	1							110	7.9	1.3
Flathead catfish							1																					1	0.1	0.1

Table 45. Relative weight (Wr) of each length-class of blue and channel catfish collected at Lake Barkley from 17-20 May 2004. Fish were collected using trotlines (totaling 14 trotline-nights). (wfdcatb.d04)

	12.0 - 19.9 in.			20.0 - 29.9 in.			≥ 30.0 in.			Total		
Species	N	Wr	Std. Error	N	Wr	Std. Error	N	Wr	Std. Error	N	Wr	Std. Error
Blue Catfish	45	100.3	1.5	63	103.7	1.6	2	113.9	0.1	110	102.5	1.1

	11.0 - 15.9 in.			16.0 -23.9 in.			≥ 24.0 in.			Total		
	N	Wr	Std. Error	N	Wr	Std. Error	N	Wr	Std. Error	N	Wr	Std. Error
Channel Catfish	50	98.7	1.7	50	100.2	1.7	5	108.0	6.6	105	99.8	1.2

Table 46. Mean back-calculated length (in) at each annulus of blue catfish collected by trotline for 14 line-nights at Lake Barkley during 17-20 May 2004, including the range in length of blue catfish at each age and the 95% confidence interval of each age group.[1] (wfdcatb.d04) (wfdbcagb.d04)

		Age								
Year-Class	N	1	2	3	4	5	6	7	8	9
2002	3	4.0	8.5							
2001	6	3.9	8.2	12.1						
2000	9	4.3	8.5	11.1	14.5					
1999	16	5.0	9.5	12.9	15.6	18.8				
1998	24	4.8	9.4	12.9	16.0	18.9	22.0			
1997	10	4.5	8.8	12.6	15.9	18.8	21.3	24.4		
1996	4	4.4	7.9	11.5	15.3	18.1	21.2	23.3	26.0	
1995	2	4.2	8.2	11.9	14.7	17.5	21.2	23.9	27.1	29.8
Mean		4.6	9.0	12.5	15.6	18.7	21.7	24.1	26.3	29.8
Number		74	74	71	65	56	40	16	6	2
Smallest		2.6	5.1	9.1	11.8	13.9	17.4	20.3	21.7	25.7
Largest		7.3	13.1	16.7	21.6	25.8	29.3	28.2	31.7	33.8
Std. Error		0.1	0.2	0.2	0.3	0.4	0.5	0.7	1.5	4.0
Low 95% CI		4.4	8.6	12.0	15.1	18.0	20.8	22.8	23.4	21.8
High 95% CI		4.9	9.3	12.9	16.1	19.4	22.6	25.3	29.3	37.7

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

Table 47. Age frequencies and CPUE of blue catfish collected during 14 line-nights at Lake Barkley during 17-20 May 2004.

	Inch-Class																											Cum.		Std.
Age	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	Total	Percent	Percent	CPUE	Error
2	3																										3	2.5	2.5	0.2	0.2
3				3	4																						7	5.9	8.5	0.5	0.3
4						2	3	2		1																	8	6.8	15.3	0.6	0.2
5								2	11	4	5			2	7	1											32	27.1	42.4	2.2	0.3
6										2	2	7	8	3	5	1	2	6	4			1					41	34.7	77.1	2.8	0.4
7													3	3	2		3		2	1	1						15	12.7	89.9	1.1	0.2
8														2						3							5	4.2	94.1	0.3	0.1
9																		6								1	7	5.9	100.0	0.5	0.1
Total	3	0	0	3	4	2	3	4	11	7	7	7	11	10	14	2	5	12	6	4	1	1	0	0	0	1	118			8.4	
%	3	0	0	3	3	2	3	3	9	6	6	6	9	8	12	2	4	10	5	3	1	1	0	0	0	1	100				

(wfdcatb.d04) (wfdbcagb.d04)

Table 48. Mean back-calculated length (in) at each annulus of channel catfish collected by trotline for 14 line-nights at Lake Barkley during 17-20 May 2004, including the range in length of channel catfish at each age and the 95% confidence interval of each age group.[1] (wfdcatb.d04) (wfdccagb.d04)

		Age									
Year-Class	N	1	2	3	4	5	6	7	8	9	10
2002	3	4.4	8.4								
2001	2	5.8	9.0	11.9							
2000	7	4.3	8.1	10.6	13.3						
1999	13	4.1	7.9	10.8	13.3	15.6					
1998	7	4.0	7.6	10.5	12.8	15.0	17.0				
1997	4	3.9	7.6	10.2	12.3	14.3	16.2	17.9			
1996	5	4.6	7.6	10.2	12.6	14.7	16.8	18.7	20.4		
1995	7	3.8	6.4	8.7	10.7	12.9	14.9	16.9	18.7	20.6	
1994	6	3.8	6.9	8.8	10.6	12.5	14.3	15.8	17.1	18.5	19.7
Mean		4.2	7.6	10.1	12.4	14.4	15.8	17.2	18.6	19.6	19.7
Number		54	54	51	49	42	29	22	18	13	6
Smallest		2.3	4.4	6.6	8.2	10.2	11.9	13.3	14.7	16.1	17.1
Largest		7.9	10.6	13.4	17.4	20.7	21.0	23.4	24.8	24.3	23.8
Std. Error		0.1	0.2	0.2	0.3	0.4	0.4	0.5	0.6	0.7	1.1
Low 95% CI		3.9	7.2	9.7	11.8	13.7	14.9	16.1	17.4	18.3	17.6
High 95% CI		4.4	8.0	10.6	12.9	15.1	16.6	18.2	19.9	21.0	21.9

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

Table 49. Age frequencies and CPUE of channel catfish collected during 14 line-nights at Lake Barkley during 17-20 May 2004.

	Inch-Class																					
Age	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total	Percent	Cum. Percent	CPUE	Std. Error
2	1	2																	3	2.8	2.8	0.2	0.1
3				1			4												5	4.6	7.4	0.3	0.1
4						7	7	3											17	15.7	23.1	1.3	0.3
5						4	7	5	5	6	1	1		3					32	29.6	52.7	2.2	0.4
6								2	5	6			3	3					19	17.6	70.3	1.3	0.3
7									2	3	1				1				7	6.5	76.8	0.6	0.1
8											1	2						1	4	3.7	80.5	0.3	0.1
9												2	3	3	2			1	11	10.2	90.7	0.7	0.2
10											4				2	4			10	9.3	100.0	0.7	0.2
Total	1	2	0	1	0	11	18	10	12	15	7	5	6	9	5	4	0	2	108				
%	1	2	0	1	0	10	17	8	11	15	8	4	5	8	5	4	0	2	100				

(wfdcatb.d04) (wfdccagb.d04)

Table 50. Nocturnal electrofishing CPUE for each size-class of smallmouth bass collected at Lake Barkley during July. CPUE = fish/hour.

	Inch-class									
	< 8.0 inch		8.0 - 10.9 inch		11.0 - 13.9 inch		≥ 14.0 inch		Total	
Year	CPUE	Std. Error	CPUE	Std. Error	CPUE	Std. Error	CPUE	Std. Error	CPUE	Std. Error
2004	35.3	16.0	14.8	5.3	1.8	1.0	0.5	0.3	52.3	20.6
2003	9.4	2.8	5.1	2.4	4.9	1.3	0.3	0.3	19.7	5.0
2002	25.3	11.4	7.3	2.7	1.5	0.7	0.0	0.0	34.0	13.6
2001	44.2	9.7	18.4	5.0	1.6	0.7	1.1	0.5	65.3	13.8
2000	32.5	8.4	5.0	1.9	1.5	0.6	0.5	0.3	39.5	10.2
1999	11.5	2.2	7.5	3.5	2.5	1.3	0.5	0.5	22.0	3.2
1998	56.7	38.4	11.3	6.8	2.3	1.2	3.3	1.6	73.7	45.1
1997	140.0	8.0	8.0	4.0	9.0	5.0	2.0	2.0	159.0	3.0
Average	44.4		9.7		3.1		1.0		58.2	

Table 51. Length frequency and CPUE of each inch-class of white and black crappie collected by trap-net (114 net-days) at Lake Barkley from 1-5 November 2004. (wfdtpntb.d04) (wfdeddyb.d04)

Location	Species	Inch-Class														Total	CPUE	St. Error
		2	3	4	5	6	7	8	9	10	11	12	13	14	15			
Eddy Creek																		
	White Crappie		1	5	14	6		11	59	30	10	2	2			140	3.7	0.6
	Black Crappie	3	10	3	2			3	4	2	1	1	1			30	0.8	0.2
Little River																		
	White Crappie	7	19	17	8	10	13	97	138	41	6	8	3	1	1	369	9.2	1.3
	Black Crappie	7	12	7			6	8	4	5	3					52	1.3	0.2
Donaldson Creek																		
	White Crappie	9	29	10	4	36	46	41	61	16	2			1		255	7.1	1.2
	Black Crappie	17	65	3	8	37	18	17	53	38	5	4	1			266	7.4	1.3
Total																		
	White Crappie	16	49	32	26	52	59	149	258	87	18	10	5	2	1	764	6.7	0.7
	Black Crappie	27	87	13	10	37	24	28	61	45	9	5	2			348	3.1	0.5

CPUE of white crappie in Little River and Donaldson Creek embayments = 8.2 f/nd (0.90 SE)
CPUE of black crappie in Little River and Donaldson Creek embayments = 4.2 f/nd (0.73 SE)

Table 52. CPUE for size groups of crappie collected from multiple years of trap netting on Lake Barkley. 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	WC&BC
1985	3.4	0.1	3.5	1.2	0.1	1.3	9.5	8.4	9.4	0.1	0.0	0.2
1986	5.9	0.2	6.0	2.3	0.0	2.3	10.9	9.9	10.8	1.1	0.0	1.0
1987	2.0	0.4	2.4	1.5	0.1	1.6	11.4	10.8	11.3	0.8	0.0	0.7
1988	3.5	0.2	3.6	1.5	0.1	1.6	10.1	10.0	10.1	3.0	8.3	3.2
1989	1.3	0.1	1.4	0.5	0.1	0.6	8.8	9.1	8.9	10.7	0.0	10.0
1990	4.6	0.2	4.7	2.0	0.0	2.0	11.0	10.9	11.0	0.0	0.0	0.0
1991	3.2	0.2	3.4	1.1	0.1	1.1	10.5	10.4	10.5	1.0	0.0	0.7
1992	2.1	2.0	4.1	0.9	0.4	1.3	10.2	9.4	9.8	0.0	0.0	0.0
1993	1.4	0.5	1.9	0.5	0.3	0.8	9.8	9.4	9.7	0.6	13.7	3.6
1994	3.4	0.8	4.2	1.1	0.7	1.8	10.5	10.4	10.4	1.1	10.9	3.5
1995	4.4	0.7	5.2	1.0	0.2	1.2	11.0	9.2	10.1	0.2	2.1	0.5
1996	5.6	0.7	6.3	2.9	0.2	3.1	10.4	9.1	10.0	0.7	0.0	0.5
1997	2.5	0.6	3.1	1.1	0.1	1.2	10.5	8.8	9.2	0.3	1.5	0.4
1998	4.5	1.5	6.0	1.3	0.2	1.5	9.5	8.2	9.3	5.1	0.6	3.0
1999	1.9	1.0	2.9	1.4	0.1	1.4	10.3	9.2	9.8	1.0	1.7	1.3
2000	2.0	1.9	3.9	0.8	0.6	1.4	11.4	10.5	10.9	9.2	1.0	4.0
2001	1.1	1.6	2.6	0.9	1.0	2.0	11.3	10.2	10.4	2.2	7.8	5.8
2002	2.6	2.7	5.3	1.1	0.6	1.7	10.4	10.0	10.2	2.7	6.8	4.9
2003	2.3	1.6	3.9	1.1	1.1	2.2	11.1	10.3	10.7	4.2	4.3	4.2
2004	5.5	1.8	7.3	1.0	0.7	1.8	11.1	10.3	10.7	1.8	3.4	2.3
Average	3.2	0.9	4.1	1.3	0.3	1.6	10.5	9.7	10.2	2.3	3.1	2.5

(Barkley_Crappie_Database.xls)

Table 53. Proportional stock density (PSD) and relative stock density (RSD) of white and black crappie collected by trap-nets (114 net-days) at Lake Barkley from 1-5 November 2004. (wfdtpntb.04) (wfdeddyb.d04)

Location	Species	N	PSD	RSD_{10}
Eddy Creek				
	White Crappie	134	85 (± 6)	33 (± 8)
	Black Crappie	14	86 (± 19)	36 (± 26)
Little River				
	White Crappie	326	90 (± 3)	18 (± 4)
	Black Crappie	26	77 (± 17)	31 (± 18)
Donaldson Creek				
	White Crappie	207	58 (± 7)	9 (± 4)
	Black Crappie	181	65 (± 7)	27 (± 6)
Total				
	White Crappie	667	79 (± 3)	18 (± 3)
	Black Crappie	221	68 (± 6)	28 (± 6)

PSD and RSD of white crappie for Little River and Donaldson Creek combined was 78 (± 4) and 15 (± 3).

PSD and RSD of black crappie for Little River and Donaldson Creek combined was 67 (± 6) and 27 (±6).

Table 54. Relative weight values of each size-class of white and black crappie collected by trap-net (114 net-days) at Lake Barkley from 1-5 November 2004. (wfdtpntb.d04) (wfdeddyb.d04)

	5.0 - 7.9 inch			8.0 - 9.9 inch			≥ 10.0 inch			Total		
Location	N	Wr	St. Error	N	Wr	St. Error	N	Wr	St. Error	N	Wr	St. Error
Eddy Creek												
White Crappie	20	87.9	3.0	70	98.2	0.9	44	97.8	1.0	134	96.5	0.8
Black Crappie	2	87.9	18.7	7	94.1	2.3	5	99.5	3.3	14	95.2	2.7
Little River												
White Crappie	31	101.1	2.9	235	105.7	0.6	60	105.9	1.2	326	105.3	0.6
Black Crappie	6	100.4	3.0	12	104.3	1.7	8	101.1	2.9	26	102.4	1.4
Donaldson Creek												
White Crappie	86	93.3	4.0	102	99.7	0.7	19	105.8	1.1	207	97.6	1.7
Black Crappie	63	91.5	1.6	70	101.0	0.7	48	99.9	0.8	181	97.4	0.7
Total												
White Crappie	137	94.3	2.7	407	102.9	0.4	123	103.0	0.8	667	101.1	0.6
Black Crappie	71	92.2	1.5	89	100.9	0.7	61	100.0	0.8	221	97.9	0.7

Table 55. Annual fall trap netting CPUE (fish/net night) of each age-class of white crappie collected from Lake Barkley from 1985-2004.

	Age-Class						
Year	0	1	2	3	4	5	6
1985	8.10	11.62	4.89	0.44	0.02	0.00	0.00
1986	1.22	5.17	1.80	0.07	0.01	0.04	0.03
1987	1.62	3.95	0.62	0.22	0.00	0.03	0.00
1988	0.24	1.35	2.08	0.19	0.11	0.00	0.00
1989	3.70	1.32	0.56	0.20	0.20	0.05	0.00
1990	4.58	6.36	0.34	0.01	0.00	0.00	0.00
1991	1.18	3.62	1.28	0.17	0.04	0.00	0.00
1992	0.95	1.34	1.16	0.10	0.00	0.00	0.00
1993	3.65	0.83	1.13	0.16	0.01	0.00	0.00
1994	6.63	7.09	1.10	0.16	0.06	0.02	0.00
1995	1.75	9.50	0.86	0.04	0.00	0.02	0.00
1996	5.96	2.21	4.90	0.32	0.03	0.00	0.00
1997	2.44	7.61	0.53	1.01	0.01	0.00	0.00
1998	1.09	5.52	4.77	0.15	0.52	0.04	0.00
1999	2.19	0.81	0.84	0.78	0.00	0.03	0.00
2000	0.80	1.91	0.11	0.09	0.18	0.01	0.01
2001	28.43	0.69	0.17	0.24	0.02	0.00	0.00
2002	0.91	1.49	1.06	0.12	0.02	0.00	0.04
2003	9.89	1.84	0.87	0.12	0.07	0.01	0.01
2004[A]	1.73	5.15	1.14	0.08	0.07	0.01	0.01
Average	4.35	3.97	1.51	0.23	0.07	0.01	0.01

[A] Age and growth data was not collected in 2004. Data from 2003 was used to determine CPUE of each age-class.
(Barkley_Crappie_Database.xls)

Table 56. Annual fall trap netting CPUE (fish/net night) of each age-class of black crappie collected from Lake Barkley from 1985-2004.

	Age-Class						
Year	0	1	2	3	4	5	6
1985	0.10	0.27	0.03	0.07	0.02	0.00	0.00
1986	0.03	0.36	0.05	0.00	0.00	0.00	0.00
1987	0.14	0.24	0.07	0.04	0.00	0.00	0.00
1988	0.05	0.00	0.12	0.03	0.02	0.00	0.00
1989	0.03	0.08	0.05	0.05	0.00	0.00	0.00
1990	2.67	0.18	0.01	0.00	0.00	0.00	0.00
1991	0.19	2.05	0.08	0.01	0.00	0.00	0.00
1992	0.53	0.21	2.01	0.04	0.00	0.00	0.00
1993	1.33	0.23	0.19	0.14	0.09	0.00	0.00
1994	0.34	2.06	0.32	0.13	0.28	0.05	0.00
1995	0.67	0.79	0.79	0.05	0.01	0.02	0.00
1996	0.79	2.52	0.70	0.11	0.00	0.00	0.00
1997	0.86	0.72	0.86	0.02	0.01	0.00	0.00
1998	0.96	8.17	0.88	0.83	0.06	0.00	0.00
1999	1.41	0.90	0.56	0.05	0.03	0.00	0.00
2000	0.54	3.37	0.16	0.38	0.02	0.01	0.00
2001	8.23	0.88	1.00	0.05	0.14	0.03	0.00
2002	0.99	2.13	0.46	0.32	0.13	0.08	0.00
2003	2.14	2.96	1.10	0.14	0.15	0.01	0.03
2004[A]	1.50	1.17	1.33	0.10	0.06	0.01	0.01
Average	1.18	1.46	0.54	0.13	0.05	0.01	0.00

[A] Age and growth data was not collected in 2004. Data from 2003 was used to determine CPUE of each age-class.
(Barkley_Crappie_Database.xls)

Table 57. Annual mortality (A) between 2003 and 2004, and CPUE (f/nd) of the last five year-classes of white and black crappie (combined), estimated from trap-net data collected at Lake Barkley during October/November 2003 and 2004. (wfdtpntb.d04) (wfdtnagb.d03)

Year-Class	Age Intervals	CPUE (2003)	CPUE (2004)	Mortality of Cohort (%)
2002	1+ - 2+	4.80	2.47	49
2001	2+ - 3+	1.97	0.18	91
2000	3+ - 4+	0.26	0.13	50
1999	4+ - 5+	0.22	0.02	91
1998	5+ - 6+	0.02	0.02	0

Table 58. Population assessment for white, black, and white and black crappie combined from Lake Barkley trap-net data collected in November 2004.

	White Crappie		Black Crappie		Combined	
Parameter	Actual Value	Score	Actual Value	Score	Actual Value	Score
Population Density (CPUE of age-1 and older crappie)	6.5	2	2.7	1	9.2	2
Recruitment (CPUE of age-1 crappie)	5.2	2	1.2	1	6.3	2
Recruitment (CPUE of age-0 crappie)	1.7	1	1.5	1	3.2	2
Size Structure (CPUE of > 8.0 inches)	5.5	3	1.8	1	7.3	3
Growth (Mean age-2 length at capture)	11.1	4	10.3	4	10.7	4
Instantaneous Mortality (Z)	0.802		0.935		0.858	
Annual Mortality (A)%	55.1		60.8		57.6	
Total Score:		12		8		13
Assessment Rating:		F		F		G

(wfdtpntb.d04) (wfdtnagb.d03)

Table 59. Population assessment of the white crappie population at Lake Barkley from 1988-2004.

	Assessment Ratings of the White Crappie Population																
Parameter	1988	1989	1990	1991[A]	1992[B]	1993[A]	1994[A]	1995	1996[A]	1997[A]	1998[B]	1999[B]	2000[B]	2001[B]	2002[B]	2003[B]	2004[A]
Population Density (CPUE of age-1 and older crappie)	1	1	2	2	1	1	2	2	2	2	2	1	1	1	1	1	2
Recruitment (CPUE of age-1 crappie)	1	1	2	2	1	1	3	3	1	3	2	1	1	1	1	1	2
Recruitment (CPUE of age-0 crappie)	1	2	2	1	1	2	3	1	2	1	1	1	1	4	1	3	1
Size Structure (CPUE of > 8.0 in)	2	1	2	2	2	1	2	2	3	2	2	1	2	1	2	2	3
Growth (Mean age-2 length at capture)	4	2	4	4	4	4	4	4	4	4	3	4	4	4	4	4	4
Total Score	9	7	12	11	9	9	14	12	12	12	10	8	9	11	9	11	12
Assessment Rating:	F	P	F	F	F	F	G	F	F	F	F	F	F	F	F	F	F

[A] Indicate years where the black crappie population comprised 15 - 34.9% of the age-1 and older crappie.

[B] Indicate years where the black crappie population comprised ≥ 35% of the age-1 and older crappie.

(Barkley_Crappie_Database.xls)

Table 60. Population assessment of the black crappie population at Lake Barkley from 1988-2004.

	Assessment Ratings of the Black Crappie Population																
Parameter	1988	1989	1990	1991[A]	1992[B]	1993[A]	1994[A]	1995	1996[A]	1997[A]	1998[B]	1999[B]	2000[B]	2001[B]	2002[B]	2003[B]	2004[A]
Population Density (CPUE of age-1 and older crappie)	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1
Recruitment (CPUE of age-1 crappie)	1	1	1	1	1	1	1	1	1	1	3	1	2	1	1	1	1
Recruitment (CPUE of age-0 crappie)	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1
Size Structure (CPUE of > 8.0 in)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1
Growth (Mean age-2 length at capture)	4	2	4	4	3	3	4	3	2	2	1	3	4	4	4	4	4
Total Score	8	6	8	8	7	7	8	7	6	6	8	7	9	10	9	8	8
Assessment Rating:	F	P	F	F	P	P	F	P	P	P	F	P	F	F	F	F	F

[A] Indicate years where the black crappie population comprised 15 - 34.9% of the age-1 and older crappie.

[B] Indicate years where the black crappie population comprised ≥ 35% of the age-1 and older crappie.

(Barkley_Crappie_Database.xls)

Table 61. Population assessment of the white and black crappie population (combined) at Lake Barkley from 1988-2004.

	Assessment Ratings of the White and Black Crappie Population (combined)																
Parameter	1988	1989	1990	1991[A]	1992[B]	1993[A]	1994[A]	1995	1996[A]	1997[A]	1998[B]	1999[B]	2000[B]	2001[B]	2002[B]	2003[B]	2004[A]
Population Density (CPUE of age-1 and older crappie)	1	1	2	2	1	1	2	2	2	2	3	1	2	1	2	2	2
Recruitment (CPUE of age-1 crappie)	1	1	2	2	1	1	3	3	2	3	3	1	2	1	2	2	2
Recruitment (CPUE of age-0 crappie)	1	2	3	1	1	2	3	1	3	2	1	2	1	4	1	4	2
Size Structure (CPUE of > 8.0 in)	2	1	2	2	2	1	2	3	3	2	3	2	2	2	3	2	3
Growth (Mean age-2 length at capture)	4	2	4	4	4	4	4	4	4	3	3	4	4	4	4	4	4
Total Score	9	7	13	11	9	9	14	13	14	12	13	10	11	12	12	14	13
Assessment Rating:	F	P	G	F	F	F	G	G	G	F	G	F	F	F	F	G	G

[A] Indicate years where the black crappie population comprised 15 - 34.9% of the age-1 and older crappie.

[B] Indicate years where the black crappie population comprised ≥ 35% of the age-1 and older crappie.

(Barkley_Crappie_Database.xls)

Table 62. Relative abundance and CPUE (fish/hour) of largemouth bass collected during 30-minute diurnal electrofishing runs for black bass at Lake Beshear during May for 2.5 hours, and 2.0 hours during October, 2004.

		Inch Class																					
Season	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	StdErr
Spring	Largemouth bass	4	1	3	3		6	10	7	7	5	13	6	10	28	28	17	16	6	1	171	68.4	11.7
Fall	Largemouth bass	25	19	4	15	25	4	3	2	1	2	6	8	9	3	3	2	3		1	135	54.0	6.2

Table 63. Spring diurnal electrofishing CPUE for each size class of largemouth bass collected at Lake Beshear. Nocturnal sampling was conducted from 1995 to 2002. CPUE = fish/hour/run

	Inch Group									
	≤8.0		8.0-11.9		≥12.0		≥15.0		Total	
Year	CPUE	StdErr	CPUE	StdErr	CPUE	StdErr	CPUE	StdErr	CPUE	StdErr
1986	4.8		11.3		18.5		14.5		34.7	
1987	4.0		22.6		9.7		5.7		56.7	
1988	1.8		16.5		38.4		30.5		22.6	
1989	9.8		15.7		54.9		26.5		80.4	
1990	4.7	1.8	7.3	2.7	38.7	3.3	29.3	4.8	50.7	2.9
1991	15.0	2.4	16.0	3.4	34.0	5.7	23.5	4.0	65.0	6.0
1992	2.7	0.7	24.0	6.4	65.3	0.7	45.3	1.8	92.0	5.3
1993	6.5	1.7	4.0	1.8	37.5	13.7	31.5	10.8	48.0	15.4
1994	11.2	2.9	8.0	1.4	48.8	10.8	34.0	9.5	68.0	10.1
1995	13.5	3.7	22.5	7.4	51.0	16.5	35.5	12.6	87.0	21.6
1996	5.5	2.2	12.5	1.7	55.5	5.1	39.0	4.2	73.5	6.2
1997	4.5	2.5	10.0	2.0	39.0	7.0	28.5	4.8	53.5	8.3
1998	5.0	1.3	13.0	3.1	70.0	8.7	53.0	5.3	88.0	8.3
1999	4.0	1.8	11.5	3.0	39.5	6.7	25.5	4.9	55.0	8.8
2000	11.2	3.7	18.0	4.9	36.0	8.7	32.0	7.6	65.2	10.9
2001	5.0	2.4	42.0	8.1	26.0	6.1	15.5	3.8	73.0	6.7
2002	11.5	1.7	24.0	7.2	64.5	10.7	36.5	8.6	100.0	16.4
2003	5.2	2.9	6.4	2.0	33.6	7.8	25.6	7.2	45.2	9.5
2004	4.4	1.6	12.0	2.8	52.0	9.3	42.4	8.5	68.4	11.7
Average	6.9		15.6		42.8		30.2		64.6	

WFDPSDLB.Dxx

Table 64. Age frequencies and CPUE of largemouth bass collected from Lake Beshear in May 2004 during 2.5 hours of diurnal sampling. Age data from 2003 were combined to make estimations.

	Inch Class																				
Age	3	4	5	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	%	CPUE	StdErr
1	4	1	3	3	5														16	9.4	6.4	1.9
2					1	10	7	7	5	7									37	21.6	14.8	2.0
3										3	5	1						1	10	5.8	4.0	0.8
4										3	1	6	9	11		16	6		52	30.4	20.8	4.7
5												1			3				4	2.3	1.6	0.5
6												1	9	11	6				27	15.8	10.8	2.1
7													5	6					11	6.4	4.1	0.9
8													5		3				8	4.7	3.2	0.7
10															3				3	1.8	1.2	0.3
12															3				3	1.8	1.2	0.3
Total	4	1	3	3	6	10	7	7	5	13	6	9	28	28	18	16	6	1	171			
%	2	1	2	2	4	6	4	4	3	8	4	5	16	16	11	9	4	1		100		

wfdpsdlb.D04, wfdlbbag.D03

Table 65. Population assessment determined from largemouth bass based on spring sampling at Lake Beshear from 2000-2004.

Parameter	2004 Value	2004 Score	2003 Value	2003 Score	2002 Value	2002 Score	2001 Value	2001 Score	2000 Value	2000 Score
Length at Age 3	14.0	4	14.0	4	14.0	4	14.1	4	14.1	4
Spring CPUE of Age 1 Fish	6.4	1	0.8	1	3.5	1	1.0	1	3.2	1
Spring CPUE 12-14.9-in Fish	9.6	1	8.0	1	28.0	2	10.5	1	4.0	1
Spring CPUE ≥ 15.0-in Fish	42.4	4	25.6	3	36.5	4	15.5	2	32.0	4
Spring CPUE ≥ 20-in Fish	2.8	3	2.0	3	3.5	3	1.5	2	2.8	3
Instantaneous Mortality (z)	0.262		0.430		0.547		0.803		0.475	
Annual Mortality (A)%	23.0		34.9		54.7		55.2		37.8	
Total Score	13		12		14		10		13	
Assessment Rating	G		G		G		F		G	

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

WFDPSDLB.Dxx

Table 66. Indices of year-class strength at age 0 and age 1 and mean length (in) of largemouth bass collected in the fall during electrofishing sampling at Lake Beshear.

Year-class	Age 0[A] Mean Length	Age 0[A] Std. Error	Age 0[A] CPUE	Age 0[A] Std. Error	Age 0 ≥ 5.0 in[A] CPUE	Age 0 ≥ 5.0 in[A] Std. Error	Age 1[B] CPUE	Age 1[B] Std. Error
2001	4.1		4.8	1.58	1.2		15.0	2.94
2002	4.1		6.9	1.34	2.0		13.5	1.33
2003	2.7		19.0	4.14	0.0		6.4	1.94
2004	3.8		17.6	4.12	0.0		*	

[A] Data collected by fall (October) diurnal electrofishing. Mean lengths were determined by analysis of scales, removed from a subsample of LMB < 8.0 in, and extrapolated to the entire catch of the fall sample.

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

* Data will be collected during the spring, diurnal electrofishing sample of 2005.

WFDWRLB.Dxx, WFDWRAGB.Dxx, WFDPSDLB.Dxx

Table 67. Age frequencies and CPUE of channel catfish collected from Lake Beshear in September 2004. Age was determined by using sectioned otoliths collected in 2003.

	Inch Class																					
Age	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	24	26	Total	%	CPUE	StdErr
1	1	1	3	21	10														36	9.8	1.3	0.2
2		4	10	22	31	26	4												97	26.4	3.6	0.6
3					16	18	10												44	12.0	1.6	0.3
4							5		3										8	2.2	0.3	0.0
6									2										2	0.5	0.1	0.0
7							5	5	2										12	3.3	0.4	0.1
8						9	10	29	14	13	8	3	6						92	25.0	3.4	0.4
9										5	8								13	3.5	0.5	0.1
10							15	5				3	1			1			25	6.8	0.9	0.1
11									2				2						4	1.1	0.1	0.0
12								10				4	2		7	2			25	6.8	0.9	0.1
13												4	1	3					8	2.2	0.3	0.1
Total	1	5	13	43	57	53	49	49	23	18	16	14	12	3	7	3	1	1	368		13.6	
%	0	1	4	12	15	14	13	13	6	5	4	4	3	1	2	1	0	0		100		

wfdcclb.d04, wfdcagbe.d03

Table 68. Population assessment by year for channel catfish at Lake Beshear

	Parameters											
Year	CPUE < 8 in	score	Total CPUE	score	CPUE ≥ 12 in	score	CPUE ≥ 15 in	score	CPUE ≥ 20 in	score	Total Score	Assessment Rating
1998	0.00	0	12.8	4	6.0	4	0.8	2	0.0	1	11	F
1999	0.00	0	3.9	3	3.0	4	0.8	2	0.0	0	9	F
2000	0.00	0	0.9	1	0.9	2	0.6	2	0.1	1	6	P
2001	0.00	0	4.4	3	3.6	4	2.0	4	0.6	3	14	G
2002	0.03	1	4.9	4	3.2	4	1.7	4	0.5	3	16	G
2003	0.00	0	8.9	4	6.1	4	2.6	4	0.4	2	14	G
2004	0.04	1	13.6	4	9.2	4	12.9	4	0.6	3	16	G

Sampling method

1998 -1999 : slat traps and hoop nets
2000 : slat traps
2001 - 2002 : gill nets
2003 : gill nets and trotlines
2004 : trotlines

Table 69. Species composition, relative abundance, and CPUE (fish/hour) of largemouth bass, bluegill, redear sunfish, white crappie, and channel catfish collected during 0.875 hours (7 runs; each 450s) of diurnal electrofishing at Lake Pennyrile on 19 April 2004. (wfdpsdpb.d04) (wfdpsdpo.d04)

	Inch-Class																						Std.
Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE	Error
Largemouth bass				6	5	2	12	16	12	14	16	16	7	1	1				1		109	119.8	14.4
Bluegill[A]		2	10	14	1	2	13	4													46	70.8	21.7
Redear sunfish[A]				5	8	16	10	5	1												45	69.2	31.1
White crappie[A]				1	2	3		3	2												11	16.9	13.2
Channel catfish[A]														2	2		1	1		1	7	10.8	7.1

[A] Fish were only collected during the first 5 electrofishing runs, each lasting 450 s (Total = 0.625 hours).

Table 70. Spring, diurnal electrofishing CPUE of each size-class of largemouth bass collected at Lake Pennyrile from 1990-2004.

	Inch-class									
	< 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
2004	27.5	7.1	63.7	10.7	26.4	4.7	2.2	1.4	119.8	14.4
2003	96.6	17.6	118.8	9.4	24.8	4.8	0.9	0.9	241.0	27.3
2002	132.3	24.2	116.2	14.7	30.8	5.4	5.4	3.3	284.0	36.9
2001[A]	54.0	0.0	138.0	10.0	12.0	4.0	5.0	1.0	209.0	15.0
2000[A]	46.0	4.0	87.0	5.0	11.0	7.0	3.0	3.0	147.0	1.0
1999[A]	26.0	8.0	102.0	8.0	3.0	1.0	2.0	2.0	133.0	1.0
1998	12.0	8.0	70.0	1.0	7.0	1.0	2.0	2.0	91.0	21.0
1994	47.0	9.0	52.0	6.0	2.0	2.0	1.0	1.0	102.0	12.0
1990	28.0	2.0	87.0	1.0	3.0	1.0	0.0	0.0	118.0	0.0
Mean	55.2		96.4		11.7		2.4		165.6	

[A] Data collected by spring, nocturnal electrofishing.

Table 71. PSD and RSD values obtained for largemouth bass, bluegill, redear sunfish, and white crappie collected during 0.875 hours of diurnal electrofishing (7 runs; each 450s) at Lake Pennyrile on 19 April 2004. (wfdpsdpb.d04) (wfdpsdpo.d04)

Species	N	PSD (± 95% CI)	RSD (± 95% CI)
Largemouth bass	84	31 (10)	2 (3)
Bluegill[AB]	44	43 (15)	9 (9)
Redear sunfish[AC]	45	36 (14)	2 (4)
White crappie[A]	10	50 (33)	

[A] Bluegill, redear sunfish, and white crappie were collected only during the first 5 electrofishing runs; each lasting 450 s (Total = 0.63 hours).

[B] Bluegill = RSD_8.

[C] Redear sunfish = RSD_9.

Table 72. Number of largemouth bass and the relative weight (Wr) values for each length category of largemouth bass collected at during 1.00 hour of diurnal electrofishing (6 runs; each 600s) at Lake Pennyrile on 27 September 2004. (wfdwrpb.d04)

	Inch-category									Total		
	8.0-11.9 inch			12.0-14.9 inch			≥15.0 inch					
Species	N	Wr	St. Error	N	Wr	St. Error	N	Wr	St. Error	N	Wr	St. Error
Largemouth bass	62	78.1	0.9	18	78.8	1.5	1	83.1		81	78.4	0.8

Table 73. Population assessment of the largemouth bass population based on spring diurnal electrofishing at Lake Pennyrile from 1998-2004.

	Year											
	1999[BC]		2000[BC]		2001[B]		2002[D]		2003		2004[E]	
Parameter[A]	Actual Value	Score	Actual Value	Score	Actual Value	Score	Actual Value	Score	Actual Value	Score	Actual Value	Score
Growth (Mean length at capture of age-3 LMB)	9.5	1	10.4	2	10.4	2	9.7	1	9.7	1	9.7	1
Recruitment (Spring CPUE of age-1)	22.7	2	41.1	2	26.0	2	111.5	4	59.4	3	13.1	1
Size Structure (Spring CPUE of LMB 12.0-14.9 in.)	3.0	1	11.0	1	12.0	1	30.8	2	24.8	2	26.4	2
Size Structure (Spring CPUE of LMB ≥ 15.0 in.)	2.0	1	3.0	1	5.0	2	5.4	2	0.9	1	2.2	1
Size Structure (Spring CPUE of LMB ≥ 20.0 in.)	0.0	1	3.0	3	2.0	3	0.8	1	0.0	1	0.0	1
Instantaneous Mortality (Z)					0.473				0.457			
Annual Mortality (A)%					37.7				36.7			
Total Score		6		9		10		10		8		6
Assessment Rating		Poor		Fair		Fair		Fair		Fair		Poor

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

[B] Spring electrofishing samples were collected nocturnally.

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

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

Table 74. Spring, diurnal electrofishing CPUE (f/h) of each age-class of largemouth bass collected from Lake Pennyrile from 1998-2004.

	Age-Class									
Year	1	2	3	4	5	6	7	8	9	10
2004[D]	13.05	38.09	12.83	26.06	17.50	5.39	1.95	2.70	0.00	2.21
2003	59.39	83.41	23.39	33.92	25.75	7.26	3.42	3.63	0.00	0.00
2002[C]	111.51	49.89	34.77	28.38	31.52	9.99	8.02	2.54	0.00	1.10
2001[A]	26.00	103.76	39.13	6.25	21.57	4.14	3.00	0.00	0.00	1.14
2000[AB]	41.06	37.53	25.23	14.88	15.11	3.76	2.31	1.63	0.00	0.50
1999[AB]	22.69	22.34	40.07	20.26	15.18	6.21	2.62	2.58	0.00	0.06
1998	5.00	9.30	28.30	26.60	7.70	3.00	5.00	4.00	0.00	0.00
Mean	39.81	49.19	29.10	22.34	19.19	5.68	3.76	2.44	0.00	0.72

[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.

Table 75. Annual mortality (A) between 2003 and 2004, and CPUE (fish/hour) of the last five year-classes of largemouth bass estimated from spring, diurnal electrofishing at Lake Pennyrile.

Year-Class	Age Intervals	CPUE (2003)	CPUE (2004)[A]	Mortality of Cohort (%)
2002	1+ - 2+	83.41	38.09	54
2001	2+ - 3+	23.39	12.83	45
2000	3+ - 4+	33.92	26.06	23
1999	4+ - 5+	25.75	17.50	32
1998	5+ - 6+	7.26	5.39	26

[A] Age and growth data was not collected during 2004. Therefore, age and growth data collected during 2003 was used to calculate CPUE of the various age-classes.

Table 76. Spring electrofishing CPUE for each size-class of bluegill and redear sunfish collected at Lake Pennyrile during May from 1990-2004.

		Inch-Class											
		< 3.0 in		3.0 - 5.9 in		6.0 - 7.9 in		≥ 8.0 in		≥ 10.0 in		Total	
Species	Year	CPUE	Std. Error	CPUE	Std. Error	CPUE	Std. Error	CPUE	Std. Error	CPUE	Std. Error	CPUE	Std. Error
Bluegill													
	2004	3.1	3.1	38.5	10.6	23.1	11.9	6.2	4.5	0.0	0.0	70.8	21.7
	2003	27.7	5.2	80.0	14.5	18.5	5.2	12.3	5.2	0.0	0.0	138.5	8.8
	2002	77.6	22.9	98.4	32.0	29.6	7.3	1.6	1.1	0.0	0.0	207.2	52.1
	2001	0.0	0.0	21.0	3.0	65.9	53.9	3.0	3.0	0.0	0.0	89.8	53.9
	2000	80.8	9.0	95.8	18.0	65.9	12.0	9.0	3.0	0.0	0.0	251.5	35.9
	1999	6.0	0.0	61.0	15.0	72.0	2.0	4.0	0.0	0.0	0.0	143.0	17.0
	1998	16.0	4.0	40.0	2.0	16.0	6.0	1.0	1.0	0.0	0.0	73.0	11.0
	1994	5.0	5.0	27.0	5.0	8.0	4.0	0.0	0.0	0.0	0.0	40.0	6.0
	1990	2.0	2.0	48.0	4.0	6.0	0.0	12.0	2.0	0.0	0.0	68.0	4.0
	Mean	24.2		56.6		33.9		5.5		0.0		120.2	
Redear sunfish													
	2004	0.0	0.0	20.0	12.8	40.0	17.1	9.2	2.9	0.0	0.0	69.2	31.1
	2003	0.0	0.0	55.4	12.7	26.2	3.1	21.5	2.9	0.0	0.0	103.1	13.0
	2002	0.0	0.0	59.2	11.4	49.2	9.9	53.8	20.9	0.0	0.0	162.3	27.3
	2001	0.0	0.0	21.0	15.0	12.0	6.0	9.0	3.0	3.0	3.0	44.9	21.0
	2000	3.0	3.0	41.9	18.0	24.0	0.0	134.7	68.9	3.0	3.0	206.6	50.9
	1999	0.0	0.0	11.0	3.0	40.0	4.0	65.0	11.0	3.0	1.0	119.0	11.0
	1998	0.0	0.0	6.0	2.0	16.0	8.0	9.0	1.0	1.0	1.0	32.0	12.0
	1994	0.0	0.0	8.0	8.0	5.0	5.0	7.0	3.0	1.0	1.0	21.0	7.0
	Mean	0.4		27.8		26.6		38.7		1.4		94.8	

Table 77. Spring, diurnal electrofishing CPUE for each age-class of bluegill collected from Lake Pennyrile during May from 2000-2004.

	Age-Class					
Year	1	2	3	4	5	6
2004[A]	0.62	12.72	28.27	15.74	4.00	9.42
2003[A]	15.38	41.03	47.93	19.33	3.38	11.40
2002	55.23	51.18	61.08	19.69	3.38	7.13
2001[AB]	0.00	3.92	19.67	42.25	7.06	15.33
2000[AB]	27.65	94.90	50.07	42.25	10.59	21.60

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

[B] Samples were collected by nocturnal electrofishing.

Table 78. Species composition, relative abundance, and CPUE of bluegill, redear sunfish, warmouth sunfish, longear sunfish, white crappie, and channel catfish collected during 0.50 hours of diurnal electrofishing (3 runs; each 600s) at Lake Pennyrile on 27 September 2004. (wfdwrpo.d04)

	Inch-Class																							Std.
Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	Error
Bluegill	2	11	38	25	15	6	6															103	202.0	71.6
Redear sunfish			2	13	11	2	2	3	1													34	66.7	34.4
Warmouth sunfish		1	1	10	9	9	2															32	62.8	14.1
Longear sunfish	2	24	37	31	10	1																105	205.9	42.6
White crappie								1														1	2.0	2.0
Channel catfish																			2		1	3	5.9	3.4

Spring CPUE of bluegill = 70.8 f/h (21.7 SE)
Spring CPUE of redear sunfish = 69.2 f/h (31.1 SE)
Spring CPUE of warmouth sunfish = 36.9 f/h (21.1 SE)
Spring CPUE of longear sunfish = 26.2 f/h (9.0 SE)
Spring CPUE of white crappie = 16.9 f/h (13.2 SE)
Spring CPUE of channel catfish = 10.8 f/h (7.1 SE)

Table 79. Population assessment of the bluegill sunfish population at Lake Pennyrile from 2000-2004.

	2000[A]		2001[A]		2002		2003[A]		2004[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)	74.9	(3)	67.6	(3)	30.0	(2)	30.8	(2)	29.2	(2)
Size Structure (CPUE ≥ 8.0 in)	9.0	(3)	2.9	(2)	1.5	(2)	12.3	(3)	6.2	(2)
Total Score:		(9)		(8)		(7)		(8)		(7)
Assessment Rating:		Fair		Fair		Fair		Fair		Fair

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

Table 80. Population assessment of the redear sunfish population at Lake Pennyrile from 2000-2004.

	2000[A]		2001[A]		2002		2003		2004	
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]	(2)	5.4[B]	(2)	5.4	(2)	5.4[B]	(2)	5.4[B]	(2)
Growth (Years to reach 8.0 in)	5[B]	(2)	5[B]	(2)	5	(2)	5[B]	(2)	5[B]	(2)
Size Structure (CPUE ≥ 8.0 in)	134.7	(4)	9.0	(2)	53.8	(4)	21.5	(4)	9.2	(2)
Size Structure (CPUE ≥ 10.0 in)	3.0	(3)	3.0	(3)	0.0	(1)	0.0	(1)	0.0	(1)
Total Score:		(11)		(9)		(9)		(9)		(7)
Assessment Rating:		Good		Fair		Fair		Fair		Fair

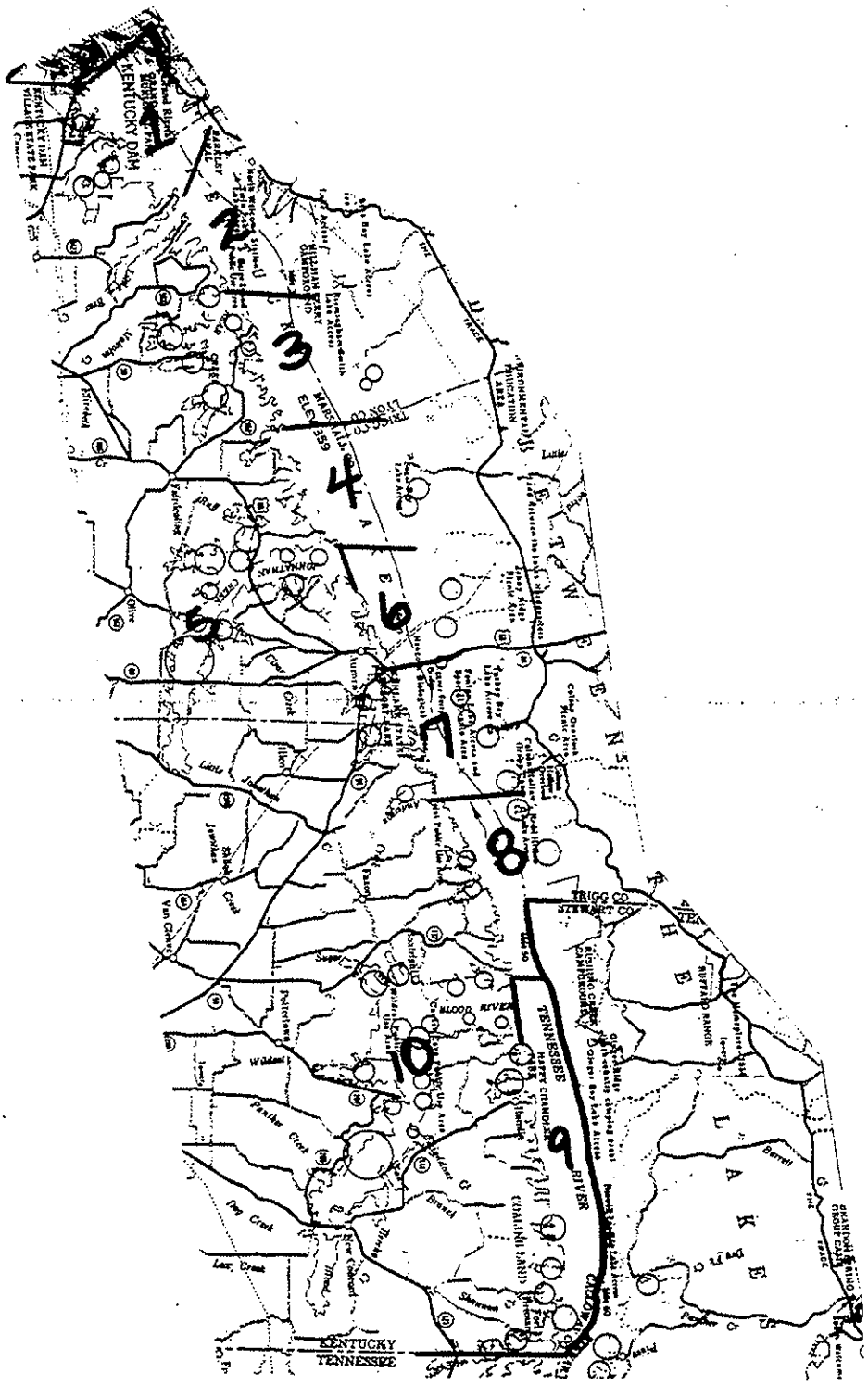
[A] Population assessments were based upon nocturnal electrofishing samples.

[B] Age and growth data was not collected. Age and growth data collected during 2002 was used as surrogate data. (Pennyrile_RDR_Database)

Table 81. Spring electrofishing catch-per-unit-effort (CPUE) for each size class of redear sunfish collected at Hematite Lake. Standard error in parentheses.

	Inch-class					
Year	< 3.0	3.0 - 5.9	6.0 - 7.9	> 8.0	> 10.0	Total
2002	1.0	73.0	69.0	16.0	0.0	159.0
	(1.0)	(17.5)	(10.0)	(4.0)	(0.0)	(22.9)
2004	8.4	216.0	27.5	1.2	0.0	253.9
	(3.6)	(26.1)	(3.6)	(1.2)	(0.0)	(25.8)

Appendix A. Map of Kentucky Lake creel survey areas.



Appendix B. Angler attitude survey concerning commercial net fishery at Kentucky Lake, 2004.

Are you aware that commercial fishermen are allowed to purchase a special commercial fishing permit that allows them to fish gill nets during November – March on Kentucky Lake, and November – February on Lake Barkley. These gill nets must have a minimum mesh size of 3 inches, to catch larger rough fish, such as carp, buffalo, and catfish.
(Total Replies = 289)

23.5% I was aware that commercial fishermen could fish gill nets on these lakes
76.5% I was **not** aware that commercial fishermen could fish gill nets on these lakes

There are approximately 20 commercial anglers that purchase this special commercial fishing permit. What is your opinion regarding this commercial fishery at Kentucky and Barkley lakes?
(Total Replies = 289)

27.0% Strongly oppose **(go to next question)**
23.2% Somewhat oppose **(go to next question)**
29.8% Neutral
10.4% Somewhat support
1.7% Strongly support
7.9% Don't know

Why do you oppose this commercial fishery?
(Total Replies = 136)

75.0% I think sport fish are caught in these nets
5.9% I hook baits in these nets
2.9% I have hit these nets with boat motors
9.6% I just don't like nets
6.6% Other (list) _____

Date _____ Name (optional)_____

NORTHWESTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Nolin Lake

A random, stratified, roving creel survey was conducted on Nolin Lake during the period March-October, 2004 (Tables 1-7). The lake was divided into two areas with equal probabilities of fishing pressure and two time periods per day of equal probability. Weekends were weighed at a rate 2.5 times that of weekdays. A total of 44,371 fishing trips were made totaling an estimated 146,796 man-hours; this equates to 25.4 man-hours per acre (Table 1). Anglers caught 245,073 fish and harvested 103,253 fish that weighed 43,397 pounds. The last creel survey on Nolin Lake was conducted in 1995 (see Annual Performance Report, Northwestern Fishery District, 1995). At that time, anglers went on 53,529 trips and expended 292,425 man-hours for an average of 50.51 man-hours per acre or nearly double that recorded in this survey. In 1995 anglers caught 367,635 fish and harvested 144,118 that weighed an estimated 87,709 pounds, again nearly double that recorded in this survey. Catch rates were higher in 2004, with 1.64 fish/hour as opposed to 1.26 fish/hour in 1995. Table 2 provides fish harvest statistics for each species.

Black bass fishing trips have decreased in number and percentage from 1995 (17,356 trips and 39 percent in 1995 versus 14,190 trips and 32 percent in 2004). The size limit on black bass changed from 12 inches in 1995 to 15 inch size limit with one fish under in 1996. There were 14,252 largemouth bass harvested in 1995 with an average length of 13.1 inches. In 2004 there were 2,916 largemouth bass harvested with an average length of 14.3 inches. Total catch for largemouth bass decreased from 68,924 fish in 1995 to 34,377 fish in 2004. However, the number of black bass caught per hour of fishing by bass anglers was 0.72 in 1995 and 0.73 in 2004 (Table 4). The average black bass fishing trip decreased from 5.5 hours in 1995 to 3.3 hours in 2004, partially explaining the discrepancy in bass catch. Also, spotted bass were caught (33,466 fish) and harvested (8,440 fish) in much greater numbers in 1995 than in 2004, when 8,676 fish were caught and 1,561 fish harvested. Largemouth bass $\geq$ 15.0 inches were caught at a greater rate in 2004 than in 1995 (4,132 versus 2,573) and were harvested at a lesser rate (1,481 harvested in 2004 and 1,527 harvested in 1995)(Table 4).

Crappie fishing has remained nearly the same in number of trips and percentage of trips (approximately 11,000 trips and 25% both surveys), however anglers fished much longer in 1995 (10.3 hours/acre in 1995 and 6.3 hours/acre in 2004). Crappies were harvested in similar numbers in both survey years (48,816 in 2004 and 47,182 in 1995). Catch (harvest) rates were better in 2004 with 1.28 fish/hour as opposed to 0.81 fish/hour in 1995 (Table 2).

Walleye fishing has declined in every aspect of the fishery. Total number of walleye caught declined from 9,531 in 1995 to 1,632 in 2004 (Table 6). Walleye harvest declined from 3,320 fish in 1995 to 206 fish in 2004. Walleye fishing trips declined from 3,947 in 1995 to 700 in 2004 and hours fished for walleye also declined from 21,536 to 2,316. Ironically, the number harvested per hour of fishing by walleye anglers changed very little, from 0.10 fish/hour in 1995 to 0.07 fish/hour in 2004.

White bass anglers also fished less in 2004 than in 1995, with 2,029 trips in 1995 and 755 trips in 2004 (Table 7). The total harvest of white bass declined from 11,767 fish in 1995 to 6,201 fish in 2004. White bass anglers harvested 4,105 fish in 2004 as compared to 5,364 fish in 1995. Catch and harvest rates increased for white bass anglers, as 1995 values for catch and harvest were both 0.57 fish/hour and catch rates were 1.38 fish/hour and harvest rates were 3.26 fish/hour in 2004.

Angler attitude surveys were conducted at Nolin Lake in conjunction with creel survey activities. These survey questionnaires and responses are provided below.

NOLIN RIVER LAKE ANGLER ATTITUDE SURVEY 2004 (121 Respondents)

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 **75%** Crappie **81%** Walleye **46%** White Bass **48%** Channel Catfish **23%** Flathead Catfish **16%** Other **31%**

4. Which one species do you fish for most at Nolin River Lake? (Check only one)
Bass **50%** Crappie **31%** Walleye **8%** White Bass **3%** Channel Catfish **2%** Flathead Catfish **1%** Other **5%**

-Ask following questions relevant to each species fished for-

Bass Anglers

5. What level of satisfaction do you have with bass fishing at Nolin l River Lake?
Very satisfied **4%** Somewhat satisfied **54%** Neutral **24%** Somewhat dissatisfied **15%** Very dissatisfied **3%**

6. Do you support or oppose the 15 inch one under size limit on largemouth bass at the lake?
Support **88%** Oppose **4%** No opinion **8%**

6a. What size limit would you prefer on largemouth bass at the lake? Current (15"-1) **64%** 15" **31%** Other **5%**

7. Do you support or oppose "no size limit" on spotted bass at the lake? Support **57%** Oppose **24%** No opinion **19%**

7a. What size limit would you prefer on spotted bass at the lake? Current (None) **60%** 12" **31%** Other **9%**

Crappie Anglers

8. What level of satisfaction do you have with crappie fishing at Nolin River Lake?
Very satisfied **12%** Somewhat satisfied **56%** Neutral **17%** Somewhat dissatisfied **10%** Very dissatisfied **5%**

9. Do you support or oppose the 9-inch size limit on crappie at the lake? Support **80%** Oppose **17%** No opinion **3%**

9a. What size limit would you prefer? No size limit **1%** 8" **5%** Current (9") **64%** 10 **30%** Other **0%**

10. Do you support or oppose the 30 fish creel limit on crappie at the lake? Support **73%** Oppose **23%** No opinion **4%**

10a. What creel limit would you prefer? Current (30) **71%** 20 **14%** 15 **13%** 10 **1%** Other **1%**

Walleye Anglers

11. What level of satisfaction do you have with walleye fishing at Nolin River Lake?
Very satisfied **4%** Somewhat satisfied **19%** Neutral **31%** Somewhat dissatisfied **20%** Very dissatisfied **26%**

12. Do you support or oppose the 15" size limit on walleye at the lake? Support **87%** Oppose **4%** No opinion **9%**

12a. What size limit on walleye would you prefer? Current (15") **89%** 18" **9%** 20" **2%** Other **0%**

13. Do you support or oppose the 10 fish creel limit on walleye at the lake? Support **56%** Oppose **35%** No opinion **9%**

13a. What creel limit on walleye would you prefer? Current (10) **55%** 6 **36%** 3 **3%** Other **6%**

White Bass Anglers

14. What level of satisfaction do you have with white bass fishing at Nolin River Lake?
Very satisfied **8%** Somewhat satisfied **33%** Neutral **33%** Somewhat dissatisfied **21%** Very dissatisfied **5%**

15. Do you support or oppose the 30 fish daily creel limit on white bass? Support **69%** Oppose **24%** No opinion **7%**

15a. What creel limit would you prefer on white bass at the lake? Current (30) **73%** 15 **23%** 10 **4%**

Catfish Anglers

16. What level of satisfaction do you have with the channel catfish fishing at Nolin River Lake?
Very satisfied **6%** Somewhat satisfied **43%** Neutral **43%** Somewhat dissatisfied **4%** Very dissatisfied **4%**

17. Do you support or oppose the no size limit on channel catfish at Nolin River Lake?
Support **63%** Oppose **25%** No Opinion**12%**

17a. If support, what size limit would you prefer? None **70%**, 12" **17%**, 14" **11%**, other **2%**

18. Do you support or oppose the no creel limit on channel catfish at Nolin River Lake?
Support **67%** Oppose **25%** No opionion **8%**

18a. What creel liimit would you prefer? None **76%**, 5 **10%**, 15 **14%**.

19. What level of satisfaction do you have with the flathead catfish fishing at Nolin River Lake?
Very satisfied **2%** Somewhat satisfied **29%** Neutral **51%** Somewhat dissatisfied **9%** Very dissatisfied **9%**

20. Do you support or oppose the no size limit on flathead catfish at Nolin River Lake?
Support **70%** Oppose **20%** No Opinion **10%**

20a. What size limit would you prefer on flathead catfish at the lake? Current (none) **80%** 20" **16%** other **4%**

21. Do you support or oppose the no creel limit on flathead catfish at the lake?
Support **64%** Oppose **22%** No opinion **14%**

21a. What creel limit would you prefer on flathead catfish at the lake? Current (none) **77%** 5 **12%** 15 **9%** Other **2%**

Nolin River Lake Creel Survey-2004 (111 Respondents)
Trophy Catfish Questionnaire

1. How many times per year do you fish for catfish at Nolin River Lake?
40% Do not fish for catfish (Skip to question 5)
29% 1-5 times per year
31% More than 5 times per year

2. Which catfish species do you prefer to fish for at Nolin River Lake?
40% Channel catfish
21% Flathead catfish

3. Check all methods that you use to catch catfish at Nolin River Lake?
55% Rod and reel
21% Trotlines
11% Limblines
20% Jugfishing
04% Tickling and Noodling (hand grabbing)

4. Which method do you prefer to use to catch catfish at Nolin River Lake?
41% Rod and reel
13% Trotlines
0% Limblines
5% Jugfishing
2% Tickling and Noodling (hand grabbing)

5. Would you favor a trophy catfish size and creel regulation that would allow the unlimited harvest of fish under 34 inches, but allow the harvest of only one fish over 34 inches per day? **95%** yes **5%** no

6. Do you feel that this length limit should apply to all the methods used to catch catfish that are listed in question # 4 above?
95% yes **5%** no

7. Tickling and Noodling is a method of harvesting catfish by handgrabbing or hooking catfish from underwater spawning cavities. Are you in favor of this method of harvesting catfish?

23%___yes (thank you for your participation)
76%___no (go to questions 7A and 7B)

7a. Why are you not in favor of tickling and noodling as a method of harvesting catfish?

61%_to many catfish harvested
59%_it targets fish that are spawning
22%_ catfish may be injured and escape only to die later
13%_just do not like it
05%_Other (please list)_____

7b. If hooks and gaffs were made illegal and only hand grabbing or roping were legal for tickling and noodling would you be in favor of this method? **9%**___Yes **91%** No

4 want creel dropped to 2-3 fish,
1 not a sport fishing method
1 too dangerous
1 takes too many big fish
1 no hooks allowed
1 trashing lake from barrels
1 inhumane to fish

Black Bass Sampling

Spring electrofishing for black bass population indices (Tables 8-10) was conducted for 4.5 hours during April 2004. Sampling results are similar to those observed in 2003, and reflect slight improvements to the bass population (Table 9). PSD and RSD15 values remain virtually constant to those found in 2003 (Table 10). Age frequency and CPUE per age class is given in Tables 11and 12. The overall black bass population assessment at Nolin Lake was fair, as it has been for the last several years (Table 13). Instantaneous mortality was estimated at 0.534 and the annual mortality was 41.4. Cohort mortality for each year class is given in Table 12. Fall electrofishing was conducted to further define largemouth bass population dynamics. Length frequency and CPUE are presented in Table 14. Table 15 provides information on year class strength and mean lengths for Age 0 and Age 1 largemouth bass.

Largemouth bass management objectives for Nolin Lake are as follow:

1) Achieve annual angler catch of 26,000 largemouth bass ≥12.0 inches.
2) Catch rate of 0.20 fish/hour for largemouth bass ≥12.0 inches by bass anglers.
3) Angler catch of 2,600 bass ≥15.0 inches.
4) CPUE of 40 fish/hour for 8.0 -11.0 inch bass, 30 fish/hour for 12.0-14.9 inch bass, and 7 fish/hour for bass ≥15.0 inches.

Objective 2 was exceeded with a catch rate of 0.28 fish/hour. Objective 3 was also exceeded with 4,132 bass being caught, and Objective 4 was partially met as 10.7 fish/hour were collected that were 15 inches or larger.

Crappie Sampling

Fall trapnetting to assess Nolin Lake's crappie population was completed during October. A total of 1,124 crappie (1051 white crappie and 73 black crappie) were collected during 77 net-nights of trapnetting. Length frequency and CPUE are given in Table 16. CPUE decreased in 2004, following two years of modest increase. Most fish are 7-10 inches in length. PSD and RSD10 values are listed in Table 17. White crappie ≥8.0 inches are well represented in the population (6.93 fish/net-night), and crappie ≥ 10.0 inches were caught at a rate of 2.0 fish/net-night. Both values represent slight declines from 2003 values. Otoliths were removed from each inch-class for age-growth determinations. White crappie continue to grow well at Nolin, reaching 9.7 inches by the end of the third growing season. The log10 length weight equation for white crappie is LogW=-3.66+3.32(log L). Age and growth determinations for white crappie are provided in Table 18. Age frequency and catch rates for age classes are given in Table 19. Age 1 fish dominate the crappie population, which has been the case for a number of years.

Annual mortality of year class is estimated to range from 100% for older fish to 62% for 1 to 2 year old fish (Table 20). The overall white crappie population assessment was calculated to be "good" with a total score of 13 (possible 20) Table 21. The instantaneous mortality was 0.63 and the total annual mortality was 46.7 %.

Strategic management plan objectives for Nolin Lake are as follow:

1)Annual yield of 4.5 pounds per acre of harvested crappie.
2)Harvest rate of 0.9 fish/hour by crappie anglers.
3)Population density of 6 fish/net/day for ≥ 8.0 inch white crappie.
4)Growth rate of 9.5 inches by capture at the end of the third growing season.

Crappie were harvested at 4.3 pound/acre which is slightly less than Objective 1. Crappie were harvested at 1.3 fish/hour (Table 2) which exceeds Objective 2. Objective 3 was exceeded with a netting CPUE of 6.9 fish. Growth rates of 9.7 exceeded standards set for Objective 4.

A summary of crappie assessments for the past 5 years is given in Table 22.

Rough River Lake

Black Bass Sampling

Spring electrofishing for black bass population indices was conducted during April 2004. Table 23 provides information regarding CPUE per inch class for largemouth and spotted bass. Table 24 tracks CPUE for selected inch-groups over the past several years for trend analysis. CPUE was noticeably down in all size categories during 2004, but are consistent with values obtained in 1999-2002. This is, for the most part, due to increased sampling efficiency in 2003, however, increases in CPUE for the larger size groups was an encouraging sign in both 2003 and 2004. Pertinent management objectives for largemouth bass are population densities of ≥ 50 bass/hour for 8.0-11.9 inch fish, ≥ 25 bass/hour for 12.0-14.9 inch fish, and ≥ 10 bass/hour for ≥ 15 inch bass. The last objective was met for the first time in several years in 2003 and was close to being met in 2004 (Table 24). PSD and RSD15 values are both down in 2004, with 39% PSD and 17% RSD15 for largemouth bass (Table 25). Age and growth determinations were conducted for largemouth bass (Table 26). Electrofishing catch rates for each age class are given in Table 27. Annual mortality of year classes is given in Table 28. The overall population assessment for largemouth bass at Rough River Lake is good, a continuation of improvement noted in 2003 (Table 29). Fall electrofishing for further definition of population parameters for young fish was conducted in September. Table 30 lists results for each inch class collected during fall sampling. Table 31 gives indices of year class strength for age 0 and age 1 largemouth bass at Rough River Lake.

Crappie Sampling

Fall trapnetting to assess Rough River Lake's crappie population was conducted during October 2004. A total of 799 white crappie and 86 black crappie were collected during 80 net days of netting. Length frequencies and CPUE are listed in Table 32. The white crappie population continues to show excellent length distribution although CPUE was down in 2004. Table 33 gives PSD and RSD values for white and black crappie. Age and growth determinations were performed on white crappie (Table 34). White crappie are exhibiting good growth rates at Rough River Lake, averaging 10.0 inches at Age 3. The length weight equation for white crappie is LogW=-3.93+3.61(LogL). Age frequencies (Table 35) indicate a dominant age 1 population composition. Annual mortality of yearly cohorts is provided in Table 36. The overall population assessment for white crappie was fair, primarily due to decreased catch of young of year crappie (Table 37).Table 38 tracks population parameters over the last several years. White crappie management objective 3 states that the white crappie population density should be at least 9 fish > 8.0 in/net night, objective 4 states that at least 40% of the population be age 2 or older, and objective 5 requires a growth rate of at least 9.0 inches of age 2+ fish at capture. Objective 3 was met in 2003 but was not met in 2004. Objective 4 was not met as only 27% of the population was age 2 or older. Objective 5 was met in 2003 and 2004.

Lake Malone

Largemouth bass sampling

Lake Malone was electrofished for largemouth bass population composition in April 2004. Table 39 shows length frequency and CPUE for largemouth bass for each inch class. CPUE decreased slightly in all size categories over those observed in 2004 (Table 40). Slot limit protected fish continue to decrease, probably a function of hooking mortality and competition, however this is an area that will be closely monitored in 2005. PSD values and RSD15 values remain at high levels (Table 41). Tables 42 and 43 examine the age structure and mortality of largemouth bass age groups in Lake Malone. Lake Malone continues to support a good large bass population and an expansive age structure. Largemouth bass instantaneous mortality was 0.365 and annual mortality was 31%. The overall largemouth bass population assessment was good, scoring slightly behind last year's values (Table 44). Bass were sampled by electrofishing during October to determine population composition and year class strength (Table 45). Table 46 provides year class strength and mean length of age 0 fish at capture. This data will be used to track year class strength and growth through time. Management objectives for largemouth bass electrofishing are as follow:

1) Achieve population density of 50 bass/hour for 8.0-11.9 inch bass, 60 bass/hour for 12.0-14.9 inch bass, and 15 bass/hour for bass greater than 15 inches.

Objectives for the intermediate bass were not met, the other objectives were exceeded.

Bluegill and redear sunfish sampling

Bluegill and redear sunfish were sampled by electrofishing in April 2004 (Table 47). Catch rates improved for ages 2-4, however, age 1 fish were slightly behind 2002 and 2003 values (Table 48). PSD and RSD values are given in Table 49 and reflect a population dominated by smaller bluegill. The overall population assessment for bluegill is fair, similar to assessments for previous years (Table 50). Table 51 shows the trend toward overpopulated small bluegill over the past few years, with an encouraging increase in fish 6.0-7.9 inches this past sampling season. Bluegill management objectives at Lake Malone call for electrofishing CPUE to be $\geq$ 72 fish 3.0-5.9 inches, $\geq$ 48 for bluegill greater than 6.0 inches and at least 5 fish/hour for 8.0 inch and larger bluegill. The first two objectives were easily met but the latter objective for large bluegill was not met.. Redear sunfish were not assessed due to small sample numbers.

Carpenter Lake

Largemouth bass

Carpenter Lake was electrofished for largemouth bass population composition in April 2004. Length frequency and CPUE is given in Table 52. Table 53 lists electrofishing CPUE 1999-2004 for selected inch groups of largemouth bass. Most notable is trends of increasing abundance of small bass and bass over 15 inches, particularly the last four years. PSD and RSD values are given in Table 41. Table 54 provides age class CPUE for the past three years at Carpenter Lake. Table 55 gives mortality of cohort for age classes over the past two years. The overall bass population assessment at Carpenter Lake is excellent, and has improved over the past few years (Table 56). Largemouth bass management objectives at Carpenter Lake state that at least 60 bass from 8.0-11.9 inches, 30 bass from 12.0-14.9 inches and 8 bass 15 inches or larger be collected per hour of electrofishing. Objectives 1 and 3 were met (Table 53).

Bluegill and redear sunfish sampling

Bluegill and redear sunfish were electrofished in April 2004 at Carpenter Lake. Table 57 provides length frequency and CPUE. The PSD and RSD8 values for bluegill were 65 and 2, respectively (Table 58). Redear sunfish were not collected in sufficient numbers for compilation. Table 59 compares electrofishing catch rates for each age class of bluegill over the past two years. Improvement was noted in each age class in 2003 and 2004. Table 60 provides electrofishing CPUE for selected size classes over the past several years. Bluegill electrofishing results have been sporadic. The overall population assessment for bluegill was good (Table 61), slightly lower than long term trends. Bluegill management objectives at Carpenter Lake require 200 fish/hour for 3-5.9 inch fish, 120 fish/hour for 6-7.9 inch fish and 20 fish/hour for fish $\geq$ 8.0 inches. These objectives were not met in 2003 or 2004.

Kingfisher Lake

Largemouth bass sampling

Largemouth bass were electrofished at Kingfisher Lake during April 2004. Length frequency and CPUE are given in Table 62. PSD and RSD15 are given in Table 41. CPUE comparisons over the past several years for selected inch groups is given in Table 63. Small fish dominate the bass population at Kingfisher Lake, as they have for a number of years, however, a few larger fish are beginning to show up. Annual removal and transplant of 250 + bass to Carpenter Lake will continue with additional transplants each year until the small bass are brought under control. Age and growth determinations in 2003 revealed a slow-growing bass population, with age 5 bass being less than 12.0 inches. Table 64 gives CPUE for each age class over the past three years. Annual mortality of cohort is listed in Table 65. Table 66 tracks population assessments over the past several years. The shortage of larger sized fish in Kingfisher is the primarily causative agent in low assessment scores.

Bluegill sampling

Bluegill were sampled at Kingfisher Lake in April 2004. Length frequency and CPUE are listed in Table 67. Comparison of selected size groups over the past several years of electrofishing is given in Table 68. The PSD for bluegill is 60 (Table 69). CPUE for each age class of bluegill collected over the past three years is listed in Table 70. Table 71 tracts population assessments over the past several years. Kingfisher Lakes have good growth rates but are low in overall population numbers, especially the larger sized fish. This is a heavily fished small lake near a metropolitan center (Owensboro), which partially explains this situation.

Mauzy Lake

Mauzy Lake was renovated in 2003. The lake was drawn down 13 feet for the installation of an underwater withdrawal pipe (set at 12 feet). While the lake was down shoreline areas were deepened to at least 18 inches to suppress vegetative growth and provide better bank fishing access and utilization. Jetties were formed of the dredged material and these were capped with riprap and gravel and access roads constructed so that those physically impaired could access the jetties. The jetties (12) were complemented with pea gravel mats and fish attractors. A large area was graveled and numerous fish attractors installed in anticipation of a floating fishing pier.

Largemouth bass sampling

Largemouth bass were sampled in April 2004, the lake was still in a partially drawn down condition. Table 72 gives length frequency and CPUE information, which revealed a fairly balanced population. Table 73 provides CPUE for selected size groups over the past several years, and reveals that the larger sized fish were heavily impacted by the lake drawdown and concentrated fishing pressure. Low PSD values are also indicative of this pressure (Table 41). Age and growth information for largemouth bass is given in Table 74. Largemouth bass are slow growing in Mauzy Lake, and this coupled with low population numbers of larger fish resulted in a poor rating for the overall bass population (Table 75).

Bluegill sampling

Mauzy Lake was sampled for bluegill in April 2004. Table 76 provides CPUE and length frequency for bluegill. PSD and RSD values are given in Table 77. Table 78 provides CPUE for selected size groups of bluegill which will need to be followed for a couple more years to assess trends.

Washburn Lake

Washburn Lake was renovated and restocked with largemouth bass, bluegill, redear sunfish, and channel catfish in 2000. Population assessments are limited due to the age of fishes present.

Largemouth bass sampling

Largemouth bass were sampled in April 2004. Table 79 gives length frequency and CPUE for collected fish. Table 80 provides CPUE for selected size groups of largemouth bass but is limited by the age of bass available in the lake. Age and growth for largemouth bass is given in Table 81 and reveals a slow-growing bass population. The overall bass population was evaluated (Table 82) and received a poor rating, primarily due to the stocking history of the lake but further compromised by slow growing bass.

Bluegill and redear sunfish sampling

Bluegill were collected during April sampling (Table 83). No redear sunfish were observed. The PSD for bluegill was 61 in 2003 and 40 this year (Table 84). Table 85 tracks bluegill relative abundance of selected size groups since stocking in 2000. The population assessment for bluegill was excellent (Table 86).

Table 1. Fishery statistics derived from a daytime creel survey at Nolin River Lake (5,800 ac) during 1 March through 31 October 2004.

Fishing trips		
No. of fishing trips (per acre)	44,371	7.66
Fishing pressure		
Total man-hours (S.E.)[a]	146,796	1,968
Man-hours/acre	25.4	
Catch/harvest		
No. of fish caught (S.E.)	245,073	15,549
No. of fish harvested (S.E.)	103,253	8,510
Lb of fish harvested	43,397	
Harvest rates		
Fish/hour	0.65	
Fish/acre	17.8	
Lb/acre	7.5	
Catch rates		
Fish/hour	1.67	
Fish/acre	42.3	
Miscellaneous characteristics (%)		
Male	81.9	
Female	18.1	
Resident	93.9	
Non-resident	6.1	
Method (%)		
Still fishing	26	
Casting	68.5	
Fly fishing	0.1	
Trolling	5.3	
Mode (%)		
Boat	81.8	
Bank	9	
Dock	9.2	

$t < 0.5\%$

[a]S.E. = standard error

																							crapple	crapple			
No. caught	920	183	547	3,734	1,632	467	16	126	83,839	2,170	146	8,676	34,377	75,852	18,371	13,505	16	43,199	4,280	87,521	94,223		246	237	15		
(per acre)	,(0.16)	,(0.03)	,(0.09)	,(0.65)	,(0.3)	,(0.08)	t	,(0.02)	,(14.49)	,(0.38)	,(0.03)	,(1.50)	,(5.94)	,(13.1)	,(3.2)	,(2.33)	t	,(7.5)	,(0.7)	,(15.1)	,(16.3)		,(0.04)	,(0.04)	t		
No. harvested	230	21	376	2,053	206	298		21	35,109	376		1,561	2,916	41,800	11,587	6,201		4,477	2,429	36,034	53,387		246	237	15		
(per acre)	,(0.04)	t	,(0.06)	,(0.35)	,(0.04)	,(0.05)		t	,(6.06)	,(0.06)		,(0.27)	,(0.50)	,(7.2)	,(2.0)	,(1.07)		,(0.8)	,(0.4)	,(6.2)	,(9.2)		,(0.04)	,(0.04)	t		
% of total no. harvested	0.22%	0.02	0.36	1.99	0.20%	0.29%		0.02%	34.00%	0.36%		1.51%	2.82%	40.48%	11.22%	6		4.34	2.35	34.9	51.71		0.24	0.23	0.02		
Lb harvested	59	134	1,075	1,818	295	29		5	4,193	27		913	4,427	19,104	6,009	5,205		5,340	2,892	4,312	25,114	5,205	35	60	10		
(per acre)	,(0.01)	,(0.02)	,(0.19)	,(0.31)	,(0.05)	t		t	,(0.72)	t		,(0.16)	,(0.77)	,(3.30)	,(1.04)	,(0.90)		,(0.92)	,(0.50)	,(0.74)	,(4.34)	,(0.90)	t	,(0.01)	t		
% of total lb harvested	0.10%	0.3	2.5	4.2	0.9	0.07		0.01	9.7	0.06		2.1	10.2	44	13.8	12.0		12.3	6.7	9.9	57.9	11.9	0.1	0.1	0.02		
Mean length (in)	7.9	24	19.2	14.4	16.9	5.2		7	5.2	4.9		10.5	14.3	9.9	9.8	12							7.5	8	13		
Mean weight (lb)	0.4	6.4	2.9	1	1.6	0.09		0.2	0.1	0.07		0.5	1.5	0.4	0.5	0.7							0.2	0.2	0.6		
No. of fishing trips for that species					700											755		14,190.00	1,382.00	3,212.00	10,994.00						13,137
% of all trips					1.6											1.7		32.00%	3.10%	7.20%	24.80%						29.6
Hours fished for that species					2,316											2,499		46,945	4,574.00	10,627.00	36,372.00						43,462
(per acre)					,(0.4)											0.43		,(8.1)	,(0.8)	,(1.8)	,(6.3)						,(7.5)
No. harvested fishing for that species					167											4,105		3,161	1,097	16,191	48,816						
Lb harvested fishing for that species																											
No./hour harvested fishing for that species					0.07											1.38		0.05	0.24	1.60	1.28						
% success fishing for that species					9.4											60		8.90%	31.80%	36.5%	61.00%						18.4

Table 3. Monthly black bass angling success at Nolin River Lake during 1 March - 30 October 2004 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
Mar	5,718	1,040	1,579	5,222	4,344	0.75	557	0.10
Apr	4,211	1,391	1,649	5,455	3,421	0.56	1,052	0.17
May	4,300	584	1,659	5,489	3,654	0.55	460	0.07
Jun	5,627	223	1,559	5,159	4,251	0.82	101	0.02
Jul	7,431	254	2,100	6,948	6,431	0.87	187	0.03
Aug	7,142	288	2,197	7,268	6,021	0.76	256	0.03
Sep	6,322	468	2,270	7,510	5,550	0.71	408	0.05
Oct	2,448	227	1,177	3,894	2,081	0.61	140	0.04
Total	43,199	4,477	14,190	46,945	35,753		3,161	
Mean						0.73		0.05

Table 4. Black bass catch and harvest statistics derived from a creel survey at Nolin River Lake (5,800 a) for each species of black bass.

	Largemouth bass										Spotted bass				Smallmouth bass			
	Harvest					Catch and release					Catch and release				Catch and release			
	8-11.9	12.0-14.9	≥15.0	≥20.0	Total	8.0-11.9	12.0-14.9	≥15.0	≥20.0	Total	Harvest	8.0-14.9	>15.0	Total	Harvest	8.0-14.9	≥15.0	Total
Total no. of bass	171	1,215	1,481	24	2,916	18,250	11	2,651	53	31,461	1,561	7,056	59	7,115	0	146	0	146
% of black bass harvested by no.					65.1						34.9							
Total weight of fish (lb)					4,427						913							
% of bass harvested by weight					82.9						17.1							
Mean length					14.3						10.5							
Mean weight					1.52						0.54							
Rate (f/hr)					0.02						0.01							

Table 5. Length distribution for each species of fish harvested or released at Nolin River Lake during 1 March - 30 October 2004.

Species	Inch class																								
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	27	29	31
Carp																										
Harvested																										
Sublegal													23	23			46	23		23			21		24	
Rock Bass																										
Harvested					69	69	46	23	23																	
Sublegal		38	19	57	230	115	153	38	19	21																
Drum																										
Harvested																										
Sublegal																				16						
Gar																										
Harvested																										
Sublegal														16												
Walleye																										
Harvested														103	21	41		21		20						
Released														31	46	16										
Sublegal							137	98	118	235	333	333	79													
Channel catfish																										
Harvested					21				423	64	148	254	191	275	191	64	139	85	64	104						
Sublegal		53	18	35	140	70	333	245	105	123	123	35	53	175	18	53	53	18	30							
Flathead Catfish																										
Harvested												23	23	70	23	23	23		23		47	70		23		28
Sublegal							28	57									28		28	30						
White crappie																										
Released								2,387	845	296	127	21	20													
Harvested								18,245	14,775	5,617	1,935	496	590	94	48											
Sublegal		23	375	868	2,651	4,715	21,723																			
Black Crappie																										
Released								641	195	28																
Harvested								4,757	4,618	1,466	608	55	83													
Sublegal	26				310	853	4,731																			
Warmouth																										
Harvested						21																				
Sublegal				18	35	35	17																			
Bluegill																										
Harvested		207	4,092	8,919	14,689	5,789	1,358	38	17																	
Sublegal		827	14,911	22,217	7,975	1,637	722	264	176																	
Longear sunfish																										
Harvested			103	239	34																					
Sublegal		172	859	477	286																					
Largemouth bass																										
Harvested					49				122	49	340	462	413	583	437	97	316	24	24							
Released														1,146	663	430	287	72	18	18		17				
Sublegal							3,970	2,563	5,974	5,743	5,781	2,467	2,312													
Spotted Bass																										
Harvested					51	51	102	26	409	333	409	102	26	52												
Sublegal							1,348	1,704	1,903	773	773	436	119	20	39											
White Bass																										
Harvested								101	626	687	1,656	667	1,313	869	242											
Sublegal			88	71	318	407	1,150	654	1,450	283	2,105	248	230	177	88					17						
Smallmouth Bass																										
Harvested																										
Sublegal							32	97		17																
Illegal Blk Crappie																										
Harvested						211	35																			
Illegal Wh Crappie																										
Harvested							237																			
Illegal Walleye																										
Harvested																										

Table 6. Monthly walleye angling success at Nolin River Lake during 1 March - 30 October 2004 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
Mar	37	37	56	186	37	0.20	37	0.20
Apr	113							
May	459	63	290	961	397	0.41	42	0.04
Jun	466	40	198	655	303	0.46	40	0.06
Jul	85		41	134	34	0.25		
Aug	288	48	70	232	80	0.34	48	0.21
Sep	166		44	147	30	0.20		
Oct	17	17						
Total	1,632	206	700	2,316	881		167	
Mean						0.38		0.07

Table 7. Monthly white bass angling success at Nolin River Lake during 1 March - 30 October 2004 creel survey period.

Month	Total no. of white bass caught	Total no. of white bass harvested	No. of white bass fishing trips	Hours fished bywhite 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
Mar	1,374	891	56	187	594	3.17	557	2.98
Apr	1,015	940						
May	501	21	83	274	459	1.67		
Jun	1,316	283	136	450	547	1.21	223	0.49
Jul	407	119						
Aug	721	416	20	66	352	5.33	256	3.88
Sep	3,433	907	100	331	3,010	9.09	726	2.19
Oct	4,739	2,623	360	1,190	4,249	3.57	2,343	1.97
Total	13,506	6,200	755	2,499	9,211		4,105	
Mean						3.26		1.38

Table 8. Species composition, relative abundance, and CPUE (no./hour) of black bass collected during 4.5 hours of 30-minute diurnal electrofishing runs at Nolin River Lake in April 2004.

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		3	11	12	16	17	13	15	17	11	10	12	12	3	11	9	7	1			180	72.00	11.63
	Spotted bass			2	1	1	7	8	3	5	8											35	14.00	6.87
Lower	Largemouth bass		4	15	25	11	10	8	5	1	7	15	11	6	4	1	6	2	2		1	134	67.50	11.76
	Spotted bass				2	7	9	3	6	7	4											38	19.00	4.36
Total	Largemouth bass		7	26	37	27	27	21	20	18	18	25	23	18	7	12	15	9	3	1	1	315	70.00	7.82
	Spotted bass			2	7	8	16	11	9	12	12											77	16.22	4.13

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Table 9. Spring electrofishing CPUE for each size class of largemouth bass collected at Nolin River Lake during spring electrofishing 1999-2004. CPUE = fish/hour.

	Inch Class									
	<8.0		8.0-11.9		12.0-14.9		≥15.0		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2004	27.56	4.13	17.11	3.51	14.67	2.29	10.67	2.77	70.00	7.82
2003	12.89	3.73	10.22	2.3	8.89	2.21	7.56	1.99	39.56	9.16
2002	4.00	1.33	9.78	2.59	8.00	3.13	8.00	1.63	29.78	5.44
2001	5.50	1.68	27.00	7.44	18.00	3.30	9.00	2.80	59.50	11.72
2000	9.50	3.11	35.00	6.27	41.50	5.12	14.00	4.34	100.00	13.07
1999	n/d		61.33	16.84	56.89	9.18	8.00	1.76	126.22	26.01

Table 10. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples in each area of Nolin River Lake during April 2004; 95% confidence intervals are in parentheses.

Area	Species	No. fish ≥ 8.0"	PSD (+/- 95%)	RSD[a] (+/- 95%)
Upper	Largemouth bass	121	54 (+/- 9)	26 (+/- 7)
	Spotted bass	31	26 (+/- 16)	0
Lower	Largemouth bass	70	70 (+/- 10)	24 (+/- 10)
	Spotted bass	25	24 (+/- 17)	4 (+/-7)
Total	Largemouth bass	191	60 (+/- 7)	25 (+/- 6)
	Spotted bass	56	25 (+/- 11)	2 (+/-3)

[a] Largemouth bass = RSD-15, spotted bass = RSD-14.
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Table 11. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Nolin River Lake during April 2004.

	Year		
Age	2002	2003	2004
1	3.78	11.33	26.00
2	8.33	9.64	15.62
3	8.90	9.08	14.90
4	1.59	1.57	1.86
5	0.73	0.82	0.97
6	1.78	2.44	3.33
7			
8			
9			
10			

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Table 12. Annual mortality (A) between 2003-2004, and CPUE (fish/hr) of the last five year classes estimated from largemouth bass captured in spring electrofishing samples at Nolin River Lake.

Year Class	Age Intervals	CPUE (2003)	CPUE (2004)	Mortality of Cohort (%)
2003	1+ - 2+	11.33	15.62	
2002	2+ - 3+	9.64	14.90	
2001	3+ - 4+	9.08	1.86	80
2000	4+ - 5+	1.57	0.97	38
1999	5+ - 6+	0.82	3.33	
1998	6+ - 7+	2.44	0	100

Table 13. Population assessment for largemouth bass based on spring electrofishing at Nolin River Lake from 1999-2004.

	Year											
	1999		2000		2001		2002		2003		2004	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Length at age 3	13.09	4	13.09	4.00	13.09	4	13.09	4	13.09	4	13.09	4
Spring CPUE age 1 fish	n/d		9.00	1	5.00	1	3.78	1	11.33	1	26.00	2
Spring CPUE 12-14.9 in fish	56.89	4	41.50	4	18.00	2	8.00	1	8.89	1	14.67	1
Spring CPUE ≥ 15.0 inch fish	8.00	2	14.00	3	9.00	2	8.00	2	7.56	2	10.67	2
Spring CPUE ≥ 20.0 inch fish	0.44	2	0.50	2	0.00	0	0.00	0	0.00	0	0.44	2
Total score				14		9		8		8		11
Assessment rating				G		F		F		F		F

Table 14. Species composition, relative abundance, and CPUE (no./hour) of black bass collected during 4.5 hours of 30-minute diurnal electrofishing runs at Nolin River Lake in September 2004.

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	20	151	24	13	24	22	3	18	28	19	13	7	7	4	3				1	357	142.80	43.27
	Spotted bass	7	47	5	2	3	3	2	2	3	4	2	4								84	33.60	6.18
Lower	Largemouth bass	27	54	10	8	14	4	7	3	2	12	11	1	4	1		2				160	80.00	19.54
	Spotted bass	22	43	5	1	10	9	4	11	8	5		2		1						121	60.50	18.19
Total	Largemouth bass																				517	114.89	26.56
	Spotted bass																				205	45.56	9.39

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Table 15. 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 Nolin RiverLake.

		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
2001	Total	3.0		76.0	29.2	7.3	0.9	3.78	1.10
2002	Total	4.5		28.6	11.8	14.4	1.4	11.33	3.11
2003	Total	4.4		28.4	4.9	14.2	2.6	22.89	1.57
2004	Total	4.1		41.3	11.2	9.6	1.6		

Table 16. Length frequency and CPUE for each specie of crappie collected in 77 net-nights of sampling at Nolin River Lake during October 2004.

	Inch Class													
Species	2	3	4	5	6	7	8	9	10	11	12	Total	CPUE	Std. Error
White crappie	1	223	168	9	21	95	223	157	111	40	3	1051	13.65	1.96
Black crappie	2	39	6		1	5	3	9	5	3		73	0.95	0.21

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Table 17. PSD and RSD10 values calculated for crappie collected in trap nets from Nolin River Lake during October 2004; 95% confidence limits are in parentheses.

Lake/Species	No.	PSD	RSD10
Nolin River Lake			
White Crappie	1051	81 (+/- 3)	23 (+/- 3)
Black Crappie	73	77 (+/- 17)	31 (+/- 18)

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Table 18. Mean back calculated lengths (in) at each annulus for white crappie collected at Nolin River Lake in October 2004.

Year		Age							
class	No.	0+	1	2	3	4	5	6	7
2004	7								
2003	32		4.7						
2002	21		5.6	8.3					
2001	9		5.3	8.2	9.5				
2000	2		5.8	7.7	9.3	10.1			
1997	1		6.3	8.0	9.6	10.5	11.1	11.8	12.1
Mean		4.0	5.1	8.2	9.5	10.2	11.1	11.8	12.1
No.	72	7	65	33	12	3	1	1	1
Smallest		2.8	3.5	6.1	7.7	9.6	11.1	11.8	12.1
Largest		6.5	7.1	9.9	11.4	10.5	11.1	11.8	12.1
Std error			0.1	0.2	0.3	0.3			
95% CI (±)			0.2	0.3	0.6	0.6			

nwdnlcag.d04

Table 19. Age-frequency and CPUE (no./net day) per inch class of white crappie trap netted for 77 net days at Nolin River Lake in October 2004. Numbers in parentheses are standard errors.

	Inch class														
Age	2	3	4	5	6	7	8	9	10	11	12	No.	CPUE	(Std. Error)	Age (%)
0	1	223	168	2	1							395	5.09		37
1				7	17	74	175	43				316	4.15	0.42	30
2					3	21	32	86	78	17		236	3.07	0.33	22
3							16	29	22	23		90	1.16	0.15	9
4									11		2	13	0.16	0.02	1
7											1	1	0.02	0.01	<1
Total	1	223	168	9	21	95	223	158	111	40	3	1,051			100
(%)	<1	21	16	1	2	9	21	15	11	4	<1	100			

nwdnrltr.d04, nwdnlcag.d04

Table 20. Annual mortality (A) estimates between 2003-2004, and CPUE (fish/hr) of the last five year classes of white crappie trap netted during October 2004 at Nolin River Lake.

Year Class	Age Intervals	CPUE (2003)	CPUE (2004)	Mortality of Cohort (%)
2003	1+ - 2+	8.00	3.07	62%
2002	2+ - 3+	4.68	1.16	75%
2001	3+ - 4+	0.32	0.16	50%
2000	4+ - 5+	0.21	0.02	91%
1999	5+ - 6+	0.02	0.0	100%

Table 21. Population assessment for white crappie trap netted at Nolin River Lake during October 2004.

Parameter	Actual Value	Assessment Score
Population density (CPUE age 1 fish and older)	8.56	2
Growth rate (Mean length of age 2+ fish at capture)	9.72	4
Size Structure (CPUE fish ≥ 8.0 in.)	6.93	3
Recruitment (CPUE of age 1 fish)	4.15	2
Recruitment (CPUE of age 0 fish)	5.09	2
Total Score		13
Assessment rating		G
Instantaneous mortality (Z)	0.6294	
Annual mortality (A)	46.71%	

Table 22. Population assessment for white crappie based on fall trapnetting at Nolin River Lake from 1999-2004.

	Year									
	1999		2001		2002		2003		2004	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
CPUE (excluding age 0)	8.72	2	10.21	2	11.99	2	13.23	3	8.56	2
CPUE of age 1	4.85	2	4.82	2	10.02	3	8.0	3	4.15	2
CPUE of age 0	0.18	1	2.62	1	4.26	2	2.04	1	5.09	2
CPUE of crappie ≥ 8.0 in.	5.55	3	3.87	2	8.78	3	8.65	3	6.93	3
Mean length age 2 at capture	9.8	4	9.1	3	9.5	3	9.8	4	9.72	4
Total score		12		10		13		14		13
Assessment rating		F		F		G		G		G

Table 23. Species composition, relative abundance, and CPUE (no./hour) of black bass collected during 4.5 hours of 30-minute diurnal electrofishing runs at Rough River Lake in April 2004.

Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	22	Total	CPUE	Std. Error
Upper	Largemouth bass		6	26	9	12	12	15	14	26	14	7	8	6	6	7	6	2			176	70.40	7.63
	Spotted bass					6	3	2		1		1		1	1						15	6.00	3.52
Lower	Largemouth bass		12	19	18	9	17	16	31	30	14	11	11	15	8	3	8	2	1	1	226	113.00	10.4
	Spotted bass		4	6	1		10	8	6		5	3	1								44	22.00	2.16
Total	Largemouth bass		18	45	27	21	29	31	45	56	28	18	19	21	14	10	14	4	1	1	402	89.33	9.5
	Spotted bass																						

nwdrrpsd.d04

Table 24. Spring electrofishing CPUE for each size class of largemouth bass collected at River River Lake during April 2004. CPUE = fish/hour.

	Inch Class									
	<8.0		8.0-11.9		12.0-14.9		≥15.0		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2004	31.11	3.86	35.56	5.12	12.89	2.16	9.78	1.08	89.33	9.5
2003	61.56	7.01	27.78	6.93	20.00	5.56	18.44	3.18	127.78	15.36
2002	7.33	1.70	7.11	2.29	2.00	0.88	1.56	0.44	18.00	3.82
2001	30.67	7.45	21.33	4.47	16.44	4.96	3.11	1.74	71.56	11.18
2000	15.11	3.45	32.89	4.31	21.78	2.76	5.33	2.11	75.11	6.42
1999	n/d		28.44	2.05	21.33	4.11	8.89	2.38	58.67	4.57

Table 25. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples in each area of Rough River Lake during April 2004; 95% confidence intervals are in parentheses.

Area	Species	No. fish ≥ 8.0"	PSD (+/- 95%)	RSD[a] (+/- 95%)
Upper	Largemouth bass	111	38 (+/- 9)	19 (+/- 7)
	Spotted bass	9	33 (+/- 33)	22 (+/- 28)
Lower	Largemouth bass	151	40 (+/- 7)	15 (+/- 6)
	Spotted bass	33	27 (+/- 15)	0
Total	Largemouth bass	262	39 (+/- 6)	17 (+/- 5)
	Spotted bass	42	29 (+/- 14)	5 (+/- 7)

[a] Largemouth bass = RSD-15, spotted bass = RSD-14.
nwrrlpsd.d004

Table 26. Mean back calculated lengths (in) at each annulus for largemouth bass collected at Rough River Lake in April 2004.

Year		Age						
class	No.	1	2	3	4	5	6	7
2003	44	5.8						
2002	39	6.0	9.9					
2001	27	6.7	11.5	13.4				
2000	11	6.7	11.1	14.1	15.1			
1999	2	6.4	11.1	13.1	15.4	16.3		
1998	4	7.6	11.4	13.3	14.9	16.1	16.7	
1997	1	5.7	9.3	11.8	13.4	14.9	16.5	17.5
Mean		6.2	10.6	13.6	15.0	16.0	16.6	17.5
No.	128	128	84	45	18	7	5	1
Smallest		2.9	7.1	11.6	12.8	14.9	16.2	17.5
Largest		10.1	14.1	15.8	17.5	17.5	16.9	17.5
Std error		0.1	0.1	0.2	0.3	0.3	0.1	
95% CI (±)		0.2	0.3	0.3	0.5	0.6	0.5	

nwdrrlag.d04

Table 27. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Rough River Lake during spring samples 2002- 2004.

	Year		
Age	2002	2003	2004
1	7.93	44.30	32.82
2	6.19	25.63	34.10
3	2.33	11.40	12.00
4	0.22	8.00	5.75
5	0	0	1.01
6	0	0	2.31

nwdrrpsd.d03, nwdrrlag.d02, nwdrrpsd.d04, nwdrrlag.d04

Table 28. Annual mortality (A) between 2003-2004, and CPUE (fish/hr) of the last five year classes estimated from largemouth bass captured in spring electrofishing samples at Rough River Lake.

Year Class	Age Intervals	CPUE (2003)	CPUE (2004)	Mortality of Cohort (%)
2002	1+ - 2+	44.30	34.10	23%
2001	2+ - 3+	25.63	12.00	53%
2000	3+ - 4+	11.40	5.75	50%
1999	4+ - 5+	8.00	1.01	87%
1998	5+ - 6+	0.00	2.31	
1997	6+ - 7+	0.00	0.89	

Table 29. Population assessment for largemouth bass based on spring electrofishing at Rough River Lake from 1999-2004.

	Year											
	1999		2000		2001		2002		2003		2004	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Length at age 3 at capture	12.5	4	12.5	4	12.5	4	12.5	4	12.5	4	13.6	4
Spring CPUE age 1 fish	2.96	1	10.52	1	28.00	2	7.93	1	44.30	3	32.82	3
Spring CPUE 12-14.9 in fish	21.33	2	21.78	2	16.44	2	2.00	1	20.00	2	12.89	1
Spring CPUE ≥ 15.0 inch fish	8.89	2	5.33	2	3.11	1	1.56	1	18.4	3	9.78	2
Spring CPUE ≥ 20.0 inch fish	0.44	2	1.78	2	0.00	1	0.00	1	0.67	2	0.22	2
Total score		11		12		10		8		14		12
Assessment rating		F		G		F		F		G		G

Table 30. Species composition, relative abundance, and CPUE (no./hour) of black bass collected during 4.5 hours of 30-minute diurnal electrofishing runs at Rough River Lake in September 2004.

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	46	181	12	23	47	16	7	12	21	14	20	15	2	2	2	1	1	1		423	169.20	21.21
	Spotted bass	3	8				1	2			2										16	6.40	2.64
Lower	Largemouth bass	13	79	12	11	7	7	7	4	7	10	6	4	6	4	2	1	2			182	91.00	23.78
	Spotted bass	3	7		1	2	2	5	1			2									23	11.50	4.19
Total	Largemouth bass	59	260	24	34	54	23	14	16	28	24	26	19	8	6	4	2	3	1		605	260.20	44.99
	Spotted bass	6	15		1	2	3	7	1		2	2									39	17.90	6.83

nwdrrlmb.d04

Table 31. 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 Rough River 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
2001	Total	4.0		38.6	3.9	29.3	0.9	7.93	1.70
2002	Total	5.0		60.5	18.3	34.3	2.6	44.30	5.61
2003	Total	4.8		34.9	3.2	20.0	2.9	32.82	3.85
2004	Total	4.0	0.06	100.4	18.6	24.2	5.9		

Table 32. Length frequency and CPUE for each specie of crappie collected in 80 net-nights of sampling at Rough River Lake during October 2004.

	Inch Class														
Species	2	3	4	5	6	7	8	9	10	11	12	13	Total	CPUE	Std. Error
White crappie		4	71	67	17	71	209	223	99	33	4	1	799	9.99	1.13
Black crappie		14	15	1	20	11	12	4	9				86	1.08	0.16

nwdrrctn.d04

Table 33. PSD and RSD10 values calculated for crappie collected in trap nets from Rough River Lake during October 2004; 95% confidence limits are in parentheses.

Lake/Species	No.	PSD	RSD10
Rough River Lake			
White Crappie	799	78 (+/-3)	19 (+/-3)
Black Crappie	86	44 (+/-13)	16 (+/-10)

nwdrrtn.d04

Table 34. Mean back calculated lengths (in) at each annulus for white crappie collected at Rough River Lake in October 2004.

Year		Age							
class	No.	0+	1	2	3	4	5	6	7
2004	17								
2003	36		5.2						
2002	21		5.9	8.4					
2001	2		5.7	8.3	9.9				
2000	2		6.1	8.6	10.7	11.9			
1997	1		5.1	7.1	8.9	9.8	10.5	11.2	11.8
Mean		4.9	5.5	8.4	10.0	11.2	10.5	11.2	11.8
No.	89	17	62	45	24	3	1	1	1
Smallest		4.2	3.5	7.1	8.9	9.8	10.5	11.2	11.8
Largest		5.9	8.9	9.4	11.6	12.8	10.5	11.2	11.8
Std error			0.1	0.1	0.5	0.9			
95% CI (±)			0.2	0.3	0.9	1.6			

nwdrrcag.d04

Table 35. Age-frequency and CPUE (no./net day) per inch class of white crappie trap netted for 80 net days at Rough River Lake in October 2004. 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		4	71	67									142	1.77		17.8
1					17	71	171	156	18	7			440	5.50	0.69	55.1
2							38	67	72	23	1		201	2.52	0.29	25.1
3									9	3			12	0.15	0.02	1.5
4											1	1	2	0.03	0.02	0.2
7											1		1	0.02	0.01	0.1
Total		4	71	67	17	71	209	223	99	33	3	1	799			
(%)		0.3	8.9	8.4	2.1	8.9	26.1	27.9	12.4	4.1	<0.5	<0.5				100

nwdrrctn.d04, nwdrrcag.d04

Table 36. Annual mortality (A) estimates between 2002-2003, and CPUE (fish/hr) of the last five year classes of white crappie trap netted during October 2004 at Rough River Lake.

Year Class	Age Intervals	CPUE (2003)	CPUE (2004)	Mortality of Cohort (%)
2003	1+ - 2+	10.77	2.52	77%
2002	2+ - 3+	1.46	0.15	90%
2001	3+ - 4+	0.66	0.03	95%
2000	4+ - 5+	0.14	0.02	86%
1999	5+ - 6+	0	0	

Table 37. Population assessment for white crappie trap netted at Rough River Lake during October 2004.

Parameter	Actual Value	Assessment Score
Population density (CPUE age 1 fish and older)	8.22	2
Growth rate (Mean length of age 2+ fish at capture)	10.4	4
Size Structure (CPUE fish ≥ 8.0 in.)	7.1	3
Recruitment (CPUE of age 1 fish)	5.5	2
Recruitment (CPUE of age 0 fish)	1.77	1
Total Score		12
Assessment rating		F
Instantaneous mortality (Z)	0.7342	
Annual mortality (A)	52.00%	

Table 38. Population assessment for white crappie based on fall trapnetting at Rough River Lake from 1999-2003.

	Year									
	1998		2000		2002		2003		2004	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
CPUE (excluding age 0)	12.11	2	4.03	1	11.99	2	13.1	3	8.22	2
CPUE of age 1	7.5	3	1.36	1	10.02	3	10.8	3	5.5	2
CPUE of age 0	1.87	1	2.12	1	4.26	2	18.85	4	1.8	1
CPUE of crappie ≥ 8.0 in.	5.46	3	3.07	2	8.78	3	9.92	3	7.1	3
Mean length age 2 at capture	9.5	3	9.2	3	9.5	3	10.6	4	10.4	4
Total score		12		8		13		17		12
Assessment rating		F		F		G		G		F

Table 39. Relative abundance, and CPUE (no./hour) of largemouth bass collected during 2.5 hours of 30-minute diurnal electrofishing runs at Lake Malone in April 2004.

		Inch Class																						
Lake	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
Malone	Largemouth bass	12	18	16	3	22	38	28	37	31	21	20	25	25	31	17	23	22	7	5	3	404	161.60	12.75

nwdlmpsd.d04

Table 40. Spring electrofishing CPUE for each size class of largemouth bass collected at Lake Malone 1999-2003. CPUE = fish/hour.

	Inch Class									
	<8.0		8.0-11.9		12.0-14.9		≥15.0		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2004	28.40	3.87	53.60	5.74	26.40	4.17	53.20	3.93	161.60	12.75
2003	57.00	3.32	76.50	6.75	35.00	5.00	57.50	4.86	226.00	12.08
2002	8.57	3.32	43.43	4.97	43.43	8.48	41.71	7.55	137.14	17.45
2001	18.00	8.05	66.00	12.03	50.00	7.98	31.33	6.32	165.33	15.55
2000	13.33	3.37	46.00	4.23	51.33	7.83	24.00	4.00	134.67	14.52
1999	n/d		48.67	9.82	61.33	6.98	23.33	4.89	133.33	12.72

Table 41. 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 2004; 95% confidence intervals are in parentheses.

Lake	Species	No. fish ≥ 8.0"	PSD (+/- 95%)	RSD[a] (+/- 95%)
Malone	Largemouth	333	60 (+/- 5)	40 (+/- 5)
Carpenter	Largemouth	129	26 (+/-8)	12 (+/-5)
Kingfisher	Largemouth	101	6 (+/-5)	0
Mauzy	Largemouth	108	8 (+/-5)	5 (+/-4)
Washburn	Largemouth	138	0	0

[a] Largemouth bass = RSD-15

Table 42. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Lake Malone during spring samples 2002- 2003.

			Year
Age	2002*	2003	2004
1	6.00	35.00	19.00
2	28.3	69.16	37.54
3	28.85	34.51	29.81
4	31.09	30.13	23.43
5	15.78	16.03	13.93
6	6.84	9.31	8.74
7	7.37	12.39	12.24
8	2.86	7.03	6.77
9	5.71	9.53	7.57
10	1.49	1.90	1.36

*nocturnal sample

Table 43. Annual mortality between 2002-2003, and CPUE (fish/hr) of the last 10 year classes estimated from largemouth bass captured in spring electrofishing samples at Lake Malone.

Year Class	Age Intervals	CPUE (2003)	CPUE (2004)	Mortality of Cohort (%)
2002	1+ - 2+	35.00	37.54	
2001	2+ - 3+	69.16	29.81	57%
2000	3+ - 4+	34.51	23.43	62%
1999	4+ - 5+	30.13	13.93	54%
1998	5+ - 6+	16.03	8.74	46%
1997	6+ - 7+	9.31	12.24	
1996	7+ - 8+	12.39	6.77	45%
1995	8+ - 9+	7.03	7.57	
1994	9+ - 10+	9.53	1.36	86%
1993	10+ - 11+	1.90	0.0	100%

Table 44. Population assessment for largemouth bass based on spring electrofishing at Lake Malone from 1999-2004.

	Year											
	1999		2000		2001		2002		2003		2004	
Parameter	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
Spring CPUE age 1 fish	n/d		2.44	1	14.00	1	6.00	1	35.00	2	19.00	2
Spring CPUE 12-14.9 in fish	61.33	4	51.33	4	50.00	4	43.43	3	35.00	3	26.40	2
Spring CPUE ≥ 15.0 inch fish	23.33	3	24.00	3	31.33	4	41.71	4	48	4	53.20	4
Spring CPUE ≥ 20.0 inch fish	2.67	3	2.00	3	0.67	1	8.00	4	8.50	4	6.00	4
Total score		14+		15		14		16		17		16
Assessment rating				G		G		G		E		G

Z=0.365, A=30.55%

Table 45. Relative abundance, and CPUE (no./hour) of largemouth bass collected during 2.5 hours of 30-minute diurnal electrofishing runs at Lake Malone in October 2004.

		Inch Class																							
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	23	Total	CPUE	Std. Error
Total	Largemouth bass	3	49	50	21	8	36	19	36	35	28	9	14	8	8	12	6	6	7	1	2	1	359	143.60	25.23

nwdlmlmb.d04

Table 46. 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 Lake Malone.

		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
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		

nwdlmlmb.d04

Table 47. Length frequency and CPUE for bluegill and redear sunfish collected in 1.25 hours of electrofishing at Lake Malone in April 2004.

	Inch Class													
Species	1	2	3	4	5	6	7	8	9	10	11	Total	CPUE	Std. Error
Bluegill	1	20	84	169	138	64	31					507	390.00	56.47
Redear sunfish			1		1	1			2		1	6	4.62	2.05

nwdlmbg.d04

Table 48. Electrofishing catch rate (fish/hr) for each age of bluegill collected from Lake Malone during spring samples 2002- 2004.

	Year		
Age	2002	2003	2004
1	16.67	23.85	15.38
2	167.38	106.59	120.33
3	169.72	69.19	189.63
4	53.73	19.60	63.88

nwdlmbg.d04

Table 49. PSD and RSD values calculated for bluegill and redear sunfish collected by electrofishing from Lake Malone during April 2004; 95% confidence limits are in parentheses.

Lake/Species	No.	PSD	RSD
Lake Malone			
Bluegill	486	19 (+/-4)	0
Redear sunfish	5		

nwdlmbg.d04

Table 50. Population assessment for bluegill based on spring electrofishing at Lake Malone from 1999-2004.

	Year											
	1999		2000		2001		2002		2003		2004	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	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
Years to 6 inches	3-3+	3	3-3+	3	3-3+	3	3-3+	3	3-3+	3	3-3+	3
CPUE of > 6.0 inch fish	21.33	1	52.67	3	47.33	2	56.80	3	7.75	1	73.08	3
CPUE of > 8.0 inch fish	0.67	2	2.00	2	0.67	2	0.00	0	0.00	0	0.00	0
Total score		8		10		9		8		6		8
Assessment rating		F		F		F		F		P		F

Table 51. Spring electrofishing CPUE for each size class of bluegill collected at Lake Malone during spring 1999-2003. CPUE = fish/hour.

	Inch Class											
	<3.0		3.0-5.9		6.0-7.9		≥ 8.0		≥10.0		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2004	16.15	9.62	300.77	49.90	73.08	15.44					390.00	56.47
2003	25.38	6.49	173.08	24.06	22.31	6.22					220.77	25.54
2002	16.67	6.21	331.67	40.59	59.17	10.50					407.50	50.54
2001	7.33	2.17	222	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	0.89			204.67	30.51
1999	53.33	14.3	20.67	4.31	0.67	0.67					74.67	18.03

Table 52. Length frequency and CPUE (no./hour) of largemouth bass collected during 0.75 hours of 15-minute diurnal electrofishing runs at Carpenter Lake in April 2004.

		Inch Class																					
Lake	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	Std. Error
Carpenter	Largemouth bass	1	17	34	7	1	19	41	9	27	11	3	3		2	4	4	4	1	1	189	252.00	47.72

nwdclpsd.d04

Table 53. Spring electrofishing CPUE for each size class of largemouth bass collected at Carpenter Lake during 1999-2004. CPUE = fish/hour.

	Inch Class									
	<8.0		8.0-11.9		12.0-14.9		≥15.0		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
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- 2004.

			Year
Age	2002	2003	2004
1	12.00	162.67	56.00
2	36.93	57.60	90.13
3	25.73	55.73	56.53
4	1.33	2.67	4.00
5	0.00	0.00	0.00
6	10.67	14.67	8.00

nwdcllag.d04

Table 55. Annual mortality (A) between 2003-2004, and CPUE (fish/hr) of the last 6 year classes estimated from largemouth bass captured in spring electrofishing samples at Carpenter Lake.

Year Class	Age Intervals	CPUE (2003)	CPUE (2004)	Mortality of Cohort (%)
2003	1+ - 2+	162.67	90.13	45%
2002	2+ - 3+	57.60	56.53	2%
2001	3+ - 4+	55.73	4.00	93%
2000	4+ - 5+	2.67	0.00	100%
1999	5+ - 6+	0.00	8.00	
1998	6+ - 7+	14.67	0.00	100%

Table 56. Population assessment for largemouth bass based on spring electrofishing at Carpenter Lake from 1999-2004.

	Year											
	1999		2000		2001		2002		2003		2004	
Parameter	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
Spring CPUE age 1 fish	n/d		2.67	1	8.00	1	12.00	1	162.67	4	56.00	4
Spring CPUE 12-14.9 in fish	29.33	2	48.00	3	90.67	4	12.00	1	54.67	4	22.67	2
Spring CPUE ≥ 15.0 inch fish	1.33	1	0.00	1	66.67	4	21.33	4	36.00	4	21.33	4
Spring CPUE ≥ 20.0 inch fish	0.00	1	0.00	1	1.33	2	0.00	1	1.33	2	2.67	3
Total score		8+		10		15		10		18		17
Assessment rating		F		F		G		F		E		E

Table 57. Length frequency and CPUE for bluegill and redear sunfish collected during 0.63 hours of electrofishing at Carpenter Lake in April 2004.

	Inch Class									
Species	2	3	4	5	6	7	8	Total	CPUE	Std. Error
Bluegill	8	6	7	4	3	27	1	56	86.15	20.41
Redear sunfish							1	1	1.54	1.54

nwdclbg.d04

Table 58. PSD and RSD values calculated for bluegill and redear sunfish collected by electrofishing from Carpenter Lake during April 2004; 95% confidence limits are in parentheses.

Lake/Species	No.	PSD	RSD
Carpenter			
Bluegill	48	65 (+/-13)	2 (+/-4)
Redear sunfish	1		

nwdclbg.d04

Table 59. Electrofishing catch rate (fish/hr) for each age of bluegill collected from Carpenter Lake during spring samples 2002- 2004.

	Year		
Age	2002	2003	2004
1	2.30	7.69	12.31
2	14.71	98.80	25.23
3	9.43	27.26	33.23
4	2.30	7.26	6.15

Table 60. Spring electrofishing CPUE for each size class of bluegill collected at Carpenter Lake during spring 1999-2004. CPUE = fish/hour.

	Inch Class											
	<3.0		3.0-5.9		6.0-7.9		≥ 8.0		≥10.0		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2004	12.31	4.62	26.15	7.13	46.15	11.41	1.54	1.54			86.15	20.41
2003	7.69	2.81	102.56	22.96	47.44	13.24	3.85	1.72			161.54	34.11
2002	2.30		8.05		17.24		1.15				28.74	0.00
2001			198.67	74.7	152.00	22.74	41.33	12.72			392.00	108.89
2000			4.00	2.31	10.67	4.81	12.00	6.11			26.67	9.61
1999			10.67	2.57	82.67	10.91	12.00	8.00			105.33	17.99

Table 61. Population assessment for bluegill based on spring electrofishing at Carpenter Lake from 1999-2004.

	Year											
	1999		2000		2001		2002		2003		2004	
Parameter	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
Years to 6 inches	2-2+	4	2-2+	4	2-2+	4	2-2+	4	2-2+	4	2-2+	4
CPUE of > 6.0 inch fish	94.67	4	22.67	1	145.7	4	18.39	1	53.33	3	47.69	2
CPUE of > 8.0 inch fish	12.00	3	12.00	3	41.33	4	1.15	1	4.00	2	1.54	2
Total score		15		12		16		10		13		12
Assessment rating		E		G		E		F		G		G

Table 62. Length frequency, and CPUE (no./hour) of largemouth bass collected during 0.39 hours of 7.5-minute diurnal electrofishing runs at Kingfisher Lake in April 2004.

		Inch Class															
Lake	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	Total	CPUE	Std. Error
Kingfisher	Largemouth bass	1	25	24	13		21	29	35	10	2	2	1	1	164	420.51	92.45

nwdkfpsd.d04

Table 63. Spring electrofishing CPUE for each size class of largemouth bass collected at Kingfisher Lake during April 1999-2004. CPUE = fish/hour.

	Inch Class									
	<8.0		8.0-11.9		12.0-14.9		≥15.0		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
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 64. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Kingfisher Lake during April 2004.

	Year		
Age	2002	2003	2004
1	116.28	57.69	94.87
2	193.45	16.67	169.00
3	60.51	3.42	66.90
4	5.74	6.84	16.24
5	0.00	5.13	1.71

nwdkflag.d04

Table 65. Annual mortality (A) between 2002-2003, and CPUE (fish/hr) of the last 4 year classes estimated from largemouth bass captured in spring electrofishing samples at Kingfisher Lake.

Year Class	Age Intervals	CPUE (2003)	CPUE (2004)	Mortality of Cohort (%)
2003	1+ - 2+	100.00	169.00	
2002	2+ - 3+	297.22	66.90	88%
2001	3+ - 4+	109.44	16.24	85%
2000	4+ - 5+	23.89	1.71	93%
1999	5+ - 6+	2.78	0.00	100%
1998	6+ - 7+			

Table 66. Population assessment for largemouth bass based on spring electrofishing at Kingfisher Lake from 1999-2004.

	Year											
	1999		2000		2001		2002		2003		2004	
Parameter	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
Spring CPUE age 1 fish	n/d		135.56	4	89.74	4	116.28	4	100.00	4	94.87	4
Spring CPUE 12-14.9 in fish	17.78	1	24.44	2	20.51	2	4.65	1	8.33	1	12.82	1
Spring CPUE ≥ 15.0 inch fish	2.22	1	6.67	2	2.56	1	0.00	1	0.00	1	2.56	1
Spring CPUE ≥ 20.0 inch fish	0.00	1	4.44	4	0.00	0	0.00	0	0.00	0	0.00	0
Total score		6+		15		10		9		9		9
Assessment rating				G		F		F		F		F

Table 67. Length frequency and CPUE for bluegill collected in 0.37 hours of electrofishing at Kingfisher Lake in April 2004.

	Inch Class								
Species	3	4	5	6	7	8	Total	CPUE	Std. Error
Bluegill	2	3	1	1	8		15	38.46	4.44

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Table 68. Spring electrofishing CPUE for each size class of bluegill collected at Kingfisher Lake during spring 1999- 2004. CPUE = fish/hour.

	Inch Class											
	<3.0		3.0-5.9		6.0-7.9		≥ 8.0		≥10.0		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2004	0	0	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			89.74	5.13
2002			9.3		62.79		6.98				79.07	0.00
2001			61.54		66.67		7.69				135.90	0.00
2000			31.11		66.67		11.11				108.99	0.00
1999			6.67		20		4.44				31.11	0.00

Table 69. PSD and RSD values calculated for bluegill collected by electrofishing from Kingfisher Lake during April 2004; 95% confidence limits are in parentheses.

Lake/Species	No.	PSD	RSD
Kingfisher Lake			
Bluegill	15	60 (+/- 25)	0

nwdfkblg.d04

Table 70. Electrofishing catch rate (fish/hr) for each age of bluegill collected from Kingfisher Lake during spring samples 2002- 2004.

	Year		
Age	2002	2003	2004
1	7.56	57.69	13.46
2	22.67	16.67	4.49
3	13.95	3.42	6.84
4	27.91	6.84	13.68
5	6.98	5.13	

nwdflblg.d04

Table 71. Population assessment for bluegill based on spring electrofishing at Kingfisher Lake from 1999-2004.

	Year											
	1999		2000		2001		2002		2003		2004	
Parameter	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
Years to 6 inches	2-2+	4	2-2+	4	2-2+	4	2-2+	4	2-2+	4	2-2+	4
CPUE of > 6.0 inch fish	24.44	1	77.78	4	64.44	3	69.77	3	21.62	1	23.08	1
CPUE of > 8.0 inch fish	4.44	2	11.11	3	6.67	2	6.98	2	5.40	2	0.00	0
Total score		11		15		13		13		11		9
Assessment rating		G		E		G		G		G		F

Table 72. Length-frequency and CPUE (no./hour) of largemouth bass collected during 0.41 hours of diurnal electrofishing runs at Mauzy Lake in April 2004.

		Inch Class																	
Lake	Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total	CPUE	Std. Error
Mauzy Lake	Largemouth bass		1	1	13	38	24	20	17	3		1	1	1	2	1	123	164.00	10.58

nwdmzpsd.d04

Table 73. Spring electrofishing CPUE for each size class of largemouth bass collected at Mauzy Lake during spring 1999-2004. CPUE = fish/hour.

	Inch Class									
	<8.0		8.0-11.9		12.0-14.9		≥15.0		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2004	20.00	9.24	132.00	2.31	5.33	1.33	6.67	1.33	164.00	10.58
2003*	98.61	18.69	163.19	31.92	73.61	6.05	20.83	6.36	356.25	58.72
2002	36.00	14.05	169.33	40.55	9.33	1.33	6.67	2.67	221.33	45.39
2001	12.00	2.31	246.67	53.53	26.67	10.67	4.00	2.31	289.33	64.18
2000	37.33	5.81	224.00	20.53	2.67	1.33	5.33	3.53	269.33	25.33
1999	n/d		165.33	8.74	17.33	5.35	4.00	2.31	186.67	14.11

* Mauzy renovated summer 2003

Table 74. Mean back calculated lengths (in) at each annulus for largemouth bass collected at Mauzy Lake in April 2004.

Year		Age						
class	No.	1	2	3	4	5	6	7
2003	2	5.6						
2002	27	6.2	8.0					
2001	19	6.1	9.5	10.1				
2000	4	5.8	9.0	10.8	11.5			
1999	5	5.6	8.5	9.9	11.1	11.3		
1998	1	5.1	8.1	9.2	10.2	11.0	11.2	
Mean		6.1	8.6	10.1	11.2	11.2	11.2	
No.	58	58	56	29	10	6	1	
Smallest		5.0	7	9.2	10.2	10.4	11.2	
Largest		7.5	10.6	11.7	12.1	12.0	11.2	
Std error		0.1	0.1	0.1	0.2	0.2		
95% CI (±)		0.1	0.2	0.2	0.4	0.4		

Table 75. Population assessment for largemouth bass based on spring electrofishing at Mauzy Lake from 2000-2004.

	Year									
	2000		2001		2002		2003*		2004	
Parameter	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Length at age 3 at capture										
Spring CPUE age 1 fish	25.33	2	5.33	1	25.33	2	86.81	4	2.67	1
Spring CPUE 12-14.9 in fish	2.67	1	26.67	2	9.33	1	73.61	4	5.33	1
Spring CPUE ≥ 15.0 inch fish	5.33	2	4.00	2	6.67	2	20.83	3	6.67	2
Spring CPUE ≥ 20.0 inch fish	0.00	0	0.00	0	1.33	2	2.78	3	0.00	0
Total score		5		5		7		14		4
Assessment rating		P		P		P		G		P

*Mauzy renovated summer2003

Table 76. Length frequency and CPUE for bluegill collected during .87 hours of electrofishing at Mauzy Lake in April 2004.

	Inch Class										
Species	1	2	3	4	5	6	7	8	Total	CPUE	Std. Error
Bluegill	2	90	52	19	6	29	30	1	229	251.65	36.11

nwdmzbg.d04

Table 77. PSD and RSD values calculated for bluegill collected by electrofishing from Mauzy Lake during April 2004; 95% confidence limits are in parentheses.

Lake/Species	No.	PSD	RSD
Mauzy			
Bluegill	137	44 (+/-8)	1 (+/-1)

nwdmzbg.d04

Table 78. Spring electrofishing CPUE for each size class of bluegill collected at Mauzy Lake during spring 1999-2004. CPUE = fish/hour.

	Inch Class											
	<3.0		3.0-5.9		6.0-7.9		≥ 8.0		≥10.0		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2004	101.1	18.03	84.62	17.53	64.84	11.97	1.10	1.10			251.65	36.11
2003*												
2002	9.33	3.53	94.67	19.64	125.33	29.24	1.33	1.33			230.67	48.02
2001	5.33	3.53	65.33	16.22	137.33	27.94	1.33	1.33			209.33	40.68
2000	1.33	1.33	52.00	4.00	73.33	5.33	4.00	2.31			130.67	10.91
1999			28.00	6.11	114.67	6.67	4.00	0.00			146.67	5.33

*Mauzy could not be sampled during 2003 due to renovation drawdown

Table 79. Relative abundance, and CPUE (no./hour) of largemouth bass collected during 0.37 hours of 7.5-minute diurnal electrofishing runs at Washburn Lake in April 2004.

		Inch Class											
Lake	Species	4	5	6	7	8	9	10	11	12	Total	CPUE	Std. Error
Washburn Lake	Largemouth bass	1	7	9	1	5	46	77	10		156	400.00	51.22

nwdwlpsd.d04

Table 80. Spring electrofishing CPUE for each size class of largemouth bass collected at Washburn Lake* during April 2001-2004. CPUE = fish/hour.

	Inch Class									
	<8.0		8.0-11.9		12.0-14.9		≥15.0		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2004	46.15	4.44	353.85	49.45	0.00				400.00	51.22
2003	123.08	33.53	438.46	49.45	0.00				561.54	52.36
2002	50.00		321.43		0.00				371.43	0.00
2001	260.00		8.00		0.00				268.00	0.00

*Washburn Lake renovated summer 1999 and restocked spring 2000

Table 81. Mean back calculated lengths (in) at each annulus for largemouth bass collected at Washburn Lake in April 2004.

Year		Age			
class	No.	1	2	3	4
2003	18	5.9			
2002	18	7.3	9.3		
2001	4	6.8	10.1	11.0	
2000	10	7.2	8.7	10.0	10.6
Mean		6.7	9.2	10.3	10.6
No.	50	50	32	14	10
Smallest		4.0	7.8	9.3	10.0
Largest		8.0	10.5	11.4	11.4
Std error		0.1	0.1	0.2	0.2
95% CI (±)		0.2	0.2	0.3	0.3

nwdwllag.d04

Table 82. Population assessment for largemouth bass based on spring electrofishing at Washburn Lake from 2003-2004*.

	Year			
	2003		2004	
Parameter	Value	Score	Value	Score
Length at age 3 at capture	11.2	3	11.2	3
Spring CPUE age 1 fish	131.62	4	48.29	3
Spring CPUE 12-14.9 in fish	0.00	0	0.00	0
Spring CPUE ≥ 15.0 inch fish	0.00	0	0.00	0
Spring CPUE ≥ 20.0 inch fish	0.00	0	0.00	0
Total score		7		6
Assessment rating		P		P

*Washburn Lake renovated and restocked spring 2000

Table 83. Length frequency and CPUE for bluegill collected in 0.50 hours of electrofishing at Washburn Lake in April 2004.

	Inch Class										
Species	1	2	3	4	5	6	7	8	Total	CPUE	Std. Error
Bluegill	3	39	18	5	2		6	11	84	161.54	12.95

nwdwlbg.d04

Table 84. PSD and RSD values calculated for bluegill and redear sunfish collected by electrofishing from Washburn Lake during April 2004; 95% confidence limits are in parentheses.

Lake/Species	No.	PSD	RSD
Washburn Lake			
Bluegill	42	40 (+/-15)	26 (+/-13)

nwdwlbg.d04

Table 85. Spring electrofishing CPUE for each size class of bluegill collected at Washburn Lake during April 2004. CPUE = fish/hour.

	Inch Class											
	<3.0		3.0-5.9		6.0-7.9		≥ 8.0		≥10.0		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2004	80.77	7.36	48.08	3.68	11.54	4.97	21.15	10.59			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. Population assessment for bluegill based on spring electrofishing at Washburn Lake 2003-2004.

	Year			
	2003		2004	
Parameter	Value	Score	Value	Score
Mean length age 2+ at capture	5.4	4	5.4	4
Years to 6 inches	2-2+	4	2-2+	4
CPUE of > 6.0 inch fish	118.00	4	32.69	2
CPUE of > 8.0 inch fish	0.00	0	22.00	4
Total score		12		14
Assessment rating		G		E

SOUTHWESTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Barren River Lake

The headwater of Barren River Lake was sampled for white bass and hybrid striped bass use. Yellow bass appeared in numbers (82) during the sampling. A total of 277 white bass (32.23 / hr.) was sampled during the spring sampling. Spring electrofishing was conducted for research purposes when a total of 139 white bass were sampled. Most white bass sampled were in the 8-inch class during 2003 but during 2004 most were 11 inch. Spring diurnal electrofishing results are presented in Tables 1 through 7.

Largemouth bass was the predominant black bass species found throughout the lake followed by spotted and smallmouth bass. Size structure of largemouth and spotted bass in Barren River Lake that was determined from the spring electrofishing was good. Due to the low numbers of fish sampled, determination of the smallmouth bass population characteristics was not as satisfactory as the other black bass. The condition of the largemouth bass population was good for all size groups. A total of 541 largemouth bass, 60 spotted bass and 0 smallmouth bass were sampled. The largemouth bass assessment was rated "Fair" but the spotted bass assessment was "Good". Results of the black bass sampling are presented in Tables 6 through 19. Sunfish were also electrofished during the spring and their results are presented in Tables 8 through 30. Bluegill was the dominant sunfish species with 595 sampled compared to 323 longear sunfish and 57 green sunfish.

Diurnal fall electrofishing was completed to evaluate the spawn success and to measure the relative condition of the bass (Wr). A heavy spawn was observed and the relative condition of the black bass remains satisfactory. A total of 1,423 largemouth bass was sampled with the majority of the fish being in the 3-inch length group. Sampling differences allowed for the larger than normal sampling of the smaller fish. Of the 1,423 fish sampled, 965 were YOY fish. Of the 263 spotted bass sampled 176 were YOY (Tables 31 through 40).

Crappie sampling with trap nets is presented in Tables 41 thru 55. Crappie sampling was lower than average largely because of the lack of a successful crappie spawn during 2001 and 2002. A total of 846 black crappie and 192 white crappie were sampled during the 112 net days fished. The population was dominated by black crappie age-1 as the catch of 6-inch black crappie numbered 318 fish. A total of 11 white bass were sampled, much lower than last year's sampling. Channel catfish numbered 135 fish. Length-weight analysis was calculated for crappie, white bass and channel catfish sampled. Crappie assessment values was rated as "Fair" for black and white crappie and the combined population.

Fall experimental gill netting sampling of white bass and hybrid striped bass was completed for 8 net days with two crews. A total of 133 hybrid striped bass and 56 white bass were sampled in the area around Walnut Creek during the last week of October for the SWFD crew only (4 net nights). Other personnel will complete age determination and stocking/natural production determinations at a later date. White bass population analysis will also be presented in next years report. Hybrid striped bass population assessment was rated as "Excellent" with a total score of 16. Channel catfish were also collected in the gill netting studies. Results of the netting are presented in Tables 56 through 65.

An overall evaluation of the fish population of Barren River Lake was mixed; the population of largemouth bass did not exceed the expected norm but sampling techniques and target sizes changed with new standardization. Then number of small YOY and age 1+ fish was sampled more intently and the resulting numbers reflected the same. The population of bluegill/sunfish was less than expected but the catch of smaller fish was high. The population of white bass is increasing with the stocking of white bass during 2002, 2003 and 2004. The population of hybrid striped bass continues to increase. The population of channel catfish exceeded expected in all categories except no fish greater than 21 inches was collected during gill netting. The population of crappie was much lower than expected with low numbers of larger fish. Reproduction is expected to be high for 2003 with most being black crappie which is reflected in the age-1 fish during 2004. The 1998 and 1999 year classes of crappie support the crappie fisheries and their numbers are declining. The 2000 and the 2001 year classes failed to meet expectations.

The low water level of 2001 during the crappie-spawning period and throughout the entire year has had a negative impact on the crappie population. Age 1 and older fish during 2001 was not acceptable. The expected population of 20 fish per net day was not attained as only 8 fish per net day was sampled. The expected population density of 8 fish per net day equal to or greater than 8 inches was not attained.

A total of 93,130 fishing trips were extended on Barren River Lake far more than the 44,804 fished during 1999. A total of 478,401 man/hours were fished greater than the 257,703 hours during 1999. Total catch was 633,454 compared to 212,093 and the harvest was 317,666 compared to 91,411. Bluegill (245,796 fish) was the most commonly harvested species during 2004 followed by largemouth bass (152,285) and black crappie (78,665). The greatest weight harvested was the hybrid striped bass at 81,543.5 pounds. A total of 1.28 fish per hour was caught with 0.63 fish being harvested. Data for the 2004 creel survey is presented in tables 66 through 77.

An angler attitude survey was conducted during the creel survey by giving each angler a mail in survey with prepaid postage. A total of 340 responses was received. Black bass was the most commonly sought fish on the lake followed by crappie and hybrid striped bass. Of the black bass anglers, 60% were satisfied with the fisheries and 81% support the current regulation on largemouth bass. Of the crappie fishermen, 56% were satisfied with the fisheries and 66% supported the current limit of 9-inch fish and 72% support the creel limit of 30 fish. Hybrid striped bass fishermen were 63% satisfied with the current fisheries and 74% supported the current regulations on their fishery. Results of the survey are presented in tables 78 through 81.

Briggs Lake

Largemouth bass remained somewhat stockpiled below 12 inches although larger fish were sampled. The leak in the dam was repaired during the summer 2002 but a small leak remains in the spillway side. The siltation problems were not addressed during the dam repairs. Bluegill and redear sunfish CPUE is low but size structure yields large fish. Results are presented in Table 82 through 91.

Green River Lake

Results of muskellunge sampling are presented in Table 92 and 93. Mid to late winter (January – March) diurnal electrofishing yielded a muskellunge CPUE of 14.77 fish/hour; higher than last several years. The lower CPUE in 2000 and 2001 was likely due to water clarity resolution from rainfall and deviation from the normal guide curve (dropped from 5 foot instead of the normal 11 feet) in 1999. Water levels were altered during 2003. Experimental water level manipulation is being conducted in conjunction with TNC. The water level was lowered only 7 feet during 2003 and 2004. Muskellunge in Green River Lake continued to attain 30 inches during their third growing season.

Headwater sampling for white bass and walleye was successful for white bass but lack of sampling frequency somewhat missed the spawning walleye or they did not try to spawn in the river (table 94 and 95). White bass sampling included 167 fish or 116 fish per hour. Walleye totaled 16 fish or 12.8 fish per hour.

Diurnal and nocturnal spring and fall electrofishing samples indicated largemouth bass remained the dominant black bass species in Green River Lake followed by spotted and smallmouth bass Tables 96 through 116. Largemouth bass size structure remains diverse and was similar to other years. Age determinations for largemouth bass were completed for spring and fall samples. Population assessment for largemouth bass was "Fair" as was spotted bass and "Good" for smallmouth bass. Spring electrofishing was dominated by 6, 10 and 11-inch largemouth bass and 8 inch spotted bass. Smallmouth although few in numbers was dominated by 8 inch fish.

Results from the trap netting sampling results for white crappie are presented in Tables 117 through 122. White crappie catch/trap net day was above the catch of 12.99 fish/net in 1998 and 8.36 in 1999, 6.30 during 2000, 13.56 during 2001 and 11.40 during 2002 and 2003. The 2004 catch rate was 21.51 fish per net night. The 2001 and 2002-year class provided the bulk of the fishes due to the poor spawns of 1999 and 2000. The crappie population assessment for Green River Lake was "Fair".

Results of the experimental gill net sampling for white bass and walleye are presented in Tables 123 through 127. A total of 92 white bass and 41 walleye were sampled during the netting. The white bass assessment was "Fair" with low recruitment of small fish and fish over 12 inch. White bass reached preferred size (12 inches)

before their third year. Walleye sampled by gill nets decreased from 8.25 fish per net day during 2001, 3.61 during 2002 and 3.88 during 2003 to 2.56 during 2004.

Marion County Lake

Marion County Lake was refilled and fish were stocked during 1996. Local assistance was provided in the stocking of the lake and several less than desirable fish. Largemouth bass have not grown to the size expected and are hampering the development of the lake population. Removal of several of the smaller bass was conducted to improve the largemouth bass population. A total of 295 largemouth bass was sampled during the spring or 376.21 fish per hour. The population assessment for largemouth bass was "Fair". Fall sampling resulted in 451 fish or 556.79 per hour. Results of the electrofishing are presented in Tables 128 through 137.

Metcalfe County Lake

Results of the 2004 sampling on Metcalfe County Lake are presented in tables 138 and 139. A good population is available in this lake and rainbow trout are stocked during the spring.

Shanty Hollow Lake

Shanty Hollow Lake was drawn down during the summer of 1997 to locate and repair a leak. A leak was found in the underlying rock formation and a compacted clay plug was installed during the fall of 1997. The water level reached pool by early 1998. A pool, with fish, remained in the lake during the 1997 repair process restocked the lake. Unfortunately, common carp were part of the lake's population. The plug used to fix the leak was unsuccessful and the water level decreased to almost the previous level during the hot summer months of 1999 and 2000 and was below normal during the summer months of 2001, 2002, 2003 and 2004. Rainfall during all years was about 10 inches below normal for each year except for 2002 and 2003 when a more normal rainfall occurred. The rainfall during 2004 was above average and the lake still was below pool throughout parts of the summer. A total of 374 largemouth bass were sampled during the spring or 213.7 per hour. The sunfish assessment was "Good" with a score of 11. Fall largemouth bass sampling yielded 337 fish or 224.67 per hour. Fish sampling in the lake was somewhat limited (Tables 140 through 149). Common carp were removed on several occasions with electrofishing gear. Less than satisfactory removal occurred although numerous large individuals were removed.

Age-growth of largemouth bass electrofished at Shanty Hollow Lake during the spring was calculated and is presented in Table 150. Largemouth bass reached 13 inches during their fourth year.

Spurlington Lake

Largemouth bass size structure was diverse and CPUE was similar to previous years (Tables 151 through 161). Spring largemouth bass sampling yielded a catch of 186 fish or 357.7 fish per hour. Fall sampling of largemouth bass yielded a total of 91 fish or 168.5 fish per hour. The bluegill population was assessed as "Fair" with a score of 9. Age determination was conducted on largemouth bass (age 0 and 1 only).

Table 1. Diurnal electrofishing for 5.76 hours for white bass and hybrid striped bass at Barren River Lake headwaters during 2004.

	Inch class																						Fish	Std
Species	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Total	/hour	err
White bass	1	6		1	26	140	66	30	4	1	2										277	48.09	32.23
Yellow bass		28	24	29	1																82	14.24	10.32
White bass X striped bass hybrid			1			2	1					1	2	2	1	10	15	11	5	3	54	9.38	9.48
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Table 2. Length frequency for white bass sampled during spring electrofishing at Barren River Lake during spring 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
6	1	1	0.36	0.36	4.67	0.13
7	6	7	2.17	2.53	4.44	0.61
8	0	7	0.00	2.53	6.00	0.00
9	1	8	0.36	2.89	18.00	0.27
10	26	34	9.39	12.27	14.44	3.49
11	140	174	50.54	62.82	6.44	16.96
12	66	240	23.83	86.64	7.11	8.91
13	30	270	10.83	97.47	10.67	2.83
14	4	274	1.44	98.92	13.33	0.61
15	1	275	0.36	99.28	7.11	0.27
16	2	277	0.72	100.00	4.44	0.29

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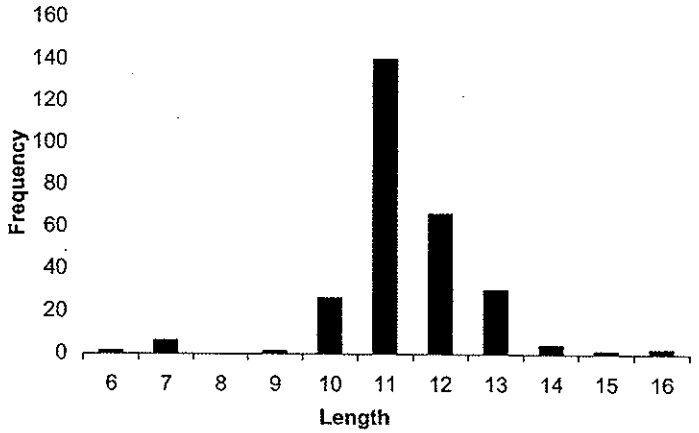

Table 3. Length frequency for yellow bass sampled during spring electrofishing at Barren River Lake during spring 2(

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
7	21	21	3.88	3.88	4.67	2.29
8	20	41	3.70	7.58	4.44	2.28
9	27	68	4.99	12.57	6.00	2.26
10	81	149	14.97	27.54	18.00	4.24

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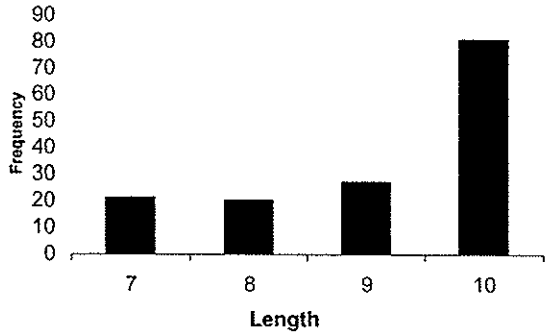

Table 4. Length frequency for hybrid striped bass sampled during spring electrofishing at Barren River Lake during spring 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
8	1	1	1.85	1.85	4.67	2.29
9	0	1	0.00	1.85	4.44	2.28
10	0	1	0.00	1.85	6.00	2.26
11	2	3	3.70	5.56	18.00	4.24
12	1	4	1.85	7.41	14.44	4.33
13	0	4	0.00	7.41	6.44	1.52
14	0	4	0.00	7.41	7.11	1.38
15	0	4	0.00	7.41	10.67	3.18
16	0	4	0.00	7.41	13.33	2.58
17	1	5	1.85	9.26	7.11	2.24
18	2	7	3.70	12.96	4.44	1.37
19	2	9	3.70	16.67	5.11	1.25
20	1	10	1.85	18.52	4.00	0.94
21	10	20	18.52	37.04	4.22	0.85
22	15	35	27.78	64.81	4.22	0.70
23	11	46	20.37	85.19	3.33	1.11
24	5	51	9.26	94.44	2.00	1.11
25	3	54	5.56	100.00	0.44	0.29

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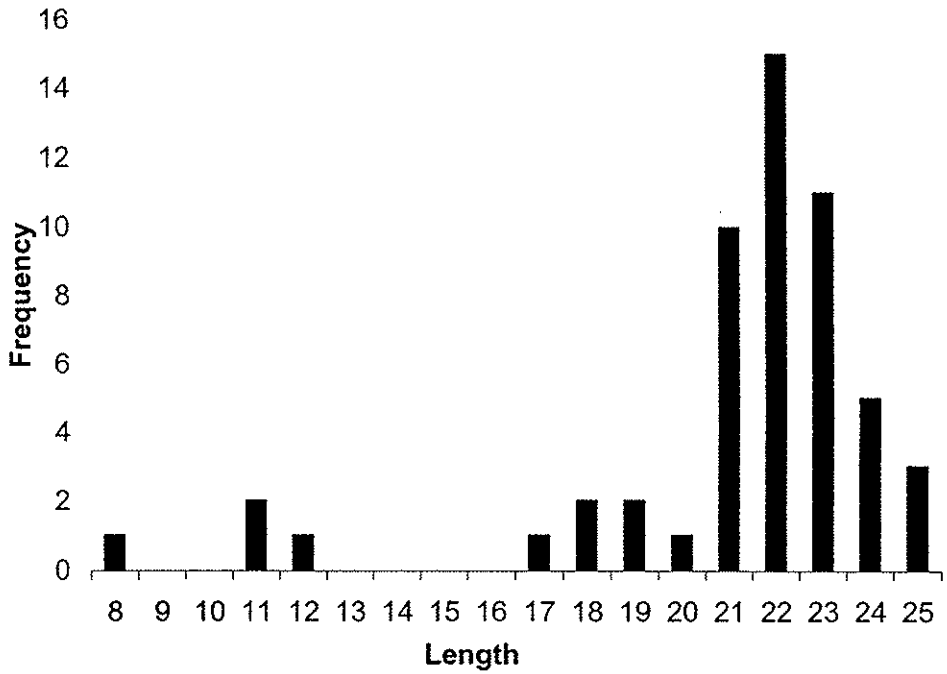

Table 5. Length/weight calculation from white bass sampled during spring headwater sampling at Barren River Lake 2004.

Inch class	Calculated wgt X.0	Actual weight Avg wt	Min wgt	Max wgt	Number of fish
6	0.09	0.13	0.13	0.13	1
7	0.14	0.18	0.14	0.22	6
8					0
9	0.32	0.34	0.34	0.34	1
10	0.45	0.54	0.43	0.66	26
11	0.61	0.71	0.5	0.87	140
12	0.81	0.89	0.74	1.11	66
13	1.05	1.15	0.99	1.39	30
14	1.33	1.46	1.43	1.5	4
15	1.66	1.6	1.6	1.6	1
16	2.05	2.04	2.02	2.05	2
Weight = 0.00025681 * Length^3.2405971					271

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Table 6. Length/weight calculation from white bass X striped bass hybrid sampled during spring headwater sampling at Barren River Lake 2004.

Inch class	Calculated wgt X.0	Actual weight Avg wt	Min wgt	Max wgt	Number of fish
8	0.21	0.3	0.3	0.3	1
9					0
10					0
11	0.59	0.64	0.61	0.68	2
12	0.77	0.85	0.85	0.85	1
13					0
14					0
15					0
16					0
17	2.31	2.46	2.46	2.46	1
18	2.77	2.6	2.6	2.6	2
19	3.28	3.76	3.76	3.76	2
20	3.86	4.03	4.03	4.03	1
21	4.5	4.71	3.71	5.21	10
22	5.21	5.66	4.62	7	15
23	6	6.34	5.77	7.1	11
24	6.86	7.89	7.73	8.22	5
25	7.8	7.54	7.05	7.9	3
Weight = 0.00030575 * Length^3.152368					54

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Table 7. Length/weight calculation from yellow bass sampled during spring headwater sampling at Barren River Lake 2004.

Inch	Calculated	Actual weight			Number
class	wgt X.0	Avg wt	Min wgt	Max wgt	of fish
7	0.15	0.19	0.11	0.26	28
8	0.24	0.29	0.23	0.38	23
9	0.36	0.4	0.33	0.5	29
10	0.51	0.55	0.55	0.55	1
Weight = 0.000229 * Length^3.34494					81

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Table 8. Spring electrofishing for black bass (4.5 hours) and sunfish (2.25 hours) at Barren River Lake during spring 2004.

	Inch class																						Fish	Std
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	/hour	err.
White bass					1						1	1										3	0.44	0.18
Yellow bass				1																		1	0.15	0.11
Green sunfish	5	12	14	17	9																	57	8.44	4.38
Warmouth				1	1																	2	0.30	0.30
Orangespotted sunfish	1																					1	0.15	0.22
Bluegill	3	24	54	249	235	29	1															595	88.15	35.86
Longear sunfish	3	50	182	88																		323	47.85	28.14
Spotted bass	1	12	6	2	1	4	9	7	1	2	3	4	5	1	2							60	8.89	2.60
Largemouth bass		21	20	27	81	65	29	32	48	60	32	20	23	18	19	19	15	9	2		1	541	80.15	18.12
White bass X striped bass hybrid																			1			1	0.15	0.11
Total																						1584	234.67	

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Table 9. Spring electrofishing for black bass for 4.5 hours at Barren River Lake during spring 2004.

	Inch class																						Fish	Std
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	/hour	err.
White bass					1						1	1										3	0.67	0.33
Yellow bass				1																		1	0.22	0.22
Spotted bass	1	12	6	2	1	4	9	7	1	2	3	4	5	1	2							60	13.33	4.19
Largemouth bass		21	20	27	81	65	29	32	48	60	32	20	23	18	19	19	15	9	2		1	541	120.22	22.18
White bass X striped bass hybrid																			1			1	0.22	0.22
Total																						606	134.67	

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Table 10. Length frequency for largemouth bass sampled during spring electrofishing at Barren River Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
3	21	21	3.88	3.88	4.67	2.29
4	20	41	3.70	7.58	4.44	2.28
5	27	68	4.99	12.57	6.00	2.26
6	81	149	14.97	27.54	18.00	4.24
7	65	214	12.01	39.55	14.44	4.33
8	29	243	5.36	44.91	6.44	1.52
9	32	275	5.91	50.82	7.11	1.38
10	48	323	8.87	59.69	10.67	3.18
11	60	383	11.09	70.78	13.33	2.58
12	32	415	5.91	76.69	7.11	2.24
13	20	435	3.70	80.39	4.44	1.37
14	23	458	4.25	84.64	5.11	1.25
15	18	476	3.33	87.97	4.00	0.94
16	19	495	3.51	91.48	4.22	0.85
17	19	514	3.51	94.99	4.22	0.70
18	15	529	2.77	97.76	3.33	1.11
19	9	538	1.66	99.42	2.00	1.11
20	2	540	0.37	99.79	0.44	0.29
21	0	540	0.00	99.79	0.00	0.00
22	1	541	0.18	99.97	0.22	0.22

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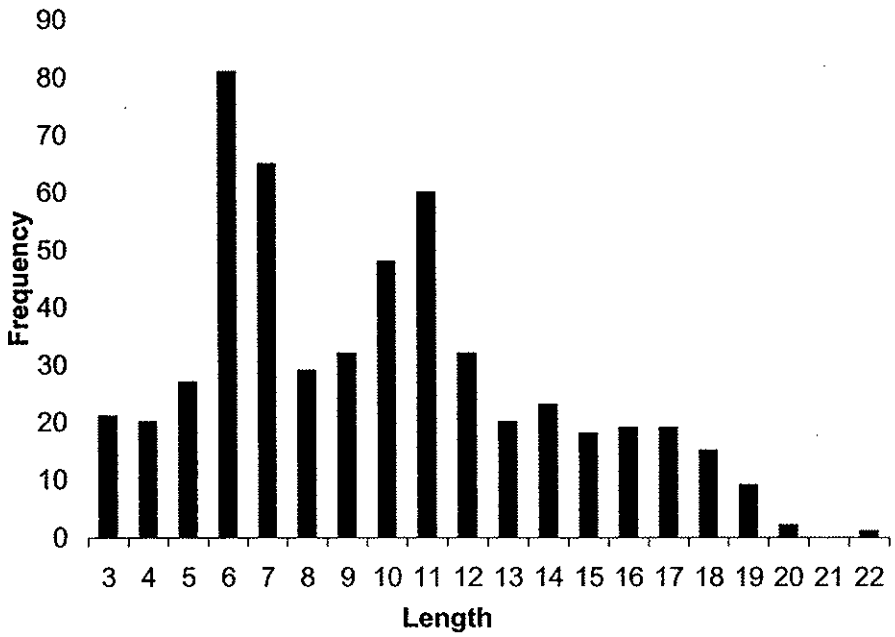

Table 11. Electrofishing catch rate (fish/hour) for each age of largemouth bass collected from Barren River Lake during 4.5 hours spring electrofishing studies 2004.

	Inch group																					Per		Std
Age	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	22	Total	cent	CPUE	error
YOY		21	20	27	81	53															202	37.06	44.89	
1						12	25	24	28	24	5										118	21.65	26.22	7.37
2							4	8	18	36	20	7									93	17.06	20.67	4.35
3									2		5	9	17	11	2						46	8.44	10.22	3.66
4											3	2	2	4	8	2	1				22	4.04	4.89	1.64
5												2	2	4	8	10	5				31	5.69	6.89	0.75
6													2		2	4	8	4			20	3.67	4.44	0.97
7																		1			1	0.18	0.22	0.86
8																		1			1	0.18	0.22	0.11
9																2		1			3	0.55	0.67	0.12
10																2		3	2		7	1.28	1.56	0.49
11																				1	1	0.18	0.22	0.11
12																					0	0.00	0.00	0.00
13																					0	0.00	0.00	0.00
Total	0	21	20	27	81	65	29	32	48	60	33	20	23	19	20	20	14	10	2	1	545		121.11	

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Table 12. Largemouth bass population assessment for largemough bass electrofishing at Barren River Lake during April and May 2004.

Parameter	Actual value	Assesment score
Growth rate		
(Mean length of age 3+ fish at capture)	14.13	4
Size structure		
(Spring CPUE fish 12 - 14.9 inches)	17.34	1
Size structure		
(Spring CPUE fish >= 15 inches)	11.11	1
Size structure		
(Spring CPUE fish >= 20 inches)	12.74	3
Recruitment		
(Spring CPUE of age 1 fish)	0.44	2
Total score		11
Assessment rating		Fair
Instantaneous mortality (Z)		0.31
Annual mortality (A)		26.82

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Table 13. Largemouth bass assessment from spring electrofishing from Barren River Lake 1985-2004.

	Mean age-3 length at capture		Spring CPUE age 1		Spring CPUE 12 - 14.9 inch		Spring CPUE >= 15 inch		Spring CPUE >= 20 inch			
Year	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Assessment	Rating
1985	14.10	4	18.46	1	8.58	1	8.14	2	0.93	2	10	F
1986	14.10	4	8.33	1	17.65	2	3.95	1	0.23	2	10	F
1987	14.10	4	9.29	1	6.72	1	5.89	2	0.16	1	9	F
1988	14.10	4	7.92	1	13.42	1	5.90	2	0.51	2	10	F
1989	14.10	4	3.89	1	6.80	1	4.49	2	0.28	2	10	F
1990	14.10	4	15.83	1	10.02	1	9.39	2	0.45	2	10	F
1991	14.10	4	13.74	1	19.75	2	17.79	3	1.23	2	12	G
1992	14.10	4	16.02	1	10.80	1	18.15	3	1.23	2	11	F
1993	14.10	4	15.53	1	12.10	1	14.00	3	0.83	2	11	F
1994	14.10	4	5.80	1	7.46	1	4.79	2	0.25	2	10	F
1995	14.10	4	15.54	1	33.41	3	22.56	4	0.93	2	14	G
1996	14.10	4	19.00	1	20.09	2	23.91	4	0.62	2	13	G
1997	14.10	4	19.35	1	48.44	4	52.67	4	3.33	4	17	E
1998	14.10	4	8.26	1	23.20	2	33.40	4	1.20	2	13	G
1999	14.10	4	24.62	2	42.17	4	38.67	4	2.33	3	17	E
2000	14.10	4	15.59	1	33.00	3	28.71	4	1.43	2	14	G
2001	14.10	4	27.83	2	49.33	4	63.05	4	1.14	2	16	G
2002	14.10	4	14.95	1	30.36	3	38.91	4	1.27	2	14	G
2003	14.10	4	19.60	1	20.46	2	39.85	4	0.31	2	13	G
2004	14.10	4	26.00	2	16.67	2	19.11	3	0.67	2	13	G
Sum	282.00	80	305.55	23	430.43	41	453.33	61	19.33	42	247	
Avg	14.10	4	15.28	1.15	21.52	2.05	22.67	3.05	0.97	2.1	12.35	

Table 14. Largemouth bass sampled by area during spring electrofishing sampling at Barren River Lake during 2004.

	Inch class																					Fish	
Location	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	/hour	Time
Beaver Creek	1			9	8	7	11	10	18	19	9	13	4	6	9	7	2	1		1	135	90.00	1.50
Walnut Creek	17	19	20	47	42	11	11	31	34	12	9	7	10	10	6	7	7	1			301	200.67	1.50
Dam area	3	1	7	25	15	11	10	7	8	1	2	3	4	3	4	1					105	70.00	1.50

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Table 15. Spring electrofishing (CPUE or fish/hour) for each size class of largemouth bass collected at Barren River Lake during spring of each year. Target fish sampling from 1981 through 1996 was all sampling. Sampling of 1997 through 2004 was for black bass only.

	Inch class									
	<8.0		8.0-11.9		12.0-14.9		>=15.0		Total	
Year	CPUE	Std.err.	CPUE	Std.err.	CPUE	Std.err.	CPUE	Std.err.	CPUE	Std.err.
2004	47.6	14.0	37.6	6.2	16.7	4.0	18.4	3.2	120.2	22.2
2003	22.2	3.4	22.5	3.5	20.5	2.9	39.5	4.7	104.2	10.6
2002	12.5	2.2	22.4	2.9	30.4	4.0	37.6	4.2	102.9	9.5
2001	11.8	1.6	42.3	4.0	49.3	6.3	61.9	4.1	165.3	9.6
2000	8.3	1.7	24.1	3.4	33.0	3.2	27.3	2.4	92.7	7.3
1999	10.7	2.4	31.7	5.7	42.2	7.3	36.3	4.7	120.8	11.2
1998	17.0	4.1	11.4	2.7	23.2	3.1	32.2	2.7	83.8	8.3
1997	6.7	1.4	31.1	5.2	48.4	6.4	19.3	6.5	135.6	11.6
1996	31.1	4.9	24.9	2.8	20.1	2.1	23.3	2.0	99.4	7.9
1995	12.9	2.8	19.3	3.2	33.4	4.5	21.6	2.8	87.3	9.2
1994	8.0	1.8	7.7	1.5	7.5	1.1	4.5	0.9	27.6	3.6
1993	20.3	3.1	22.7	1.8	12.1	1.1	13.2	1.8	68.3	4.1
1992	13.4	3.0	24.6	2.8	10.8	1.0	16.9	1.9	65.7	5.7
1991	25.6	5.3	18.8	3.0	19.8	2.6	16.6	1.7	80.7	7.7
1990	9.6	1.7	21.6	2.0	10.0	1.1	8.9	1.2	50.1	3.9
1989	1.4	0.5	6.3	0.8	6.8	0.7	4.2	0.4	18.7	1.6
1988	3.0	1.3	12.5	2.5	13.4	4.7	5.4	1.7	34.2	7.1
1987	18.9	8.8	11.4	8.4	6.7	3.4	6.3	1.8	43.2	21.7
1986	6.6	2.1	12.9	4.8	17.7	4.6	3.7	3.4	40.9	11.3
1985	8.2	1.7	32.9	3.3	8.6	1.3	7.2	2.4	56.9	5.9
1984	0.2	0.3	2.4	1.4	4.1	0.1	0.4	0.3	7.1	1.5
1983	1.0	0.6	7.6	4.5	1.2	1.2	0.2	0.2	10.0	6.4
1982			5.0	0.8	6.7	0.8	5.2	0.7	17.0	1.7
1981			11.2	4.7	13.8	4.1	5.1	0.4	30.1	9.0

Table 16. Electrofishing catch rate (fish/hour) for each age of largemouth bass collected from Barren River Lake from 1991 to 2004.

	Year													
Age	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
1	13.74	15.99	15.60	5.84	15.55	18.93	28.00	25.60	37.83	20.57	27.62	14.91	16.77	26.22
2	14.66	13.09	12.69	5.59	18.18	16.09	44.67	32.80	37.50	29.86	32.38	19.82	13.85	20.67
3	11.60	7.59	7.59	4.23	18.24	15.29	40.00	52.40	31.33	27.00	36.19	20.18	18.31	10.22
4	4.97	3.95	3.32	1.56	7.12	6.76	18.89	22.80	15.17	10.86	17.00	10.18	10.31	4.89
5	6.01	5.80	4.39	1.86	8.32	8.27	26.89	31.20	18.50	12.14	23.24	14.00	14.15	6.89
6	3.19	3.58	2.97	0.96	4.60	3.64	13.78	18.00	10.50	6.00	11.43	7.64	7.54	11.11
7	0.12	0.12	0.18	0.05	0.22	0.09	0.22	0.60	0.50	0.29	0.38	0.18	0.31	0.22
8	0.12	0.12	0.18	0.05	0.22	0.09	0.22	0.60	0.50	0.29	0.38	0.18	0.31	0.22
9	0.43	0.49	0.42	0.15	0.66	0.44	2.22	2.20	1.50	0.86	1.71	1.09	1.08	0.67
10	1.53	1.60	1.42	0.40	1.53	0.98	5.78		5.50	2.57	2.86	2.91	1.69	1.56
11														
12														
13	0.31	0.43	0.18	0.05	0.49	0.18	0.89	2.00	0.67	0.57	0.19		0.15	
14														
15														

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Table 17. Annula mortality (A) between 2003 and 2004, and CPUE (fish/hour) of the last five year classes estimated from largemouth bass captured in spring electrofishing samples at Barren River Lake.

Year class	Age intervals	CPUE(2003)	CPUE(2004)	Mortality of Cohort (%)
2002	1+ - 2+	16.77	20.67	-23.26
2001	2+ - 3+	13.85	10.22	26.21
2000	3+ - 4+	18.31	4.89	73.29
1999	4+ - 5+	10.31	6.89	33.17
1998	5+ - 6+	14.15	11.11	21.48

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Table 18. Length frequency for spotted bass sampled during spring electrofishing at Barren River Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
2	1	1	1.67	1.67	0.22	0.22
3	12	13	20.00	21.67	2.67	1.37
4	6	19	10.00	31.67	1.33	0.67
5	2	21	3.33	35.00	0.44	0.44
6	1	22	1.67	36.67	0.22	0.22
7	4	26	6.67	43.33	0.89	0.35
8	9	35	15.00	58.33	2.00	0.94
9	7	42	11.67	70.00	1.56	0.87
10	1	43	1.67	71.67	0.22	0.22
11	2	45	3.33	75.00	0.44	0.29
12	3	48	5.00	80.00	0.67	0.67
13	4	52	6.67	86.67	0.90	0.48
14	5	57	8.33	95.00	1.11	0.68
15	1	58	1.67	96.67	0.22	0.22
16	2	80	3.33	100.00	0.44	0.29

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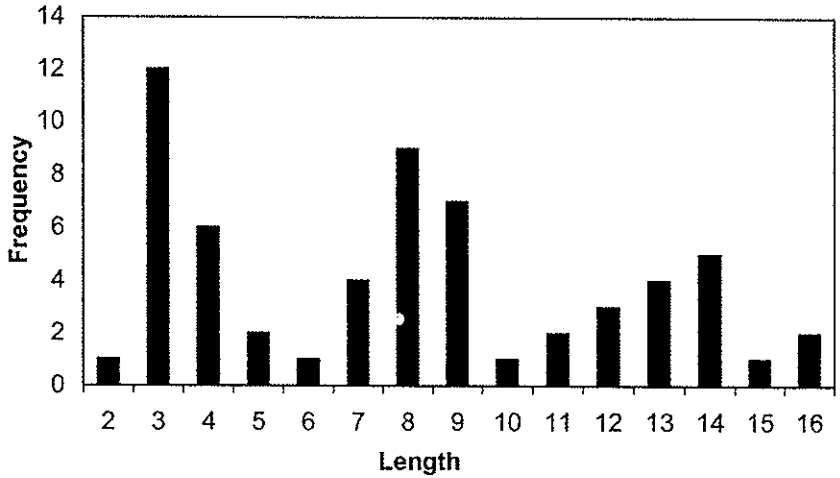

Table 19. Electrofishing catch rate (fish/hour) for each age of spotted bass collected from Barren River Lake during 9.0 hours fall electrofishing studies 2004.

	Inch group																					Per		Std
Age	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	22	Total	cent	CPUE	error
YOY	1	12	6	2																	21	35.00	4.67	
1					1	4	3	1													9	15.00	2.00	0.82
2							5	4	1	1											11	18.33	2.44	1.06
3							1	2		1	2	1									7	11.67	1.56	0.74
4											1	2	4	1	1						9	15.00	2.00	0.93
5													1		2						3	5.00	0.67	0.15
6																					0	0.00	0.00	0.00
7																					0	0.00	0.00	0.00
Total	1	12	6	2	1	4	9	7	1	2	3	3	5	1	3	0	0	0	0	0	60		13.33	

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Table 20. Spotted bass sampled by area during spring electrofishing sampling at Barren River Lake during 2004.

	Inch class																Fish	
Location	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total	/hour	Time
Beaver Creek			1													1	0.67	1.50
Walnut Creek		6	5	2		1	2			1	3	1	1			22	14.67	1.50
Dam area	1	6			1	3	7	7	1	1		3	4	1	2	37	24.67	1.50

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Table 21. Spotted bass population assessment for spotted bass electrofishing at Barren River Lake from during April and May 2004.

Parameter	Actual value	Assesment score
Growth rate		
(Mean length of age 3+ fish at capture)	11.37	3
Size structure		
(Spring CPUE fish 11 - 13.9 inches)	1.35	3
Size structure		
(Spring CPUE fish >= 14 inches)	1.33	3
Size structure		
(Spring CPUE fish >= 17 inches)	1.19	4
Recruitment		
(Spring CPUE of age 1 fish)	0	1
Total score		14
Assessment rating		Good
Instantaneous mortality (Z)		64.38
Annual mortality (A)		1.03

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Table 22. Spotted bass assessment from spring electrofishing from Barren River Lake 1985-2004.

	Spotted bass											
	Mean age-3 length at capture		Spring CPUE age 1		Spring CPUE 11 - 13.9 inch		Spring CPUE >= 14 inch		Spring CPUE >= 17 inch			
Year	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Assessment	Rating
1985	11.37	3	0.28	1	1.46	3	0.24	2	0.00	0	9	F
1986	11.37	3	0.86	2	1.74	3	0.23	2	0.00	0	10	F
1987	11.37	3	0.50	2	3.01	4	0.16	2	0.05	1	12	G
1988	11.37	3	0.89	2	3.99	4	0.51	3	0.00	0	12	G
1989	11.37	3	1.37	3	1.94	3	3.00	4	0.00	0	13	G
1990	11.37	3	4.42	4	5.43	4	1.64	4	0.00	0	15	G
1991	11.37	3	0.53	2	3.62	4	0.92	3	0.00	0	12	G
1992	11.37	3	1.86	3	6.67	4	2.47	4	0.00	0	14	G
1993	11.37	3	1.59	3	2.79	4	1.36	4	0.00	0	14	G
1994	11.37	3	0.48	2	1.41	3	0.25	2	0.00	0	10	F
1995	11.37	3	1.84	3	2.63	4	1.81	4	0.05	1	15	G
1996	11.37	3	0.93	2	7.73	4	3.56	4	0.18	2	15	G
1997	11.37	3	0.65	2	7.56	4	4.67	4	0.00	0	13	G
1998	11.37	3	0.98	2	3.20	4	2.60	4	0.00	0	13	G
1999	11.37	3	0.21	1	6.83	4	3.00	4	0.17	2	14	G
2000	11.37	3	1.04	3	4.71	4	2.43	4	0.00	0	14	G
2001	11.37	3	2.16	3	12.19	4	6.10	4	0.19	3	17	E
2002	11.37	3	1.63	3	3.82	4	2.36	4	0.00	0	14	G
2003	11.37	3	2.24	3	8.92	4	6.15	4	0.00	0	14	G
2004	11.37	3	2.02	3	2.00	3	1.78	4	0.00	0	13	G
Sum	227.40	60	26.48	49	91.65	75	45.24	70	0.64	9	263	
Avg	11.37	3	1.32	2.45	4.58	3.75	2.26	3.5	0.03	0.45	13.15	

Table 23. Spring electrofishing (CPUE or fish/hour) for each size class of spotted bass collected at Barren River Lake during spring of each year. Target fish sampling from 1981 through 1996 was all sampling. Sampling of 1997 through 2004 was for black bass only.

	Inch class									
	<7.0		7.0-10.9		11.0-13.9		>=14.0		Total	
Year	CPUE	Std.err.	CPUE	Std.err.	CPUE	Std.err.	CPUE	Std.err.	CPUE	Std.err.
2004	4.9	2.2	4.7	2.4	2.0	1.4	1.8	1.0	13.3	4.4
2003	2.2	0.7	7.1	1.7	8.9	2.0	6.2	1.8	24.3	4.8
2002	2.4	1.2	2.2	1.1	3.8	1.3	2.4	0.7	10.7	2.2
2001	1.5	1.1	9.9	2.5	12.2	2.6	5.9	2.3	29.5	6.2
2000	0.3	0.3	4.3	1.5	4.7	1.8	2.4	1.5	11.7	3.4
1999	0.2	0.2	1.2	0.4	6.8	2.1	2.8	1.0	11.0	2.5
1998	0.4	0.3	2.8	1.1	3.2	1.4	2.6	1.2	9.0	2.9
1997	0.2	0.2	2.7	1.4	7.6	1.6	4.7	2.6	15.1	4.2
1996	0.7	0.6	3.0	0.9	7.7	1.8	3.4	1.5	14.8	3.4
1995	1.2	1.7	3.8	2.3	2.6	1.1	1.8	1.1	9.4	4.3
1994	0.3	0.1	1.4	0.8	1.4	0.6	0.3	0.1	3.3	1.1
1993	1.5	1.2	4.0	1.2	2.8	1.3	1.4	1.2	9.7	3.0
1992	0.9	1.1	4.6	1.4	6.7	1.7	2.5	1.4	14.6	3.3
1991	1.2	0.9	3.1	1.7	3.6	2.7	0.9	1.0	7.9	4.2
1990	1.1	0.4	8.1	1.8	5.4	1.5	1.6	0.5	16.3	3.2
1989	0.5	0.2	3.2	0.7	1.9	0.4	0.4	0.1	6.0	1.2
1988	1.0	0.3	2.7	0.9	4.0	1.4	0.5	0.6	7.8	1.8
1987	0.1	0.2	3.8	3.4	3.0	3.5	0.1	0.1	7.0	6.8
1986	0.3	0.2	1.4	1.1	1.7	0.5	0.2	0.1	3.7	0.6
1985	1.0	0.5	0.9	0.7	1.5	0.9	0.2	0.6	3.6	1.2
1984			0.6	0.1	0.6	0.1			1.2	0.1
1983										
1982			1.2	0.5	3.2	2.2	0.2	0.2	4.6	2.9
1981			2.0	0.8	4.1	1.8	0.6	0.6	6.8	3.1

Table 24. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples in each area of Barren River Lake during April and May 2004; 95% confidence intervals are in parentheses.

Area	Species	Num of fish >= 8"	PSD (+/- 95%)	RSD(=/- 95%)
Beaver Creek				
	Smallmouth bass	0	0	0
	Spotted bass	0	0	0
	Largemouth bass	117	61(9)	26(8)
Walnut Creek				
	Smallmouth bass	0	0	0
	Spotted bass	9	67(0)	11(0)
	Largemouth bass	156	44(8)	26(7)
Dam area				
	Smallmouth bass	0	0	0
	Spotted bass	29	38(19)	24(17)
	Largemouth bass	54	33(13)	22(11)
Total				
	Smallmouth bass	0	0	0
	Spotted bass	38	45(16)	21(13)
	Largemouth bass	327	48(5)	25(5)

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Table 25. Spring electrofishing for sunfish for 2.25 hours at Barren River Lake during spring 2004.

	Inch class									Fish	Std
Species	2	3	4	5	6	7	8	9	Total	/hour	err.
Green sunfish	5	12	14	17	9				57	25.33	6.43
Warmouth				1	1				2	0.89	0.59
Orangespotted sunfish	1								1	0.44	0.44
Bluegill	3	24	54	249	235	29	1		595	264.44	33.08
Longear sunfish	3	50	182	88					323	143.56	45.58
Total									978	434.67	

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Table 26. Length frequency for bluegill sampled during spring electrofishing at Barren River Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
2	3	3	0.50	0.50	1.33	0.94
3	24	27	4.03	4.54	10.67	5.62
4	54	81	9.08	13.61	24.00	4.47
5	249	330	41.85	55.46	110.67	21.51
6	235	656	39.50	94.98	104.44	20.10
7	29	594	4.87	99.83	12.89	2.29
8	1	595	0.17	100.00	0.44	0.44

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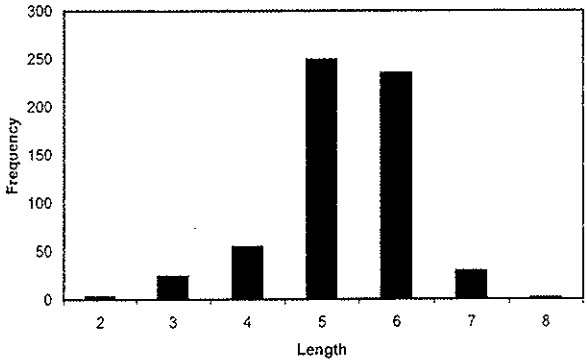

Table 27. Bluegill evaluation BRL 2004

Parameter	Value	Assessment score
Growth	0.15	1
Mean length age-2 capture		
Growth	0	1
Years to 6.0 inches		
Size structure	39.26	2
CPUE >= 6.0 inches		
Size structure	0.15	2
CPUE >= 8.0 inches		
		6
		Poor

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Table 28. Bluegill sampled by area during spring electrofishing sampling at Barren River Lake during 2004.

	Inch class								Fish	
Location	2	3	4	5	6	7	8	Total	/hour	Time
Beaver Creek	3	21	17	44	97	11		193	257.33	0.75
Walnut Creek			12	138	107	14		271	361.33	0.75
Dam area		3	25	67	31	4	1	131	174.67	0.75

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Table 29. Longear sunfish sampled by area during spring electrofishing sampling at Barren River Lake during 2004.

	Inch class								Fish	
Location	2	3	4	5	6	7	8	Total	/hour	Time
Beaver Creek			11	12				23	30.67	0.75
Walnut Creek	2	1	41	28				72	96.00	0.75
Dam area	1	49	130	48				228	304.00	0.75

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Table 30. Length frequency for longear sunfish sampled during spring electrofishing at Barren River Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
2	3	3	0.93	0.93	1.33	0.94
3	50	53	15.48	16.41	22.22	11.12
4	182	235	56.35	72.76	80.89	26.05
5	88	323	27.24	100.00	39.11	10.19

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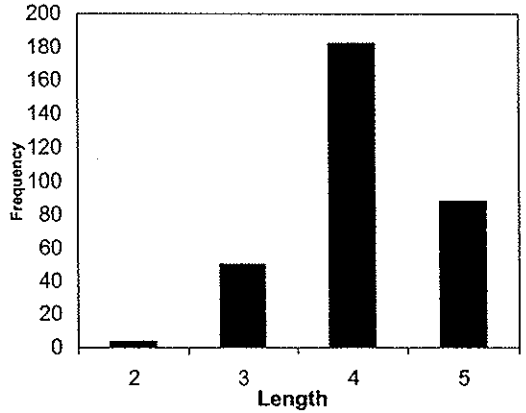

Table 31. Black bass relative weight determination for Barren River Lake during 2004.

	Size	Wrs	Num	Size	Wrs	Num	Size	Wrs	Num	Wrs	Num
Largemouth bass	8-11.9	86.49	290	12-14.9	90.19	104	=>15	93.78	58	88.57	533
Smallmouth bass	7-10.9	89.05	2	11-13.9			=>14			81.8	8
Spotted bass	7-10.9	82.09	52	11-13.9	88.87	11	=>14	99.97	9	82.72	108
White bass	6-8.9	73.77	2	9-11.9	67.75	1	=>12	64.38	1	69.92	4

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Table 32. Number of fish and the relative wieght (Wr) for each length category of black bass collected at Barren River Lake during September 2004. Standard errors are in parentheses.

		Size range					
		8.0-11.9 in		12.0-14.9 in		>=15.0 in	
Species	Area	Num	Wr	Num	Wr	Num	Wr
Largemouth bass							
	Dam area	27	82.02	13	89.04	4	92.14
			(1.92)		(2.95)		(4.89)
	Beaver Creek	84	88.14	23	91.34	18	96.27
			(1.01)		(1.49)		(1.93)
	Peter Creek	29	84.25	7	88.94	8	91.35
			(1.42)		(2.85)		(3.39)
	Browns Ford	80	87.34	39	89.50	10	96.31
			(1.13)		(1.34)		(2.53)
	Lower Skaggs Creek	23	83.67	7	87.27	7	87.29
			(1.25)		(4.02)		(4.93)
	Upper Skaggs Creek	47	87.43	15	93.15	11	93.89
			(1.88)		(2.97)		(1.32)
		7.0-10.9		11.0-13.9		>=14.0 in	
		Num	Wr	Num	Wr	Num	Wr
Smallmouth bass							
	Dam area	1	76.02				
	Lower Skaggs Creek	1	102.08				
Spotted bass							
	Dam area	13	94.15			1	107.35
			(2.05)				
	Beaver Creek	1	86.22	1	87.95	2	104.29
	Peter Creek	15	95.61	3	92.56	3	96.68
			(2.12)		(3.29)		(2.77)
	Browns Ford	1	94.18	1	108.35	1	93.10
	Lower Skaggs Creek	22	94.2	6	97.60	1	120.53
			(2.08)		(1.62)		
	Upper Skaggs Creek					1	117.54

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Table 33. Length frequency of fish sampled during fall electrofishing for 9.0 hours at Barren River Lake during 2004.

	Inch class																				Fish	Std
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	/hour	error
White bass					1		1	1	1		1									5	0.56	0.22
Yellow bass					1	1														2	0.22	0.15
Smallmouth bass	1	27	1	4	7	3		1												44	4.89	1.95
Spotted bass	34	112	9	17	19	25	12	7	8	5	4	2	3	4	1	1				263	29.22	7.6
Largemouth bass	286	445	58	110	43	28	73	85	89	43	35	41	29	24	19	8	3	3	1	1423	158.11	22.58
Hybrid striped bass			1	1																2	0.22	0.22

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Table 34. Length frequency for largemouth bass sampled during fall electrofishing at Barren River Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
2	286	286	20.10	20.10	31.78	10.13
3	445	731	31.27	51.37	49.44	13.05
4	58	789	4.08	55.45	6.44	1.29
5	110	899	7.73	63.18	12.22	3.07
6	43	942	3.02	66.20	4.78	1.07
8	28	970	1.97	68.17	3.11	0.63
8	73	1043	5.13	73.30	8.11	1.27
9	85	1128	5.97	79.27	9.44	1.75
10	89	1217	6.25	85.52	9.89	2.05
11	43	1260	3.02	88.55	4.78	1.16
12	35	1295	2.46	91.00	3.89	0.85
13	41	1336	2.88	93.89	4.56	0.95
14	29	1365	2.04	95.92	3.22	0.73
15	24	1389	1.69	97.61	2.67	0.56
16	19	1408	1.34	98.95	2.11	0.47
17	8	1416	0.56	99.51	0.89	0.33
18	3	1419	0.21	99.72	0.33	0.18
19	3	1422	0.21	99.93	0.33	0.18
20	1	1423	0.07	100.00	0.11	0.11
21	0	1423	0.00	100.00	0.00	0.00

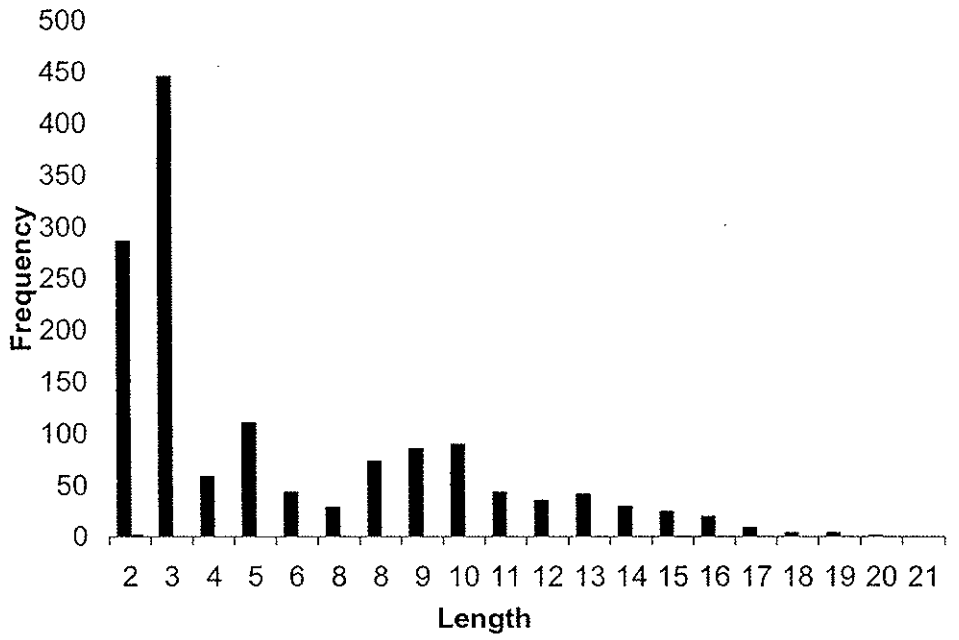

Table 35. Length frequency for spotted bass sampled during fall electrofishing at Barren River Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
2	34	34.00	12.93	12.93	3.78	1.30
3	112	146.00	42.59	55.51	12.44	4.60
4	9	155.00	3.42	58.94	1.00	0.52
5	17	172.00	6.46	65.40	1.89	0.88
6	19	191.00	7.22	72.62	2.11	0.69
7	25	216.00	9.51	82.13	2.78	0.92
8	12	228.00	4.56	86.69	1.33	0.49
9	7	235.00	2.66	89.35	0.78	0.33
10	8	243.00	3.04	92.40	0.89	0.37
11	5	248.00	1.90	94.30	0.56	0.32
12	4	252.00	1.52	95.82	0.44	0.26
13	2	254.00	0.76	96.58	0.22	0.22
14	3	257.00	1.14	97.72	0.33	0.18
15	4	261.00	1.52	99.24	0.44	0.26
16	1	262.00	0.38	99.62	0.11	0.11
17	1	263.00	0.38	100.00	0.11	0.11
21	0	263.00	0.00	100.00	0.00	0.00

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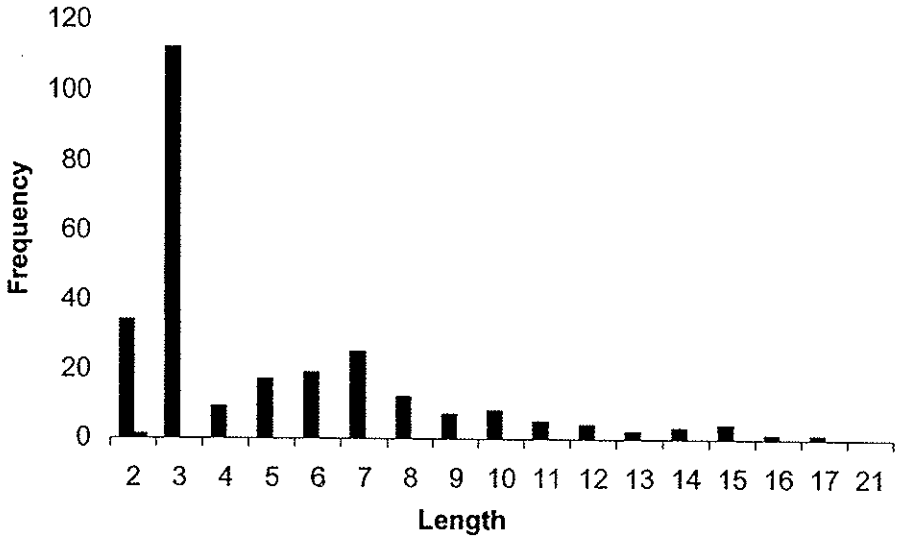

Table 36. Electrofishing catch rate (fish/hour) for each age of largemouth bass collected from Barren River Lake during 9.0 hours fall electrofishing studies 2004.

	Inch group																					Per	
Age	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	22	Total	cent	CPUE
YOY	286	445	58	110	43	23															965	67.81	107.22
Unknown						5	73	85	89	43	35	41	29	24	19	8	3	3	1		458	32.19	50.89
Total	286	445	58	110	43	28	73	85	89	43	35	41	29	24	19	8	3	3	1	0	1423		158.11

swdbrlwr.d04

swdbrlag.d03

Table 37. Electrofishing catch rate (fish/hour) for each age of spotted bass collected from Barren River Lake during 9.0 hours fall electrofishing studies 2004.

	Inch group																		Per	
Age	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total	cent	CPUE
YOY	34	112	9	17	4													176	66.92	19.56
Unknown					15	25	12	7	8	5	4	2	3	4	1	1		87	33.08	9.67
Total	34	112	9	17	19	25	12	7	8	5	4	2	3	4	1	1	0	263		29.22

swdbrlwr.d04

swdbrlag.d03

Table 38. Indices of year class stringth at age 0 and age 1 and mean length (in) of largemouth bass collected in the fall in electrofishing samples at Barren River Lake during 2003 and 2004.

		Age 0		Age 0		Age 0 >=5.0 inch		Age 1	
Year class	Area	Mean length	Std error	CPUE	Std Error	CPUE	Std Error	CPUE	Std Error
2004	Total	3.72	0.04	108.44	22.20	20.78	3.85	22.76	2.89
2003	Total	4.40	0.04	198.00	30.81	84.00	18.74	11.46	1.52

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swdbrlwr.d03

swdbrlag.d03

Table 39. Mean back calculated length (in.) at each age for otoliths from largemouth bass electrofishing at Barren River Lake

		Age
Year class	Number	1
2003	25	3.86

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Table 40. Mean back calculated length (in.) at each age for otoliths from spotted bass electrofishing at Barren River Lake during the fall 2004.

		Age	
Year class	Number	1	2
2003	39	3.41	
2002	5		5.64

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Table 41. Trap netting for 112 net days at Barren River Lake for crappie population evaluations.

Species	Inch class																									Total	Fish /day	Std error
	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			
Alewife			5	4																						9	0.08	0.05
Gizzard shad			443	33																						476	4.25	1.48
Common carp																1	1	2	1		3					8	0.07	0.03
Spotted sucker						14	4		1	4	16	70	172	86	13											380	3.39	0.67
River redhorse														2				1	2							5	0.04	0.02
Golden redhorse					1								1	1	1	2	2	2	5	4	1	1	1	2	1	25	0.22	0.05
Yellow bullhead					1			1	4	3	2	1														12	0.11	0.04
Channel catfish			3	4	2	3	3	13	13	4	5	15	16	8	7	10	10	5	4	6	1	1	2			135	1.21	0.48
Mountain madtom		1																								1	0.01	0.01
Flathead catfish		1	33	26	1	1											1		2	1						66	0.59	0.27
White bass				1		2	3	2		1	1	1														11	0.10	0.04
Yellow bass					1	3	16	2	2	1																25	0.22	0.06
Green sunfish		135	125	13	5	1	1																			280	2.50	0.59
Warmouth	3	249	61	21	13	3	12	6																		368	3.29	0.45
Orangespotted sunfish		10	2																							12	0.11	0.03
Bluegill	20	2864	4592	206	170	271	34																			8157	72.83	8.77
Longear sunfish	2	64	32	2	2																					102	0.91	0.14
Redear sunfish		1	23	10	4	8	32																			78	0.70	0.12
Smallmouth bass				1																						1	0.01	0.01
Spotted bass			23	15	3	4	12	14	12	7	4	7	4	6	1	1										113	1.01	0.14
Largemouth bass		4	19	16	4	3		1	2	3	1	1			1	1										56	0.50	0.08
White crappie			16	21	3	3	4	31	50	41	16	6	1													192	1.71	0.27
Black crappie		14	59	1	57	318	151	93	78	50	22	3														846	7.55	0.90
Logperch			1	47	16	2																				66	0.59	0.12
White bass x striped bass			1	31	6	5	1	1														1				46	0.41	0.11
Sunfish hybrids						1																				1	0.01	0.01
Total																										11471	102.42	

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Table 42. Length frequency for white crappie sampled during trap netting at Basrren River Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
3	16	16	8.33	8.33	0.14	0.04
4	21	37	10.94	19.27	0.19	0.04
5	3	40	1.56	20.83	0.03	0.02
6	3	43	1.56	22.40	0.03	0.02
7	4	47	2.08	24.48	0.04	0.02
8	31	78	16.15	40.63	0.28	0.08
9	50	128	26.04	66.67	0.45	0.10
10	41	169	21.35	88.02	0.37	0.09
11	16	185	8.33	96.35	0.14	0.04
12	6	191	3.13	99.48	0.05	0.02
13	1	192	0.52	100.00	0.01	0.01

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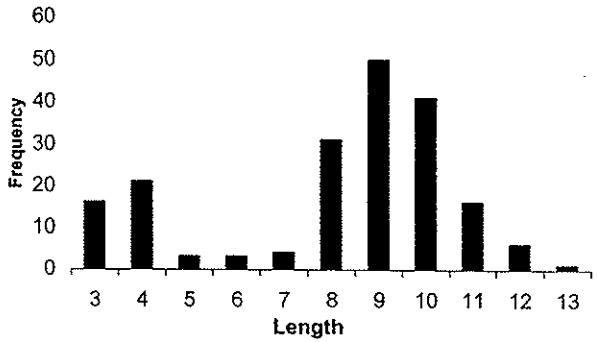

Table 43. Length frequency for black crappie sampled during trap netting at Basrren River Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
2	14	14	1.65	1.65	0.13	0.09
3	59	73	6.97	8.63	0.53	0.19
4	1	74	0.12	8.75	0.01	0.01
5	57	131	6.74	15.48	0.51	0.08
6	318	449	37.59	53.07	2.84	0.42
7	151	600	17.85	70.92	1.35	0.21
8	93	693	10.99	81.91	0.83	0.14
9	78	771	9.22	91.13	0.70	0.15
10	50	821	5.91	97.04	0.45	0.11
11	22	843	2.60	99.65	0.20	0.07
12	3	846	0.35	100.00	0.03	0.02

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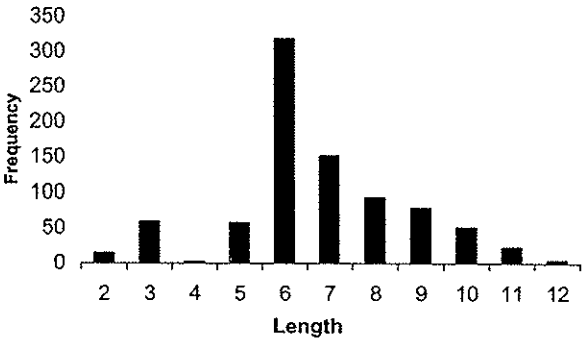

Table 44. Population assissment for white, black and white and black crappie combined from Barren River Lake trap netting data collected in October and November 2004.

	Species					
	White crappie		Black crappie		Combined	
Parameter	Actual value	Assessment	Actual value	Assessment	Actual value	Assessment
CPUE < 8.0 inches	1.55	1	6.9	2	8.45	2
CPUE of age 1 crappie	0.88	1	4.36	2	5.24	2
CPUE of age 0 crappie	0.16	1	0.65	1	0.81	1
CPUE of crappie >= 8 inches	1.29	1	2.2	1	3.49	2
Mean ag-2 length at capture	11.08	4	9.22	3	10.15	4
Instantaneous mortality (z)	0.68		0.49		0.18	
Annual mortality (A)	49.18		-63.3		-19.5	
Total score		8		9		11
Assessment rating		Fair		Fair		Fair

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Table 45. White crappie assessment from trap netting at Barren River Lake from 1985 - 2004.

	White crappie											
	CPUE excluding age 0		CPUE age 1		CPUE age 0		CPUE >= 8 inches		Mean age-2 length at capture			
Year	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Assessment	Rating
1985	30.98	4	24.40	4	0.42	1	2.20	1	9.41	3	13	G
1986	13.56	3	3.61	2	1.91	1	8.87	2	8.97	2	10	F
1987	3.99	1	1.26	1	0.41	1	2.48	1	10.79	4	8	F
1988	3.07	1	2.49	1	0.24	1	2.48	1	11.07	4	8	F
1989	4.15	1	1.69	1	3.25	2	2.56	1	11.03	4	9	F
1990	22.83	4	20.80	4	0.50	1	13.38	2	10.79	4	15	G
1991	30.98	4	0.52	1	0.98	1	8.86	2	9.83	4	12	F
1992	6.82	2	5.09	2	0.07	1	4.04	2	11.50	4	11	F
1993	5.77	2	0.59	1	0.04	1	5.22	2	10.00	4	10	F
1994	0.66	1	0.11	1	0.65	1	0.44	1	10.60	4	8	F
1995	7.95	2	7.69	3	0.64	1	5.47	2	11.50	4	12	F
1996	6.34	2	0.80	1	1.40	1	5.59	2	9.70	4	10	F
1997	6.71	2	5.12	2	1.04	1	5.16	2	10.23	4	11	F
1998	1.22	1	0.68	1	2.03	1	0.93	1	10.91	4	8	F
1999	6.48	2	5.91	2	0.54	1	2.93	1	10.85	4	10	F
2000	2.50	1	0.32	1	0.03	1	2.38	1	9.30	3	7	P
2001	1.58	1	0.51	1	0.21	1	1.34	1	10.45	4	8	F
2002	1.41	1	0.29	1	1.16	1	0.80	1	10.67	4	8	F
2003	1.37	1	1.02	1	0.43	1	1.05	1	11.45	4	8	F
2004	1.55	1	0.88	1	0.16	1	1.29	1	11.08	4	8	F
Sum	159.92	37	83.78	32	16.11	21	77.47	28	210.13	76	194	
Avg	8.00	1.85	4.19	1.6	0.81	1.05	3.87	1.4	10.51	3.8	9.7	

Table 46. Black crappie assessment from trap netting at Barren River Lake from 1985 - 2004.

	Black crappie											
	CPUE excluding age 0		CPUE age 1		CPUE age 0		CPUE >= 8 inches		Mean age-2 length at capture			
Year	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Assessment	Rating
1985	3.53	1	0.72	1	0.33	1	0.78	1	7.44	1	5	P
1986	10.72	2	6.94	3	3.83	2	2.80	1	8.69	2	10	F
1987	3.27	1	1.90	1	2.82	1	1.34	1	9.57	4	8	F
1988	6.18	2	5.68	2	0.10	1	0.44	1	9.30	3	9	F
1989	9.19	2	1.48	1	7.51	3	5.90	2	8.19	1	9	F
1990	29.12	4	26.11	4	0.10	1	1.92	1	8.80	2	12	F
1991	3.53	1	0.95	1	0.86	1	3.55	1	7.63	1	5	F
1992	9.20	2	3.49	2	0.07	1	4.24	2	7.66	1	8	F
1993	12.61	2	1.06	1	0.29	1	9.13	2	8.05	1	7	P
1994	0.74	1	0.10	1	0.82	1	0.70	1	8.80	2	6	P
1995	7.39	2	6.54	2	1.29	1	0.53	1	8.94	2	8	F
1996	9.03	2	0.79	1	0.48	1	4.16	2	7.84	1	7	P
1997	9.12	2	1.45	1	0.87	1	5.98	2	7.60	1	7	P
1998	1.71	1	0.12	1	1.79	1	1.56	1	8.19	1	5	P
1999	4.66	1	3.82	2	0.26	1	0.85	1	8.61	2	7	P
2000	1.81	1	0.18	1	0.22	1	0.65	1	7.79	1	5	P
2001	5.72	2	0.33	1	0.41	1	4.47	2	7.60	1	7	P
2002	4.58	1	1.02	1	3.09	2	3.34	1	8.72	2	7	P
2003	2.37	1	1.19	1	5.35	2	0.89	1	9.68	4	9	F
2004	6.90	2	4.36	2	0.65	1	2.20	1	9.22	3	9	F
Sum	141.38	33	68.23	30	31.14	25	55.43	26	168.32	36	150	
Avg	7.07	1.65	3.41	1.5	1.56	1.25	2.77	1.3	8.42	1.8	7.5	

Table 47. Annual mortality (a) between 2003 amd 2004, and CPUE (num./net-night) of the last five-year classes estimated from crappie captured in trap nets at Barren River Lake.

		White crappie			Black crappie			Combined		
Year class	Age intervals	CPUE (2003)	CPUE (20004)	Mortality of Cohort(%)	CPUE (2003)	CPUE (20004)	Mortality of Cohort(%)	CPUE (2003)	CPUE (20004)	Mortality of Cohort(%)
2003	1+ - 2+	1.09	0.43	60.55	1.26	1.82	2063.55	2.35	2.25	4.26
2002	2+ - 3+	0.02	0.05	-150.00	0.28	0.19	1852.00	0.3	0.24	20.00
2001	3+ - 4+	0.01	0.01	0.00	0.01	0.27	2001.00	0.02	0.28	-1300.00
2000	4+ - 5+	0	0	0.00	0.12	0.04	2000.00	0.12	0.04	0.00
1999	5+ - 6+	0.07	0.02	71.43	0.13	0.15	2070.43	0.2	0.17	15.00

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Table 48. PSD and RSD10 values calculated for crappie collected in trap nets at Barren River Lake during October and November 2004, 95% confidence llimits are in parenteses.

Lake	Species	No	PSD	RSD
Barren River Lake				
	White crappie	155	94 (4)	41 (8)
	Black crappie	772	32 (3)	10 (2)

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Table 49. Mean back calculated length (in.) at each age for otoliths from white crappie trap netted at Barren River Lake during the fall 2004.

		Age					
Year class	Number	1	2	3	4	5	6
2003	29	4.2					
2002	21		7.39				
2001	3			8.92			
2000	1				9.5		
1998	2					9.11	10.93

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Table 50. Mean back calculated length (in.) at each age for otoliths from black crappie trap netted at Barren River Lake during the fall 2004.

		Age					
Year class	Number	1	2	3	4	5	6
2003	29	3.32					
2002	26		6.14				
2001	5			7.86			
2000	4				7.62		
1999	2					9.71	
1998	8						9.88

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Table 51. Length at age for white crappie from trap netting at Barren River Lake during 2004.

Length/	Inch class														Std
Age	2	3	4	5	6	7	8	9	10	11	12	13	Total	Percent	error
YOY		16	21	1									38	18.91	
1				2	3	4	31	60	8				108	53.73	
2									33	13	3		49	24.38	
3										1	2		3	1.49	
4										1			1	0.50	
5													0	0.00	
6											1	1	2	1.00	
Total	0	16	21	3	3	4	31	60	41	15	6	1	201	100.00	
Percent	0.00	7.96	10.45	1.49	1.49	1.99	15.42	29.85	20.40	7.46	2.99	0.50	100.00		

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Table 52. Length at age for black crappie from trap netting at Barren River Lake during 2004.

Length/	Inch class													Std
Age	2	3	4	5	6	7	8	9	10	11	12	Total	Percent	error
YOY	14	59	1									74	8.77	
1				57	318	96	9	8				488	57.82	
2						27	84	62	35			208	24.64	
3								8	10	4		22	2.61	
4						27				4		31	3.67	
5										4		4	0.47	
6									5	9	3	17	2.01	
Total	14	59	1	57	318	150	93	78	50	21	3	844	100.00	0
Percent	1.66	6.99	0.12	6.75	37.68	17.77	11.02	9.24	5.92	2.49	0.36			

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swdbrlag.d04

Table 53. Length frequency for channel catfish sampled during trap netting at Basrren River Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
3	3	3	2.22	2.22	0.03	0.02
4	4	7	2.96	5.19	0.04	0.02
5	2	9	1.48	6.67	0.02	0.02
6	3	12	2.22	8.89	0.03	0.02
7	3	15	2.22	11.11	0.03	0.02
8	13	28	9.63	20.74	0.12	0.05
9	13	41	9.63	30.37	0.12	0.04
10	4	45	2.96	33.33	0.04	0.02
11	5	50	3.70	37.04	0.04	0.03
12	15	65	11.11	48.15	0.13	0.06
13	16	81	11.85	60.00	0.14	0.08
14	8	89	5.93	65.93	0.07	0.05
15	7	96	5.19	71.11	0.06	0.03
16	10	106	7.41	78.52	0.09	0.04
17	10	116	7.41	85.93	0.09	0.04
18	5	121	3.70	89.63	0.04	0.03
19	4	125	2.96	92.59	0.04	0.03
20	6	131	4.44	97.04	0.05	0.04
21	1	132	0.74	97.78	0.01	0.01
22	1	133	0.74	79.26	0.01	0.01
23	2	135	1.48	80.74	0.02	0.01

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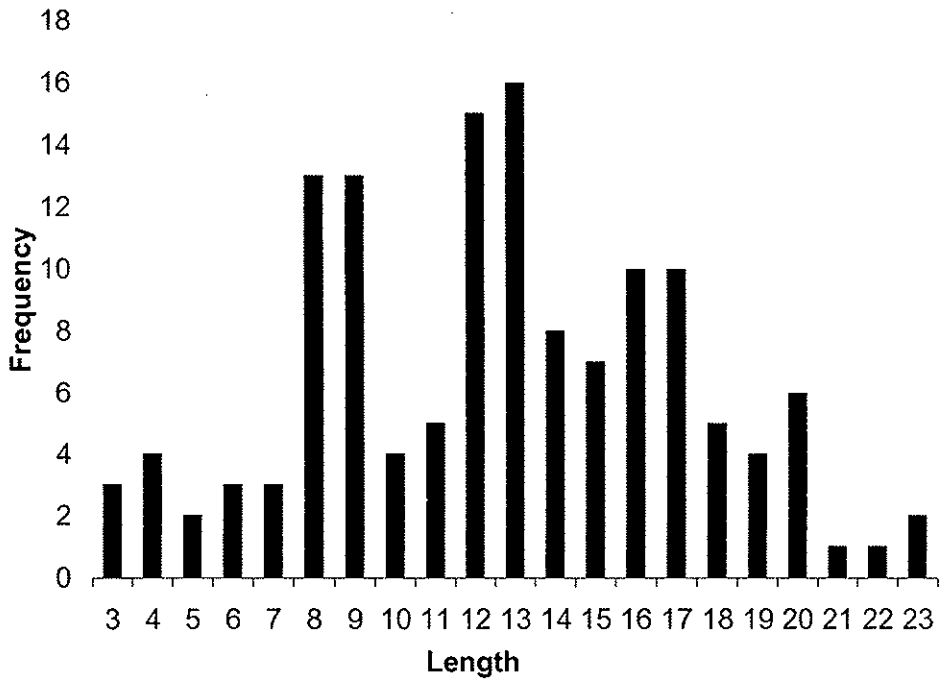

Table 54. Length frequency for bluegill sampled during trap netting at Barren River Lake during 2004.

Inch class	Freq	Cum Freq	Percent	Cum Pct	CPUE	Std error
1	20	20	0.25	0.25	0.18	0.07
2	2864	2884	35.11	35.36	25.57	3.08
3	4592	7476	56.30	91.65	41.00	4.99
4	206	7682	2.53	94.18	1.84	0.25
5	170	7852	2.08	96.26	1.52	0.28
6	271	8123	3.32	99.58	2.42	0.38
7	34	8157	0.42	100.00	0.30	0.06

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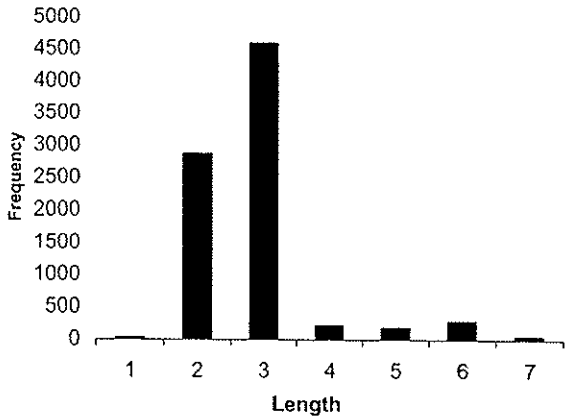

Table 55. Length frequency for redear sunfish sampled during trap netting at Barren River Lake during 2004.

Inch class	Freq	Cum Freq	Percent	Cum Pct	CPUE	Std error
1	0	0	0.00	0.00	0.00	0.00
2	1	1	1.28	1.28	0.01	0.01
3	23	24	29.49	30.77	0.21	0.06
4	10	34	12.82	43.59	0.09	0.03
5	4	38	5.13	48.72	0.04	0.02
6	8	46	10.26	58.97	0.07	0.03
7	32	78	41.03	100.00	0.29	0.07

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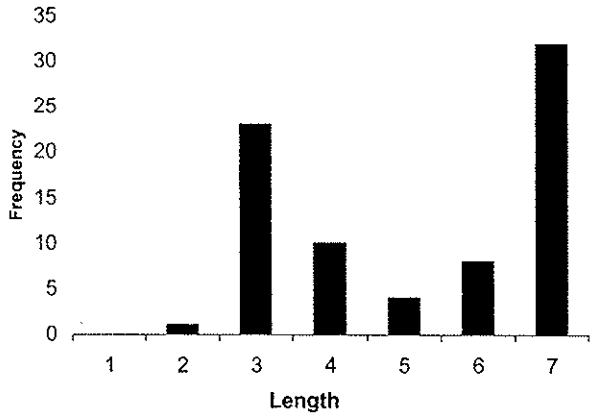

Table 56. Gill netting for 4 net days at Barren River Lake for white bass and hybrid striped bass population evaluations.

	Inch class																						Fish	Std
Species	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	30	32	33	42	Total	/day	error
Longnose gar																		1	2	1	1	5	1.25	0.95
Alewife	6	144	22																			172	43.00	6.99
Gizzard shad	134	195	289	39	12	22	5															696	174.00	17.64
Goldfish										1												1	0.25	0.25
Common carp										2	1	3	2	1								9	2.25	1.03
Spotted sucker		2	1		1	4	3	4	22	12	1	1										51	12.75	3.06
Golden redhorse			2			1				2		8	8	7	2							30	7.50	2.75
Yellow bullhead					1																	1	0.25	0.25
Channel catfish			1		1	3	2	6	4	3	6	5	5	3	3	3	1					46	11.50	3.84
White bass		8	11	6			17	4	4	5	1											56	14.00	3.58
Yellow bass	6	8	45	4	1																	64	16.00	2.38
Warmouth	2																					2	0.50	0.29
Bluegill	7	2																				9	2.25	1.11
Spotted bass				1			1	1		1												4	1.00	0.58
Largemouth bass		2		2	2		3	3	1													13	3.25	0.48
White crappie			1		2	1																4	1.00	0.41
Black crappie	1	3			1	1	2															8	2.00	1.35
Logperch		1																				1	0.25	0.25
White bass x striped bass	1	7	7	13	4			21	22	7	22	21	6		1	1						133	33.25	5.82
Total																						1305	326.25	

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Table 57. Length frequency for hybrid striped bass sampled during gill netting at Barren River Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
5	1	1	0.75	0.75	0.25	0.25
6	7	8	5.26	6.02	1.75	1.11
7	7	15	5.26	11.28	1.75	0.63
8	13	28	9.77	21.05	3.25	1.03
9	4	32	3.01	24.06	1.00	0.58
10	0	32	0.00	24.06	0.00	0.00
11	0	32	0.00	24.06	0.00	0.00
12	21	53	15.79	39.85	5.25	0.95
13	22	75	16.54	56.39	5.50	1.32
14	7	82	5.26	61.65	1.75	0.48
15	22	104	16.54	78.20	5.50	1.32
16	21	125	15.79	93.98	5.25	0.48
17	6	131	4.51	98.50	1.50	0.87
18	0	131	0.00	98.50	0.00	0.00
19	1	132	0.75	99.25	0.25	0.25
20	1	133	0.75	100.00	0.25	0.25

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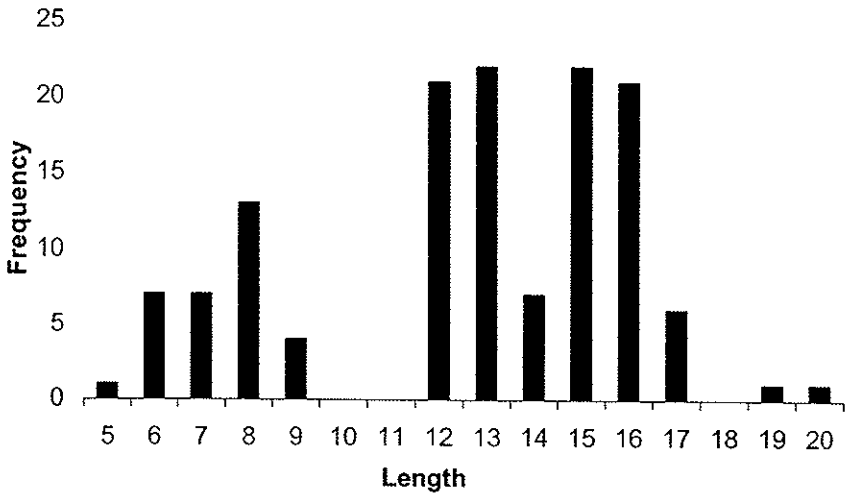

Table 58. Mean back calculated length (in.) at each age for otoliths from hybrid striped bass gill netting at Barren River Lake during the fall 2004.

		Age	
Year class	Number	1	2
2003	53	7.26	
2002	4		11.80

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Table 60. Hybrid striped bass assessment from Barren River Lake 1985 - 2004 from gill netting.

	Hybrid striped bass									
	CPUE age 1 fish and older		Mean length of age 2+ fish at capture		CPUE >= 15.0 inches		CPUE of age 1 fish			
Year	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Assessment	Rating
1985	13.50	3	0.00	0	3.50	2	0.00	0	5	P
1986	62.75	4	18.50	4	1.75	1	30.00	4	13	G
1987	2.14	1	0.00	0	1.93	1	0.00	0	2	P
1988	8.38	2	0.00	0	7.00	3	0.00	0	5	P
1989	38.00	4	0.00	0	19.25	4	0.00	0	8	F
1990	14.00	3	17.83	3	3.90	2	7.40	3	11	G
1991	22.62	4	18.42	4	16.62	4	13.21	4	16	E
1992	22.33	4	19.10	4	7.83	3	13.19	4	15	E
1993	16.50	3	19.44	4	9.56	3	8.12	3	13	G
1994	23.88	4	18.05	4	19.25	4	5.06	3	15	E
1995	44.38	4	0.00	0	36.62	4	0.00	0	8	F
1996	24.12	4	16.84	2	10.88	4	12.71	4	14	E
1997	13.17	3	18.01	4	5.75	3	8.10	3	13	G
1998	52.75	4	17.60	3	15.38	4	41.00	4	15	E
1999	52.00	4	18.77	4	50.50	4	35.12	4	16	E
2000	82.00	4	17.62	3	50.50	4	33.92	4	15	E
2001	0.00	0	0.00	0	0.00	0	0.00	0	0	
2002	34.75	4	18.77	4	16.50	4	16.75	4	16	E
2003	17.12	3	18.77	4	7.62	3	5.88	3	13	G
2004	33.25	4	18.77	4	12.75	4	20.62	4	16	E
Sum	577.64	66	256.49	51	297.09	61	251.08	51	229	
Avg	28.88	3.3	12.82	2.55	14.85	3.05	12.55	2.55	11.45	

Table 61. Length frequency for white bass sampled during gill netting at Barren River Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
6	8	8	14.29	14.29	2.00	0.58
7	11	19	19.64	33.93	2.75	1.75
8	6	25	10.71	44.64	1.50	0.29
9	0	25	0.00	44.64	0.00	0.00
10	0	25	0.00	44.64	0.00	0.00
11	17	42	30.36	75.00	4.25	1.18
12	4	46	7.14	82.14	1.00	0.41
13	4	50	7.14	89.29	1.00	0.41
14	5	55	8.93	98.21	1.25	0.48
15	1	56	1.79	100.00	0.25	0.25

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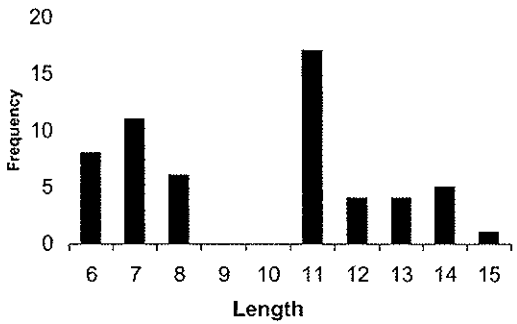

Table 62. White bass assessment from Barren River Lake 1985 - 2004 from gill netting.

	White bass									
	CPUE age 1 fish and older		Mean length of age 2+ fish at capture		CPUE >= 12.0 inches		CPUE of age 1 fish			
Year	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Assessment	Rating
1985	6.50	2	13.13	4	4.50	2	1.79	1	9	F
1986	26.00	4	13.13	4	6.50	3	2.33	1	12	G
1987	2.21	1	13.13	4	0.21	1	0.26	1	7	F
1988	2.62	1	13.13	4	1.12	1	0.71	1	7	F
1989	16.25	3	13.13	4	14.00	4	1.25	1	12	G
1990	5.10	2	13.13	4	2.10	1	0.40	1	8	F
1991	3.50	1	13.18	4	0.88	1	2.21	1	7	F
1992	3.00	1	14.20	4	2.33	1	0.61	1	7	F
1993	1.12	1	13.07	4	0.75	1	0.38	1	7	F
1994	2.00	1	12.80	3	1.19	1	0.58	1	6	F
1995	5.25	2	13.13	4	4.00	2	0.88	2	10	G
1996	4.00	1	13.90	4	0.88	1	1.25	1	7	F
1997	0.67	1	11.85	2	0.50	1	0.17	1	5	P
1998	0.88	1	13.90	4	0.38	1	0.12	1	7	F
1999	2.25	1	0.00	0	2.25	1	0.50	1	3	P
2000	2.25	1	14.41	4	2.25	1	0.00	0	6	F
2001	0.00	0	0.00	0	0.00	0	0.00	0	0	P
2002	1.00	1	0.00	0	0.50	1	0.25	1	3	P
2003	5.75	2	0.00	0	0.38	1	1.12	1	4	P
2004	14.00	3	0.00	0	3.50	2	6.25	3	8	F
Sum	104.35	30	199.22	57	48.22	27	21.06	21	135	
Avg	5.22	1.5	9.96	2.85	2.41	1.35	1.05	1.05	6.75	

Table 63. Length frequency for yellow bass sampled during gill netting at Barren River Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
5	6	6	9.38	9.38	1.50	0.65
6	8	14	12.50	21.88	2.00	0.41
7	45	59	70.31	92.19	11.25	1.44
8	4	63	6.25	98.44	1.00	0.71
9	1	64	1.56	100.00	0.25	0.25

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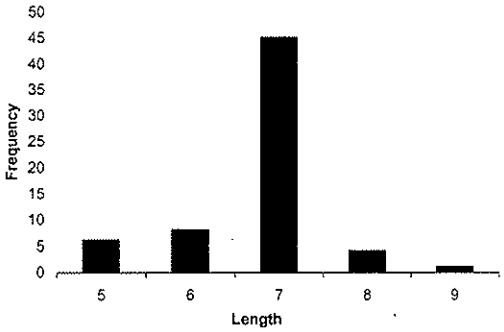

Table 64. Length frequency for channel catfish sampled during gill netting at Barren River Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
6	0	0	0.00	0.00	0.00	0.00
7	1	1	2.17	2.17	0.25	0.25
8	0	1	0.00	2.17	0.00	0.00
9	1	2	2.17	4.35	0.25	0.25
10	3	5	6.52	10.87	0.75	0.48
11	2	7	4.35	15.22	0.50	0.29
12	6	13	13.04	28.26	1.50	0.87
13	4	17	8.70	36.96	1.00	0.71
14	3	20	6.52	43.48	0.75	0.25
15	6	26	13.04	56.52	1.50	0.29
16	5	31	10.87	67.39	1.25	0.95
17	5	36	10.87	78.26	1.25	0.48
18	3	39	6.52	84.78	0.75	0.25
19	3	42	6.52	91.30	0.75	0.75
20	3	45	6.52	97.83	0.75	0.48
21	1	46	2.17	100.00	0.25	0.25

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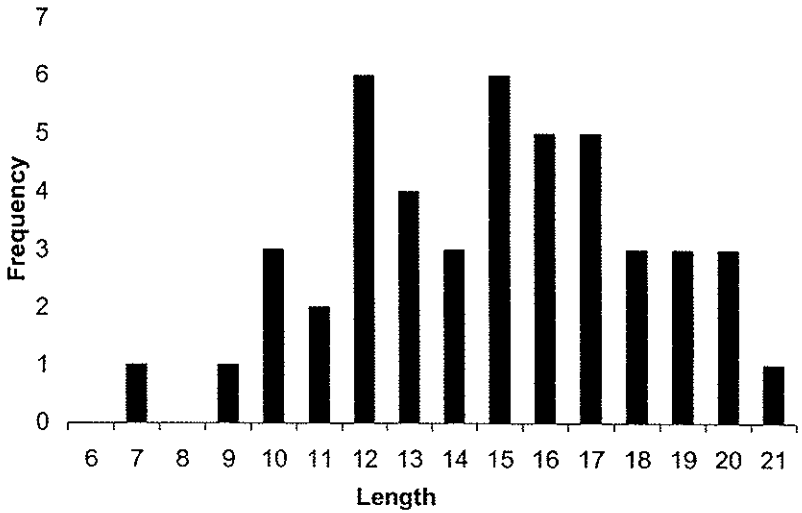

Table 65. Length frequency for gizzard shad sampled during gill netting at Barren River Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
4	0	0	0.00	0.00	0.00	0.00
5	134	134	19.25	19.25	33.50	3.12
6	195	329	28.02	47.27	48.75	6.12
7	289	618	41.52	88.79	72.25	7.79
8	39	657	5.60	94.40	9.75	3.57
9	12	669	1.72	96.12	3.00	1.08
10	22	691	3.16	99.28	5.50	0.65
11	5	696	0.72	100.00	1.25	0.25
12	0	696	0.00	100.00	0.00	0.00
13	0	696	0.00	100.00	0.00	0.00

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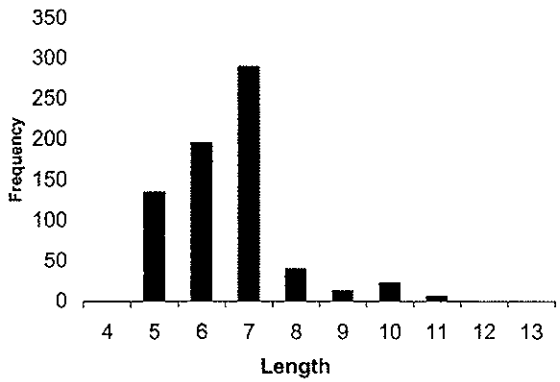

Table 66. Fish harvest statistics derived from a creel survery at Barren River Lake (10,000 acres) from 1 March through 31 October 2004.

Fishing trips			
	No. of fishing trips (per acre)	93130	9.31
Fishing presure			
	Total man-hours (S>E>)	478401	5541
	Man-hours / acre	47.84	
Catch/harvest			
	No. of fish caught (S.E.)	633454	35241
	No of fish harvested (S.E.)	317666	23408
	Pounds of fish harvested	236431	
Harvest rates			
	Fish/hour	0.63	
	Fish/acre	31.77	
	Lbs/acre	23.64	
Catch rates			
	Fish/hour	1.28	
	Fish/acre	63.35	
Miscellaneous characteristics (%)			
	Male	87.41	
	Female	12.59	
	Resident	93.56	
	Non-resident	6.44	
Methods(%)			
	Still fishing	32.9	
	Casting	49.9	
	Fly fishing	0.26	
	Trolling	16.32	
	Others	0.62	
Mode (%)			
	Boat	93.11	
	Bank	4.18	
	Dock	2.71	

Table 67. Fish harvest statistics derived from a creel survey at Barren River Lake (10,000 acres) from 1 March to 31 October 2004.

	Carp	Channel catfish	Flathead catfish	White bass	Warmouth	Bluegill	Longear sunfish	Redear sunfish	Smallmouth bass	Spotted bass	Largemouth bass	White crappie	Black crappie	Hybrid rockfish	Gar	Anything	Black bass group	Catfish group	Panfish group	Crappie group	Morone group	Illegal bass	Illegal black crappie
Number caught	848.79	14823.5	3230.35	17459.9	2807.17	245796.4	511.29	911.7	2580.29	18878.85	152285.47	39823.76	78685.22	54199.26	49.74		173844.6	18056.88	249826.58	118488.98		345.74	336.89
(per acre)	0.08	1.48	0.32	1.75	0.28	24.58	0.05	0.09	0.27	1.89	15.23	3.98	7.87	5.42	0.01		17.38	1.81	24.98	11.85		0.03	0.03
No. harvested	237	11972	3110	3420	1402	153831	50	271	513	3999	27366	21942	49692	39129	50		31878	15082	155553	71634		346	337
(per acre)	0.02	1.2	0.31	0.34	0.14	15.38	0.01	0.03	0.05	0.4	2.74	2.19	7.97	3.91	0.01		3.19	1.51	15.56	7.16		0.03	0.03
% total no. harvested	0.07	3.77	0.98	1.08	0.44	48.43	0.02	0.09	0.16	1.26	8.61	6.91	15.64	12.32	0.02		10.04	4.75	48.97	2.55		0.11	0.1
Lb harvested	942.8	11528.8	23650.7	2304.7	337.4	20515.8	3.9	37	903	3571	51016.5	11187.5	28421.3	81543.5	181.8		55490.5	35177.5	20894.1	39608.8	83848.2	235.1	52.4
(per acre)	0.09	1.15	2.37	0.23	0.03	2.05			0.09	0.36	5.1	1.12	2.84	8.15	0.02		5.55	3.52	2.09	3.96	8.38	0.02	0.01
% total lb harvested	0.4	4.88	10	0.97	0.14	8.68		0.02	0.38	1.51	21.58	4.73	12.02	34.49	0.08		23.47	14.88	8.84	16.75	35.48	0.1	0.02
Mean length (in)	22.1	15	23.1	11.6	7.1	6.1	5	6.3	10	13	15.3	10.4	10.2	16.6	35							11.8	7.5
Mean weight (lb)	5.51	0.9	5.24	0.66	0.25	0.14	0.08	0.2	1.98	0.94	1.85	0.52	0.57	2.61	3.66							0.85	0.17
No. of fishing trips for that species																5314.75	40443.94	2839.15	9833.6	15048.3	19651.77		
% of all trips																5.71	43.43	3.05	10.56	16.16	21.1		
Hours fished for that species																27301.56	207758.18	14584.56	50514.66	77292	100949.99		
(per acre)																2.73	20.78	1.46	5.05	7.73	10.1		
No. harvested fishing for that species																	27918	9221	139128	69391	40428		
Lb harvested fishing for that species																	52916.2	30123	18440.9	38221.9	81839.4		
No./hour harvested fishing for that species																	0.112	0.292	3.748	0.969	0.425		
% success fishing for that species																30.64	20.14	64.35	61.07	61.09	41.6		

Table 68. Length distribution (length of released fish are estimates) for each specie of fish harvested at Barron River Lake (10,000 acres) from 1 March to 31 October 2004

		Inch Classes																																										
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Carp	H																	47	47	95							48																					
	S															47	94	141		94	47	94	95																									
Channel catfish	H										145	291	1939	2860	1939	1503	1503	582	533	194	97	48	242		48			48																					
	S								509	102	560	255	497	305	153	153	102	102		51	51	51								50																		
Flathead catfish	H														56	56	56			111	111		278	111	222	111	444	111	444	167	333	167	56	111	56	56							56					
	S																								81	40																					
White bass	H										703	328	2062	281			46																														
	S				47	235	282	282	986	610	5071	1315	4555	517	140																															
Warmouth	H						487	514	374	47																																				
	S					193	241	530	241																																					
Bluegill	H		198		3222	44817	71388	58654	5701			51																																	
	S		981	442	16587	40388	28954	3730	638		246																																	
Longear sunfish	H					50																																							
	S				103	359																																						
Redear sunfish	H					135	90		46																																				
	S				296	345																																						
Smallmouth bass	H													93	47	47	233	47		46																									
	R															148	97		49				48																						
	S								49		593	99	444	296	346																													
Spotted bass	H									98	482	289	964	675	819	337	289		48																									
	S								1737	422	4832	1080	4318	1843	422	141	235																												
Largemouth bass	H								93	47	373	189	1772	2331	4009	5408	5781	3403	2144	1029	288	280	233	47																						
	R															5279	5600	3029	1285	689	505	138	230	138		45																			
	S								11415	1243	30655	3268	35718	14499	11184																														
White crappie	H									4589	9179	4939	2404	656	175																														
	R									251	251	42	126	42		42																													
	S		261			174	2956	4130	9607																																				
Black crappie	H									13590	18490	11094	5408	925	92		46	47																										
	R									509	925	324	323																																
	S			322	46	92	4551	3264	18317																																				
Hybrid rockfish	H									342	829	1025	6001	7904	3810	2342	2978	2147	1708	2635	1269	1708	2638	1356	390	242																						
	R															2452	301	387	215		43	129	44																						
	S					49			491	49	1913	198	3729	2698	2159																														
Gar	H																																			50											
	S																																														
Illegal bass	H										198		99	49																																
Illegal black crappie	H							241	96																																					

Table 69. Black bass catch and harvest statistics for each species derived from the creel survey at Barren River Lake during 2004.

	Smallmouth bass						Spotted bass						Largemouth bass					
	Harvest			Catch and release			Harvest			Catch and release			Harvest			Catch and release		
	< 15.0	>= 15.0	Total	< 15.0	>= 15.0	Total	< 15.0	>= 15.0	Total	< 15.0	>= 15.0	Total	< 15.0	>= 15.0	Total	< 15.0	>= 15.0	Total
Total no of bass	140	373	513	1827	340	2167	3325	674	3999	14504	376	14880	8814	18613	27427	135348	16938	152285
% of bass harvested by no.	27.27	72.66	100.00	84.33	15.67	100.00	83.14	16.85	100.00	97.47	2.53	100.00	32.14	67.86	100.00	88.88	11.12	100.00
Total weight of fish (lb)	167.17	735.83	903.00	2284.8	801.30	3086.10	2456.30	1114.70	3571.00	11539.6	756.70	12296.30	2623.47	48393.03	51016.50	128427.3	39088.30	167515.60
% of bass harvested by weight	18.51	81.49	100.00	74.04	25.96	100.00	68.78	31.22	100.00	93.85	6.15	100.00	5.14	94.86	100.00	76.67	23.33	100.00
Mean length (in)	13.50	15.50	15.97	13.30	16.50	9.40	10.80	15.50	12.99	13.20	15.60	9.50	9.00	17.30	15.31	12.50	16.50	13.20
Mean weight (lb)	1.20	1.97	1.98	1.25	2.36	1.42	0.74	1.51	0.94	0.80	2.01	0.83	0.30	2.60	1.85	0.95	2.31	1.10
Rate (Fish/hour)	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.03	0.00	0.03	0.02	0.04	0.06	0.28	0.04	0.32

Table 70. Monthly black bass angling success at Barren River Lake during the 2004 creel survey period.

Month	Total catch by all anglers	Total harvest by all anglers	Hours fishing for bass	Number of trips for bass	Number harvested by bass anglers	Harvest rate by bass anglers	Number caught by bass anglers	Actual catch rate by bass anglers
March	14428.34	1719.58	24970.92	4861.05	1692	0.060	13810	0.489
April	18302.09	4941.57	34806.14	6775.65	4805	0.129	17251	0.463
May	26594.49	5444.16	29559.14	5754.23	4769	0.134	24474	0.689
June	39500.16	5497.15	37491.70	7298.45	4987	0.113	37573	0.854
July	13281.37	2089.20	16708.64	3252.64	1542	0.084	11292	0.613
August	12350.75	1938.26	16804.35	3271.27	1307	0.040	10186	0.548
September	25225.41	4956.74	25941.26	5049.94	4368	0.144	23803	0.782
October	24162.00	5291.29	21476.06	4180.70	4448	0.163	22290	0.818
Total	173844.60	31877.95	2007758.18	40443.94	27918	0.112	160679	0.065

Table 71. Crappie catch and harvest statistics derived from a creel survey at Barren River Lake during 2004.

	White crappie						Black crappie						Combined					
	Harvest			Catch and release			Harvest			Catch and release			Harvest			Catch and release		
	< 9.0	>= 9.0	Total	< 9.0	>= 9.0	Total	< 9.0	>= 9.0	Total	< 9.0	>= 9.0	Total	< 9.0	>= 9.0	Total	< 9.0	>= 9.0	Total
Total no of crappie	0	21942	21942	17128	22696	39824	92	49592	49592	26592	51673	78665	92	71534	71534	43720	74369	118489
% of crappie harvested by no.	0.00	30.67	30.67	14.46	19.15	33.61	0.13	69.33	69.33	22.44	43.61	66.39	0.08	60.37	60.37	36.90	62.76	100.00
Total weight of fish (lb)	0.00	11187.50	11187.50	4102.83	10159.07	14261.90	19.50	28451.30	28451.30	6972.84	28075.66	35048.50	19.50	39638.80	39638.80	11075.67	38234.73	49310.40
% of crappie harvested by weight	0.00	28.22	28.22	8.32	20.60	28.92	0.05	71.78	71.78	14.14	56.94	71.08	0.05	100.00	100.00	22.46	77.54	100.00
Mean length (in)	0.00	10.36	10.36	7.20	10.50	9.40	8.00	10.23	10.23	8.00	10.00	9.50						
Mean weight (lb)	0.00	0.52	0.52	0.24	0.45	0.36	0.21	0.57	0.57	0.26	0.54	0.45	0.21	1.09	1.09	0.50	0.99	0.80
Rate (Fish/hour)	0.00	0.05	0.05	0.04	0.05	0.08	tr	0.10	0.10	0.06	0.11	0.16	0.00	0.15	0.15	0.09	0.16	0.25

Table 72. Monthly crappie angling success from Barren River Lake creel survey 1 March through 31 October 2004.

Month	Total catch by all anglers	Total harvest by all anglers	Hours fishing for crappie	Number of trips for crappie	Number harvested by crappie anglers	Harvest rate by crappie anglers	Number caught by crappie anglers	Catch rate by crappie anglers
March	6314.08	3331.68	9955.18	1937.96	3278	0.457	6020	0.839
April	45526.46	29649.39	24541.28	4777.41	29237	1.303	44795	1.996
May	6118.66	3854.27	10556.84	2055.08	3710	0.383	5781	0.596
June	4023.69	2550.23	4056.94	789.76	2153	0.654	3286	0.998
July	3133.81	1293.32	1991.76	387.73	945	0.483	2387	1.221
August	12080.3	7076.89	5194.07	1011.12	6716	1.305	10908	2.119
September	22280.81	13201.62	9281.73	1806.86	12956	1.401	21545	2.329
October	19011.19	10676.23	11714.2	2280.38	10396	1008	18356	1.779
Total	118488.98	71633.64	77292	15046.3	69391	0.969	113078	1.584

Table 73. Catch and harvest statistics for hybrid striped bass from Barren River Lake creel survey during 1 March through 31 October 2004.

	Harvest			Catch and release		
	< 15.0	>= 15.0	Total	< 15.0	>= 15.0	Total
Total no of hybrids	19711	18418.13	39129.13	12648	3271	15919
% of hybrids harvested by no.	50.37	47.07	100.00	79.45	20.55	100.00
Total weight of fish (lb)	17128.25	64415.25	81543.50	8087.50	5976.32	14063.82
% of hybrids harvested by weight	21.01	78.99	100.00	57.51	42.49	100.00
Mean length (in)	12.60	19.90	16.65	11.40	16.50	12.70
Mean weight (lb)	0.87	3.50	2.61	0.64	1.83	0.88
Rate (Fish/hour)	0.04	0.04	0.08	0.03	0.01	0.03

Table 74. Monthly catch and harvest for hybrid striped bass at Barren River Lake during the 2004 creel survey.

Month	Total catch by all anglers	Total harvest by all anglers
March	886.66	26.87
April	274.53	0
May	3420.67	2746.17
June	10087.56	6403.9
July	13281.37	9301.93
August	15506.05	12080.3
September	8588.42	7165.19
October	2153.98	1404.77
Total	54199.23	39129.13

Table 75. Catfish catch and harvest statistics from Barren River Lake creel survey 1 March through 31 October 2004

Species	Weight harvested	Average length	Average weight	Number harvested	Harvest rate	% of all catfish harvested by weight	% of all catfish harvesteed by number	Number caught and released 12-14.9 inches	Weight caught and released 12-14.9 inches	Number caught and released >15 inches	Weight caught and released > 15 inches	Total weight caught	Total number caught
Channel catfish	11526.8	14.0226	0.9	11972.33	0.0237	32.768	79.382	865	512	560.207	331.3	13213.1	14823.53
Flathead catfish	23650.7	23.0867	5.237	3109.55	0.005	67.232	20.618			120.802	695.2	24345.9	3230.35
Total	35177.5	37.1093	6.137	15081.88		100	100	865	512	681.009	1026.5	37559	18053.88

Table 76. Monthly catch and harvest for catfish at Barren River Lake during the 2004 creel survey.

Month	Total catch by all anglers	Total harvest by all anglers	Hours fishing for catfish	Number of trips for catfish	Number harvested by catfish anglers	Harvest rate by catfish anglers	Number caught by catfish anglers	Catdh rate by catfish anglers
March	537.37	510.5	912.56	177.65	430	0.453	430	0.453
April	91.51	45.76	0	0	0	0	0	0
May	4673.31	3661.56	2483.96	483.55	1686	0.704	1927	0.805
June	7083.96	6007.2	7414.4	1443.35	4533	0.54	4986	0.595
July	2686.12	2437.4	1549.15	301.57	1642	1.068	1642	1.068
August	1667.8	1442.42	1629.51	317.21	586	0.341	586	0.341
September	1079.69	883.38	594.98	115.82	344	0.778	344	0.778
October	234.19	93.65	0	0	0	0	0	0
Total	18053.88	15081.87	14584.56	2839.15	9221	0.592	9915	0.633

Table 77. Species fished for and preferred fish from angler attitude survey from anglers (340) fishing Barren River Lake during the creel survey of 2004.

What species do you fish for at Barren River Lake?

	Frequency	Percent
Bass	263	77.35%
Crappie	239	70.29%
Hybrid	137	40.29%
Channel Catfish	91	26.76%
White Bass	63	18.53%
Flathead Catfish	49	14.41%
Sunfish	31	9.12%
All	1	0.29%

What species do you Primarily fish for at Barren River Lake?

	Frequency	Percent
Bass	179	53.43%
Crappie	107	31.94%
Hybrid Striped Bass	24	7.16%
Sunfish	12	3.58%
Channel Catfish	8	2.39%
Flathead Catfish	3	0.90%
White Bass	1	0.30%
All	1	0.30%
	335	100.00%

Table 78. Fishermen attitude survey for black bass fishing from anglers (340) fishing Barren River Lake during the creel survey of 2004.

What level of satisfaction do you have with black bass fishing at Barren River Lake?

	Frequency	Percent
Very Satisfied	60	22.70%
Somewhat Satisfied	98	37.10%
Neutral	53	20.10%
Somewhat Dissatisfied	46	17.40%
Very Dissatisfied	7	2.70%
Total	264	100.00%

Do you support or oppose the 15 inch one under size limit on largemouth bass at Barren River Lake?

	Frequency	Percent
Support	217	81.00%
Oppose	40	14.90%
No Opinion	11	4.10%
Total	268	100.00%

What size limit would you prefer on largemouth bass at Barren River Lake?

	Frequency	Percent
Current (15"-1)	159	62.80%
5"	70	27.70%
2"	8	3.17%
4"	5	1.98%
8"	3	1.19%
2"-1	1	0.40%
3"	1	0.40%
4-15" Slot	1	0.40%
4" state wide all lakes	1	0.40%
5"-1 and 12"-1	1	0.40%
0"	1	0.40%
Catch & Release	1	0.40%
Same as Dale Hollow on SMB	1	0.40%
Total	253	100.00%

Do you support or oppose "no size limit" on spotted bass at Barren River Lake?

	Frequency	Percent
Support	118	43.90%
Oppose	100	37.20%
No Opinion	51	19.00%
Total	269	100.00%

What size limit would you prefer on spotted bass at Barren River Lake?

	Frequency	Percent
Current (none)	122	50.20%
2"	106	43.60%
5"	7	2.88%
5"-1	2	0.82%
4"	1	0.41%
4" 3 fish limit	1	0.41%
Catch & Release	1	0.41%
N/a	1	0.41%
Same as Largemouth	1	0.41%
Total	243	100.00%

Table 79. Fishermen attitude survey about crappie fishing from anglers (340) fishing Barren River Lake during the creel survey of 2004.

What level of satisfaction do you have with crappie fishing at Barren River Lake?

	Frequency	Percent
Very Satisfied	34	14.10%
Somewhat Satisfied	100	41.50%
Neutral	41	17.00%
Somewhat Dissatisfied	48	19.90%
Very Dissatisfied	18	7.50%
Total	241	100.00%

Do you support or oppose the 9-inch size limit on crappie at Barren River Lake?

	Frequency	Percent
Support	160	65.60%
Oppose	80	32.80%
No Opinion	4	1.60%
Total	244	100.00%

What size limit would you prefer?

	Frequency	Percent
No size limit	4	1.70%
8"	9	3.80%
Current (9")	123	52.60%
10"	95	40.60%
11" (2yrs) then 10"	1	0.4%
12"	1	0.4%
9 or 10	1	0.4%
Total	234	100.00%

Do you support or oppose the 30 fish creel limit on crappie at Barren River Lake?

	Frequency	Percent
Support	173	71.50%
Oppose	67	27.70%
No Opinion	2	0.80%
Total	242	100.00%

What creel limit would you prefer?

	Frequency	Percent
Current (30)	140	61.90%
20	55	24.30%
15	27	11.90%
10	3	1.30%
25	1	0.40%
Total	226	100.00%

Table 80. Fishermen attitude survey about white bass and hybrid stripe bass fishing from anglers (340) fishing Barren River Lake during the creel survey of 2004.

What level of satisfaction do you have with hybrid striped bass fishing at Barren River Lake?

	Frequency	Percent
Very Satisfied	38	23.50%
Somewhat Satisfied	64	39.50%
Neutral	51	31.50%
Somewhat Dissatisfied	4	2.50%
Very Dissatisfied	5	3.10%
Total	162	100.00%

What level of satisfaction do you have with the white bass fishing at Barren River Lake?

	Frequency	Percent
Very Satisfied	13	9.10%
Somewhat Satisfied	29	20.30%
Neutral	78	54.50%
Somewhat Dissatisfied	16	11.20%
Very Dissatisfied	7	4.90%
Total	143	100.00%

Do you support or oppose the current regulation on hybrid striped bass and white bass?

	Frequency	Percent
Support	118	74.20%
Oppose	25	15.70%
No Opinion	16	10.10%
Total	159	100.00%

What regulation on hybrid striped bass and white bass would you prefer?

	Frequency	Percent
Current	100	71.40%
0 fish creel only 5 over 15 inches	30	21.40%
Other	10	7.10%
5 fish only over 15"	3	2.1%
quit stocking hybrids	2	1.4%
10 fish any size	1	0.7%
15 limit no size	1	0.7%
20 with 10 over 15	1	0.7%
5 over 15 - 15 creel	1	0.7%
5 under 15" & 5 over 15"	1	0.7%
No size limit	1	0.7%
Total	140	100.00%

Table 81. Fishermen attitude survey about catfish fishing from anglers (340) fishing Barren River Lake during the creel survey of 2004.

What level of satisfaction do you have with the channel catfish fishing at Barren River Lake?

	Frequency	Percent
Very Satisfied	23	19.00%
Somewhat Satisfied	53	43.80%
Neutral	35	28.90%
Somewhat Dissatisfied	7	5.80%
Very Dissatisfied	3	2.50%
Total	121	100.00%

Do you support or oppose the no size limit regulation on channel catfish at Barren River Lake?

	Frequency	Percent
Support	90	72.60%
Oppose	20	16.10%
No Opinion	14	11.30%
Total	124	100.00%

What size limit would you prefer on channel catfish at Barren River Lake?

	Frequency	Percent
Current (none)	83	73.50%
12"	8	7.10%
14"	18	15.90%
15"	3	2.70%
10"	1	0.90%
Total	113	100.00%

Do you support or oppose the no creel limit regulation on channel catfish at Barren River Lake?

	Frequency	Percent
Support	82	67.80%
Oppose	28	23.10%
No Opinion	11	9.10%
Total	121	100.00%

What creel limit would you prefer on channel catfish at Barren River Lake?

	Frequency	Percent
Current (none)	74	67.90%
5	4	3.70%
15	22	20.20%
30	5	4.60%
10	3	2.80%
20	1	0.90%
Total	109	100.00%

What level of satisfaction do you have with the flathead catfish fishing at Barren River Lake?

	Frequency	Percent
Very Satisfied	14	13.00%
Somewhat Satisfied	32	29.60%
Neutral	49	45.40%
Somewhat Dissatisfied	8	7.40%
Very Dissatisfied	5	4.60%
Total	108	100.00%

Do you support or oppose the no size limit regulation on flathead catfish at Barren River Lake?

	Frequency	Percent
Support	72	67.30%
Oppose	16	15.00%
No Opinion	19	17.80%
Total	107	100.00%

What size limit would you prefer on flathead catfish at Barren River Lake?

	Frequency	Percent
Current (none)	71	74.70%
20"	20	21.10%
15"	1	4.05%
10"	1	4.05%
36"	1	4.05%
None over 30"	1	4.05%
Total	95	100.00%

Do you support or oppose the no creel limit regulation on flathead catfish at Barren River Lake?

	Frequency	Percent
Support	69	65.70%
Oppose	22	21.00%
No Opinion	14	13.30%
Total	105	100.00%

What creel limit would you prefer on flathead catfish at Barren River Lake?

	Frequency	Percent
Current (none)	62	66.70%
5	8	8.60%
15	15	16.10%
30	4	4.30%
10	3	3.20%
20	1	1.10%
Total	93	100.00%

Table 82. Largemouth bass sampling during spring 2004 at Briggs Lake for 0.52 hours.

	Inch class																Fish	Std
Species	4	5	6	7	8	9	10	11	12	13	14	15	19	20	21	Total	/hour	err.
Largemouth bass	1	2	3	8	25	14	14	17	8	2	1	1	1		1	98	188.46	19.49

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Table 83. Length frequency for largemouth bass sampled during spring electrofishing at Briggs Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
4	1	1	1.02	1.02	1.92	1.92
5	2	3	2.04	3.06	0.85	2.22
6	3	6	3.06	6.12	5.77	3.68
7	0	6	0.00	6.12	0.00	0.00
8	8	14	8.16	14.29	15.38	5.44
9	25	39	25.51	39.80	48.08	4.84
10	14	53	14.29	54.08	26.92	4.97
11	14	67	14.29	68.37	26.92	4.97
12	17	84	17.35	85.71	32.69	5.77
13	8	92	8.16	93.88	15.38	3.14
14	2	94	2.04	95.92	3.85	3.85
15	1	95	1.02	96.94	1.92	1.92
16	1	96	1.02	97.96	1.92	1.92
17	0	96	0.00	97.96	0.00	0.00
18	0	96	0.00	97.96	0.00	0.00
19	1	97	1.02	98.98	1.92	1.92
20	0	97	0.00	98.98	0.00	0.00
21	1	98	1.02	100.00	1.92	1.92

swdbrgbb.d04

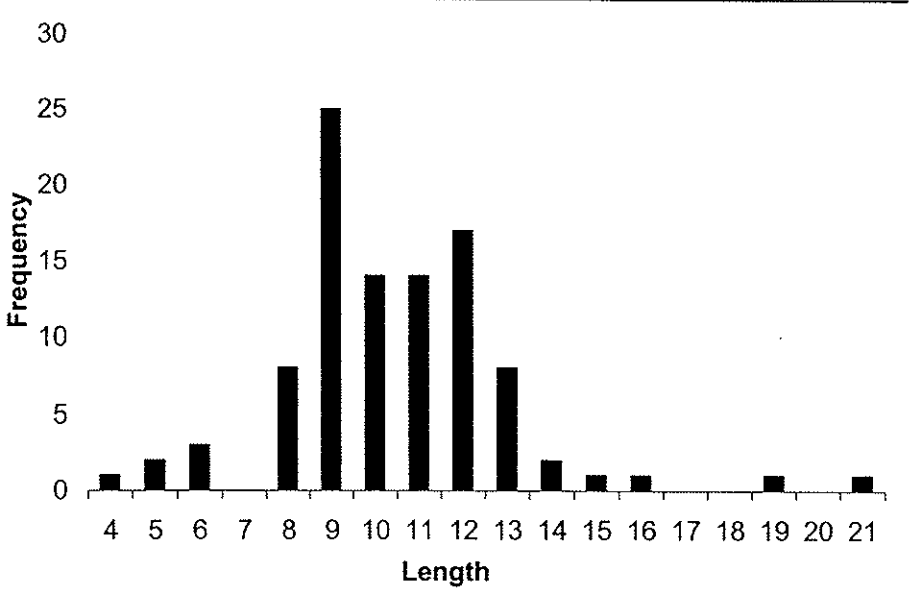

Table 84. Sunfish sampling at Briggs Lake during May 2004 for 0.52 hours.

	Inch class											Fish	Std.
Species	1	2	3	4	5	6	7	8	9	10	Total	/hour	error
Warmouth					5	5	7	2			19	36.54	11.48
Bluegill	1	2	11	30	21	27	39	6			137	263.46	67.45
Redear sunfish				3	11	9	4	1	4		32	61.54	16.32

swdshlpd.d04

Table 85. Length frequency for bluegill sampled during spring electrofishing at Briggs Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
1	1	1	0.73	0.73	1.92	1.92
2	2	3	1.46	2.19	3.85	2.22
3	11	14	8.03	10.22	21.15	10.59
4	30	44	21.90	32.12	57.69	20.95
5	21	65	15.33	47.45	40.38	4.84
6	27	92	19.71	67.15	51.92	18.41
7	39	131	28.47	95.62	75.00	34.02
8	6	137	4.38	100.00	11.54	2.22
9	0	137	0.00	100.00	0.00	0.00
10	0	137	0.00	100.00	0.00	0.00

swdbrgpd.d04

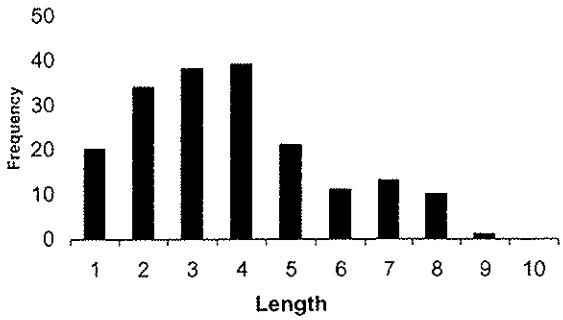

Table 86. Bluegill population assessment for Briggs Lake during 2004.

Parameter	Value	Assessment score
Growth Mean length age - 2 at capture	5.24	4
Growth Years to 6.0 inches	3	3
Size Structure CPUE >= 6.0 inches	138.46	4
Size Structure CPUE >= 8.0 inches	11.54	3
Total score		14
Assessment rating		Excellent

swdbrgpd.d04
swdbrgag.d02

Table 87. Length frequency of fish sampled during fall electrofishing for 0.75 hours at Briggs Lake during 2004.

	Inch class																	Fish
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	17	18	20	Total	/hour
Largemouth bass	10	24	5	1	15	17	6	11	16	10	6	5	3	1	1	1	132	176.00

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Table 88. Length frequency for largemouth bass sampled during fall electrofishing at Briggs Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
3	10	10	7.35	7.35	13.33	3.53
4	24	34	17.65	25.00	32.00	8.00
5	5	39	3.68	28.68	6.67	2.67
6	1	40	0.74	29.41	1.33	1.33
7	15	55	11.03	40.44	20.00	10.07
8	17	72	12.50	52.94	22.67	8.74
9	8	80	5.88	58.82	8.00	2.31
10	11	91	8.09	66.91	14.67	3.53
11	18	109	13.24	80.15	21.33	10.41
12	10	119	7.35	87.50	13.33	7.06
13	6	125	4.41	91.91	8.00	4.00
14	5	130	3.68	95.59	8.67	1.33
15	3	133	2.21	97.79	4.00	2.31
16	0	133	0.00	97.79	0.00	0.00
17	1	134	0.74	98.53	1.33	1.33
18	1	135	0.74	99.26	1.33	1.33
19	0	135	0.00	99.26	0.00	0.00
20	1	136	0.74	100.00	1.33	1.33
21	0	136	0.00	100.00	0.00	0.00
22	0	136	0.00	100.00	0.00	0.00

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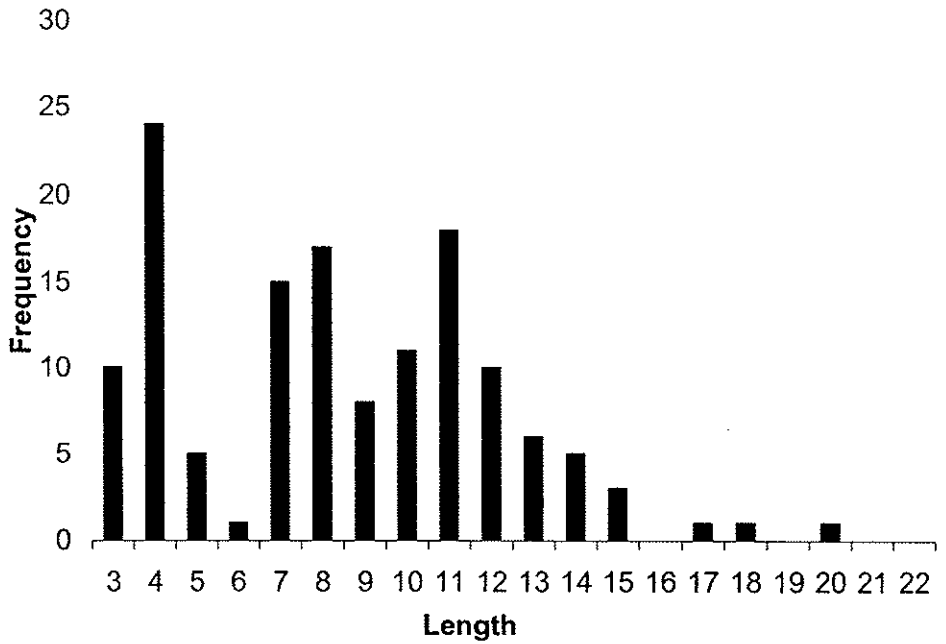

Table 89. Black bass relative weight determination for Briggs Lake during 2004.

	Size	Wrs	Num	Size	Wrs	Num	Size	Wrs	Num	Wrs	Num
Largemouth bass	8-11.9	84.1	50	12-14.9	80.97	21	=>15	88.41	6	86.35	98

swdbrgwr.d04

Table 90. Age-growth for largemouth bass collected during fall electrofishing at Briggs Lake during 2004.

Length/	Inch groups																	
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	17	18	20	Total	Percent
0	10	24	4	1													39	29.55
Unknown			1		15	17	6	11	16	10	6	5	3	1	1	1	93	70.45
Total	10	24	5	1	15	17	6	11	16	10	6	5	3	1	1	1	132	
Percent	7.58	18.18	3.79	0.76	11.36	12.88	4.55	8.33	12.12	7.58	4.55	3.79	2.27	0.76	0.76	0.76		

swdbrgwr.d04

swdbrgag.d04

Table 91. Length frequency for redear sunfish sampled during spring electrofishing at Briggs Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
1	0	0	0.00	0.00	0.00	0.00
2	0	0	0.00	0.00	0.00	0.00
3	0	0	0.00	0.00	0.00	0.00
4	3	3	9.38	9.38	5.77	3.68
5	11	14	34.38	43.75	21.15	6.57
6	9	23	28.13	71.88	17.31	5.77
7	4	27	12.50	84.38	7.69	4.44
8	1	28	3.13	87.50	1.92	1.92
9	4	32	12.50	100.00	7.69	5.44
10	0	32	0.00	100.00	0.00	0.00

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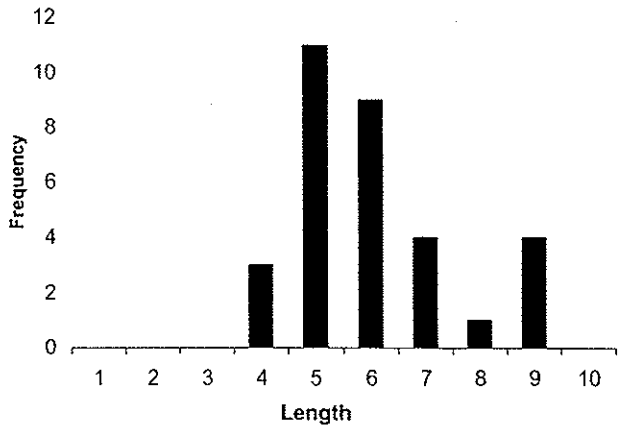

Table 92. Muskellunge sampling on Green River Lake during winter of 2004 for 15.5 hours.

	Inch class																												Fish	Std
	12	13	14	15	16	17	18	21	22	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	42	43	44	Total	/hour	error
Muskellunge	1	9	35	33	13	7	3			1	10	20	11	5	1	1	5	13	11	14	8	8	7	5	5	1	1	1	229	14.77	1.33
Walleye								1	1		2	1																	5	0.32	0.19

swdgrlmy.d04

Table 93. Muskellunge assessment for Green River Lake spring electrofishing from 1985 to 2004.

	CPUE age 1 fish		CPUE >= 20.0 inches		CPUE >= 30.0 inches		CPUE >= 36.0 inches		CPUE >= 40.0 inches			
Year	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Assessment	Rating
1985	2.38	2	1.46	1	0.25	1	0.00	0	0.00	0	4	P
1986	0.56	1	1.63	1	0.52	1	0.08	1	0.00	0	4	P
1987	1.52	1	2.32	1	1.00	1	0.12	1	0.00	0	4	P
1988	0.23	1	2.24	1	0.98	1	0.34	1	0.11	1	5	P
1989	2.58	2	2.37	1	2.23	2	0.56	2	0.21	2	9	F
1990	12.68	4	7.04	3	2.11	2	1.17	3	0.00	0	12	G
1991	10.19	4	3.86	2	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	3	17	E
1994	4.11	3	8.94	3	3.90	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	E
1996	5.16	3	16.01	4	3.54	3	0.84	2	0.24	2	14	E
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	E
2000	2.57	2	7.64	3	4.18	4	2.03	4	0.78	4	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	4	18	E
sum	124.72	56.00	140.62	52.00	65.91	56.00	22.87	51.00	7.31	45.00	260	
average	6.24	2.80	7.03	2.60	3.30	2.80	1.14	2.55	0.37	2.25	13	

Table 94. White bass sampled during spring electrofishing in headwaters areas for white bass for 1.28 hours in Green River Lake during 2004.

	Inch class													Fish
Species	6	7	8	10	11	12	13	14	15	21	22	25	Total	/hour
White bass	4	8	4	6	3	13	9	2	1				50	39.06
Walleye								3	1	1	2	1	8	6.25

swdgrlwb.d04

Table 95. White bass assessment for Green River Lake spring electrofishing from 1991 to 2004.

	CPUE age 1 fish and older		mean length of age 2+ fish at capture		CPUE >= 12.0 inches		CPUE of age 1 fish			
Year	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Assessment	Rating
1991	22.19	4	13.37	4	10.69	4	9.57	4	16	E
1992	33.75	4	13.37	4	16.75	4	10.14	4	16	E
1993	32.31	4	13.65	4	16.31	4	14.95	4	16	E
1994	22.56	4	13.43	4	15.62	4	4.49	4	16	E
1995	27.25	4	13.64	4	11.94	4	9.72	4	16	E
1996	33.06	4	13.64	4	18.88	4	18.38	4	16	E
1997	17.12	3	12.94	3	10.88	3	3.81	3	12	G
1998	19.06	3	12.86	3	6.31	3	6.43	3	12	G
1999	26.60	4	13.26	4	13.40	4	16.22	4	16	E
2000	11.54	3	13.58	3	9.42	3	2.77	3	12	G
2001	8.00	2	14.00	2	4.88	2	0.07	2	8	F
2002	10.17	3	13.80	3	4.43	3	5.41	3	12	G
2003	18.88	3	12.52	3	1.31	3	2.29	3	12	G
2004	5.75	2	12.78	2	0.50	2	3.50	2	8	F
sum	288.24	47 0	186.84	47 0	141.32	47 0	107.75	47 0	188	
avg	20.59	3.35714	13.35	3.35714	10.09	3.35714	7.70	3.35714	13.4286	

Table 96. Spring electrofishing at Green River Lake for black bass during 2004 for 6 hours.

	Inch class																				Fish	Std
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	/ hour	err.
Rainbow trout									1												1	0.13	0.13
Smallmouth bass		9	3		1	12	18	13	14	13	6	11	6	5	2	1	3	2		1	120	16.00	3.97
Spotted bass	5	21	10	4	15	27	41	39	30	8	7	2	2	2		1					214	28.53	3.84
Largemouth bass		2	6	25	56	41	16	45	61	49	30	29	28	24	22	28	23	13	4	3	505	67.33	6.41
Total																					840	112.00	

swdgrlbb.d04

Table 97. Length frequency for white bass sampled during headwaters spring electrofishing at Green River Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
6	4	4	8.00	8.00	1.95	1.04
7	8	12	16.00	24	3.14	3.14
8	4	16	8.00	32	2.33	1.34
9	0	16	0.00	32	0.00	0.00
10	6	22	12.00	44	3.12	1.56
11	3	25	6.00	50	1.18	1.18
12	13	38	26.00	76	6.63	3.34
13	9	47	18.00	94	3.53	3.53
14	2	49	4.00	98	0.78	0.78
15	1	50	2.00	100	0.39	0.39
16	0	50	0.00	100	0.00	0.00

swdgriwb.d04

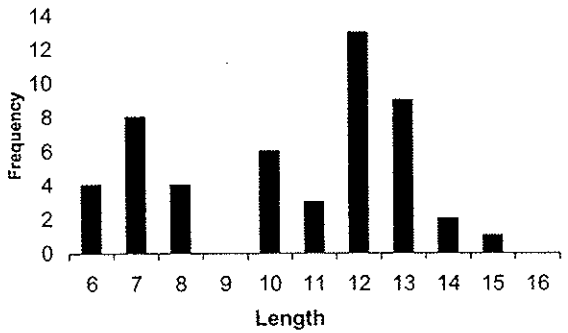

Table 98. Largemouth bass sampling at Green River Lake during spring 2004 at specific locations.

	Inch class																				Fish		Std
Location	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	/hour	Time	err
Holms Bend	1	3	8	12	14	2	8	9	12	6	8	8	3	5	8	6	4	1	2	120	80.00	1.50	
Ramp 1	1	2	7	16	10	6	6	9	9	4	7	5	6	5	7	6	3	2		111	74.00	1.50	
State Dock			2	4	4	3	11	15	11	3	5	4	2	1	1	4	1		1	72	48.00	1.50	
Lone Valley			6	12	4	3	9	11	7	13	8	10	8	9	7	5				112	74.67	1.50	
Smith Ridge		1	2	12	9	2	11	17	10	4	1	1	5	2	5	2	5	1		90	60.00	1.50	

swdgrlbb.d04

Table 99. Spotted bass sampling at Green River Lake during spring 2004 at specific locations.

	Inch class																Fish		Std
Location	2	3	4	5	6	7	8	9	10	11	12	13	14	15	17	Total	/hour	Time	err
Holms Bend		2	2	1	1	4	7	6	4		1				1	29	19.33	1.50	
Ramp 1	2	4	1	1	1	5	11	7	6	1	2	2	1	1		45	30.00	1.50	
State Dock		5	1		1	8	6	5	6	3	1					36	24.00	1.50	
Lone Valley	3	8	3		10	9	15	14	10	3	2		1	1		79	52.67	1.50	
Smith Ridge		2	3	2	2	1	2	7	4	1	1					25	16.67	1.50	

swdgrlbb.d04

Table 100. Electrofishing catch rate (fish/hour) for each age of largemouth bass collected from Green River Lake during 6.0 hours spring electrofishing studies 2004.

Len/ Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	Per cent	CPUE
YOY	2	6	25	56																89	17.69	14.83
1					31	11	4													46	9.15	7.67
2					10	5	40	61	49	19	9									193	38.37	32.17
3										8	20	16	11	5						60	11.93	10.00
4										4		7	8	7	10					36	7.16	6.00
5												2	5	7	12	7				33	6.56	5.50
6												2		2	4	3	1			12	2.39	2.00
7																7	3			10	1.99	1.67
8															2	7	3	2		14	2.78	2.33
9																	3			3	0.60	0.50
10																	1	2		3	0.60	0.50
11																			3	3	0.60	0.50
12																				0	0.00	0.00
13																	1			1	0.20	0.17
Total	2	6	25	56	41	16	44	61	49	31	29	27	24	21	28	24	12	4	3	503		83.83

swdgrlbb.d04

swdgrlag.d03

Table 101. Electrofishing catch rate (fish/hour) for each age of spotted bass collected from Green River Lake during 6.0 hours spring electrofishing studies 2004.

Len/	Inch group																		Per	
Age	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total	cent	CPUE
YOY	5	21	10	4	15													55	25.82	9.17
1																		0	0.00	0.00
2						27	41	31	16	3								118	55.40	19.67
3								4	8	3	4		2					21	9.86	3.50
4								4	5	1	4	1						15	7.04	2.50
5																		0	0.00	0.00
6																		0	0.00	0.00
7																		0	0.00	0.00
8												1		2		1		4	1.88	0.67
9																		0	0.00	0.00
Total	5	21	10	4	15	27	41	39	29	7	8	2	2	2	0	1	0	213		35.50

swdgrlbb.d04

swdgrlag.d03

Table 102. Electrofishing catch rate (fish/hour) for each age of smallmouth bass collected from Green River Lake during 6.0 hours spring electrofishing studies 2004.

Len/	Inch group																				Per		Std
Age	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	cent	CPUE	error
YOY		9	3		1																13	10.83	2.17	
1																					0	0.00	0.00	
2						12	18	13	10	6											59	49.17	9.83	
3									4	7	5	9	6								31	25.83	5.17	
4											1			5	2	1	1				10	8.33	1.67	
5												2					2	2		1	7	5.83	1.17	
6																					0	0.00	0.00	
Total	0	9	3	0	1	12	18	13	14	13	6	11	6	5	2	1	3	2	0	1	120		20.00	

swdgrlbb.d04

swdgrlag.d03

Table 103. Length frequency for smallmouth bass sampled during spring electrofishing at Green River Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
3	9	9	7.50	7.50	1.20	0.47
4	3	12	2.50	10.00	0.40	0.21
5	0	12	0.00	10.00	0.00	0.00
6	1	13	0.83	10.83	0.13	0.13
7	12	25	10.00	20.83	1.60	0.52
8	18	43	15.00	35.83	2.40	1.16
9	13	56	10.83	46.67	1.73	0.83
10	14	70	11.67	58.33	1.87	0.69
11	13	83	10.83	69.17	1.73	0.47
12	6	89	5.00	74.17	0.80	0.33
13	11	100	9.17	83.33	1.47	0.36
14	6	106	5.00	88.33	0.80	0.33
15	5	111	4.17	92.50	0.67	0.25
16	2	113	1.67	94.17	0.27	0.18
17	1	114	0.83	95.00	0.13	0.13
18	3	117	2.50	97.50	0.40	0.21
19	2	119	1.67	99.17	0.27	0.18
20	0	119	0.00	99.17	0.00	0.00
21	1	120	0.83	100.00	0.13	0.13
22	0	120	0.00	100.00	0.00	0.00

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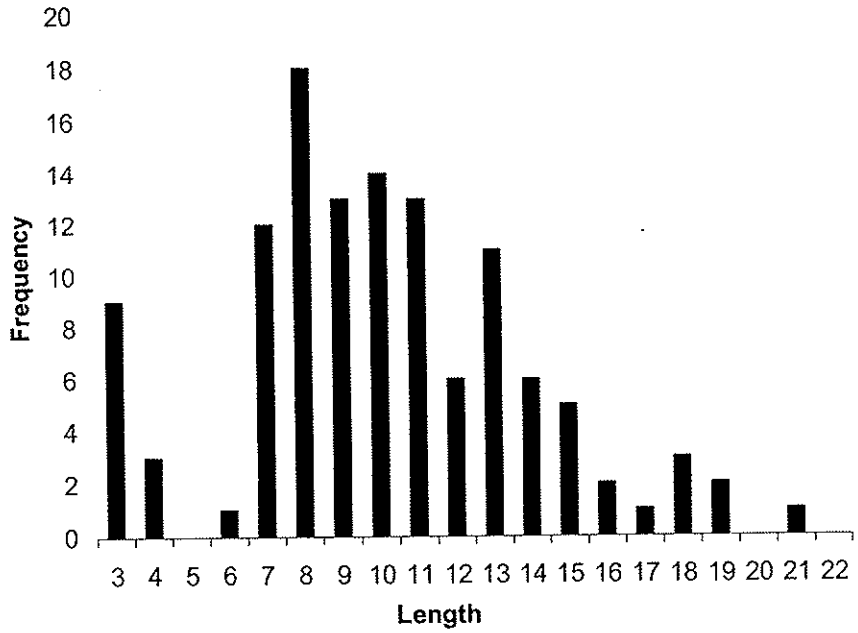

Table 104. Length frequency for spotted bass sampled during spring electrofishing at Green River Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
2	5	5	2.33	2.33	0.67	0.32
3	21	26	9.77	12.09	2.80	0.95
4	10	36	4.65	16.74	1.33	0.37
5	1	37	0.47	17.21	0.53	0.31
6	4	41	1.86	19.07	2.00	0.70
7	15	56	6.98	26.05	3.60	0.79
8	27	83	12.56	38.60	5.47	1.06
9	41	124	19.07	57.67	5.20	0.75
10	39	163	18.14	75.81	4.00	0.98
11	30	193	13.95	89.77	1.07	0.38
12	8	201	3.72	93.49	0.93	0.27
13	7	208	3.26	96.74	0.27	0.18
14	2	210	0.93	97.67	0.27	0.18
15	2	212	0.93	98.60	0.27	0.18
16	2	214	0.93	99.53	0.00	0.00
17	0	214	0.00	99.53	0.13	0.13
18	1	215	0.47	100.00	0.00	0.00
19	0	215	0.00	100.00	0.00	0.00

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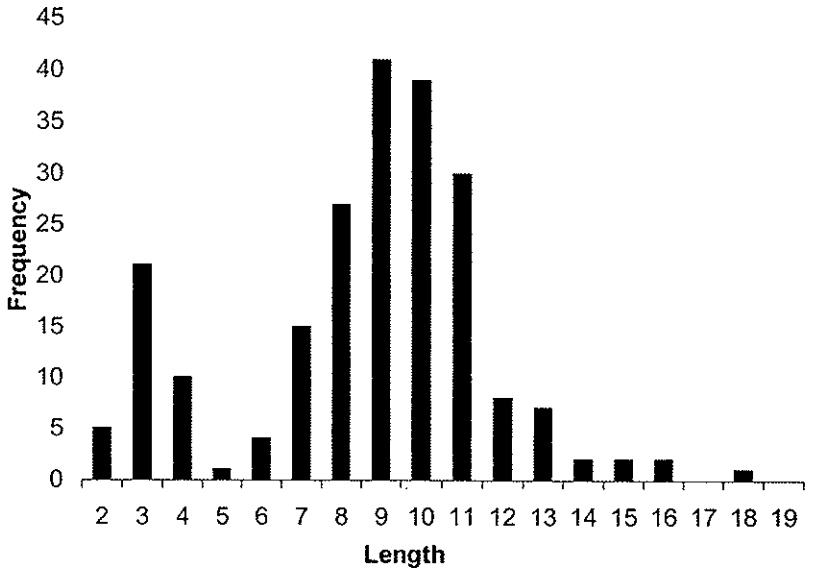

Table 105. Length frequency for largemouth bass sampled during spring electrofishing at Green River Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
3	2	2	0.40	0.40	0.27	0.18
4	6	8	1.19	1.58	0.80	0.33
5	25	33	4.95	6.53	3.33	0.89
6	56	89	11.09	17.62	7.47	1.37
7	41	130	8.12	25.74	5.47	0.93
8	16	146	3.17	28.91	2.13	0.60
9	45	191	8.91	37.82	6.00	0.89
10	61	252	12.08	49.90	8.13	1.11
11	49	301	9.70	59.60	6.53	1.19
12	30	331	5.94	65.54	4.00	0.98
13	29	360	5.74	71.29	3.87	0.97
14	28	388	5.54	76.83	3.73	0.70
15	24	412	4.75	81.58	3.20	0.91
16	22	434	4.36	85.94	2.93	0.73
17	28	462	5.54	91.49	3.73	0.78
18	23	485	4.55	96.04	3.07	0.64
19	13	498	2.57	98.61	1.73	0.64
20	4	502	0.79	99.41	0.53	0.24
21	3	505	0.59	100.00	0.40	0.21
22	0	505	0.00	100.00	0.00	0.00

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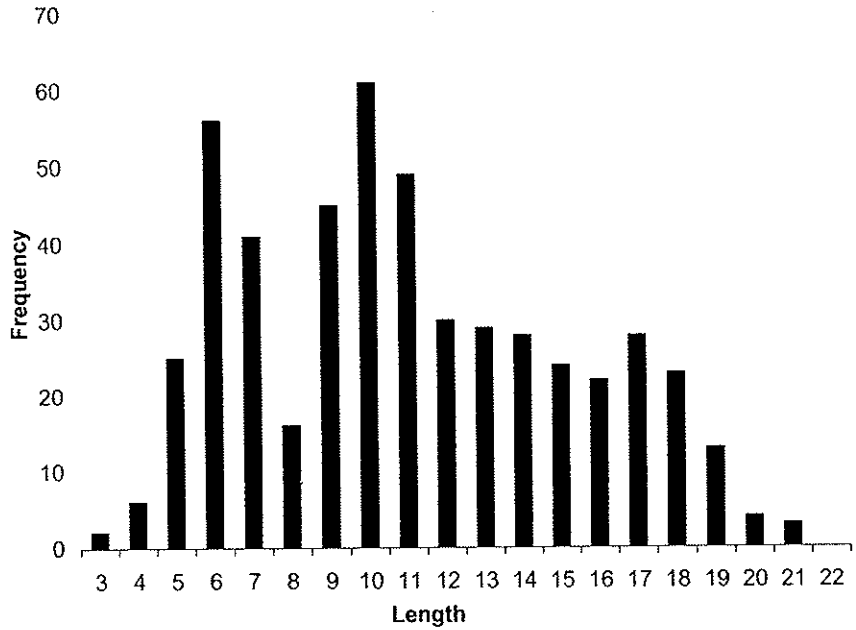

Table 106. Largemouth bass assessment for Green River Lake spring electrofishing from 1985 to 2004.

	Mean age-3 length at capture		Spring CPUE age 1		Spring CPUE 12 - 14.9 inch		Spring CPUE >= 15 inch		Spring CPUE >= 20 inch			
Year	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Assessment	Rating
1985	14.35	4	0.36	1	8.55	1	5.20	2	0.24	2	10	F
1986	14.35	4	0.84	1	10.72	1	11.99	2	0.97	2	10	F
1987	14.35	4	1.62	1	4.21	1	10.70	2	0.36	2	10	F
1988	14.35	4	1.80	1	2.42	1	3.52	1	0.14	1	8	F
1989	14.35	4	2.99	1	5.68	1	9.24	2	1.24	2	10	F
1990	14.35	4	3.72	1	5.21	1	15.80	3	3.41	4	13	G
1991	14.35	4	22.52	2	12.78	1	2.79	1	0.29	2	10	F
1992	14.35	4	2.71	1	21.73	2	14.63	3	2.44	3	13	G
1993	14.35	4	4.73	1	21.60	2	11.45	2	1.08	2	11	F
1994	14.35	4	9.08	1	22.74	2	19.21	3	2.43	3	13	G
1995	14.35	4	2.03	1	9.45	1	6.77	2	1.78	3	11	F
1996	14.35	4	6.74	1	14.50	1	9.33	2	0.50	2	10	F
1997	14.35	4	2.80	1	23.33	2	24.33	4	1.17	2	13	G
1998	14.35	4	4.11	1	8.83	1	19.50	3	2.00	3	12	G
1999	14.35	4	19.34	1	21.00	2	18.50	3	3.00	4	14	G
2000	14.35	4	1.60	1	24.17	2	17.83	3	3.17	4	14	G
2001	14.35	4	12.23	1	32.17	3	14.17	3	1.67	3	14	G
2002	14.35	4	0.00	0	0.00	0	0.00	0	0.00	0	4	P
2003	14.35	4	3.75	1	5.83	1	20.00	4	1.83	3	13	G
2004	14.35	4	6.19	1	11.60	1	16.53	3	0.93	2	11	F
sum	287.00	80	109.16	20	266.52	27	251.49	48	28.65	49	224	
average	14.35	4	5.46	1	13.33	1.35	12.57	2.4	1.43	2.45	11.2	

Table 107. Spotted bass assessment for Green River Lake spring electrofishing from 1985 to 2004.

	Mean age-3 length at capture		Spring CPUE age 1		Spring CPUE 11 - 13.9 inch		Spring CPUE >= 14 inch		Spring CPUE >= 17 inch			
Year	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Assessment	Rating
1985	11.79	3	0.00	0	2.08	3	0.56	3	0.00	0	9	F
1986	11.79	3	0.00	0	4.97	4	2.05	4	0.00	0	11	F
1987	11.79	3	0.00	0	4.49	4	1.43	4	0.07	1	12	G
1988	11.79	3	0.00	0	3.38	4	0.76	3	0.00	0	10	F
1989	11.79	3	0.00	0	3.20	4	0.00	0	0.00	0	7	P
1990	11.79	3	0.00	0	3.23	4	0.00	0	0.00	0	7	P
1991	11.79	3	0.00	0	3.38	4	0.00	0	0.00	0	7	P
1992	11.79	3	0.00	0	4.21	4	1.11	4	0.00	0	11	F
1993	11.79	3	0.00	0	3.24	4	0.22	2	0.00	0	9	F
1994	11.79	3	0.00	0	8.39	4	0.66	3	0.00	0	10	F
1995	11.79	3	0.00	0	1.25	3	0.00	0	0.00	0	6	P
1996	11.79	3	0.00	0	2.00	3	0.00	0	0.00	0	6	P
1997	11.79	3	0.00	0	1.67	3	0.50	3	0.00	0	9	F
1998	11.79	3	0.00	0	1.33	3	0.17	2	0.00	0	8	F
1999	11.79	3	0.00	0	1.83	3	0.00	0	0.00	0	6	P
2000	11.79	3	0.00	0	4.00	4	0.00	0	0.00	0	7	P
2001	11.79	3	0.00	0	3.17	4	0.67	3	0.17	2	12	G
2002	11.79	3	0.00	0	0.00	0	0.00	0	0.00	0	3	P
2003	11.79	3	0.00	0	5.00	4	0.83	3	0.00	0	10	F
2004	11.79	3	0.00	0	2.27	3	0.80	3	0.13	2	11	F
sum	235.80	60	0.00	0	63.09	69	9.76	37	0.37	5	171	
average	11.79	3	0.00	0	3.15	3.45	0.49	1.85	0.02	0.25	8.55	

Table 108. Smallmouth bass assessment for Green River Lake spring electrofishing from 1985 to 2004.

Year	Mean age-3 length at capture		Spring CPUE age 1		Spring CPUE 11 - 13.9 inch		Spring CPUE >= 14 inch		Spring CPUE >= 17 inch			
	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Assessment	Rating
1985	12.60	4	0.00	0	0.00	0	0.24	3	0.08	1	8	F
1986	12.60	4	0.00	0	0.29	1	0.58	3	0.19	3	11	F
1987	12.60	4	0.00	0	0.29	1	2.28	4	1.00	4	13	G
1988	12.60	4	0.00	0	0.21	1	0.48	3	0.07	1	9	F
1989	12.60	4	0.00	0	0.36	1	0.98	3	0.18	2	10	F
1990	12.60	4	0.00	0	2.87	3	4.49	4	1.44	4	15	G
1991	12.60	4	0.00	0	3.52	3	1.47	3	0.29	3	13	G
1992	12.60	4	0.00	0	2.00	2	2.66	4	0.22	3	13	G
1993	12.60	4	0.00	0	3.46	3	0.65	3	0.22	3	13	G
1994	12.60	4	0.00	0	6.18	3	2.21	4	0.66	4	15	G
1995	12.60	4	0.00	0	0.71	1	0.00	0	0.00	0	5	P
1996	12.60	4	0.00	0	3.33	3	1.33	3	0.17	2	12	G
1997	12.60	4	0.00	0	2.67	3	1.83	3	0.83	4	14	G
1998	12.60	4	0.00	0	1.33	2	2.83	4	0.33	3	13	G
1999	12.60	4	0.00	0	3.00	3	0.00	0	0.00	0	7	P
2000	12.60	4	0.00	0	2.33	3	0.33	3	0.00	0	10	F
2001	12.60	4	0.00	0	2.83	3	0.83	3	0.17	2	12	G
2002	12.60	4	0.00	0	0.00	0	0.00	0	0.00	0	4	P
2003	12.60	4	0.00	0	1.83	2	2.00	4	0.50	4	14	G
2004	12.60	4	0.00	0	4.00	3	3.60	4	0.93	4	15	G
sum	252.00	80	0.00	0	41.21	41	28.79	58	7.28	47	226	
average	12.60	4	0.00	0	2.06	2.05	1.44	2.9	0.36	2.35	11.3	

Table 109. PSD for spring electrofishing at Green River Lake during 2004.

Species	PSD	+/-	RSD	+/-	Stock	>PSD	>RSD
Largemouth bass	54	5	31	5	375	204	117
Smallmouth bass	47	9	19	7	107	50	20
Spotted bass	14	5	3	3	159	22	5
Bluegill	17	3	0		631	106	0
Longear sunfish	1		0		417	3	0
Green sunfish	8	3	0		285	22	0

swdgrlbb.d04

swdgrlpd.d04

Table 110. Sunfish sampling at Green River Lake during May 2004 for 2.38 hours.

	Inch class								Fish	Std.
Species	1	2	3	4	5	6	7	Total	/hour	error
Green sunfish		47	111	95	57	21	1	332	139.5	60.51
Bluegill	1	75	115	242	168	94	12	707	297.06	33.82
Longear sunfish		52	145	168	101	3		469	197.06	35.86
Sunfish hybrid					1			1	0.42	0.42

swdgrlpd.d04

Table 111. Fall electrofishing for 6 hours at Green River Lake during 2004 for black bass.

Species	Inch class																			Total	Fish /hour	Std error
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	23			
White bass			1				1		3											5	0.83	0.39
Smallmouth bass	4	100	6	2	4	3	2			1		1						1		124	20.67	7.74
Spotted bass	30	160	56	46	53	73	18	13	6	4	3	1								463	77.17	12.69
Largemouth bass	2	104	91	76	56	36	14	21	14	5	8	6	6	2	2	1	1			445	74.17	9.42
Walleye											1					2			1	4	0.67	0.38

swdgrlwr.d04

Table 112. Fall electrofishing for 6 hours at selected areas at Green River Lake during 2004 forlargemouth bass.

Species	Inch class																	Total	Fish /hour	Time
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18			
Holmes Bend		51	43	24	21	11	6	9	3			1	4		2			175	116.67	1.50
Ramp 1	1	16	18	20	17	7	3	2	3		1	2	2	1			1	94	62.67	1.50
Lone Valley	1	27	12	12	9	7	1	1	3	3	3	2		1		1		83	55.33	1.50
Smith Ridge		10	18	20	9	11	4	9	5	2	4	1						93	62.00	1.50

swdgrlwr.d04

Table 113. Fall electrofishing for 6 hours at selected areas at Green River Lake during 2004 for spotted bass.

	Inch class													Fish	
Species	2	3	4	5	6	7	8	9	10	11	12	13	Total	/hour	Time
Holmes Bend		38	19	2	8	24	8	5					104	69.33	1.50
Ramp 1	10	32	10	20	23	28	2	2	1		2		130	86.67	1.50
Lone Valley	19	63	16	22	17	11	2	3	3	2	1	1	160	106.67	1.50
Smith Ridge	1	27	11	2	5	10	6	3	2	2			69	46.00	1.50

swdgrlwr.d04

Table 114. Fall electrofishing for 6 hours at selected areas at Green River Lake during 2004 for smallmouth bass.

	Inch class													Fish	
Species	2	3	4	5	6	7	8	11	12	13	14	19	23	Total	/hour	Time
Holmes Bend		2					1	1						4	2.67	1.50
Ramp 1	4	20	3	2	2	3								34	42.67	1.50
Lone Valley		46	2		1		1			1		1		52	34.67	1.50
Smith Ridge		2	1		1									4	2.67	1.50

swdgrlwr.d04

Table 115. Black bass relative weight determination for Green River Lake during 2004.

	Size	Wrs	Num	Size	Wrs	Num	Size	Wrs	Num	Wrs	Num
Largemouth bass	8-11.9	85.64	50	12-14.9	91.97	20	=>15	92.67	6	88.22	158
Smallmouth bass	7-10.9	86.26	5	11-13.9	77.01	2	=>14	55.74	1	84.93	111
Spotted bass	7-10.9	79.57	94	11-13.9	78.1	8	=>14			79.79	150
White bass	6-8.9	73.6	1	9-11.9	58.17	3	=>12			62.03	4

swdgrlwr.d04

Table 116. YOY determinationsFall electrofishing for 6 hours at Green River Lake during 2004 for black bass.

	Inch class																		Fish
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total	/hour
YOY	2	104	91	76	56	32												361	0.83
Age 1+ and greater						4	14	21	14	5	8	6	6	2	2	1	1	84	0.67

swdgrlwr.d04

swdgrlag.d04

Table 117. Trap netting for 59 trap net days at Green River Lake during 2004.

	Inch class																Fish	Std
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21	Total	/day	error
Spotted sucker							1	1	2	1	14	6	4			29	0.49	0.20
Golden redhorse												1				1	0.02	0.01
Channel catfish									1							1	0.02	0.02
Flathead catfish														1		1	0.02	0.02
White bass									1							1	0.02	0.02
Warmouth		1	2	2	2											7	0.12	0.06
Bluegill	40	42	114	157	112	10										475	8.05	1.95
Longear sunfish	2		1													3	0.05	0.04
Spotted bass			1		2	4	2	1	1	1	1	2	1			16	0.27	0.10
Largemouth bass															1	1	0.02	0.02
White crappie		44	168	27	246	316	288	133	41	6						1269	21.51	3.33
Black crappie							1									1	0.02	0.02

swdgrltr.d04

Table 118. Length frequency at age for white crappie sampled in trap netting at Green River Lake during 2004.

Len/	Inch class										
Age	3	4	5	6	7	8	9	10	11	Total	Percent
YOY	44	168	14							226	17.80
1			13	238	179	126	9	2		567	44.65
2				8	105	72	9	7		201	15.83
3					32	90	116	32	5	275	21.65
4										0	0.00
5									1	1	0.08
Total	44	168	27	246	316	288	134	41	6	1270	100.00

swdgrltr.d04

swdgrlag.d04

Table 119. White crappie assessment for Green River Lake trap netting from 1985 to 2004.

	CPUE excluding age 0		CPUE age 1		CPUE age 0		CPUE >= 8 inches		Mean age-2 length at capture			
Year	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Assessment	Rating
1985	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0	
1986	16.87	3	3.23	2	1.23	1	3.99	1	7.92	1	8	F
1987	15.43	3	4.06	2	19.16	4	5.16	2	8.05	1	12	F
1988	15.87	3	8.87	3	18.62	4	4.52	2	8.00	1	13	G
1989	26.30	4	20.24	4	1.29	1	6.38	2	9.59	4	15	G
1990	12.61	2	5.87	2	0.42	1	7.57	2	9.17	3	10	F
1991	8.68	2	2.93	2	6.88	3	6.15	2	9.25	3	12	F
1992	28.34	4	24.48	4	1.84	1	8.54	2	9.96	4	15	F
1993	24.81	4	6.99	3	1.22	1	15.53	2	9.00	2	12	F
1994	8.65	2	2.47	1	11.78	4	6.08	2	9.30	3	12	F
1995	16.18	3	11.12	3	13.22	4	10.74	2	9.96	4	16	G
1996	13.36	3	6.51	2	3.17	2	5.96	2	9.24	3	12	F
1997	14.08	3	3.94	2	1.89	1	8.11	2	8.65	2	10	F
1998	9.21	2	2.48	1	3.78	2	8.01	2	9.29	3	10	F
1999	7.38	2	5.21	2	0.99	1	2.86	1	9.94	4	10	F
2000	6.29	2	1.45	1	0.01	1	5.17	2	9.66	4	10	F
2001	4.27	1	0.15	1	10.78	4	4.17	2	9.45	3	11	F
2002	10.87	2	9.69	3	0.53	1	4.11	2	9.80	4	12	F
2003	12.95	2	5.08	2	3.30	2	6.80	2	9.12	3	11	F
2004	17.67	3	9.60	3	3.84	2	7.93	2	8.37	1	11	F
sum	269.82	50	134.37	43	103.95	40	127.78	36	173.72	53	222	
average	14.20	2.63158	7.07	2.26316	5.47	2.10526	6.73	1.89474	9.14	2.78947	11.6842	

Table 120. PSD and RSD10 values calculated for crappie collected in trap nets at Green River Lake during October and November 2004, 95% confidence limits are in parenteses.

Lake	Species	No	PSD	RSD
	White crappie	1057	44 (3)	4 (1)
	Black crappie	1	100 (0)	0

swdbrltr.d04

Table 121. Length frequency for white crappie sampled during trap netting at Green River Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
3	44	44	3.47	3.47	0.75	0.18
4	168	212	13.24	16.71	2.85	0.7
5	27	239	2.13	18.83	0.46	0.14
6	246	485	19.39	38.22	4.17	1.2
7	316	801	24.90	63.12	5.36	0.88
8	288	1089	22.70	85.82	4.88	0.82
9	133	1222	10.48	96.30	2.25	0.42
10	41	1263	3.23	99.53	0.69	0.2
11	6	1269	0.47	100.00	0.10	0.05

swdspltr.d04

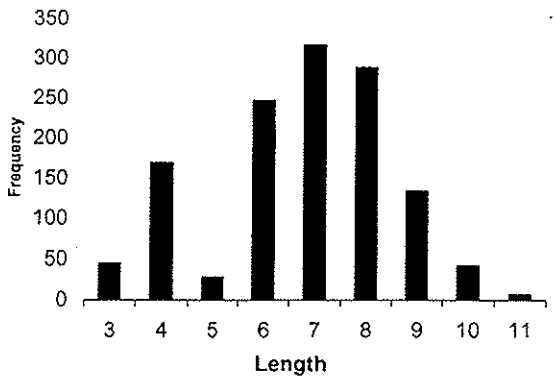

Table 122. Length frequency for bluegill sampled during trap netting at Green River Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
2	40	40	8.42	8.42	0.68	0.30
3	42	82	8.84	17.26	0.71	0.19
4	114	196	24.00	41.26	1.93	0.50
5	157	353	33.05	74.32	2.66	0.75
6	112	465	23.58	97.89	1.90	0.51
7	10	475	2.11	100.00	0.17	0.05

swdspltr.d04

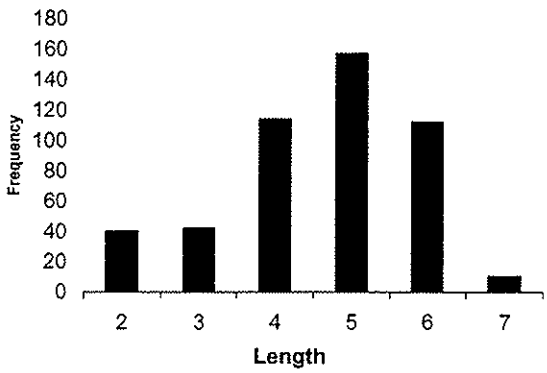

Table 123. Length frequency for fish sampled during gill netting for 16 net days at Green River Lake during 2004.

	Inch class																			Fish	Std
Species	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	23	Total	/day	error
Gizzard shad		66	128	12	25	1	2	4												238	14.88	4.39
Common carp													1							1	0.06	0.06
Spotted sucker								2	40	23	1									66	4.12	0.63
Golden redhorse											1	2	4	1	1					9	0.56	0.24
Shorthead redhorse										2	2									4	0.25	0.17
Channel catfish				9	10	8	7	19	13	4	4	6	7	2	6	2	5	1	2	105	6.56	2.98
Flathead catfish															1					1	0.06	0.06
White bass		13	8	7	2	7	25	22	2	4	1	1								92	5.75	1.15
Bluegill		3	1																	4	0.25	0.19
White crappie	2	1	8	4	5	7	1													28	1.75	0.50
Walleye				2	3	9	9		5		5	3	2		3					41	2.56	0.44
Freshwater drum			2	1	9	10	16	4	1	1										44	2.75	0.67

swdgrlgl.d04

Table 124. Length frequency for walleye sampled during gill netting at Green River Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
7	2	2	4.88	4.88	0.13	0.09
8	3	5	7.32	12.20	0.19	0.14
9	9	14	21.95	34.15	0.56	0.20
10	9	23	21.95	56.10	0.56	0.20
11	0	23	0.00	56.10	0.00	0.00
12	5	28	12.20	68.29	0.31	0.12
13	0	28	0.00	68.29	0.00	0.00
14	5	33	12.20	80.49	0.31	0.15
15	3	36	7.32	87.80	0.19	0.10
16	2	38	4.88	92.68	0.13	0.09
17	0	38	0.00	87.80	0.00	0.00
18	3	41	7.32	95.12	0.19	0.10

swdsplgl.d04

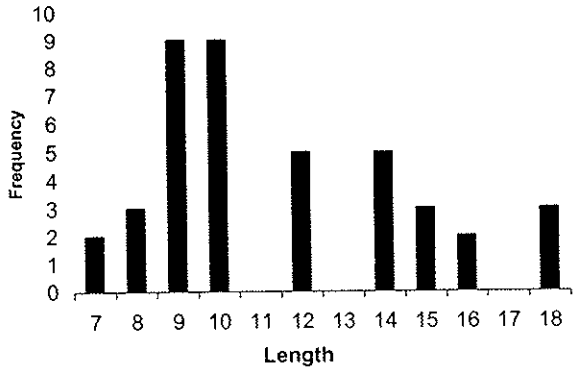

Table 125. Walleye assessment from gill netting from Green River Lake 1996-2004.

	CPUE age 1 fish and older		Mean length of age 2+ fish at capture		CPUE >=20.0 inches		CPUE of age 1 fish			
Year	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Assessment	Rating
1996	1.81	1	18.61	4	0.12	1	1.44	2	8	F
1997	0.75	1	17.3	3	0.19	1	0.44	1	6	F
1998	0.5	1	17.64	3	0.06	1	0.29	1	6	F
1999									0	
2000	5.04	3	18.11	4	0.17	1	4.07	4	12	G
2001	5.75	3	17.79	3	0.00	0	5.03	4	10	G
2002	2.57	2	17.82	3	0.39	1	0.74	1	7	F
2003	2.12	2	18.27	4	0.50	2	1.62	2	10	G
2004	1.12	1	16.43	2	0.00	0	0.75	1	4	P
Sum	19.66	14	141.97	26	1.43	7	14.38	16	63	
Avg	2.46	1.75	17.75	3.25	0.18	0.88	1.80	2.00	7.88	

Table 126. Length frequency for white bass sampled during gill netting at Green River Lake during 2004.

inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
5	13	13	14.13	14.13	0.81	0.28
6	8	21	8.70	22.83	0.5	0.18
7	7	28	7.61	30.43	0.44	0.16
8	2	30	2.17	32.61	0.13	0.09
9	7	37	7.61	40.22	0.44	0.2
10	25	62	27.17	67.39	1.56	0.68
11	22	84	23.91	91.30	1.38	0.52
12	2	86	2.17	93.48	0.13	0.09
13	4	90	4.35	97.83	0.25	0.14
14	1	91	1.09	98.91	0.06	0.06
15	1	92	1.09	100.00	0.06	0.06

swdsplgl.d04

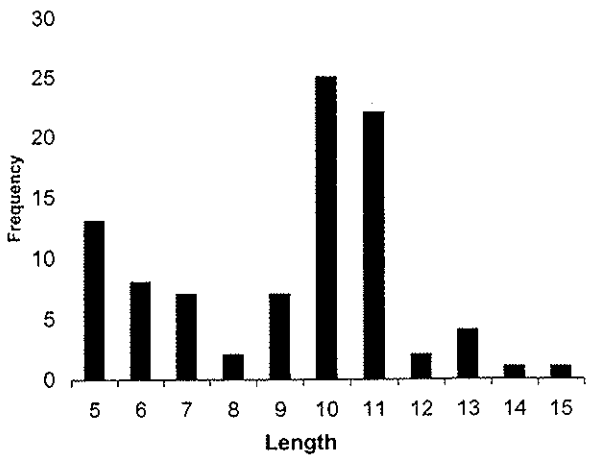

Table 127. White bass assessment from gill netting from Green River Lake 1991-2004.

	CPUE age 1 fish and older		Mean length of age 2+ fish at capture		CPUE >=12.0 inches		CPUE of age 1 fish			
Year	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Assessment	Rating
1991	22.19	4	13.95	4	10.69	4	14.56	4	16	E
1992	33.75	4	13.37	4	16.75	4	10.14	4	16	E
1993	32.31	4	13.65	4	16.31	4	14.95	4	16	E
1994	22.56	4	13.43	4	15.62	4	4.49	2	14	E
1995	27.25	4	0.00		11.94	4	0.00		8	F
1996	33.06	4	13.64	4	18.88	4	18.38	4	16	E
1997	17.12	3	12.94	3	10.88	4	3.81	2	12	G
1998	19.06	3	12.86	3	6.31	3	6.43	3	12	G
1999	26.60	4	13.26	4	13.40	4	16.22	4	16	E
2000	11.54	3	13.58	4	9.42	3	2.77	2	12	G
2001	8.00	2	14.00	4	4.88	2	0.07	1	9	F
2002	10.17	3	13.80	4	4.43	2	5.41	3	12	G
2003	18.88	3	12.52	3	1.31	1	2.29	1	8	F
2004	5.75	2	12.78	3	0.50	1	3.50	2	8	F
Sum	288.24	47	173.78	48	141.32	44	103.02	36	175	
Avg	20.59	3.36	12.41	3.43	10.09	3.14	7.36	2.57	12.50	

Table 128. Largemouth bass sampling during spring 2004 at Marion County Lake for 0.78hours.

Species	4	5	6	7	8	9	10	11	12	13	14	15	16	21	22	Total	Fish /hour	Std err.
Largemouth bass	1	14	36	35	4	11	62	77	43	3	3	1	1	1	3	295	378.21	36.59

swdbrgbb.d04

Table 129. Length frequency for largemouth bass sampled during spring electrofishing at Marion County Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
3	0	0	0.00	0.00	0	0.00
4	1	1	0.34	0.34	1.28	1.28
5	14	15	4.75	5.08	17.95	4.29
6	36	51	12.20	17.29	46.15	7.16
7	35	86	11.86	29.15	44.87	9.19
8	4	90	1.36	30.51	5.13	2.56
9	11	101	3.73	34.24	14.10	5.41
10	62	163	21.02	55.25	79.49	9.46
11	77	240	26.10	81.36	98.72	19.60
12	43	283	14.58	95.93	55.13	9.40
13	3	286	1.02	96.95	3.85	2.63
14	3	289	1.02	97.97	3.85	1.72
15	1	290	0.34	98.31	1.28	1.28
16	1	291	0.34	98.64	1.28	1.28
17	0	291	0.00	98.64	0.00	0.00
18	0	291	0.00	98.64	0.00	0.00
19	0	291	0.00	98.64	0.00	0.00
20	0	291	0.00	98.64	0.00	0.00
21	1	292	0.34	98.98	1.28	1.28
22	3	295	1.02	100.00	3.85	2.63

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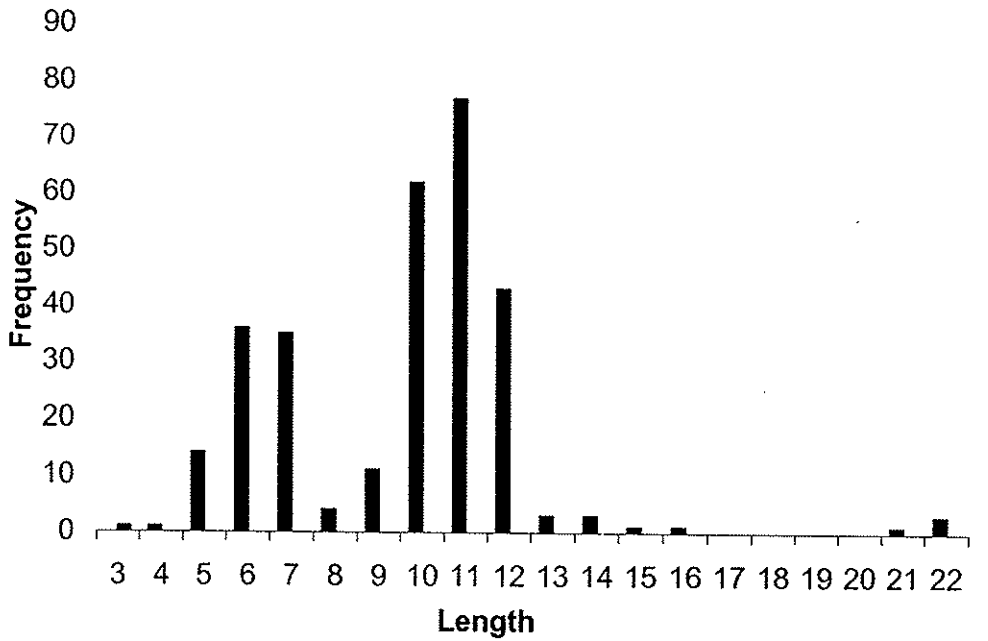

Table 130. Sunfish sampling at Marion County Lake during May 2004 for 1.04 hours.

	Inch class											Fish	Std.
Species	1	2	3	4	5	6	7	8	9	10	Total	/hour	error
Green sunfish			1		2	1	1				5	4.81	2.49
Bluegill	160	143	118	81	56	27	8	1			594	571.15	82.6
Redear sunfish		2	10	21	9	11	7	1	5	1	67	64.42	16.65

swdmclpd.d04

Table 131. Bluegill assessment for Marion County Lake during 2004.

Parameter	Value	Assessment score
Growth	4.68	3
Mean length age - 2 at capture		
Growth	3	3
Years to 6.0 inches		
Size Structure	34.62	2
CPUE >= 6.0 inches		
Size Structure	0.96	2
CPUE >= 8.0 inches		
Total score		10
Assessment rating		Fair

swdmclpd.d04
swdmclag.d02

Table 132. Length frequency for bluegill sampled during spring electrofishing at Marion County Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
1	160	160	26.94	26.94	153.85	31.92
2	143	303	24.07	51.01	137.50	46.12
3	118	421	19.87	70.88	113.46	31.03
4	81	502	13.64	84.51	77.88	14.57
5	56	558	9.43	93.94	53.85	9.42
6	27	585	4.55	98.48	25.96	9.85
7	8	593	1.35	99.83	7.69	3.85
8	1	594	0.17	100.00	0.96	0.96
9	0	594	0.00	100.00	0.00	0.00
10	0	594	0.00	100.00	0.00	0.00

swdmclpd.d04

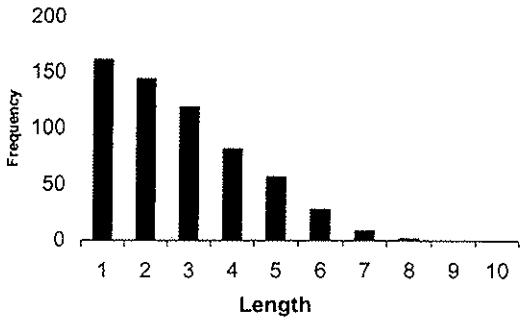

Table 133. Length frequency for redear sunfish sampled during spring electrofishing at Marion County Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
1	0	0	0.00	0.00	0.00	0.00
2	2	2	2.99	2.99	1.92	1.92
3	10	12	14.93	17.91	9.62	4.77
4	21	33	31.34	49.25	20.19	8.34
5	9	42	13.43	62.69	8.65	2.70
6	11	53	16.42	79.10	10.58	3.83
7	7	60	10.45	89.55	6.73	3.39
8	1	61	1.49	91.04	0.96	0.96
9	5	66	7.46	98.51	4.81	3.83
10	1	67	1.49	100.00	0.96	0.96

swdmclpd.d04

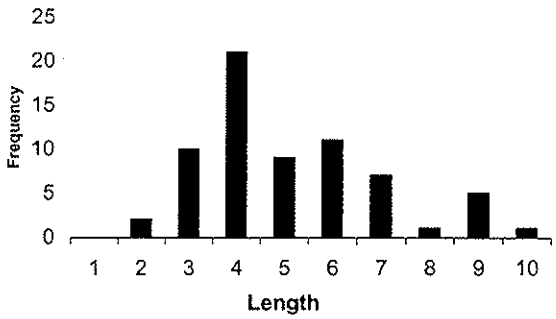

Table 135. Black bass relative weight determination for Marion County Lake during 2004.

	Size	Wrs	Num	Size	Wrs	Num	Size	Wrs	Num	Wrs	Num
Largemouth bass	8-11.9	79.89	24	12-14.9	77.18	25	=>15	69.78	1	84.27	91

swdmclwr.d04

Table 134. Length frequency of fish sampled during fall electrofishing at Marion County Lake during 2004.

	Inch class														Fish
Species	2	3	4	5	6	7	8	10	11	12	13	14	19	Total	/hour
Largemouth bass	22	290	28	20	20	21	2	3	19	10	10	5	1	451	556.79

swdmclwr.d04

Table 136. Length frequency for largemouth bass sampled during fall electrofishing at Marion County Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
2	22	22.00	4.88	4.88	28.82	16.07
3	290	312.00	64.30	69.18	356.22	26.13
4	28	340.00	6.21	75.39	33.46	9.44
5	20	360.00	4.43	79.82	24.60	2.39
6	20	380.00	4.43	84.26	25.38	4.77
7	21	401.00	4.66	88.91	26.45	3.73
8	2	403.00	0.44	89.36	2.41	1.22
9	0	403.00	0.00	89.36	0.00	0.00
10	3	406.00	0.67	90.02	4.00	2.31
11	19	425.00	4.21	94.24	22.75	7.48
12	10	435.00	2.22	96.45	12.04	4.02
13	10	445.00	2.22	98.67	12.04	4.02
14	5	450.00	1.11	99.78	5.89	2.99
15	0	450.00	0.00	99.78	0.00	0.00
16	0	450.00	0.00	99.78	0.00	0.00
17	0	450.00	0.00	99.78	0.00	0.00
18	0	450.00	0.00	99.78	0.00	0.00
19	1	451.00	0.22	100.00	1.08	1.08
20	0	451.00	0.00	100.00	0.00	0.00
21	0	451.00	0.00	100.00	0.00	0.00

swdmclwr.d04

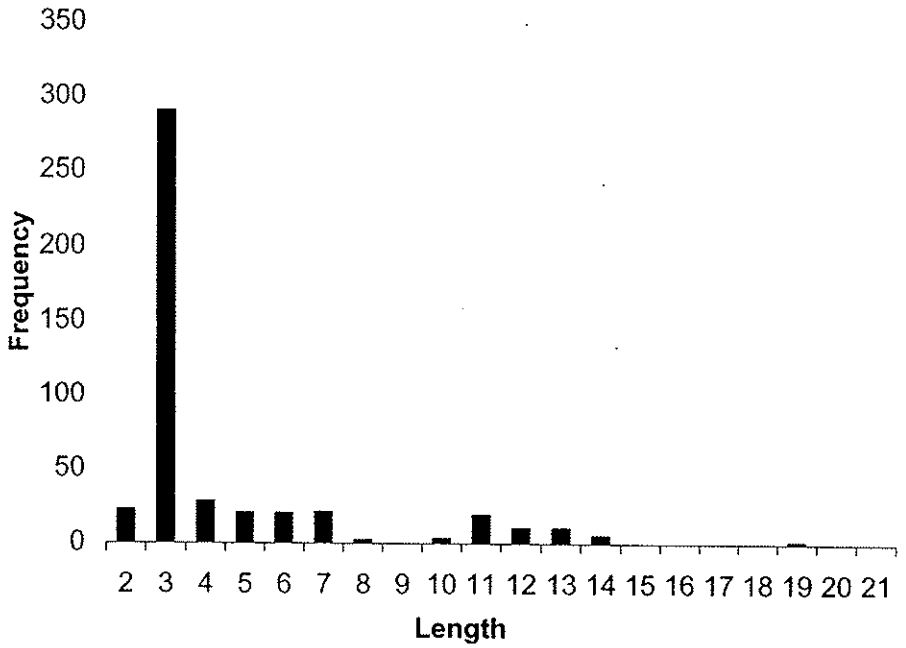

Table 137. Age-growth for largemouth bass collected during fall electrofishing at Marion County Lake during 2004.

Length/	Inch groups																	
Age	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	19	Total	Percent
0	22	290	28	1	8	12	1										362	80.09
Unknown				20	12	9	1	0	3	19	10	10	5			1	90	19.91
Total	22	290	28	21	20	21	2	0	3	19	10	10	5	0	0	1	452	
Percent	4.87	64.16	6.19	4.65	4.42	4.65	0.44	0.00	0.66	4.20	2.21	2.21	1.11	0.00	0.00	0.22		

swdmclwr.d04

swdmclag.d04

Table 138. Length frequency for largemouth bass sampled for 0.39 hours at Metcalfe County Lake during 2004.

	Inch class																		Fish	Std.
Species	3	4	5	7	8	9	10	11	12	13	14	16	17	18	19	20	22	Total	/hour	err.
Largemouth bass	1	4	1	3	5	5	3	11	5	3	1	2	1	2	4	2	1	54	138.46	23.08

swdmetbb.d04

Table 139. Length frequency for largemouth bass sampled during spring electrofishing at Metcalfe County Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
3	1	1	1.85	1.85	2.56	2.56
4	4	5	7.41	9.26	10.26	2.56
5	1	6	1.85	11.11	2.56	2.56
6	0	6	0.00	11.11	0.00	0.00
7	3	9	5.56	16.67	7.69	4.44
8	5	14	9.26	25.93	12.82	6.78
9	5	19	9.26	35.19	12.82	9.25
10	3	22	5.56	40.74	7.69	4.44
11	11	33	20.37	61.11	28.21	2.56
12	5	38	9.26	70.37	12.82	2.56
13	3	41	5.56	75.93	7.69	4.44
14	1	42	1.85	77.78	2.56	2.56
15	0	42	0.00	77.78	0.00	0.00
16	2	44	3.70	81.48	5.13	5.13
17	1	45	1.85	83.33	2.56	2.56
18	2	47	3.70	87.04	5.13	2.56
19	4	51	7.41	94.44	10.26	2.56
20	2	53	3.70	98.15	5.13	2.56
21	0	53	0.00	98.15	0.00	0.00
22	1	54	1.85	100.00	2.56	2.56

swdmetpd.d04

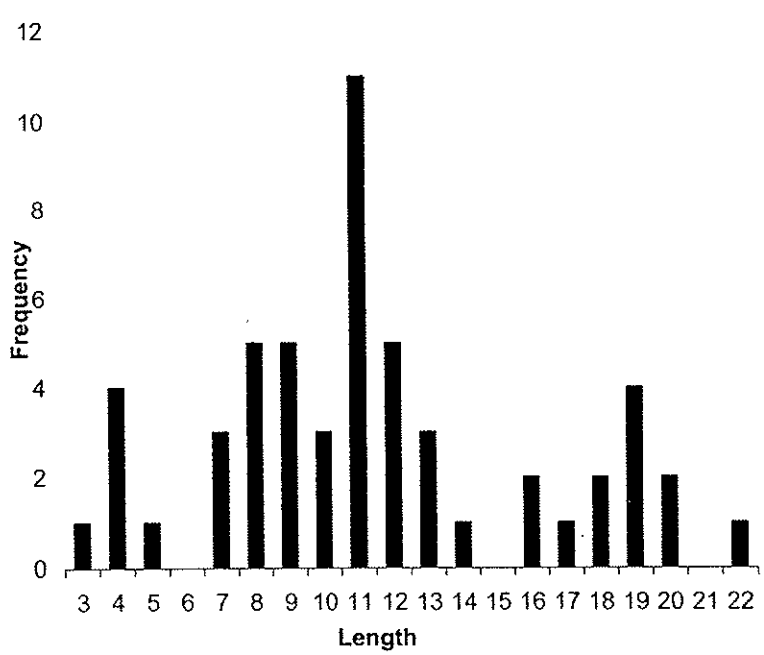

Table 140. Largemouth bass sampling during spring 2004 at Shanty Hollow Lake for 1.75 hours.

	Inch class																				Fish	Std
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	/hour	err.
Largemouth bass	1	9	9	10	5	23	65	78	68	28	20	16	11	7	5	6	7	2	2	2	374	213.71	16.99

swdshlbb.d04

Table 141. Length frequency for largemouth bass sampled during spring electrofishing at Shanty Hollow Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
3	1	1.00	0.27	0.27	0.57	0.57
4	9	10.00	2.41	2.67	5.14	2.09
5	9	19.00	2.41	5.08	5.14	1.68
6	10	29.00	2.67	7.75	5.71	1.19
7	5	34.00	1.34	9.09	2.86	1.14
8	23	57.00	6.15	15.24	13.14	2.26
9	65	122.00	17.38	32.62	37.14	4.16
10	78	200.00	20.86	53.48	44.57	4.74
11	68	268.00	18.18	71.66	38.86	3.88
12	28	296.00	7.49	79.14	16.00	3.60
13	20	316.00	5.35	84.49	11.43	2.03
14	16	332.00	4.28	88.77	9.14	1.44
15	11	343.00	2.94	91.71	6.29	2.29
16	7	350.00	1.87	93.58	4.00	0.87
17	5	355.00	1.34	94.92	2.86	1.14
18	6	361.00	1.60	96.52	3.43	1.84
19	7	368.00	1.87	98.40	4.00	2.14
20	2	370.00	0.53	98.93	1.14	0.74
21	2	372.00	0.53	99.47	1.14	0.74
22	2	374.00	0.53	100.00	1.14	0.74

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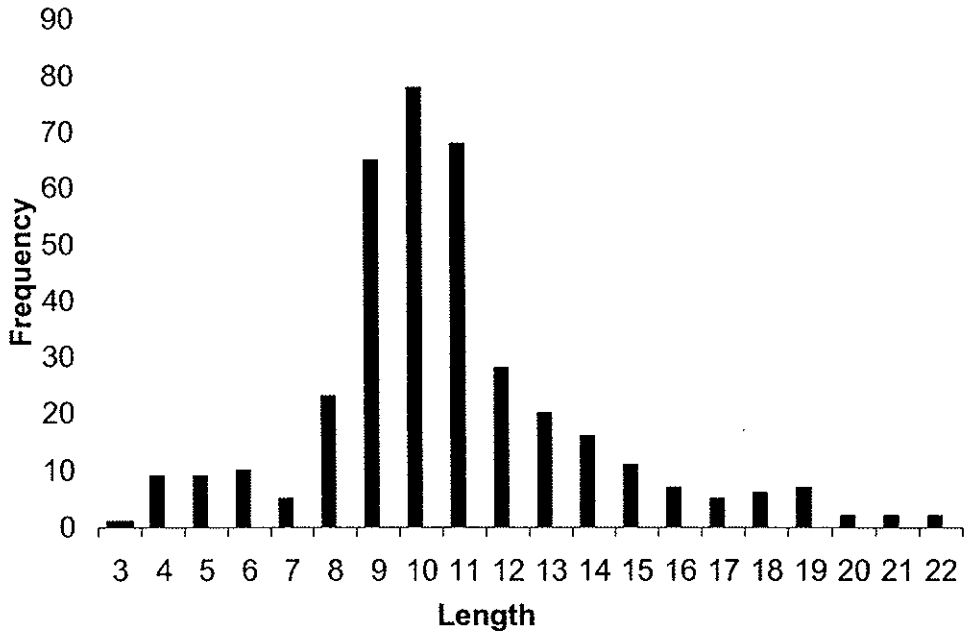

Table 142. Sunfish sampling at Shanty Hollow Lake during May 2004 for 1.69 hours.

	Inch class									Fish	Std.
Species	1	2	3	4	5	6	7	8	Total	/hour	error
Warmouth		5	1	1	3	3	5		18	10.65	2.23
Bluegill	32	124	120	163	237	190	96		962	569.23	96.52
Longear sunfish		6	5	13	5	2			31	18.34	4.73
Redear sunfish		2	2	4	7	10	3	16	44	26.04	4.65

swdshlpd.d04

Table 143. Length frequency for bluegill sampled during spring electrofishing at Shanty Hollow Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
1	32	32	3.33	3.33	17.58	6.06
2	124	156	12.89	16.22	68.13	21.53
3	120	276	12.47	28.69	65.93	14.64
4	163	439	16.94	45.63	89.56	15.65
5	237	676	24.64	70.27	130.22	27.36
6	190	866	19.75	90.02	104.40	16.70
7	96	962	9.98	100.00	52.75	13.54
8	0	962	0.00	100.00	0.00	0.00
9	0	962	0.00	100.00	0.00	0.00
10	0	962	0.00	100.00	0.00	0.00

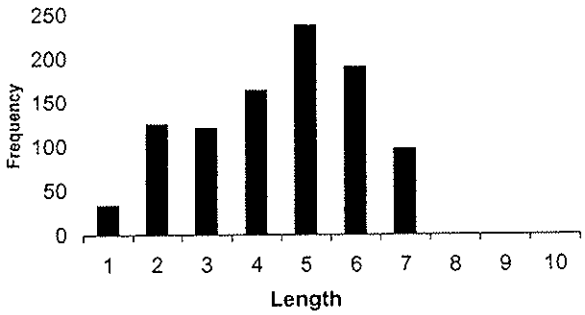

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Table 144. Length frequency for redear sunfish sampled during fall electrofishing at Shanty Hollow Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
1	1	1	0.73	0.73	1.92	1.92
2	2	3	1.46	2.19	3.85	2.22
3	11	14	8.03	10.22	21.15	10.59
4	30	44	21.90	32.12	57.69	20.95
5	21	65	15.33	47.45	40.38	4.84
6	27	92	19.71	67.15	51.92	18.41
7	39	131	28.47	95.62	75.00	34.02
8	6	137	4.38	100.00	11.54	2.22
9	0	137	0.00	100.00	0.00	0.00
10	0	137	0.00	100.00	0.00	0.00

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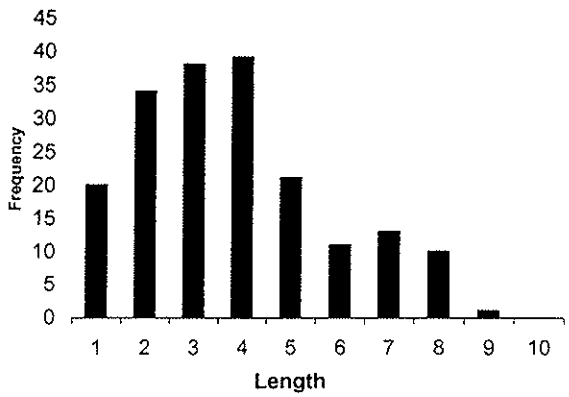

Table 145. Age-growth for largemouth bass collected during fall electrofishing for 1.5 hours at Shanty Hollow Lake during 2004.

Length/	Inch groups															
Age	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total	Percent
0	1	31	81	81	3										197	58.46
Unknown						3	21	17	26	33	23	7	4	6	140	41.54
Total	1	31	81	81	3	3	21	17	26	33	23	7	4	6	337	
Percent	0.30	9.20	24.04	24.04	0.89	0.89	6.23	5.04	7.72	9.79	6.82	2.08	1.19	1.78		

swdshlwr.d04

swdshlag.d04

Table 146. Bluegill population assessment for Shanty Hollow Lake during 2004.

Parameter	Value	Assessment score
Growth Mean length age - 2 at capture	4.81	3
Growth Years to 6.0 inches	3	3
Size Structure CPUE >= 6.0 inches	169.23	4
Size Structure CPUE >= 8.0 inches	0	1
Total score		11
Assessment rating		Good

swdshlpd.d04
swdshlag.d02

Table 147. Black bass relative weight determination for Shanty Hollow Lake during 2004.

	Size	Wrs	Num	Size	Wrs	Num	Size	Wrs	Num	Wrs	Num
Largemouth bass	8-11.9	89.17	94	12-14.9	85.8	34	=>15	89.74	6	88.14	152

swdshlwr.d04

Table 148. Length frequency of fish sampled during fall electrofishing for 1.5 hours at Shanty Hollow Lake during 2004.

	Inch class																Fish
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	25	Total	/hour
Largemouth bass	1	31	81	81	3	3	21	17	26	33	23	7	4	6		337	224.67
Bowfin															1	1	0.67

swdshlwr.d04

Table 149. Length frequency for largemouth bass sampled during fall electrofishing at Shanty Hollow Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
2	1	1	0.30	0.30	0.67	0.67
3	31	32	9.20	9.50	20.67	8.09
4	81	113	24.04	33.53	54.00	11.02
5	81	194	24.04	57.57	54.00	9.51
6	3	197	0.89	58.46	2.00	0.89
7	3	200	0.89	59.35	2.00	1.37
8	21	221	6.23	65.58	14.00	2.88
9	17	238	5.04	70.62	11.33	3.78
10	26	264	7.72	78.34	17.33	3.96
11	33	297	9.79	88.13	22.00	6.18
12	23	320	6.82	94.96	15.33	3.17
13	7	327	2.08	97.03	4.67	1.91
14	4	331	1.19	98.22	2.67	0.84
15	6	337	1.78	100.00	4.00	1.46
16	0	337	0.00	100.00	0.00	0.00

swdshlwr.d04

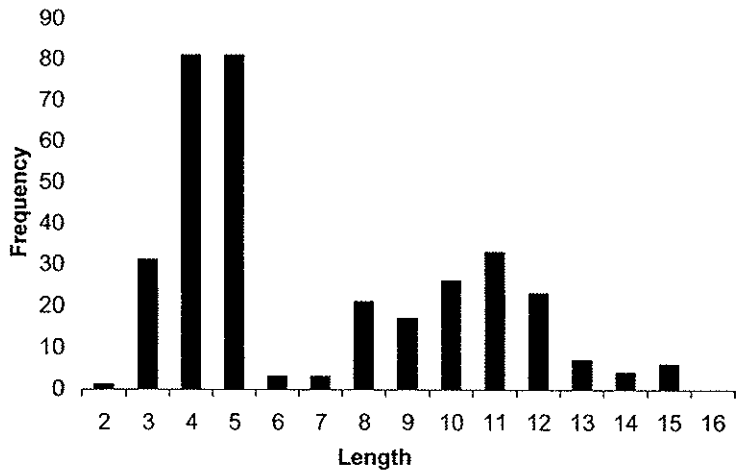

Table 150. Mean back calculated length (in.) at each age for otoliths from largemouth bass electrofished at Shanty Hollow Lake during the spring 2004.

		Age														
Year class	Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2003	20	5.89														
2002	24	5.53	8.81													
2001	29	5.79	9.74	11.42												
2000	8	5.47	9.73	11.99	13.66											
1999	5	5.87	9.93	12.01	13.64	14.98										
1998	20	4.92	8.14	10.70	12.35	13.76	15.11									
1997	14	5.09	9.60	11.70	13.29	14.71	16.07	17.18								
1996	5	6.88	10.84	13.86	15.03	16.04	16.84	17.59	18.34							
1994	2	6.75	9.90	12.78	14.31	15.59	16.33	16.96	17.60	18.12	18.55					
1993	2	4.67	8.00	9.84	11.49	12.98	14.14	15.46	16.96	18.27	19.59	20.90				
1992	1	5.93	9.35	11.63	13.69	15.06	16.20	17.34	18.48	19.62	20.53	21.22	21.90			
1991	3	3.56	5.99	7.63	9.08	10.45	11.81	13.18	14.46	15.75	16.90	17.97	18.87	19.63		
1989	1	3.09	5.24	6.43	7.62	8.81	10.00	11.18	12.61	13.80	14.99	15.94	16.66	17.37	18.09	18.80
Mean		5.51	9.14	11.34	12.88	14.13	15.29	16.45	16.81	17.05	18.06	18.98	19.03	19.07	18.09	18.80
Number	135	134	114	90	61	53	48	27	14	9	9	7	5	4	1	1
Smallest		2.54	4.58	6.36	7.62	8.81	10.00	11.18	12.61	13.80	14.99	15.94	16.66	17.37	18.09	18.80
Largest		8.16	12.14	14.80	16.23	17.64	19.06	20.50	19.76	20.23	20.70	22.10	21.90	22.30	18.09	18.80
Std error		0.09	0.13	0.18	0.25	0.28	0.30	0.47	0.62	0.79	0.78	0.93	1.11	1.12		
95% ConLo		5.32	8.87	10.97	12.38	13.57	14.69	15.49	15.49	15.26	16.30	16.79	16.17	15.96		
95% ConHi		5.69	9.39	11.67	13.39	14.68	15.89	17.42	18.13	18.84	19.81	21.17	21.89	22.17		

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Table 151. Length frequency for largemouth bass sampled during spring electrofishing for 1.5 hours at Spurlington Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
5	0	0	0.00	0.00	0.00	0.00
6	2	2	1.08	1.08	3.85	2.22
7	13	15	6.99	8.06	25.00	8.53
8	12	27	6.45	14.52	23.08	7.02
9	14	41	7.53	22.04	26.92	2.22
10	41	82	22.04	44.09	78.85	12.71
11	37	119	19.89	63.98	71.15	21.39
12	31	150	16.67	80.65	59.62	5.77
13	16	166	8.60	89.25	30.77	8.31
14	10	176	5.38	94.62	19.23	7.35
15	4	180	2.15	96.77	7.69	3.14
16	2	182	1.08	97.85	3.85	3.85
17	0	182	0.00	97.85	0.00	0.00
18	1	183	0.54	98.39	1.92	1.92
19	2	185	1.08	99.46	3.85	2.22
20	0	185	0.00	99.46	0.00	0.00
21	0	185	0.00	99.46	0.00	0.00
22	0	185	0.00	99.46	0.00	0.00
23	0	185	0.00	99.46	0.00	0.00
24	1	186	0.54	100.00	1.92	1.92

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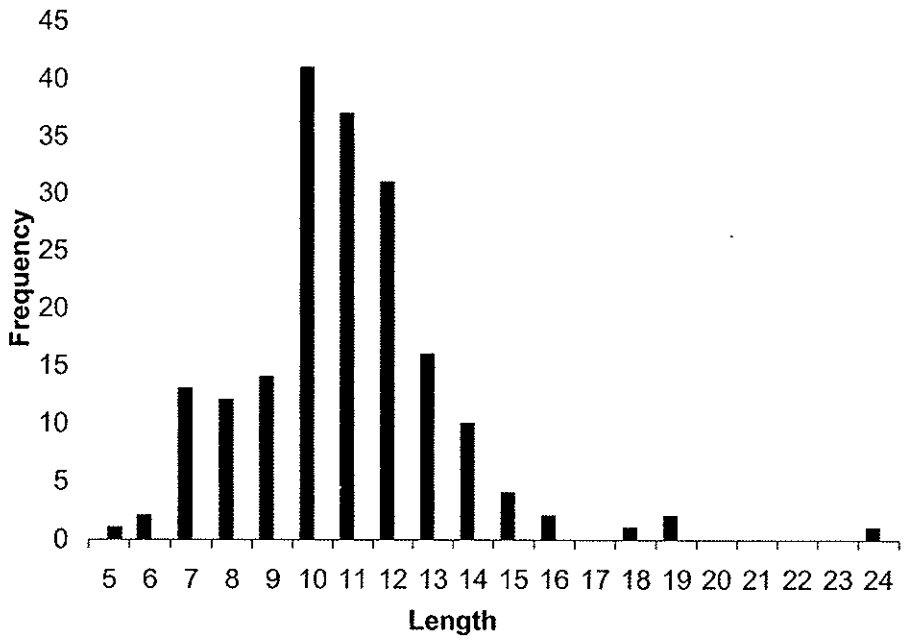

Table 152. Mean back calculated length (in.) at each age for otoliths from largemouth bass electrofished at Spurlington Lake during the spring 2004.

		Age										
Year class	Number	1	2	3	4	5	6	7	8	9	10	11
2002	24	4.83	7.92									
2001	26	5.00	8.80	10.54								
2000	10	5.06	9.07	11.18	12.13							
1999	10	4.83	8.64	11.18	12.57	13.31						
1998	14	4.78	8.79	11.45	12.89	13.91	14.54					
1996	4	4.21	7.38	10.99	13.13	14.23	15.07	15.85	16.50			
1994	1	5.74	10.17	14.09	16.70	18.78	20.87	21.91	22.70	23.48	24.00	
1993	1	4.34	6.95	9.98	12.15	14.33	15.41	16.05	17.36	18.01	18.67	19.10
Mean		4.87	8.51	11.00	12.72	13.93	15.00	16.97	17.68	20.75	21.33	19.10
Number	90	90	90	66	40	30	20	6	6	2	2	1
Smallest		3.46	6.50	9.40	10.90	11.56	12.08	12.61	13.00	18.01	18.67	19.10
Largest		7.16	10.75	14.09	16.70	18.78	20.87	21.91	22.70	23.48	24.00	19.10
Std error		0.08	0.09	0.10	0.16	0.25	0.42	1.30	1.35			
95% ConLo		4.71	8.32	10.79	12.40	13.42	14.14	13.80	14.36			
95% ConHi		5.03	8.70	11.20	13.04	14.44	15.87	20.14	20.99			

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Table 153. Largemouth bass sampling during spring 2004 at Spurlington Lake for 0.52 hours.

	Inch class																
Species	6	7	8	9	10	11	12	13	14	15	16	18	19	24	Total	Fish /hour	Std err.
Largemouth bass	2	13	12	14	41	37	31	16	10	4	2	1	2	1	186	357.69	39.78

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Table 154. Sunfish sampling at Spurlington Lake during May 2004 for 0.52 hours.

	Inch class										Fish	Std.
Species	1	2	3	4	5	6	7	8	9	Total	/hour	error
Warmouth	1		2			6	2			11	139.5	8.53
Bluegill	20	34	38	39	21	11	13	10	1	187	359.62	57.51

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Table 155. Bluegill population assessment for SpurlingtonLake during 2004.

Parameter	Value	Assessment score
Growth	21.15	1
Mean length age - 2 at capture		
Growth	0	1
Years to 6.0 inches		
Size Structure	67.31	3
CPUE >= 6.0 inches		
Size Structure	21.15	4
CPUE >= 8.0 inches		
Total score		9
Assessment rating		Fair

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Table 156. Length frequency of fish sampled during fall electrofishing at Spurlington Lake during 2004.

	Inch class																Fish
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	Total	/hou
Largemouth bass	5	18	6	1	5	4	3	10	9	9	8	7	3	2	1	91	168.52

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Table 157. Length frequency for bluegill sampled during spring electrofishing at Spurlington Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
1	20	20	10.70	10.70	38.46	12.95
2	34	54	18.18	28.88	65.38	21.18
3	38	92	20.32	49.20	73.08	22.32
4	39	131	20.86	70.05	75.00	6.57
5	21	152	11.23	81.28	40.38	6.57
6	11	163	5.88	87.17	21.15	3.68
7	13	176	6.95	94.12	25.00	9.09
8	10	186	5.35	99.47	19.23	8.01
9	1	187	0.53	100.00	1.92	1.92
10	0	187	0.00	100.00	0.00	0.00

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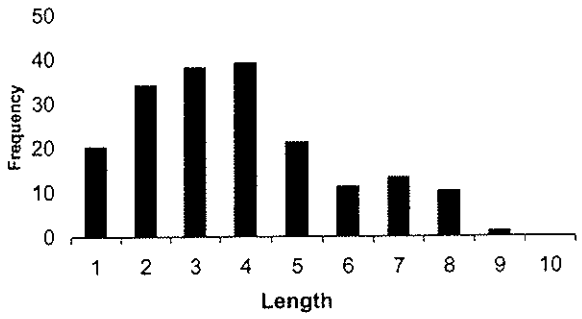

Table 158. Length frequency for redear sunfish sampled during spring electrofishing at Spurlington Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
1	0	0	0.00	0.00	0.00	0.00
2	2	2	4.55	4.55	1.10	0.75
3	2	4	4.55	9.09	1.10	1.10
4	4	8	9.09	18.18	2.20	0.96
5	7	15	15.91	34.09	3.85	1.07
6	10	25	22.73	56.82	5.49	1.49
7	3	28	6.82	63.64	1.65	0.88
8	16	44	36.36	100.00	8.79	2.89
9	0	44	0.00	100.00	0.00	0.00
10	0	44	0.00	100.00	0.00	0.00

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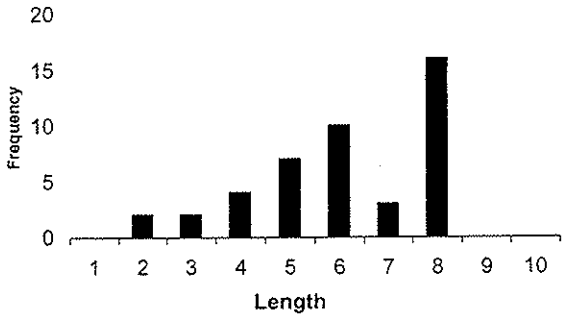

Table 159. Black bass relative weight determination for 0.54 hours at Spurlington Lake during 2004.

	Size	Wrs	Num	Size	Wrs	Num	Size	Wrs	Num	Wrs	Num
Largemouth bass	8-11.9	87.26	26	12-14.9	81.75	24	=>15	82.06	6	85.08	62

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Table 160. Age-growth for largemouth bass collected during fall electrofishing at Spurlington Lake during 2004.

Length/	Inch groups																	
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total	Percent
0	5	18	6														29	31.87
Unknown				1	5	4	3	10	9	9	8	7	3	2		1	62	68.13
Total	5	18	6	1	5	4	3	10	9	9	8	7	3	2	0	1	91	
Percent	5.49	19.78	6.59	1.10	5.49	4.40	3.30	10.99	9.89	9.89	8.79	7.69	3.30	2.20	0.00	1.10		

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Table 161. Length frequency for largemouth bass sampled during fall electrofishing at Spurlington Lake during 2004.

Inch class	Freq	Cum Freq	Pct	Cum Pct	CPUE	Std error
3	5	5	5.49	5.49	9.26	0.00
4	18	23	19.78	25.27	33.33	0.00
5	6	29	6.59	31.87	11.11	0.00
6	1	30	1.10	32.97	1.85	0.00
7	5	35	5.49	38.46	9.26	0.00
8	4	39	4.40	42.86	7.41	0.00
9	3	42	3.30	46.15	5.56	0.00
10	10	52	10.99	57.14	18.52	0.00
11	9	61	9.89	67.03	16.67	0.00
12	9	70	9.89	76.92	16.67	0.00
13	8	78	8.79	85.71	14.81	0.00
14	7	85	7.69	93.41	12.96	0.00
15	3	88	3.30	96.70	5.56	0.00
16	2	90	2.20	98.90	3.70	0.00
17	0	90	0.00	98.90	0.00	0.00
18	1	91	1.10	100.00	1.85	0.00
19	0	91	0.00	#REF!	0.00	0.00

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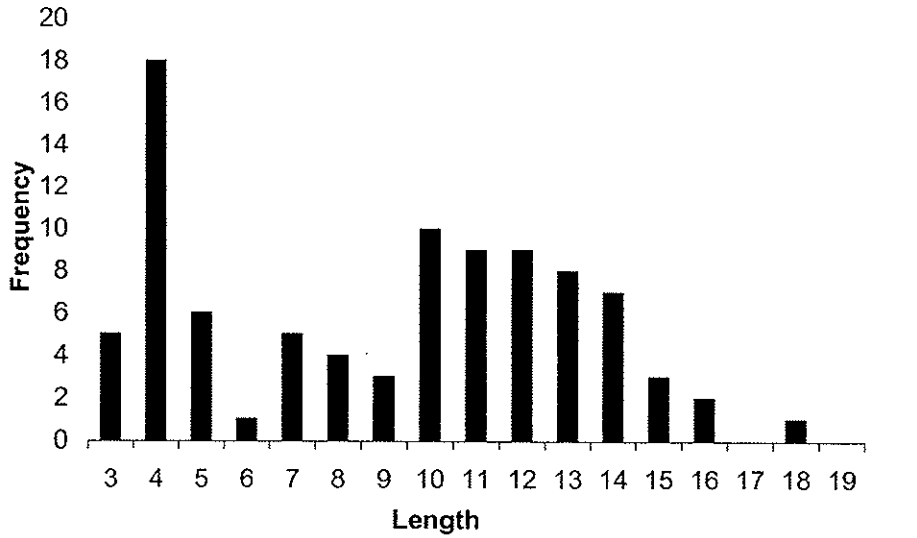

CENTRAL FISHERIES DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Taylorsville Lake

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 1 and 2. Catch rates for bass ≥ 12 inches were 56.1 f/h in 2004 compared to 40.1 f/h in 2003. Catch rates for bass ≥ 15 inches were 13.2 f/h compared to 15.2 f/h in 2003. Catch rates for all sizes of bass decreased from last year. The middle section (Ashes Creek area) had the highest catch rate for largemouth bass. The PSD for largemouth bass was 68 in 2004 compared to 41 in 2003. The RSD_{15} value was 16 compared to 15 in 2003 (Table 3). Largemouth bass age and growth rates are based on otolith samples taken in 2002 (Tables 4 and 5). Growth rates indicated most bass are reaching harvestable size (15 in) between age 4 and 5. There continues to be a significant decline of age 5 and older bass (16 in and longer). The largemouth bass population assessment score (based on spring electrofishing data) was 14 (Table 6), in the "Good" category. Relative weight data collected in September are presented in Tables 7 and 8 and indicate good body condition for all size categories. The index of largemouth bass year class strength from data collected in September is presented in Table 9. Though mean length of age 0 largemouth bass captured decreased from 5.4 inches in 2003 to 4.4 inches in 2004, the numbers (CPUE) increased from 32.2 f/h in 2003 to 50.0 f/h in 2004.

Trap netting efforts during October 2004 captured 146 white crappie (3.04 ± 0.48 fish/net day). Tables 10 – 19 show crappie data collected in 2004. There were 634 black crappie captured (13.21 ± 2.36 fish/net day) compared to 123 (2.56 ± 0.41 fish/net day) black crappie captured in 2003. Crappie was sampled during 48 net days. The crappie population (blacks and whites) assessment score based on Colvin and Vasey assessment method was 13 ("Good") in 2004 compared to 9 in 2003 ("Fair"). Crappie assessment scores from 1989 to 2004 are presented in Table 19. Age and growth determinations were completed using otoliths removed from 69 white crappie and 102 black crappie. Age frequency and CPUE of white crappie and black crappie indicated the black crappie were reaching 9 inches (legal size) between age 2 and 3 while white crappie were not reaching 9 inches until between age 3 and age 4. The cause for the high catch rate of black crappie compared to white crappie is not entirely known. The lake level at time of sampling was high and rising due to recent heavy rains.

Fall gill netting for hybrid striped bass was conducted during October 2004 (Tables 20 – 24). A total of 38 hybrid striped bass were collected compared to 75 in 2003. Hybrid striped bass were captured in 8 net days for a CPUE of 4.75 ± 2.64 fish/net day. The hybrid striped bass population has exhibited notable fluctuations since 1990. The density of hybrid striped bass in Taylorsville Lake appears to be proportional to the amount of increased 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. Catch rates for age 1 and older hybrid striped bass were 4.62 fish/net-day, well below the set objective of 60 fish/net-day. Overall, annual stocking rates for hybrid striped bass have been about 20 fish/acre since the initial stocking in 1989, except in 1997 when they were stocked at 30 fish/acre. Age and growth studies were completed for both hybrid striped bass and white bass using otoliths. These studies indicate hybrid striped bass reach harvestable size (15 inches) between age 2 and 3. The population assessment for hybrid striped bass was rated at "Poor". A total of 64,688 (21/acre) hybrid striped bass were stocked in Taylorsville Lake in 2004.

Data for white bass collected during these gillnetting studies are presented in Tables 25 – 28. White bass collected during the study comprised 70% of the *Morones* while in 2003 they comprised 54.5%. White bass collected did not exceed 3 years of age, with most Age 1 or younger (≤11 in). The white bass population assessment gave a rating of "Fair".

Channel catfish population data was collected while fall gill netting at Taylorsville Lake. Channel catfish and blue catfish were sampled using the same gear and during the same effort (8 net nights) as the *Morone* sampling. Data from these studies are presented in Tables 29 – 36. A total of 47 (33%) channel catfish and 94 (67%) blue catfish were collected. In 2003, 120 channel catfish and 75 blue catfish were captured. Age and growth studies (otoliths) indicated channel catfish reaching 12 inches between age 3 and 4, and 15 inches between age 4 and 5. Of

the channel catfish collected, 83% were age 3+ or less. The population assessment for channel catfish indicated a "Good" fishery.

Blue catfish were stocked in Taylorsville Lake for the first time in 2002. In 2004, a total of 24,710 blue catfish were stocked. All three stockings were represented (total of 42 fish) in 2004 sampling. Mean lengths of these three year classes were 6.6 in, 10.9 in, and 14.6 in. The population assessment for blue catfish indicated an "Excellent" population present.

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. Numbers of bass collected increased from 2003, and were the highest seen since 1999. Species composition, relative abundance, and CPUE of black bass collected in the spring are presented in Table 37. The mid-lake area had a much higher catch rate than did the upper and lower sections. The PSD for largemouth bass was 51 compared to 67 in 2003. The RSD_{15} was 22 compared to 25 in 2003. Age frequency for largemouth bass is presented in Table 40. A total of 84% of the largemouth bass collected were age 3 or younger. The population assessment based on spring electrofishing data indicated a "Good" population (Table 42). Fall electrofishing was done to evaluate largemouth bass relative weight index (Wr) and year class strength at age 0 and age 1. Kentucky Utilities made a concerted effort to keep the lake level stable during the bass spawn, even during periods of heavy rainfall. Largemouth bass and spotted bass data are presented in Tables 37 - 45.

Diurnal electrofishing studies were completed in March to monitor the crappie population. Upper, middle, and lower lake sections were sampled for a total of 4.5 hours (six 15-min runs per section). A total of 178 crappie were collected compared to 79 in 2003 (May, 6.0 hrs electrofishing). Catch in the lower and middle sections of the lake was dominated by white crappie, while black crappie numbers were highest in the upper section (the reverse was seen in 2003). Age and growth studies of white and black crappie indicated both species reach 9 inches between age 2 and 3. Age 2 white crappie dominated the white crappie samples, while age 3 and age 4 black crappie were most numerous for this species. Crappie data are presented in Tables 46 – 51. A population assessment method for crappie using electrofishing data is yet to be determined.

Gill netting for hybrid striped bass and white bass was completed in October 2004. During the 18 net night sampling period, 50 hybrid striped bass and 183 white bass were collected. This compares to 52 hybrid striped bass and 57 white bass in 2003 (16 net nights). Otoliths were taken from hybrid striped bass and white bass for age and growth determinations. Results of these studies indicate excellent growth rates. Hybrid striped bass reach 15 inches between age 1 and 2, as they have historically. White bass reach 15 inches between age 3 and age 4, also as in past years. The population assessment for hybrid striped bass indicates a "Fair" population (same in 2003), while the white bass fishery improved to "Good" ("Fair" in 2003). An excellent year class of white bass from 2003 was evident, possibly due to above-average rainfall during the spawning period that year. Data from these samples are presented in Tables 52 – 60.

Herrington Lake was stocked with 55,299 (22 fish/acre) hybrid striped bass in June 2004. Stockings are usually done at two or more access sites in the mid-lake area.

A daytime roving creel survey was conducted at Herrington Lake from March through October 2004 (Tables 61 – 71). The last creel survey done was in 1996. Data from 1996 for comparison are shown in parentheses. Total fishing trips in 2004 were only 12,878 (60,557). The lower angler usage is attributed to above-average rainfall and lake level during the period. Total man-hours were 72,985 (202,422). Harvest rate was 0.37 fish/hr (0.59 f/hr). Catch, harvest rates and trips for all species decreased due to reduced pressure. Mean lengths and weights of hybrid striped bass, largemouth bass, crappie, and white bass harvested decreased, while spotted bass and bluegill increased. Fishing success rates remained almost unchanged for black bass, *Morone*, crappie and catfish anglers. Results of the Angler Attitude Survey are presented at the end of this section. Surveys were handed out to anglers when interviewed. Completed surveys were returned by mail. A total of 750 surveys were distributed and 171 completed surveys were returned (22.8%). Anglers appeared to be satisfied with the quality of fishery and regulations pertaining to their species of interest. Black bass and bluegill were the primary species of interest.

Guist Creek Lake

Spring electrofishing studies were completed for length frequency, CPUE, age frequency and population assessment for largemouth bass in April 2004 (Tables 72 – 77). Size of largemouth bass was well distributed, with over 26% of the fish sampled being ≥ 15 inches. The PSD for largemouth bass was 64 compared to 45 in 2003. The RSD_{15} was 31 compared to 28 in 2003. The population assessment gave a rating of "Good", the same as last year. Fall sampling for relative weight data (Wr) was done, as was the index for year class strength at age 0 and age 1 (Tables 78 – 80).

Gill netting was completed in October for hybrid striped bass (Tables 81 – 85). Four nets were fished for two nights (8 net days) in similar sites as in past years. A total of 37 hybrid striped bass were captured compared to 29 in 2003. Age and growth studies were completed for hybrid striped bass using otoliths. These studies indicate they reach 15 inches (on average) between age 1 and 2, compared to age 2 and 3 in 2003. The population assessment from 2004 indicated a "Fair" fishery, as it did in 2003. Length frequency and CPUE of yellow bass captured while netting for hybrid striped bass are also shown.

In June 2004, 5,044 (7.1 inches, 16 f/a) hybrid striped bass were stocked in Guist Creek Lake. The size of stocked fish was increased to improve survival.

Beaver Lake

The sport fish population continues to improve following gizzard shad removal in 1998. Beaver Lake was sampled for largemouth bass in April 2004 (Tables 86 – 90). The CPUE for all sizes was 417.5 f/hr (highest seen in over 12 years) compared to 312 f/hr in 2003. Largemouth bass ≤ 16 inches comprised 96% of the catch. The population assessment score indicated a "Good" bass population. Fall electrofishing for the index of largemouth bass year class strength at age 0 and age 1are presented in Tables 91 - 93. The Relative weight index for largemouth bass was collected in the fall. This reflected below-average weights for all three size groups (crowding and dense aquatic vegetation).

Bluegill and redear sunfish were sampled in May 2004 for CPUE, Age frequency and age and growth (Tables 94 – 105). Catch rates for both species were very similar to 2003 results. The PSD for bluegill was 55 compared to 48 in 2003. The RSD remained 0. Age and growth studies indicated bluegill reached 6 inches between ages 3 and 4. The population assessment for bluegill indicated a "Fair" population. Redear sunfish sampling indicated continual improvement in numbers and quality. Catch rate of fish ≥ 8 inches was the highest seen in over 12 years. The population assessment indicated a "Good" redear sunfish fishery.

Aquatic vegetation was prevalent in shallow areas of the lake during spring and summer. An aquatic herbicide (diquat dibromide) was applied to submerged aquatic vascular plants (multiple applications) around the fishing pier and selected embayments (14 surface acres) to maintain fishing and boating access. No liquid fertilizer applications have been made since 2001.

Boltz Lake

Spring electrofishing for largemouth bass length frequency, CPUE, age frequency and population assessment was done in April 2004 (Tables 106 – 110). Results indicate a declining bass population (all sizes). Most bass (79%) were age 4 or younger (≤ 15 in). Due to the decline, largemouth bass were stocked (4,033, 4- to 5-in) for the first time since 1966. Stocking was reflected in the higher catch rate of bass < 8 inches. The population assessment indicated a "Good" bass population. Boltz Lake continues to be a blue catfish study lake (Black Bass Research Project), stocked annually since 1998.

Bullock Pen Lake

Bullock Pen Lake was electrofished in April 2004 for largemouth bass length frequency, CPUE, age frequency and population assessment (Tables 111 – 115). Catch rates for all sizes increased from 2003 rates, with catch rates of bass ≥ 15 inches remaining the most numerous size group. The population assessment for largemouth bass indicated a "Good" fishery present. Largemouth bass were stocked to offset poor reproduction. A total of 2,759 bass (4- to 5-in) were stocked in 2004. Bullock Pen Lake is a blue catfish study lake (Black Bass Research Project), stocked annually with blue catfish since 1998.

Corinth Lake

Corinth Lake was electrofished in April 2004 to collect largemouth bass length frequency, CPUE, PSD, age frequency and population assessment (Tables 116 – 121). Catch rate for largemouth bass has declined since 2000. All sizes declined with the exception of 12- to 15-inch bass, which increased. This size group reflects a strong year class produced in 2000. The PSD for largemouth bass was 37 (17 in 2003) and the RSD_{15} was 4 (3 in 2003). The population assessment for largemouth bass was rated "Fair", as it was in 2003. Fall electrofishing for largemouth bass was done to determine year class strength and the Wr (Tables 122 – 124).

Electrofishing for bluegill and redear sunfish was done in May 2004 to obtain length frequency, CPUE, age and growth, age frequency and population assessment data (Tables 125 – 133). Statistically, catch rates for bluegill were unchanged from 2003. The bluegill PSD was 26 (36 in 2003) and the RSD was 0 (0.3 in 2003). Age and growth studies showed that bluegill reach 6 inches at age 3, then needed to two more years to reach 7 inches. No bluegill older that age 5 were collected. Population assessment of the bluegill reflected a "Fair" population, down from "Good" in 2003. Catch rate for redear sunfish ≥ 8 inches was 19.2 f/h compared to 28.4 f/h in 2003, and catch rates for redear sunfish ≥ 10 inches declined from 24.9 f/hr in 2003 to 14.4 f/hr in 2004. The population assessment for redear sunfish continued to be "Excellent". Relative weight index for bluegill and redear sunfish was done in the fall (Table 134). The Index indicated poor body condition for bluegill in the 6- to 7-inch range.

Elmer Davis Lake

Elmer Davis Lake was sampled for largemouth bass in April 2004. Length frequency, CPUE, PSD, age and growth, age frequency and population assessment data were collected (Tables 135 – 141). Catch rates of largemouth bass declined overall. The decline in numbers was seen in the 8- to 12-inch fish. There was an increase, however, in the catch rate of fish in the protected slot (12- to 15-inches). The catch rate of bass ≥ 15 inches remained unchanged (15 f/hr) from 2003. The PSD increased to 23 from 13 in 2003, as did the RSD_{15}, 9 in 2004 and 7 in 2003. Age and growth studies showed that largemouth bass enter the protection of the slot limit (12 inches) between age 3 and age 4, compared to age 4 and 5 two years ago. They are available for harvest again (15 inches) between age 5 and 6. On average, largemouth bass are spending about two years in the protection of the slot limit. Population assessment data indicated a "Good" bass population, compared to "Fair" in 2003. Fall electrofishing for the Wr index and year class strength for largemouth bass was done in September 2004 (Tables 142 – 144).

Electrofishing for length frequency, CPUE, age and growth, age frequency and population assessment was done for bluegill and redear sunfish in May 2004 (Tables 145 – 156). Bluegill catch rates were almost unchanged from 2003. Catch rates of bluegill ≥ 8 inches continued to increase. The PSD value for bluegill was 56 compared to 63 in 2003, while the RSD increased from 1 in 2003 to 4 in 2004. The population assessment for bluegill was "Good", as it was in 2003. Age and growth studies for bluegill showed they were reaching 6 inches between age 2 and age 3, and 8 inches between age 5 and age 6. CPUE for all redear sunfish size groups increased from 2003. There was a significant increase in numbers of redear sunfish greater than 6 inches. The PSD for redear sunfish was 61 compared to 63 in 2003, and the RSD was 10 compared to 30 in 2003. Relative weight index results for bluegill indicated they exhibited good body condition, while the index for redear sunfish indicated excellent body condition. The redear sunfish population assessment indicated an "Excellent" population present in 2004. Elmer Davis Lake continued to be shad-free in 2004 since the last gizzard shad removal efforts in 1997.The probable source for the previous shad invasions has been attributed to the city of Owenton's water supply reservoir, Lower Thomas Lake, located in the drainage of Elmer Davis Lake.

Kincaid Lake

Spring electrofishing studies were conducted in April 2004 for PSD, length frequency, age frequency and CPUE for largemouth bass (Tables 157 – 162). Total catch rate declined (192.5 f/hr) in 2004 from 2003 (221.1 f/hr). This decline was seen in largemouth bass < 8 inches and ≥ 15 inches. The largemouth bass PSD and RSD_{15} were 59 (64 in 2003) and 38 (48 in 2003). The population assessment indicated a "Good" bass population, the same as in 2003. Fall electrofishing for Wr and index of year class strength at age 0 was done in September (Tables 163 – 165). Catch rate of age 0 largemouth bass was considerably lower than last year. Cycling of largemouth bass reproduction appears to be normal at Kincaid Lake. Relative weights of largemouth bass size groups were below average.

Electrofishing for bluegill and redear sunfish was done in May 2004 to collect length frequency, CPUE, age and growth (bluegill), age frequency, PSD and population assessment data (Tables 166 – 172). Bluegill numbers are fairly stable (numerous small fish: PSD of 6, RSD is 0) and redear sunfish are few in number and small in size.

Growth rate of bluegill is slow with few fish reaching 6 inches. The population assessment for bluegill indicated a "Poor" population present, as in 2003. The Wr value for bluegill indicated poor body condition (Table 173).

McNeely Lake

McNeely Lake was electrofished for largemouth bass population analysis in April 2004. Data for length frequency, CPUE, age and growth, age frequency and population assessment were collected (Tables 174 – 180). Overall catch rates for largemouth bass declined, but catch rate for fish ≥ 15 remained high from last year. The PSD was 47 compared to 46 in 2003, and the RSD_{15} was 26 compared to 15 in 2003. Age and growth studies indicated bass reached 15 inches between age 4 and age 5. The population assessment continued to "Good" in 2004. Electrofishing for largemouth bass in September 2004 was done to collect Wr and the index of year class strength at age 0 (Table 181 – 183). The Wr index seen indicated poor body condition for largemouth bass, probably a reflection of dense aquatic vegetation growth in spring and summer.

Bluegill and redear sunfish were sampled in May 2004 for length frequency, CPUE, age and growth, age frequency and population assessment (Tables 184 – 195). Catch rate for all sizes of bluegill increased from 2003. The bluegill PSD was 29 compared to 19 in 2003. The RSD remains 0 for both years. Age and growth data for bluegill indicate they reach 6 inches between age 3 and age 4. No 8-inch bluegill were collected. The population assessment for bluegill indicated a "Fair" population present, as was seen in 2003. Catch rates for redear sunfish increased from 2003 results. A significant increase was seen in redear sunfish numbers ≥ 8 inches. The redear sunfish fishery was rated "Good", an improvement from "Fair" in 2003. Relative weight data for bluegill and redear sunfish were collected in the fall (Table 195) and indicated good body condition.

Lincoln Homestead Lake

Lincoln Homestead Lake was sampled for largemouth bass in April 2004. Data for length frequency, CPUE, PSD, age frequency and population assessment were collected (Tables 196 – 200). Catch rates for all size groups of bass ≥ 8 inches increased from 2003. The largemouth bass PSD was 44 compared to 40 in 2003. The RSD_{15} was 8 compared to 4 in 2003. The population assessment indicated a "Fair" fishery, compared to "Good" in 2003. Relative weight index and index of year class strength at age 0 data were collected in September 2004 (Tables 201 – 203).

Electrofishing for bluegill and redear sunfish data was done in May 2004 (Tables 204 – 214). Data for length frequency, CPUE, age frequency, PSD and population assessment were collected. All size categories of bluegill declined since 2003. No bluegill ≥ 8 inches were collected. The PSD for bluegill was 11 compared to 33 in 2003, and the PSD for redear sunfish was 19 compared to 28 in 2003. The bluegill population assessment was determined to be "Fair" compared to "Excellent" in 2003. The redear sunfish rating was "Fair" compared to "Good" in 2003. Relative weight data collected in September for both species indicated both species were well below average in mean weight.

Game Farm Lakes

Species composition, relative abundance, and CPUE of the fish sampled in the Upper Game Farm Lake and Lower Game Farm Lake are presented in Tables 215 and 216. These lakes receive heavy fishing pressure. The Lower Lake, by regulation, is for children 12 years of age and younger.

General Butler State Park Lake

Length frequency, relative abundance and CPUE of largemouth bass was collected in April 2004 at General Butler State Park Lake are shown in Table 217. Results and catch rate was very similar to those seen in 2003. Largemouth bass fingerlings have been stocked annually since 1999.

Wilburn Park Lake

Length frequency, relative abundance and CPUE data for largemouth bass were collected in April 2004 (Table 218). Largemouth bass fingerlings were stocked in 2004 and 2003 to improve the population.

Leary Lake

Species composition, relative abundance and CPUE of fishes collected at Leary Lake in April 2004 are presented in Table 219.

Williamstown Lake

Length frequency and CPUE of largemouth bass collected in April 2004 at Williamstown Lake are presented in Table 220. The catch rate is nearly the same as seen in 2003 for the same amount of time. Largemouth bass fingerlings were stocked from 2001 through 2003 at rates ranging from 6 f/a to 26 f/a in an effort to re-establish the largemouth bass population. This lake needs further research to determine the factors suppressing the fish population if a fishery is to be developed and maintained.

Jacobson Park Lake

Length frequency and CPUE of largemouth bass collected in May 2004 at Jacobson Park Lake are presented in Table 221. The same catch rate (50 f/hr) was observed in 2003. Advanced fingerling largemouth bass have been stocked annually (20 f/a to 30 f/a) since 1995.

Kleber pond

Species composition, relative abundance and CPUE of fishes collected at Kleber Wildlife Management Area Pond are shown in Table 222. This 2-acre pond receives heavy fishing pressure and is periodically stocked during the year with excess fish from Pfeiffer Fish Hatchery nearby.

Upper Thomas Lake

Species composition, relative abundance and CPUE of fishes collected at Lower Thomas Lake (Owen County) are presented in Table 223. This county water supply lake is the source for gizzard shad contamination downstream in Elmer Davis Lake. Various predator fish have been stocked in recent years to reduce the shad population in this small lake (16 acres).

Table 1. Length distribution and CPUE (no./hour) of largemouth bass collected in 7.5 hours of 30-minute electrofishing runs for black bass in Taylorsville Lake in May 2004: numbers in parentheses are standard errors.

	Inch Class																			
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE
Van Buren																				
Largemouth bass		1	8	6	5	3	9	20	25	33	52	37	15	11	2	5	1		233	93.2 (10.4)
Ashes Creek																				
Largemouth bass	4	9	17	12	11	4	5	32	49	55	36	18	9	8	6	3	1	2	281	112.4 (5.1)
Big Beech Creek																				
Largemouth bass		2	13	12	6	11	2	14	26	37	36	18	25	5	3	2	1		213	85.2 (7.3)
Total																				
Largemouth bass	4	12	38	30	22	18	16	66	100	125	124	73	49	24	11	10	3	2	727	96.9 (5.2)

Dataset = cfdpstvl.d04

Table 2. Electrofishing CPUE data (no./hour) for each size group of largemouth bass collected from Taylorsville Lake from 1984-2004; numbers in parentheses are standard errors.

	Inch Class									
Year	< 8.0		8.0 - 11.9		12.0 - 14.9		≥ 15.0		All sizes	
1984	50.4	(1.8)	88.0	(6.0)	6.0	(2.2)	0.0	(0.0)	144.4	(5.6)
1985	0.8	(0.6)	43.8	(5.4)	74.8	(9.2)	3.4	(1.0)	122.2	(14.4)
1986	1.8	(0.2)	11.2	(1.4)	21.0	(1.8)	24.4	(3.0)	59.0	(5.4)
1987	3.6	(0.6)	5.4	(0.6)	9.2	(1.0)	29.2	(2.6)	48.0	(3.8)
1988	3.2	(0.8)	8.4	(1.2)	6.0	(1.0)	19.6	(3.0)	37.2	(4.8)
1989	58.6	(15.6)	33.4	(5.8)	22.2	(3.4)	13.8	(3.0)	128.2	(24.0)
1990	57.0	(8.4)	54.2	(6.8)	22.8	(2.6)	21.8	(3.4)	154.4	(15.0)
1991	26.0	(2.8)	37.2	(2.8)	22.8	(2.1)	11.8	(1.4)	98.6	(5.2)
1992	58.5	(5.5)	42.6	(2.5)	36.9	(2.9)	17.6	(1.6)	155.6	(7.3)
1993	21.0	(3.6)	53.2	(4.8)	36.4	(13.8)	14.8	(1.9)	128.3	(8.6)
1994	25.1	(3.0)	39.9	(3.6)	40.7	(5.1)	15.0	(1.5)	122.3	(9.8)
1995	28.2	(3.5)	69.6	(3.9)	20.3	(1.3)	11.6	(1.4)	129.6	(6.8)
1996	16.2	(2.4)	41.0	(3.9)	49.8	(3.2)	16.0	(3.2)	122.6	(9.8)
1997	33.2	(6.3)	43.4	(4.0)	46.4	(1.8)	15.2	(1.8)	138.3	(7.7)
1998	20.0	(3.0)	26.4	(2.7)	30.5	(2.6)	21.7	(2.6)	98.7	(7.2)
1999	19.1	(2.8)	38.7	(3.2)	20.9	(3.0)	22.7	(2.6)	101.3	(7.1)
2000	17.7	(3.3)	33.1	(3.9)	16.1	(2.6)	10.5	(1.5)	77.5	(6.1)
2001	32.4	(4.1)	44.1	(3.7)	27.6	(3.6)	15.5	(2.7)	119.6	(8.3)
2002	33.7	(4.4)	22.3	(2.2)	12.8	(2.2)	9.6	(1.8)	78.4	(7.0)
2003	19.5	(2.9)	58.5	(4.8)	24.9	(2.2)	15.2	(2.1)	118.1	(9.2)
2004	14.1	(2.5)	26.7	(2.7)	42.9	(3.4)	13.2	(1.6)	96.9	(5.2)

Dataset = cfdpstvl.d04

Table 3. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in each area of Taylorsville Lake in 2004; confidence intervals are in parentheses.

Area	Species	No. fish > stock size	PSD	RSD_{15}
Big Beech	Largemouth bass	180	71 (± 7)	20 (± 6)
Ashes Creek	Largemouth bass	228	61 (± 6)	13 (± 5)
Van Buren	Largemouth bass	213	73 (± 6)	16 (± 5)
Total	Largemouth bass	621	68 (± 4)	16 (± 3)

Dataset = cfdpstvl.d04

Table 4. Age frequency and CPUE (no./hour) per inch class of largemouth bass collected during 7.5 hours of electrofishing at Taylorsville Lake during May 2004. 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	20	Total	%	CPUE	ERR
1	4	12	38	30	20	8													112	15	14.93	2.48
2					2	10	14	59	50	13									148	20	19.75	2.09
3							2	7	50	100	62	24	6						251	35	33.44	2.52
4											50	41	25	10					124	17	16.57	1.65
5											12		18	5	7	3			46	6	6.07	0.60
6										13		8			2	3			26	4	3.49	0.31
7														5			1		6	1	0.77	0.17
8																3	1		4	1	0.58	0.22
9														5	2		1	2	10	1	1.33	0.31
Total	4	12	38	30	22	18	16	66	100	125	124	73	49	24	11	10	3	2	727	100	96.93	5.22
%	1	2	5	4	3	2	2	9	14	17	17	10	7	3	2	1	0	0	100			

Dataset = cfdagtvl.d02 and cfdpstvl.d04

Table 5. Electrofishing catch rate (fish/hour) of each age of largemouth bass collected from Taylorsville Lake from 1995-2004.

	Year									
Age	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
1	12.1	11.6	20.4	12.0	17.8	14.1	20.5	34.8	21.2	14.9
2	57.9	22.1	22.3	18.8	27.4	12.4	26.7	16.7	46.1	19.8
3	34.9	39.0	54.9	28.5	14.3	17.7	24.8	13.1	26.3	33.4
4	12.5	28.2	18.2	10.8	17.8	10.8	12.5	6.2	12.6	16.6
5	5.1	8.8	8.4	9.1	6.7	7.7	16.6	3.6	5.9	6.1
6	3.7	5.8	9.0	11.9	6.5	6.9	9.7	1.4	2.9	3.5
7	1.2	4.8	3.4	5.2	6.8	4.5	4.8	0.7	0.7	0.8
8	1.5	1.1	0.8	1.2	1.0	1.5	1.7	0.4	0.5	0.6
9	0.5	1.0	0.3	0.4	2.3	0.9	1.5	1.6	1.3	1.3
10			0.6	0.5	0.6	0.2	0.3			
11		0.3				0.5	0.2			
12						0.3	0.3			

Table 6. Population assessment from largemouth bass collected from Taylorsville Lake during April-May 2004.

Parameter	Value	Assessment Score
Length at age 3	12.6 ± 0.3	4
Spring CPUE of Age 1	14.93 ± 2.48	1
Spring CPUE 12-14.9 in fish	42.93 ± 3.39	4
Spring CPUE ≥ 15.0-in fish	13.20 ± 1.63	3
Spring CPUE ≥ 20.0-in fish	0.27 ± 0.27	2
Instantaneous mortality (z)	0.489	
Annual mortality (A)	38.7	
Total Score		14
Assessment Rating		Good

Table 7. Length distribution and CPUE (no./hour) of largemouth bass collected in 4.5 hours of 15-minute electrofishing runs for black bass in Taylorsville Lake in September 2004: 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
Van Buren																			
Largemouth bass		1	19	33	18	4	6	14	9	4	3	7	4	5	3	2		132	88.0 (14.4)
Ashes Creek																			
Largemouth bass	6	61	28	4	2	12	11	5	4	7	5	12	9	6	2	1		175	116.7 (10.7)
Big Beech Creek																			
Largemouth bass		16	26	12	6	2	13	7	7	5	3	5	4	11	1	2	3	123	82.0 (13.3)
Total																			
Largemouth bass	6	78	73	49	26	18	30	26	20	16	11	24	17	22	6	5	3	430	95.6 (7.9)

Dataset = cfdwrtvl.d04

Table 8. Number of fish and the relative weight (Wr) for each length category of largemouth bass collected at Taylorsville Lake on 14-16 September 2004. Standard errors are in parentheses.

Species	Area	Size Range							
		8.0 – 11.9 in		12.0 – 14.9 in		≥ 15.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Van Buren	33	103.9 (7.1)	14	102.1 (5.3)	10	99.3 (3.1)	57	102.6 (4.3)
	Ashes	27	95.9 (1.6)	26	100.6 (1.9)	9	108.8 (3.1)	62	99.7 (1.2)
	Big Beech	32	87.1 (1.1)	12	91.3 (2.6)	17	93.9 (2.8)	61	89.8 (1.1)
	Total	92	95.7 (2.7)	52	98.8 (1.9)	36	99.1 (2.0)	180	97.3 (1.5)

Dataset = cfdwrtvl.d04

Table 9. 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		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2001	Total	4.6	1.3	63.6	11.7	13.3	1.0	34.8	4.3
2002	Total	5.3	0.1	29.1	4.8	18.7	3.5	21.2	2.8
2003	Total	5.4	0.1	32.2	5.4	19.1	3.4	14.9	2.5
2004	Total	4.4	0.1	50.0	6.2	15.1	3.6		

Table 10. Length distribution and CPUE (no./hour) of each species of crappie collected at Taylorsville Lake in 48 net-nights during October 2004.

Species	Inch Class										Total	CPUE	Std. error
	3	4	5	6	7	8	9	10	11	12			
White crappie	41	17	9		33	29	9	5	2	1	146	3.04	0.48
Black crappie	28	27	1	111	411	38	9	6	2	1	634	13.21	2.36

Dataset = cfdtntvl.d04

Table 11. PSD and RSD_{10} values calculated for crappie collected at Taylorsville Lake in 48 net-nights during October 2004.

Species	No. fish > stock size	PSD	RSD_{10}
White crappie	88	52 (± 10)	9 (± 6)
Black crappie	579	10 (± 2)	2 (± 1)

Dataset = cfdtntvl.d04

Table 12. Mean back calculated lengths (in.) at each annulus for otoliths from white crappie trap netted at Taylorsville Lake in 2004.

		Age							
Year Class	No.	1	2	3	4	5	6	7	8
2003	59	4.9							
2002	8	5.1	9.2						
1996	2	5.2	7.2	8.5	9.2	9.7	10.0	10.4	11.0
Mean	69	5.0	8.8	8.5	9.2	9.7	10.0	10.4	11.0
Smallest		4.0	6.6	7.9	8.3	8.8	9.2	9.6	10.3
Largest		6.4	10.2	9.2	10.0	10.5	10.8	11.3	11.7
Std Error		0.1	0.4	0.7	0.8	0.8	0.8	0.8	0.7
95% ConLo		4.8	8.1	7.2	7.6	8.0	8.4	8.8	9.7
95% ConHi		5.1	9.5	9.9	10.7	11.3	11.6	12.1	12.3

Intercept value = 0.00
Dataset.= cfdagtvl.d04

Table 13. Age frequency and CPUE (no./net day) per inch class of white crappie trap netted for 48 net nights at Taylorsville Lake in 2004.

	Inch Class												STD
Age	3	4	5	7	8	9	10	11	12	Total	%	CPUE	ERR
0+	41	17	9							67	46	1.40	0.33
1+				33	28	8				69	47	1.43	0.28
2+					1	1	4	2		8	6	0.17	0.07
8+							1		1	2	1	0.04	0.03
Total	41	17	9	33	29	9	5	2	1	146	100	3.04	0.48
(%)	28	12	6	23	20	6	3	1	1	100			

Dataset = cfdtntvl.d04 and cfdagtvl.d04
CPUE of ≥ 8 in. white crappie = 0.96 ± 0.21; ≥ 10 in. = 0.17 ± 0.08

Table 14. Mean back calculated lengths (in.) at each annulus for otoliths from black crappie trap netted at Taylorsville Lake in 2004.

		Age		
Year Class	No.	1	2	3
2003	88	4.6		
2002	10	4.3	8.0	
2001	4	4.9	8.9	10.6
Mean	102	4.5	8.3	10.6
Smallest		3.1	7.3	10.1
Largest		6.9	9.5	11.4
Std Error		0.1	0.2	0.3
95% ConLo		4.4	7.9	10.0
95% ConHi		4.7	8.7	11.2

Intercept value = 0.00
Dataset = cfdagtvl.d04

Table 15. Age frequency and CPUE (no./net day) per inch class of black crappie trap netted for 48 net nights at Taylorsville Lake in 2004.

	Inch Class													STD
Age	3	4	5	6	7	8	9	10	11	12	Total	%	CPUE	ERR
0+	28	27	1								56	8	1.17	0.33
1+				111	411	35	4	2			563	89	11.73	2.28
2+						3	5	2			11	2	0.22	0.06
3+								1	2	1	4	1	0.09	0.06
Total	28	27	1	111	411	38	9	6	2	1	634	100	13.21	2.36
%	4	4	0	18	65	6	1	1	0	0	100			

Dataset = cfdtntvl.d04 and cfdagtvl.d04
CPUE of ≥ 8 in. black crappie = 1.17 ± 0.29; ≥ 10 in. = 0.19 ± 0.10

Table 16. Population assessment for crappie trap netted at Taylorsville Lake in October 2004.

	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)	1.6 ± 0.3	1	12.0 ± 2.4	2	13.7 ± 2.6	3
CPUE of age 1 crappie	1.4 ± 0.3	1	11.7 ± 2.3	3	13.1	3
CPUE of age 0 crappie	1.4 ± 0.3	1	1.2 ± 0.3	1	2.6 ± 0.6	1
CPUE of crappie ≥ 8.0 Inches	1.0 ± 0.2	1	1.2 ± 0.3	1	2.1 ± 0.4	2
Mean age-2 length at Capture	10.3 ± 0.3	4	9.3 ± 0.2	3	9.7 ± 0.2	4
Instantaneous mortality (z)	1.504		2.435			
Annual mortality (A)	65.2%		91.2%			
Assessment Total		8		10		13
Assessment Rating		Fair		Fair		Good

Table 17. Population assessment for white crappie populations at Taylorsville Lake from 1989 through 2004.

Parameters	Year															
	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04
CPUE of crappie (excluding age-0)	4.7 1	2.3 1	0.1 1	0.7 1	3.3 1	0.4 1	2.6 1	6.3 2	52.3 4	15.4 3	7.5 2	6.5 2	4.5 1	1.6 1	1.8 1	1.6 1
CPUE of age-1 crappie	0.04 1	0.5 1	0.06 1	0.5 1	3.2 2	0.09 1	2.6 1	6.2 2	47.7 4	1.3 1	0.08 1	0.5 1	2.6 1	0.6 1	1.7 1	1.4 1
CPUE of age-0 crappie	0.03 1	0.2 1	0.6 1	4.3 2	0.4 1	1.8 1	2.8 1	5.0 2	0.3 1	0 1	0 1	0.6 1	0.1 1	0.8 1	0.5 1	1.4 1
CPUE of crappie > 8.0 inches	4.2 2	2.2 2	0.2 1	0.7 1	1.2 1	0.4 1	2.5 2	4.2 2	4.9 2	11.4 4	7.1 3	6.3 3	4.3 2	1.6 1	1.7 1	1.0 1
Mean age-2 length at capture	NS 1	NS 1	NS 1	NS 1	10.8 4	9.9 4	11.0 4	10.7 4	9.0 2	8.9 2	8.6 2	8.6 2	9.4 3	10.1 4	8.2 1	10.3 4
Total Score Assessment Rating	6 P	6 P	5 P	6 P	9 F	8 F	9 F	12 F	13 G	11 F	9 F	9 F	8 F	8 F	5 P	8 F

Table 18. Population assessment for Black crappie populations at Taylorsville Lake from 1995 through 2004.

Parameters	Year									
	95	96	97	98	99	00	01	02	03	04
CPUE of crappie (excluding age-0)	0.4 1	0.3 1	3.6 1	0.8 1	0.7 1	0.8 1	1.8 1	2.3 1	1.3 1	12.0 2
CPUE of age-1 crappie	0.4 1	0.2 1	3.4 1	0.2 1	0.5 1	0.5 1	1.5 1	1.8 1	1.0 1	11.7 3
CPUE of age-0 crappie	0 1	0.2 1	0.1 1	0.02 1	0.04 1	0.2 1	0.1 1	0.1 1	1.3 1	1.2 1
CPUE of crappie > 8.0 inches	0.4 1	0.2 1	1.2 1	0.7 1	0.3 1	0.7 1	1.5 1	1.6 1	1.1 1	1.2 1
Mean age-2 length at capture	NS 1	11.5 4	9.2 3	9.6 4	9.2 3	9.6 4	10.1 4	10.2 4	10.2 4	9.3 3
Total Score Assessment Rating	5 Poor	8 Fair	7 Poor	8 Fair	7 Poor	8 Fair	8 Fair	8 Fair	8 Fair	10 Fair

Table 19. Population assessment for white and black crappie populations combined at Taylorsville Lake from 1989 through 2004.

	Year															
Parameters	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04
CPUE of crappie	4.7	2.3	0.1	0.7	3.3	0.4	3.1	6.5	55.9	16.3	8.2	7.3	6.3	3.9	3.1	13.7
(excluding age-0)	1	1	1	1	1	1	1	2	4	3	2	2	2	1	1	3
CPUE of age-1	0.04	0.5	0.06	0.5	3.2	0.09	3.0	6.4	51.1	1.4	0.6	0.9	4.0	2.4	2.7	13.1
crappie	1	1	1	1	2	1	2	2	4	1	1	1	2	1	1	3
CPUE of age-0	0.03	0.2	0.6	4.3	0.4	1.8	2.8	5.2	0.4	0.02	0.04	0.7	0.2	0.9	1.8	2.6
crappie	1	1	1	2	1	1	1	2	1	1	1	1	1	1	1	1
CPUE of crappie >	4.2	2.2	0.2	0.7	1.2	0.4	2.9	4.4	6.1	12.1	7.4	7.0	5.7	3.2	2.8	2.1
8.0 inches	2	2	1	1	1	1	2	2	3	4	3	3	3	2	2	2
Mean age-2 length	NS	NS	NS	NS	10.8	9.9	11.0	11.0	9.0	9.1	8.7	9.4	9.9	10.2	10.1	9.7
at capture	1	1	1	1	4	4	4	4	2	3	2	3	4	4	4	4
Total Score	6	6	5	6	9	8	10	12	14	12	9	10	12	9	9	13
Assessment Rating	P	P	P	P	F	F	F	F	G	F	F	F	F	F	F	G

Table 20. Length distribution and CPUE (no./hour) of white bass and hybrid striped bass collected during 8 net-nights of gill netting in Taylorsville Lake in October 2004: 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	Total	CPUE
White bass	9	1	14	21	3	28	13		1								90	11.25 (5.33)
Hybrid striped bass				1		10	18	1			1	1	1	1	1	3	38	4.75 (2.64)

Dataset = cfdgntvl.d04

Table 21. Mean back calculated lengths (in.) at each annulus for otoliths from hybrid striped bass gill netted at Taylorsville Lake in 2004.

		Age		
Year Class	No.	1	2	3
2003	28	5.9		
2002	2	7.9	14.7	
2001	6	9.3	14.7	17.6
Mean	36	6.6	14.7	17.6
Smallest		5.0	13.7	16.5
Largest		12.0	15.7	18.6
Std Error		0.3	0.2	0.3
95% ConLo		6.1	14.3	17.0
95% ConHi		7.1	15.2	18.3

Intercept Value = 0.00
Dataset = cfdagtvl.d04

Table 22. Age frequency and CPUE (no./net day) per inch class of hybrid striped bass gill netted for 8 net nights at Taylorsville Lake in 2004.

	Inch Class													STD
Age	8	10	11	12	15	16	17	18	19	20	Total	%	CPUE	ERR
0+	1										1	3	0.13	0.13
1+		10	18	1							29	76	3.63	2.04
2+					1	1					2	5	0.25	0.16
3+							1	1	1	3	6	16	0.75	0.37
Total	1	10	18	1	1	1	1	1	1	3	38	100	4.75	2.64
%	3	26	47	3	3	3	3	3	3	8	100			

Dataset = cfdagtvl.d04 and cfdgntvl.d04

Table 23. Number of fish and the relative weight (Wr) for each length category of hybrid striped bass collected at Taylorsville Lake in October 2004.

Size range					
8.0 – 11.9 inch		12.0 – 14.9 inch		≥ 15.0 inch	
No.	Wr	No.	Wr	No.	Wr
29	81.65 (3.03)	1	80.86	8	73.68 (1.95)

Dataset = cfdgntvl.d04

Table 24. Population assessment for hybrid striped bass gill netted at Taylorsville Lake in October 2004.

Parameter	Actual Value	Assessment Value
CPUE of hybrid striped bass (excluding age 0)	4.63 ± 2.52	1
Mean age-2+ length at capture	16.00 ± 0.30	1
CPUE of fish ≥ 15.0 in	1.00 ± 0.50	1
CPUE of age 1 hybrid striped bass	3.63 ± 2.04	2
Assessment Total		5
Assessment Rating		Poor

Table 25. Mean back calculated lengths (in.) at each annulus for otoliths from white bass gill netted at Taylorsville Lake in 2004.

		Age Class		
Year Class	No.	1	2	3
2003	59	6.6		
2002	10	5.2	9.9	
2001	1	7.1	10.3	12.1
Mean	70	6.4	10.0	12.1
Smallest		4.4	9.1	12.1
Largest		9.0	10.4	12.1
Std Error		0.2	0.1	
95% ConLo		6.1	9.7	
95% ConHi		6.8	10.2	

Intercept Value = 0.00
Dataset = cfdagtvl.d04

Table 26. Age frequency and CPUE (no./net day) per inch class of white bass gill netted for 8 net nights at Taylorsville Lake in 2004

	Inch Class												STD
Age	5	6	7	8	9	10	11	12	13	Total	%	CPUE	ERR
0+	9	1	8	3						21	23	2.63	0.80
1+			6	18	3	26	5			58	65	7.26	4.10
2+						2	8			10	11	1.24	0.75
3+									1	1	1	0.13	0.13
Total	9	1	14	21	3	28	13		1	90	100	11.25	5.33
%	10	1	16	23	3	31	14		1	100			

Dataset = cfdagtvl.d04 and cfdgntvl.d04

Table 27. Number of fish and the relative weight (Wr) for each length category of white bass collected at Taylorsville Lake in October 2004.

Size range					
6.0 – 8.9 inch		9.0 – 11.9 inch		≥ 12.0 inch	
No.	Wr	No.	Wr	No.	Wr
		44	90.44 (1.07)	1	81.12

Dataset = cfdgntvl.d04

Table 28. Population assessment for white bass gill netted at Taylorsville Lake in October 2004.

Parameter	Actual Value	Assessment Value
CPUE of white bass (excluding age 0)	8.63 ± 4.96	2
Mean age-2+ length at capture	11.43 ± 0.10	2
CPUE of fish ≥ 12.0 in	0.13 (0.13)	1
CPUE of age 1 white bass	7.26 ± 4.10	3
Instantaneous mortality (z)	2.0113	
Annual mortality (A)	86.6%	
Assessment Total		8
Assessment Rating		Fair

Table 29. Length distribution and CPUE (no./hour) of blue and channel catfish collected during 8 net-nights of gill netting in Taylorsville Lake in October 2004: numbers in parentheses are standard errors.

Species	Inch Class																		Total	CPUE
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
Blue catfish				1	3	5	8	8	15	8	4	11	10	9	7	3	1	1	94	11.75 (2.62)
Channel catfish	1	6	9	4	8	1	2	4	1		2	3	2	1	1		2		47	5.88 (1.96)

Dataset = cfdgntvl.d04

Table 30. Mean back calculated lengths (in.) at each annulus for otoliths of channel catfish gill netted at Taylorsville Lake in 2004.

		Age							
Year	No.	1	2	3	4	5	6	7	8
2003	16	3.9							
2002	14	4.4	7.2						
2001	7	5.3	8.9	11.6					
2000	2	5.2	9.3	12.1	14.4				
1999	4	6.1	9.6	12.7	15.2	17.5			
1996	1	4.3	6.2	8.2	9.7	11.8	13.5	14.6	16.3
Mean	44	4.5	8.1	11.8	14.2	16.3	13.5	14.6	16.3
Smallest		2.5	6.0	8.2	9.7	11.8	13.5	14.6	16.3
Largest		7.7	11.4	14.3	16.5	18.7	13.5	14.6	16.3
Std Error		0.2	0.3	0.5	0.8	1.2			
95% ConLo		4.2	7.5	10.8	12.6	14.0			
95% ConHi		4.9	8.7	12.7	15.9	18.7			

Intercept value = 0.00
Dataset = cfdagtvl.d04

Table 31. Age frequency and CPUE (no./net day) per inch class of channel catfish gill netted for 8 net nights at Taylorsville Lake in 2004.

	Inch Class																		STD
Age	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	21	Total	%	CPUE	ERR
1+	1	6	9	1													17	36	2.13	1.14
2+				3	8	1	1		1								14	30	1.75	0.85
3+							1	4				3					8	17	1.00	0.28
4+											2		1				3	6	0.38	0.21
5+														1	1	2	4	9	0.50	0.27
8+													1				1	2	0.13	0.08
Total	1	6	9	4	8	1	2	4	1	0	2	3	2	1	1	2	47	100	5.88	1.96
%	21	13	19	9	17	2	4	9	2	0	4	6	4	2	2	4	100			

Dataset = cfdagtvl.d04 and cfdgntvl.d04

Table 32. Age frequency and CPUE (no./net day) per inch class of blue catfish gill netted from 8 net-nights at Taylorsville Lake in 2004.

		Age		
Year Class	No.	1	2	3
2003	19	7.0		
2002	38	6.2	10.6	
2001	29	6.8	11.3	14.6
Mean	42	6.6	10.9	14.6
Smallest		4.2	8.1	11.8
Largest		10.1	14.5	17.3
Std Error		0.1	0.2	0.3
95% ConLo		6.3	10.5	14.0
95% ConHi		6.8	11.3	15.1

Intercept Value = 0.00
Dataset = cfdagtvl.d04

Table 33. Age frequency and CPUE (no./net day) per inch class of blue catfish gill netted for 8 net nights at Taylorsville Lake in 2004.

	Inch Class																		STD
Age	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	%	CPUE	ERR
1+	1	3	2	4	2	7	1									21	22	2.60	0.77
2+			3	4	6	8	6	2	7	3	1					41	43	5.06	1.04
3+							1	2	3	7	8	7	3	1	1	33	35	4.09	1.53
Total	1	3	5	8	8	15	8	4	11	10	9	7	3	1	1	94	100	11.75	2.62
%	1	3	5	9	9	16	9	4	12	11	10	7	3	1	1	100			

Dataset = cfdagtvl.d04 and cfdgntvl.d04

Table 34. Number of fish and the relative weight (Wr) for each length category of catfish collected at Taylorsville Lake during October 2004.

	Size range					
Species	11.0 – 15.9 in.		16.0 – 23.9 in		≥ 24.0 in	
	No.	Wr	No.	Wr	No.	Wr
Channel catfish	9	99.42 (5.22)	9	100.01 (2.35)		
	12..0 – 19.9 in.		20.0 – 29.9 in		≥ 30.0 in	
	No.	Wr	No.	Wr	No.	Wr
Blue catfish	72	95.38 (1.17)	5	107.58 (3.57)		

Dataset = cfdgntvl.d04

Table 35. Population assessment for channel catfish gill netted at Taylorsville Lake in October 2004.

Parameter	Actual Value	Assessment Value
CPUE < 8.0 inches	2.00 ± 1.12	4
Total CPUE	5.88 ± 1.96	4
CPUE of fish ≥ 12.0 in	2.00 ± 0.63	4
CPUE of fish ≥ 15.0 in	1.38 ± 0.53	3
CPUE of fish ≥ 20.0 in	0.25 ± 0.16	2
Instantaneous mortality (z)	0.4426	
Annual mortality (A)	35.8%	
Assessment Total		17
Assessment Rating		Good

Table 36. Population assessment for blue catfish gill netted at Taylorsville Lake in October 2004.

Parameter	Actual Value	Assessment Value
Total CPUE	11.75 ± 2.62	4
CPUE of fish ≥ 12.0 in	9.63 ± 2.46	4
CPUE of fish ≥ 15.0 in	5.75 ± 1.94	4
CPUE of fish ≥ 20.0 in	0.63 ± 0.26	2
Instantaneous mortality (z)		
Annual mortality (A)		
Assessment Total		14
Assessment Rating		Excellent

Table 37. Species composition, relative abundance, and CPUE of black bass collected in 7.5 hours of 15-minute electrofishing runs in Herrington Lake, May 2004; numbers in parenthesis 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	3	2	3	5	13	38	35	25	5	12	22	24	27	29	20	9	4	4	3	1		284	113.6 (10.43)
Spotted bass				1							1											2	0.80 (0.53)
Middle																							
Largemouth bass	2	3	5	15	36	78	148	103	33	59	60	56	69	54	23	18	10	4	3	1		780	312.00 (38.47)
Spotted bass							3	6	22	25	9	2										67	26.80 (4.42)
Lower																							
Largemouth bass		2	1	3	4	9	18	23	14	11	6	11	15	14	10	4	6	3	2		1	157	62.80 (7.50)
Spotted bass	2	2			4	1	1	1	10	17	16	13										67	26.80 (6.56)
Total																							
Largemouth bass	5	7	9	23	53	125	201	151	52	82	88	91	111	97	53	31	20	11	8	2	1	1221	162.80 (23.85)
Spotted bass	2	2		1	4	1	4	7	32	42	26	15										136	18.13 (3.42)

Dataset = cfdpsher.d04

Table 38. Electrofishing CPUE data (no./hour) for each size group of largemouth bass collected from Herrington Lake from 1994-2004; numbers in parentheses are standard errors.

	Inch Class									
Year	< 8.0		8.0 - 11.9		12.0 - 14.9		≥ 15.0		All sizes	
1994	4.9	(0.9)	30.1	(4.4)	21.5	(2.6)	17.9	(1.8)	74.4	(5.4)
1995	8.8	(2.3)	20.0	(4.4)	25.6	(4.0)	20.4	(1.4)	74.8	(9.6)
1996	9.5	(2.4)	24.4	(3.9)	20.3	(2.8)	26.5	(2.6)	80.9	(6.7)
1997	15.6	(2.3)	19.9	(3.4)	27.3	(2.6)	22.0	(1.7)	84.8	(6.1)
1998	37.2	(3.8)	45.3	(4.1)	30.9	(2.5)	21.3	(2.2)	134.8	(7.2)
1999	43.2	(5.2)	69.1	(6.7)	40.4	(3.9)	21.6	(2.4)	174.3	(14.2)
2000	15.6	(3.9)	53.5	(6.6)	26.9	(2.2)	12.2	(1.4)	108.3	(10.8)
2001	37.1	(6.7)	40.1	(6.3)	34.1	(4.5)	12.5	(1.5)	123.9	(15.3)
2002	19.5	(2.6)	32.1	(4.7)	25.5	(3.5)	24.0	(2.2)	101.1	(9.7)
2003	20.8	(4.4)	23.9	(2.4)	30.1	(2.8)	17.9	(1.7)	92.7	(4.2)
2004	29.6	(5.5)	64.8	(12.2)	38.7	(5.7)	29.7	(3.4)	162.8	(23.9)

Dataset = cfdpsher.d04

Table 39. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in each area of Herrington Lake in 2004; confidence intervals are in parentheses.

Area	Species	No. fish > stock size	PSD	RSD_{15}
Lower	Largemouth bass	138	52 (± 8)	29 (± 8)
Middle	Largemouth bass	641	46 (± 4)	18 (± 3)
Upper	Largemouth bass	220	65 (± 6)	32 (± 6)
Total	Largemouth bass	999	51 (± 3)	22 (± 3)

Dataset = cfdpsher.d04

Table 40. Age frequency and CPUE (no./hour) per inch class of largemouth bass collected during 7.5 hours of electrofishing at Herrington Lake during May 2004. 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	5	7	9	23	53	109	45															251	21	33.47	6.03
2						16	156	151	52	52	49	13										489	40	65.20	11.59
3										30	39	78	86	44								277	23	36.98	5.26
4													25	18	27	6						75	6	10.00	1.21
5														18		19	15	2				53	4	7.12	0.97
6														18	13			4				35	3	4.70	0.54
7																	5					18	1	2.43	0.32
8																		2		1		3	0	0.43	0.11
9																6						6	1	0.83	0.18
10																		2				2	0	0.29	0.08
11																			8	1	1	10	1	1.33	0.36
Total	5	7	9	23	53	125	201	151	52	82	88	91	111	97	53	31	20	11	8	2	1	1221	100	162.80	23.85
%	0	1	1	2	4	10	16	12	4	7	7	7	9	8	4	3	2	1	1	0	0	100			

Dataset = cfdagher.d03 and cfdpsher.d04

Table 41. Electrofishing catch rate (fish/hour) of each age of largemouth bass collected from Herrington Lake from 1995-2004.

	Year									
Age	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
1	9.7	12.7	17.2	38.5	17.8	13.1	28.2	16.7	20.9	33.5
2	15.1	16.4	15.0	33.4	27.4	24.9	41.4	27.9	28.0	65.2
3	18.5	13.3	16.0	26.3	14.3	24.2	15.1	11.9	26.9	37.0
4	8.6	8.7	10.8	11.6	17.8	28.4	17.4	13.3	6.0	10.0
5	5.9	9.9	9.2	9.3	6.7	9.1	9.8	12.5	4.1	7.1
6	4.5	6.7	5.6	6.3	6.5	4.3	4.4	6.2	2.9	4.7
7	2.7	3.2	2.7	2.9	6.8	1.2	2.6	5.4	1.6	2.4
8	3.5	4.2	3.0	2.9	1.0	1.7	2.3	3.2	0.5	0.4
9	3.1	2.9	2.7	2.0	2.3	1.3	1.6	1.8	0.5	0.8
10	2.1	1.9	1.9	1.2	0.6	0.1	1.0	2.2	0.3	0.3
11	1.2	1.0	0.9	0.5					0.9	1.33

Table 42. Population assessment from largemouth bass collected from Herrington Lake during May 2004.

Parameter	Value	Assessment Score
Length at age 3	13.7 ± 0.2	4
Spring CPUE of Age 1	33.47 ± 6.03	2
Spring CPUE 12-14.9 in fish	38.67 ± 5.69	4
Spring CPUE ≥ 15.0-in fish	29.73 ± 3.39	4
Spring CPUE ≥ 20.0-in fish	1.47 ± 0.41	2
Instantaneous mortality (z)	0.514	
Anural mortality (A)	40.2%	
Total Score		16
Assessment Rating		Good

Table 43. Length distribution and CPUE (no./hour) of largemouth bass collected in 4.5 hours of 15-minute electrofishing runs for black bass in Herrington Lake in September 2004: numbers in parentheses are standard errors.

	Inch Class																			
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE
Lower																				
Largemouth bass		1	5	3	4	9	6	4	8		1		1			1			43	28.7 (4.4)
Middle																				
Largemouth bass	5	5	4	14	17	10	12	7	5	4	4	3	3	5	2		1	1	102	68.0 (11.6)
Upper																				
Largemouth bass	2	3	8	11	9	8	9	3	4	6	5	11	8	8	3	1	2	2	103	51.5 (5.5)
Total																				
Largemouth bass	7	9	17	28	30	27	27	14	17	10	10	14	12	13	5	2	3	3	248	49.6 (5.4)

Dataset = cfdwrher.d04

Table 44. Number of fish and the relative weight (Wr) for each length category of largemouth bass collected at Herrington Lake on 20-22 September 2004. Standard errors are in parentheses.

Species	Area	Size Range							
		8.0 – 11.9 in		12.0 – 14.9 in		≥ 15.0 in		Total	
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Lower	18	86.1 (1.3)	2	85.6 (5.8)	1	87.4	21	86.1 (1.1)
	Middle	28	91.1 (3.6)	10	92.6 (2.7)	9	95.2 (4.9)	47	92.2 (2.4)
	Upper	22	91.0 (2.0)	24	99.6 (1.6)	16	96.7 (2.7)	62	95.8 (1.3)
	Total	68	89.7 (1.7)	36	96.9 (1.5)	26	95.8 (2.3)	130	92.9 (1.1)

Dataset = cfdwrher.d04

Table 45. 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		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2001	Total	4.5	0.1	18.3	2.9	5.9	0.9	16.7	2.2
2002	Total	4.6	0.2	9.8	2.0	4.9	1.2	20.9	4.3
2003	Total	4.6	0.1	51.1	6.0	27.3	5.3	33.5	6.0
2004	Total	4.9	0.1	15.6	3.0	9.0	2.1		

LAKE LEVELS WERE HELD STABLE 2004 SPRING APR 15 TO MAY 15, SLIGHT FLUXS DUE TO RAINFALL

Table 46. Species composition, relative abundance, and CPUE of crappie collected in 4.5 hours of 15-minute electrofishing runs in Herrington Lake, March 2004; numbers in parenthesis are standard errors.

	Inch Class													
Location/Species	3	4	5	6	7	8	9	10	11	12	13	14	Total	CPUE
Upper														
White crappie							1	1	1				3	1.71 (1.19)
Black crappie						2		4	3	4	3	2	18	10.29 (5.30)
Middle														
White crappie					2	7	7	3	1		2		22	14.67 (4.81)
Black crappie						1	1	1			1		4	2.67 (1.98)
Lower														
White crappie	1		8	3	25	46	17	10	6	4	1		121	79.20 (23.95)
Black crappie	1			2	1			4	1		1		10	6.40 (2.99)
Total														
White crappie	1		8	3	27	53	25	14	8	4	3		146	27.56 (10.10)
Black crappie	1			2	1	3	1	9	4	4	5	2	32	6.67 (2.33)

Dataset = cfdpsher.d04

Table 47. PSD and RSD_{10} values calculated for crappie collected at Herrington Lake in electrofished during March 2004.

Species	No. fish > stock size	PSD	RSD_{10}
White crappie	145	74 (± 7)	20 (± 7)
Black crappie	31	90 (± 11)	77 (± 15)

Dataset = cfdpsher.d04

Table 48. Mean back calculated lengths (in.) at each annulus for otoliths from white crappie electrofished at Herrington Lake in 2004.

		Age				
Year Class	No.	1	2	3	4	5
2002	123	4.1	8.4			
2001	10	3.6	7.8	10.8		
2000	8	3.9	7.9	10.4	11.8	
1999	3	3.2	7.1	9.8	11.2	12.2
Mean	144	4.0	8.3	10.5	11.6	12.2
Smallest		2.8	5.2	8.6	9.6	10.9
Largest		6.6	10.7	12.3	13.4	13.1
Std Error		0.1	0.1	0.2	0.3	0.7
95% ConLo		3.9	8.1	10.1	10.9	10.9
95% ConHi		4.1	8.5	10.9	12.3	13.6

Intercept value = 0.00
Dataset = cfdagher.d04

Table 49. Age frequency and CPUE (no./hour) per inch class of white crappie electrofished at Herrington Lake in 2004.

	Inch Class												STD
Age	5	6	7	8	9	10	11	12	13	Total	%	CPUE	ERR
1										0	0	0.00	
2	8	3	27	53	23	9				123	85	23.13	8.69
3					1	4	5			10	7	1.91	0.71
4					1		3	3	2	9	6	1.70	0.76
5						1		1	2	3	2	0.71	0.30
Total	8	3	27	53	25	14	8	4	3	145	100	27.56	10.10
(%)	6	2	19	37	17	10	6	3	2	100			

Dataset = cfdpsher.d04 and cfdagher.d04
CPUE of ≥ 8 in. crappie = 21.11 ± 7.19; ≥ 10 in. = 5.78 ± 2.27

Table 50. Mean back calculated lengths (in.) at each annulus for otoliths from black crappie electrofished at Herrington Lake in 2004.

		Age				
Year Class	No.	1	2	3	4	5
2003	1	3.2				
2002	6	4.5	9.0			
2001	12	3.9	7.6	10.0		
2000	12	4.7	9.3	12.0	13.3	
1999	1	3.4	5.0	7.4	9.2	10.2
Mean	32	4.3	8.4	10.9	13.0	10.2
Smallest		3.2	4.9	6.8	9.2	10.2
Largest		5.6	10.7	12.9	14.2	10.2
Std Error		0.1	0.3	0.3	0.4	
95% ConLo		4.0	7.9	10.2	12.3	
95% ConHi		4.5	9.0	11.5	13.7	

Intercept value = 0.00
Dataset = cfdagher.d04

Table 51. Age frequency and CPUE (no./hour) per inch class of black crappie collected during 4.5 hours of electrofishing at Herrington Lake in 2004.

	Inch Class													STD
Age	3	6	7	8	9	10	11	12	13	14	Total	%	CPUE	ERR
1	1										1	3	0.11	0.11
2		1	1	1		3					6	20	1.31	0.43
3		1		2	1	5	4				13	39	2.67	1.20
4								4	5	2	11	34	2.33	1.26
5						1					1	4	0.25	0.09
Total	1	2	1	3	1	9	4	4	5	2	32	100	6.67	2.33
%	3	6	3	9	3	28	13	13	16	6	100			

Dataset = cfdtnher.d04 and cfdagher.d04
CPUE of ≥ 8 in. crappie = 6.11 ± 2.35; ≥ 10 in. = 5.22 ± 2.00

Table 52. Length distribution and CPUE (no./hour) of white bass and hybrid striped bass collected during 18 net-nights of gill netting in Herrington Lake in October 2004: numbers in parentheses are standard errors.

Species	Inch Class																		Total	CPUE
	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	26		
White bass	2	2	13	45	60	48	4	7	1	1									183	10.17 (3.68)
Hybrid striped bass		2	4	2	2	1						5	8	10	4	5	5	2	50	2.78 (1.10)

Dataset = cfdgnher.d04

Table 53. Mean back calculated lengths (in.) at each annulus for otoliths from hybrid striped bass gill netted at Herrington Lake in 2004.

		Age					
Year Class	No.	1	2	3	4	5	6
2003	2	7.3					
2002	17	12.6	18.4				
2001	12	10.4	17.3	20.5			
2000	3	13.2	18.9	21.7	22.9		
1999	3	14.2	18.9	21.2	22.7	23.5	
1998	3	13.0	18.6	21.1	22.6	23.8	24.6
Mean	46	11.9	18.2	20.9	22.7	23.7	24.6
Smallest		4.6	12.3	18.7	21.1	21.8	23.3
Largest		14.7	20.6	23.1	24.2	25.5	26.5
Std Error		0.4	0.2	0.3	0.4	0.6	1.0
95% ConLo		11.0	17.7	20.3	22.0	22.5	22.6
95% ConHi		12.7	18.7	21.4	23.4	24.8	26.5

Intercept Value = 0.00
Dataset = cfdagher.d04

Table 54. Age frequency and CPUE (no./net day) per inch class of hybrid striped bass gill netted for 18 net nights at Herrington Lake in 2004.

	Inch Class													STD
Age	9	10	13	19	20	21	22	23	24	26	Total	%	CPUE	ERR
0+	2	3									5	11	0.28	0.24
1+		1	1								2	4	0.11	0.07
2+				3	7	7					17	37	0.94	0.38
3+				2	1	3	3	2	1		12	27	0.68	0.30
4+								2	1		3	7	0.18	0.09
5+							1		1	1	3	7	0.18	0.10
6+								1	1	1	3	7	0.18	0.10
Total	2	4	1	5	8	10	4	5	5	2	46	100	2.78	1.10
%	4	9	2	11	17	22	9	11	11	4	100			

Dataset = cfdagher.d04 and cfdgnher.d04

Table 55. Number of fish and the relative weight (Wr) for each length category of hybrid striped bass collected at Herrington Lake in October 2004.

Size range					
8.0 – 11.9 inch		12.0 – 14.9 inch		≥ 15.0 inch	
No.	Wr	No.	Wr	No.	Wr
8	97.12	3	95.10	39	88.13
	(1.57)		(4.24)		(1.13)

Dataset = cfdgnher.d04

Table 56. Population assessment for hybrid striped bass gill netted at Herrington Lake in October 2004.

Parameter	Actual Value	Assessment Value
CPUE of hybrid striped bass (excluding age 0)	2.50 ± 1.07	1
Mean age-2+ length at capture	20.78 ± 0.15	4
CPUE of fish ≥ 15.0 in	2.17 ± 0.93	1
CPUE of age 1 hybrid striped bass	0.11 ± 0.07	1
Instantaneous mortality (z)	0.605	
Annual mortality (A)	45.4%	
Assessment Total		7
Assessment Rating		Fair

Table 57. Mean back calculated lengths (in.) at each annulus for otoliths from white bass gill netted at Herrington Lake in 2004.

		Age Class							
Year Class	No.	1	2	3	4	5	6	7	8
2003	96	9.6							
2002	4	9.1	12.5						
2001	4	11.0	13.3	14.7					
2000	3	8.8	12.2	14.3	15.5				
1998	1	8.0	12.3	13.6	14.3	14.8	15.2		
1996	1	5.9	10.2	13.3	14.3	15.0	15.4	16.2	16.5
Mean	109	9.6	12.5	14.3	15.0	14.9	15.3	16.2	16.5
Smallest		4.0	9.3	13.1	14.3	14.8	15.2	16.2	16.5
Largest		12.0	14.3	15.4	16.2	15.0	15.4	16.2	16.5
Std Error		0.1	0.5	0.3	0.4	0.1	0.1		
95% ConLo		9.3	11.6	13.9	14.3	14.7	15.0		
95% ConHi		9.9	13.4	14.8	15.7	15.0	15.6		

Intercept Value = 0.00
Dataset = cfdagher.d04

Table 58. Age frequency and CPUE (no./net day) per inch class of white bass gill netted for 18 net nights at Herrington Lake in 2004.

	Inch Class													STD
Age	8	9	10	11	12	13	14	15	16	17	Total	%	CPUE	ERR
0+	2										2	1	0.11	0.08
1+		2	13	43	60	48					166	91	9.22	3.44
2+				2			1	2			5	3	0.30	0.11
3+							3	2			5	3	0.26	0.10
4+								2	1		3	2	0.17	0.08
6+								1			1	1	0.06	0.03
8+										1	1	1	0.06	0.06
Total	2	2	13	45	60	48	4	7	1	1	183	100	10.17	3.68
%	1	1	7	.25	33	26	2	4	1	1	100			

Dataset = cfdagher.d04 and cfdgnher.d04

Table 59. Number of fish and the relative weight (Wr) for each length category of white bass collected at Herrington Lake in October 2004.

Size range					
6.0 – 8.9 inch		9.0 – 11.9 inch		≥ 12.0 inch	
No.	Wr	No.	Wr	No.	Wr
		60	92.96 (0.57)	121	95.96 (0.50)

Dataset = cfdgnher.d04

Table 60. Population assessment for white bass gill netted at Herrington Lake in October 2004.

Parameter	Actual Value	Assessment Value
CPUE of white bass (excluding age 0)	10.06 ± 3.69	3
Mean age-2+ length at capture	13.9 ± 0.9	4
CPUE of fish ≥ 12.0 in	6.72 ± 2.45	3
CPUE of age 1 white bass	9.22 ± 3.44	3
Instantaneous mortality (z)	0.9981	
Annual mortality (A)	63.1%	
Assessment Total		13
Assessment Rating		Good

Table 61. Fishery statistics derived from a daytime creel survey at Herrington Lake (2,410 acres) during 7 March through 31 October 2004.

Fishing Trips		
No. of fishing trips (per acre)	12,878	(5.34)
Fishing Pressure		
Total man-hours (S.E.)[a]	72,958	(1,861)
Man-hours/acre	30.27	
Catch / Harvest		
No. of fish caught (S.E.)	79,836	(8,260)
No. of fish harvested (S.E.)	27,343	(3,532)
Lb of fish harvested	13,606	
Harvest Rates		
Fish/hour	0.37	
Lb/hour	0.45	
Fish/acre	11.35	
Lb/acre	5.65	
Catch Rates		
Fish/hour	1.10	
Fish/acre	33.13	
Miscellaneous Characteristics		
Male	88.23	
Female	11.77	
Resident	98.06	
Non-resident	1.94	
Method (%)		
Still fishing	41.40	
Casting	50.81	
Fly	0.16	
Trolling	7.63	
Mode (%)		
Boat	90.16	
Bank	5.48	
Dock	4.35	

[a] S.E. = Standard Error

Table 62. Fish harvest derived from a creel survey on Herrington Lake (2,410acres) from 7 March to 31 October 2004.

	Black bass group	Largemouth bass	Smallmouth bass	Spotted bass	Illegal bass	Crappie group	White crappie	Black crappie	Catfish group	Channel catfish	Flathead catfish
No. caught	10,448.12	8,567.98	31.84	1,888.30	45.95	8,457.88	5,740.64	2,717.24	1,598.23	926.17	672.06
(per acre)	(4.35)	(3.56)	(0.01)	(0.78)	(0.02)	(3.51)	(2.38)	(1.13)	(0.66)	(0.38)	(0.28)
No. harvested	1,992.20	1,378.86	16.88	596.45	45.95	6,002.09	3,805.62	2,196.47	1,369.65	778.92	590.73
(per acre)	(0.83)	(0.57)	(0.01)	(0.25)	(0.02)	(2.49)	(1.58)	(0.91)	(0.57)	(0.32)	(0.25)
% of total no. harvested	7.29	5.04	0.06	2.18	0.17	21.95	13.92	8.03	5.00	2.84	2.16
Lb harvested	2,388.9	1,933.3	17.5	438.1	22.7	2,107.8	1,319.7	788.1	2,679.8	1,137.4	1,542.4
(per acre)	(0.99)	(0.80)	(0.01)	(0.18)	(0.01)	(0.87)	(0.55)	(0.33)	(1.11)	(0.47)	(0.64)
% of total lb harvested	17.56	14.21	0.13	3.22	0.17	15.49	9.70	5.79	19.70	8.36	11.34
Mean length (in)		14.0	13.0	12.03	10.3		9.3	9.5		17.2	20.1
Mean weight (lb)		1.40	1.04	0.76	0.54		0.37	0.46		1.69	3.44
No. of fishing trips for that species	4,206.65					1,599.15			1,011.31		
% of all trips	32.67					12.41			7.85		
Hours fished for that species (per acre)	23,832.28 (9.89)					9,059.81 (3.76)			5,729.45 (2.38)		
No. harvested fishing for that species	1,568					5,896			1,079		
Lb harvested fishing for that species	1,860.8					2,059.4			2,173.6		
No./hour harvested fishing for that species	0.065					0.655			0.136		
% success fishing for that species	11.93					53.60			30.22		

Table 62 (cont). Fish harvest derived from a creel survey on Herrington Lake (2,410 acres) from 7 March to 31 October 2004.

	Panfish group	Bluegill	Rock bass	Warmouth	Morone group	Hybrid striped bass	White bass	Carp	Buffalo	Drum	Gar	Anything
No. caught	46,266.88	45,948.35	174.49	144.04		7,957.73	4,528.36	72.35	29.96	296.19	94.761	
(per acre)	(19.20)	(19.07)	(0.07)	(0.07)		(3.30)	(1.88)	(0.03)	(0.01)	(0.12)	(0.04)	
No. harvested	12,170.51	12,047.70	78.38	44.43		3,058.84	2,395.02		29.96	248.83	29.96	
(per acre)	(5.05)	(5.00)	(0.03)	(0.02)		(1.27)	(0.99)		(0.01)	(0.10)	(0.01)	
% of total no. harvested	44.51	44.06	0.29	0.16		11.19	8.76		0.11	0.91	0.11	
Lb harvested	2,008.1	1,982.5	18.7	6.9		2,654.3	914.9		245.8	513.6	69.8	
(per acre)	(5.05)	(5.00)	(0.03)	(0.02)		(1.10)	(0.38)		(0.10)	(0.21)	(0.03)	
% of total lb harvested	14.76	14.57	0.14	0.05		19.51	6.72		1.81	3.77	0.51	
Mean length (in)		6.5	7.0	6.0		13.0	9.6		24.5	16.6	30.0	
Mean weight (lb)		0.17	0.24	0.16		1.25	0.42		8.20	1.91	2.33	
No. of fishing trips for that species	1,960.76				2,404.14							1,695.91
% of all trips	15.23				18.67							13.17
Hours fished for that species (per acre)	11,108.47 (4.61)				13,620.39 (5.65)							9,608.00 (3.99)
No. harvested fishing for that species	10,649				5,220							
Lb harvested fishing for that species	1,716.6				3,481.5							
No./hour harvested fishing for that species	1.128				0.310							
% success fishing for that species	45.58				18.75							11.74

Table 63. Length distribution (Length of released fish are estimated) for each species of fish harvested at Herrington Lake from 7 March – 31 October 2004.

	Inch Class																												
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	34
Largemouth bass																													
Harvested										360	360	240	165	45	75	105	15		14										
Released						1901	29	2618	586	819	328	298	238	119	119	119		16											
Smallmouth bass																													
Harvested											17																		
Released										15																			
Spotted bass																													
Harvested							15	73	73	233	202																		
Released						131	15	653	160	174	87	58	14																
White crappie																													
Harvested				30	236	1180	1298	546	236	162	74	30	14																
Released			171	942	514	154	120	17						17															
Black crappie																													
Harvested					165	873	722	226	196	14																			
Released				394	127																								
Bluegill																													
Harvested			989	6198	4234	627																							
Released		4199	25756	3188	758																								
Rock bass																													
Harvested					78																								
Released				41	55																								
Warmouth																													
Harvested			15	15	14																								
Released			43	57																									
Hybrid striped bass																													
Harvested						76	551	1025	551	275	31	15	76	15	15	92	31	31	31	76	122	31				15			
Released					31	946	473	1984		1038		15	122	15	31	107	15	46		15	15	15		15	16				
White bass																													
Harvested					114	323	874	817	57	190			20																
Released				33	116	695	910	298		81																			
Channel catfish																													
Harvested							16	16	31	140	16	78	78	47	62	47	62	62	16	16	16	16	31		16	13			
Released						55		18		37	18						19												
Flathead catfish																													
Harvested									14	43	43	14	43	115	29	72	29		29	43	14	14	29	14	14		14		18
Released						14				41			14															12	

Table 63 (cont). Length distribution (Length of released fish are estimated) for each species of fish harvested at Herrington Lake from 7 March – 31 October 2004.

	Inch Class																												
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	36
Gar																													
Harvested																						15							15
Released																										13		39	
Buffalo																													
Harvested																					15			15					
Drum																													
Harvested									31			47	16	16	16	16	31	16	31	29									
Released																24						24		11					
Carp																													
Released																						24							
Illegal bass																													
Harvested						15			31																				

Table 64. Black bass catch and harvest statistics derived from a creel survey at Herrington Lake (2,410 acres) for black bass caught and released by all anglers from 7 March to 31 October 2004.

	Largemouth bass Catch and Release				Spotted bass Catch and Release				Smallmouth bass Catch and Release			
	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 no of bass	1,378.9	1,445.0	610.5	8,568.0	596.5	319.0	13.9	1,888.3	16.9	15.0		31.8
% of black bass harvested by no.	69.2				29.9				0.9			
Total weight of fish (lbs)	1,933.3	1,910.0	808.1	6,710.8	438.1	169.0	6.6	1,119.7	17.5	12.2		29.7
% of black bass harvest by weight	80.9				18.3				0.8			
Mean length	14.0				12.0				13.0			
Mean weight	1.40				0.76				1.03			
Rate (fish/h)	0.018				0.008				t			

Table 65. Monthly black bass angling success at Herrington Lake during the 2004 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
March	970.6	138.65	616.12	3,490.56	915	0.27	139	0.04
April	1,274.5	297.39	526.56	2,983.16	1,094	0.34	297	0.09
May	1,958.6	607.83	610.33	3,457.78	1,486	0.35	456	0.11
June	1,766.8	263.46	593.43	3,362.00	1,486	0.43	185	0.05
July	1,632.6	464.33	731.20	4,142.54	1,214	0.34	270	0.08
August	513.9	42.82	292.09	1,654.79	385	0.22	43	0.02
September	980.4	87.99	245.06	1,388.37	641	0.45	88	0.06
October	1,390.8	89.73	591.85	3,353.08	1,182	0.33	90	0.03
Total	10,488.1	1,992.20	4,206.65	23,832.28	8,403		1,568	0.07
Mean						0.35		

t = < 0.01

Table 66. Crappie catch and harvest statistics derived from a creel survey at Herrington Lake (2,410 acres) for crappie caught and released by all anglers from 7 March to 31 October 2004.

	White crappie				Black crappie			
		Catch and Release				Catch and Release		
	Harvest	6.0-8.9 in.	≥ 9.0 in.	Total	Harvest	6.0-8.9 in.	≥ 9.0 in.	Total
Total no of crappie	3,805.62	1,610.0	154.0	5,740.6	2,196.5	520.8	0.0	2,717.2
% of crappie harvested by no.	63.4				36.6			
Total weight of fish (lbs)	1,319.7	217.0	20.3	1,580.0	788.1	59.1	0.0	847.2
% of crappie harvest by weight	62.6				37.4			
Mean length	9.3				9.5			
Mean weight	0.37				0.46			
Rate (fish/h)	0.05				0.03			

Table 67. Monthly crappie angling success at Herrington Lake during the 2004 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
March	1,469.72	748.73	216.78	1,228.16	1,443	1.09	749	0.57
April	1,221.41	977.13	334.64	1,895.84	1,200	0.58	966	0.46
May	1,603.99	1,215.66	401.74	2,276.01	1,537	0.81	1,165	0.61
June	170.48	46.49	36.18	205.00	170	1.45	46	0.39
July	59.91		15.39	87.21	45	0.55		
August	107.06		10.07	57.06	107	0.91		
September	804.46	666.20	110.86	628.07	805	0.96	667	0.80
October	3,020.84	2,347.88	473.48	2,682.46	2,976	1.25	2,303	0.97
Total	8,457.88	6,002.09	1,599.15	9,059.81	8,283		5,896	
Mean						0.90		0.66

Table 68. Catch and harvest statistics derived from a creel survey at Herrington Lake (2,410 acres) for Morones caught and released by all anglers from 7 March to 31 October 2004.

	White bass				Hybrid striped bass			
		Catch and Release				Catch and Release		
	Harvest	8.0 – 14.9 in.	≥ 15.0 in.	Total	Harvest	8.0 – 14.9 in.	≥ 15.0 in.	Total
Total no of morones	2,395.0	1,984.35	0.0	4,528.36	3,058.8	4,456.0	411.9	7,957.7
% of Morones harvested by no.	43.9%				56.1%			
Total weight of fish (lbs)	914.9	663.5	0.0	1,628.4	2,654.3	2,697.0	250.2	5,619.5
% of Morones harvest by weight	25.6%				74.4%			
Mean length	9.6				13.0			
Mean weight	0.42				1.25			
Rate (fish/h)	0.025				0.040			

Table 69. Monthly morone angling success at Herrington Lake during the 2004 creel survey.

Month	Total no. of Morones caught by all anglers	Total no. of Morones harvested by all anglers	No. of fishing trips for Morones	Hours fished by Morone anglers	Morones caught by Morone anglers	Morone caught/hr by Morone anglers	Morone harvested by Morone anglers	Morone harvested/hr by Morone anglers
March	1,331.07	1,136.95	182.55	1,034.24	1,276	1.35	1,137	1.21
April	371.73	201.80	182.08	1,031.56	233	0.28	116	0.14
May	4,862.63	1,806.60	494.45	2,801.24	4,154	1.59	1,689	0.65
June	3,161.55	1,534.28	586.19	3,321.00	3,114	0.85	1,534	0.42
July	1,857.30	434.37	415.63	2,354.70	1,812	0.63	419	0.15
August	406.82	299.76	176.26	998.58	407	0.31	300	0.23
September	465.08	25.14	204.22	1,156.97	465	0.34	25	0.02
October	29.91	14.95	162.76	922.10	15	0.01		
Total	12,486.09	5,453.86	2,404.14	13,620.39	11,476		5,220	
Mean						0.71		0.31

Table 70. Catch and harvest statistics derived from a creel survey at Herrington Lake (2,410 acres) for catfish caught and released by all anglers from 7 March to 31 October 2004.

	Channel catfish				Flathead catfish			
		Catch and Release				Catch and Release		
	Harvest	12.0-14.9 in.	≥ 15.0 in.	Total	Harvest	12.0-14.9 in.	≥ 15.0 in.	Total
Total no of catfish	778.9	55.0	19.2	926.2	590.7	41.0	26.3	1,658.6
% of catfish harvested by no.	56.9%				43.1%			
Total weight of fish (lbs)	1,137.4	32.0	9.4	1,221.8	1,542.4	58.0	39.2	1,658.6
% of catfish harvest by weight	42.4%				57.6%			
Mean length	17.2				20.1			
Mean weight	1.69				3.44			
Rate (fish/h)	0.01				0.01			

Table 71. Monthly catfish angling success at Herrington Lake during the 2004 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
March	221.84	166.38	22.82	129.28	194	0.78	166	0.67
April	42.48	42.48	24.61	139.40	21	0.22	21	0.22
May	168.84	135.07	61.81	350.15	51	0.12	51	0.12
June	216.97	201.47	166.45	943.00	139	0.13	139	0.13
July	569.17	479.30	369.45	2,093.07	480	0.15	420	0.13
August	171.29	149.88	95.68	542.09	150	0.27	139	0.25
September	87.99	75.42	122.53	694.18	38	0.05	38	0.05
October	119.64	119.64	147.96	838.27	105	0.08	105	0.08
Total	1,598.23	1,369.65	1,011.31	5,729.45	1,178		1,079	
Mean						0.15		0.14

HERRINGTON LAKE ANGLER ATTITUDE SURVEY 2004

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 Herrington Lake? (check all that apply)
Bass **80** Crappie **64** Hybrid Striped Bass **57** White Bass **42** Channel Catfish **37** Flathead Catfish **33** Other **25**

4. Which one species do you fish for most at Herrington Lake? (Check only one)
Bass **54.6%** Crappie **21.7%** Hybrid Striped Bass **7.2%** White Bass **4.1%** Channel Catfish **5.2%** Flathead Catfish **4.1%** Other **3.1%**

-Ask following questions relevant to each species fished for- (see question 3)

Bass Anglers

5. What level of satisfaction do you have with bass fishing at Herrington Lake?
Very satisfied **10.3%** Somewhat satisfied **36.8%** Neutral **31.0%** Somewhat dissatisfied **10.3%** Very dissatisfied **11.5%**

6. Do you support or oppose the current 12-inch size limit on largemouth bass at the lake?
Support **73.6 %** Oppose **15.4%** No opinion **11.0%**

6a. What size limit would you prefer on largemouth bass at the lake? current (12") **69.1%** 15" **26.2%** Other **4.8%**

7. Do you support or oppose "no size limit" on spotted bass at the lake? Support **55.0%** Oppose **27.5%** No opinion **17.6%**

7a. What size limit would you prefer on spotted bass at the lake? current (None) **59.5%** 12" **28.6%** 15" **11.9%**

Crappie Anglers

8. What level of satisfaction do you have with crappie fishing at Herrington Lake?
Very satisfied **6.9%** Somewhat satisfied **29.2%** Neutral **26.4%** Somewhat dissatisfied **19.4%** Very dissatisfied **18.1%**

9. Do you support or oppose the current "No Size Limit" on crappie at the lake? Support **50.7%** Oppose **38.4%** No opinion **11.0%**

9a. What size limit would you prefer? Current (none) **51.4%** 8" **8.6%** 9" **22.9%** 10" **17.1%**

10. Do you support or oppose the 30 fish daily creel limit on crappie at the lake? Support **80.8%** Oppose **13.7%** No opinion **5.5%**

10a. What daily creel limit would you prefer? Current (30) **84.1%** 20 **2.9%** 15 **10.1%** 10 **1.5%** Other **1.5%**

Hybrid Striped Bass/White Bass Anglers

11. What level of satisfaction do you have with hybrid striped bass fishing at Herrington Lake?
Very satisfied **31.9%** Somewhat satisfied **29.2%** Neutral **25.0%** Somewhat dissatisfied **11.1%** Very dissatisfied **12.9%**

12. What level of satisfaction do you have with the white bass fishing at Herrington Lake?
Very satisfied **17.1%** Somewhat satisfied **34.3%** Neutral **28.6%** Somewhat dissatisfied **7.1%** Very dissatisfied **12.9%**

13. Do you support or oppose the current "20 fish daily creel limit, with only 5 over 15 inches" regulation on hybrid striped bass and white bass at the lake? Support **72.9%** Oppose **15.7%** No opinion **11.4%**

13a. What regulation on hybrid striped bass and white bass would you prefer?
Current **75.8%** 10 fish creel only 5 over 15 inches **16.7%** Other **7.6%**

Catfish Anglers

14. What level of satisfaction do you have with the channel catfish fishing at Herrington Lake?
Very satisfied **7.0%** Somewhat satisfied **24.6%** Neutral **49.1%** Somewhat dissatisfied **14.0%** Very dissatisfied **5.3%**

15. Do you support or oppose the no size limit regulation on channel catfish at the lake? Support **75.4%** Oppose **17.5%**
No Opinion **7.0%**

15a. What size limit would you prefer on channel catfish at the lake? Current (none) **77.4%** 12" **13.2 %** 14" **9.4%**

16. Do you support or oppose the no creel limit regulation on channel catfish at the lake? Support **66.1%** Oppose **19.6%**
No opinion **7.0%**

16a. What creel limit would you prefer on channel catfish at the lake? Current (none) **67.3%** 5 **3.9%** 15 **19.2%** 30 **7.7%** Other **1.9%**

17. What level of satisfaction do you have with the flathead catfish fishing at Herrington Lake?
Very satisfied **5.2%** Somewhat satisfied **34.5%** Neutral **37.9%** Somewhat dissatisfied **19.0%** Very dissatisfied **3.5%**

18. Do you support or oppose the no size limit regulation on flathead catfish at the lake? Support **76.4%** Oppose **14.6%** No Opinion **9.1%**

18a. What size limit would you prefer on flathead catfish at the lake? Current (none) **79.6%** 20" **16.7%** Other **3.7%**

19. Do you support or oppose the no creel limit regulation on flathead catfish at the lake? Support **70.2%** Oppose **22.8%** No Opinion **7.0%**

19a. What creel limit would you prefer on flathead catfish at the lake? Current (none) **64.8%** 5 **9.3%** 15 **14.8%** 30 **9.3%** Other **1.9%**

Based on 103 returned surveys out of 750 survey (13.7% return rate)

Table 72. Species composition, relative abundance, and CPUE of black bass collected in 3.0 hours of 15-minute electrofishing runs in Guist Creek Lake, April 2004; numbers in parenthesis 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	Total	CPUE
Largemouth bass	1	24	31	9	4	23	47	46	36	59	80	51	43	42	32	37	26	15	9	2	617	205.7 (17.0)

Dataset = cfdpsgcl.d04

Table 73. Electrofishing CPUE data (no./hour) for each size group of largemouth bass collected from Guist Creek Lake from 1992-2004; numbers in parentheses are standard errors.

	Inch Class									
Year	< 8.0		8.0 - 11.9		12.0 - 14.9		≥ 15.0		All sizes	
1992	12.0	(2.1)	16.8	(2.7)	38.4	(5.2)	41.2	4.7	108.4	(7.2)
1993	22.7	(2.6)	25.5	(2.7)	23.8	(2.7)	51.6	(5.0)	123.6	(9.1)
1994	19.2	(2.7)	29.8	(3.7)	19.6	(2.6)	40.2	(3.9)	108.8	(8.6)
1995	18.2	(3.0)	40.6	(3.8)	23.2	(2.4)	47.2	(5.5)	129.2	(9.2)
1996	32.6	(5.5)	28.8	(3.6)	44.8	(2.8)	58.2	(5.2)	164.4	(10.6)
1997	NS									
1998	20.3	(3.1)	45.3	(4.9)	18.7	(3.5)	72.7	(12.3)	157.0	(14.5)
1999	53.5	(6.9)	56.8	(10.2)	41.7	(6.3)	51.3	(3.4)	203.3	(19.4)
2000	26.7	(6.1)	19.3	(2.4)	23.0	(2.9)	41.3	(5.4)	110.3	(7.6)
2001	39.0	(5.3)	42.0	(3.6)	17.3	(2.7)	46.3	(5.2)	144.7	(10.1)
2002	43.3	(9.9)	32.3	(7.7)	23.3	(3.1)	41.3	(7.8)	134.3	(18.6)
2003	27.7	(6.7)	96.7	(9.9)	31.0	(4.6)	49.7	(4.0)	205.0	(19.7)
2004	30.7	(6.0)	62.7	(6.5)	58.0	(7.0)	54.3	(5.9)	205.7	(17.0)

Dataset = cfdpsgcl.d04

Table 74. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Guist Creek Lake in 2004; confidence intervals are in parentheses.

Species	No. fish > stock size	PSD	RSD_{15}
Largemouth bass	525	64 (± 4)	31 (± 4)

Dataset = cfdpsgcl.d04

Table 75. Age frequency and CPUE (no./hour) per inch class of largemouth bass collected during 7.5 hours of electrofishing at Guist Creek Lake during May 2004. 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	Total	%	CPUE	ERR
1	1	24	31	9	1																66	11	22.11	4.79
2					3	23	47	29													101	16	33.81	4.58
3								6	24												30	5	9.92	1.41
4								6	12	30	32	17									96	16	32.08	2.69
5								6		30	32	34	24	17							142	23	47.31	4.62
6											16		14	25	9						65	10	21.56	2.16
7													5		18	9					32	5	10.77	1.78
8															5	14	11	2			32	5	10.58	1.69
9																14	11	2			27	4	9.05	1.60
10																	4	9			12	2	4.10	0.79
11																		2	6		8	1	2.71	0.60
12																			3	2	5	1	1.67	0.57
Total	1	24	31	9	4	23	47	46	36	59	80	51	43	42	32	37	26	15	9	2	617	100	205.67	17.02
%	0	4	5	1	1	4	8	7	6	10	13	8	7	7	5	6	4	2	1	0	100			

Dataset = cfdaggcl.d01 and cfdpsgcl.d04

Table 76. Electrofishing catch rate (fish/hour) of each age of largemouth bass collected from Guist Creek Lake from 1999-2004.

	Year					
Age	1999	2000	2001	2002	2003	2004
1	50.8	16.8	25.7	23.8	16.3	22.1
2	31.3	19.8	32.9	30.1	58.3	33.8
3	12.9	4.5	7.5	6.3	18.3	9.9
4	32.9	11.4	11.2	12.0	29.9	32.1
5	17.1	17.1	20.3	19.7	33.7	47.3
6	11.0	13.8	15.4	11.6	16.9	21.6
7	14.6	6.1	10.3	8.9	10.6	10.8
8	8.8	10.0	8.3	8.6	8.8	10.6
9	9.4	4.7	6.4	7.3	6.9	9.1
10	9.8	2.2	3.7	3.4	4.6	4.1
11	1.9	3.9	1.8	1.6	2.0	2.7
12	1.3		0.6	1.1	1.6	1.7

Table 77. Population assessment from largemouth bass collected from Guist Creek Lake during April 2004.

Parameter	Value	Assessment Score
Length at age 3*	10.2 ± 0.3	2
Spring CPUE of Age 1	22.11 ± 4.79	2
Spring CPUE 12-14.9 in fish	58.00 ± 6.95	4
Spring CPUE ≥ 15.0-in fish	54.33 ± 5.88	4
Spring CPUE ≥ 20.0-in fish	3.67 ± 1.04	3
Instantaneous mortality (z)	0.240	
Annual mortality (A)	21.3%	
Total Score		15
Assessment Rating		Good

* 2001 Age and growth dataset was used

Table 78. Length distribution and CPUE (no./hour) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Guist Creek Lake in September 2004: numbers in parentheses are standard errors.

Species	Inch Class																			Total	CPUE
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
Largemouth bass	1	32	27	2	22	41	18	5	11	25	10	16	20	7	9	5	2	3		256	170.7 (16.0)

Dataset = cfdwrgcl.d04

Table 79. Number of fish and the relative weight (Wr) for each length category of largemouth bass collected at Guist Creek Lake on 13 September 2004. Standard errors are in parentheses.

Species	Area	Size Range							
		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	54	88.8 (1.0)	46	95.4 (1.2)	26	99.1 (1.5)	126	93.3 (0.8)

Dataset = cfdwrgcl.d04

Table 80. 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		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2000	Total	3.6	0.1	19.5	4.0	0.0		25.7	5.3
2001	Total	3.9	0.1	65.3	14.0	1.0	0.5	23.8	6.7
2002	Total	4.7	0.1	47.3	7.6	19.3	2.8	16.3	3.3
2003	Total	4.0	0.1	30.7	8.2	6.0	2.0	22.1	4.8
2004	Total	4.0	0.1	40.7	6.0	0.7	0.7		

Table 81. Length distribution and CPUE (no./hour) of hybrid striped bass and yellow bass collected during 8 net-nights of gill netting in Guist Creek Lake in October 2004: numbers in parentheses are standard errors.

Species	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	Total	CPUE
Hybrid striped bass		1	7	1		3	3	1	1	1	1		2	1	2	1	3	3	1	2	1	2	37	4.63 (0.89)
Yellow bass	64	271	6																					42.63 (11.73)

Dataset = cfdgngcl.d04

Table 82. Mean back calculated lengths (in.) at each annulus for otoliths from hybrid striped bass gill netted at Guist Creek Lake in 2004.

		Age						
Year Class	No.	1	2	3	4	5	6	7
2003	7	6.8						
2002	9	8.6	14.1					
2001	6	8.9	16.5	20.3				
2000	1	9.2	14.6	18.4	22.1			
1999	5	8.0	15.0	20.6	23.9	25.0		
1997	1	11.2	18.9	22.9	24.6	26.0	26.4	26.9
Mean	29	8.2	15.2	20.4	23.7	25.2	26.4	26.9
Smallest		5.4	11.4	18.4	22.1	23.9	26.4	26.9
Largest		11.4	18.9	22.9	25.3	26.2	26.4	26.9
Std Error		0.3	0.4	0.3	0.4	0.3		
95% ConLo		7.6	14.4	19.8	22.9	24.5		
95% ConHi		8.8	16.0	21.1	24.6	25.8		

Intercept Value = 0.00
Dataset = cfdaggcl.d04

Table 83. Age frequency and CPUE (no./net day) per inch class of hybrid striped bass gill netted for 8 net nights at Guist Creek Lake in 2004.

	Inch Class																						STD
Age	7	8	9	11	12	13	14	15	16	18	19	20	21	22	23	24	25	26	27	Total	%	CPUE	ERR
0+	1	7																		8	22	1.00	0.38
1+			1	3	3															7	19	0.88	0.35
2+						1	1	1	1	2	1	2								9	24	1.13	0.40
3+													1	3	2					6	16	0.75	0.32
4+															1					1	3	0.13	0.09
5+																1	2	1	1	5	14	0.63	0.25
7+																			1	1	3	0.13	0.08
Total	1	7	1	3	3	1	1	1	1	2	1	2	1	3	3	1	2	1	2	37	100	4.63	0.89
%	3	19	3	8	8	3	3	3	3	5	3	5	3	8	8	3	5	3	5	100			

Dataset = cfdaggcl.d04 and cfdgngcl.d04

Table 84. Number of fish and the relative weight (Wr) for each length category of hybrid striped bass collected at Guist Creek Lake in October 2004.

Size range					
8.0 – 11.9 inch		12.0 – 14.9 inch		≥ 15.0 inch	
No.	Wr	No.	Wr	No.	Wr
11	75.59 (1.67)	5	70.82 (2.01)	20	83.00 (2.02)

Dataset = cfdgngcl.d03

Table 85. Population assessment for hybrid striped bass gill netted at Herrington Lake in October 2004.

Parameter	Actual Value	Assessment Value
CPUE of hybrid striped bass (excluding age 0)	3.63 ± 0.71	1
Mean age-2+ length at capture	17.4 ± 0.8	3
CPUE of fish ≥ 15.0 in	2.50 ± 0.68	2
CPUE of age 1+ hybrid striped bass	0.88 ± 0.35	1
Instantaneous mortality (z)	0.3356	
Annual mortality (A)	28.5%	
Assessment Total		7
Assessment Rating		Fair

Table 86. Length frequency, relative abundance, and CPUE of largemouth bass collected in 2.0 hours of 15-minute electrofishing runs in Beaver Lake, April 2004; numbers in parenthesis are standard errors.

	Inch Class																				
Location/Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Largemouth bass	8	98	53	22	128	177	75	63	81	58	25	13	4	3	7	9	7	2	2	835	417.5 (20.3)

Dataset = cfdpsbvr.d04

Table 87. Electrofishing CPUE data (no./hour) for each size group of largemouth bass collected from Beaver Lake from 1992-2004; numbers in parentheses are standard errors.

	Inch Class									
Year	< 8.0		8.0 - 11.9		12.0 - 14.9		≥ 15.0		All sizes	
1992	7.1	(2.1)	105.3	(8.6)	4.9	(1.1)	19.1	4.8	136.4	(5.6)
1993	22.5	(3.9)	59.5	(5.3)	76.0	(7.9)	13.0	(4.3)	171.0	(12.2)
1994	22.5	(2.8)	5.5	(2.5)	41.5	(3.3)	28.5	(4.5)	96.5	(6.9)
1995	73.0	(8.4)	37.5	(5.9)	10.0	(3.8)	34.0	(7.0)	154.5	(9.9)
1996	81.0	(11.6)	47.0	(6.3)	8.0	(2.0)	37.5	(2.9)	173.5	(17.8)
1997	84.5	(12.2)	99.5	(16.7)	8.5	(2.1)	42.5	(9.6)	235.0	(34.1)
1998	36.0	(4.2)	206.5	(17.6)	14.5	(4.8)	30.5	(6.6)	287.5	(22.8)
1999	42.0	(11.0)	71.5	(7.3)	17.0	(2.6)	22.0	(3.5)	152.5	(18.1)
2000	56.0	(7.7)	26.5	(5.6)	28.5	(2.2)	24.5	(2.9)	137.0	(9.8)
2001	142.5	(8.6)	66.5	(8.6)	25.5	(1.5)	39.0	(6.1)	273.5	(17.1)
2002	55.5	(10.8)	97.0	(13.6)	16.0	(2.1)	32.0	(4.9)	200.5	(26.8)
2003	142.5	(9.1)	131.5	(12.9)	20.0	(3.0)	18.0	(2.4)	312.0	(20.4)
2004	154.5	(5.5)	198.0	(15.1)	48.0	(7.5)	17.0	(3.7)	417.5	(20.3)

Dataset = cfdpsbvr.d04

Table 88. Age frequency and CPUE (no./hour) per inch class of largemouth bass collected during 2.00 hours of electrofishing at Beaver Lake during April 2004. 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	8	98	53	22	14															195	23	97.6	5.0
2					114	157	45	6												332	39	160.9	12.4
3						20	15	17	29		8									90	11	44.8	3.4
4							15	40	52	58	17	8	4	1						194	23	97.0	8.9
5												5		1	4	2				11	1	5.6	1.1
6																				0	0	0.0	
7														1		4	5			9	1	4.6	1.5
8														1	4	4	2			10	1	5.0	1.3
11																		2	2	4	0	2.0	0.8
Total	8	98	53	22	128	177	75	63	81	58	25	13	4	3	7	9	7	2	2	835	100	417.5	20.3
%	1	12	6	3	15	21	9	8	10	7	3	2	0	0	1	1	1	0	0	100			

Dataset = cfdagbvr.d03 and cfdpsbvr.d04

Table 89. Electrofishing catch rate (fish/hour) of each age of largemouth bass collected from Beaver Lake from 1999-2004.

	Year					
Age	1999	2000	2001	2002	2003	2004
1	25.5	33.1	47.8	35.4	133.2	97.6
2	25.4	36.8	149.0	96.8	68.8	160.9
3	27.7	7.5	14.4	19.9	29.8	44.8
4	50.4	29.4	14.3	11.5	64.4	97.0
5	3.4	13.3	15.3	9.5	5.6	5.6
6	0.4	6.2	15.6	9.4	0.0	0.0
7	5.3	1.9	4.8	4.6	3.5	4.6
8	3.5	1.3	2.6	2.5	5.3	5.0
9	2.6	1.2	5.7	7.1	0.5	0.0
10	0.7	0.3	1.4	1.9	0.0	0.0
11	5.8	1.4	0.5	0.8	0.5	2.0
12	1.8	0.7	2.2	1.2	0.5	0.0

Table 90. Population assessment from largemouth bass collected from Beaver Lake during April 2004.

Parameter	Value	Assessment Score
Length at age 3*	10.7 ± 0.43	2
Spring CPUE of Age 1	97.61 ± 5.01	4
Spring CPUE 12-14.9 in fish	48.00 ± 7.45	3
Spring CPUE ≥ 15.0-in fish	17.00 ± 3.68	3
Spring CPUE ≥ 20.0-in fish	2.00 ± 0.76	3
Instantaneous mortality (z)	0.471	
Annual Mortality (A)	37.6%	
Total Score		15
Assessment Rating		Good

* 2003 Age and growth dataset was used

Table 91. Length distribution and CPUE (no./hour) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Beaver Lake in September 2004: numbers in parentheses are standard errors.

Species	Inch Class																	Total	CPUE
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
Largemouth bass	5	86	34	5	7	55	69	108	102	79	37	21	3	3	1	1	2	618	412.0 (40.3)

Dataset = cfdwrbvr.d04

Table 92. Number of fish and the relative weight (Wr) for each length category of largemouth bass collected at Beaver Lake on 9 September 2004. Standard errors are in parentheses.

Species	Area	Size Range							
		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	80	80.4 (0.6)	43	78.6 (1.2)	7	98.1 (3.8)	130	80.8 (0.7)

Dataset = cfdwrbvr.d04

Table 93. 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		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2000	Total	3.7	0.1	127.3	32.9	6.7	2.2	47.8	5.7
2001	Total	4.6	0.1	139.3	28.1	40.7	13.9	35.4	8.9
2002	Total	4.4	0.1	104.0	7.5	19.3	4.6	133.2	9.3
2003	Total	3.7	0.1	117.3	22.0	0.0		97.6	5.0
2004	Total	3.7	0.1	86.7	17.1	3.3	1.6		

Table 94. Species composition, relative abundance, and CPUE of bluegill and redear sunfish collected in 1.25 hours of 7.5-minute electrofishing runs in Beaver Lake, May 2004; numbers in parenthesis are standard errors.

Species	Length Class									Total	CPUE
	0	1	2	3	4	5	6	7	8		
Bluegill	1	17	27	71	45	32	86	93		372	297.6 (56.4)
Redear sunfish				11	23	14	10	45	4	136	108.8 (17.1)

Dataset = cfdpsbvr.d04

Table 95. PSD and RSD values calculated for sunfish collected during 1.25 hours of electrofishing at Beaver Lake during May 2004. Fish were collected in 7.5-minute runs.

Species	No. fish > stock size	PSD	RSD
Bluegill	327	55 (± 5)	0
Redear sunfish	125	62 (± 9)	3 (± 3)

Bluegill = RSD-8; Redear = RSD-9
Dataset = cfdntvl.d04

Table 96. Electrofishing CPUE data (no./hour) for each size group of bluegill collected from Beaver Lake from 1992-2004; numbers in parentheses are standard errors.

	Inch Class											
Year	< 3.0		3.0 - 5.9		6.0 - 7.9		≥ 8.0		≥ 10.0		All Sizes	
1992	1.3	(0.9)	54.2	(10.2)	80.9	(15.1)	0.0		0.0		136.4	(24.0)
1993	2.5	(1.1)	47.0	(6.2)	79.5	(10.0)	0.0		0.0		129.0	(12.6)
1994	2.5	(1.1)	130.0	(21.0)	20.0	(4.0)	0.0		0.0		152.5	(24.2)
1995	2.0	(1.1)	174.0	(18.4)	16.5	(4.7)	0.0		0.0		192.5	(17.3)
1996	0.5	(0.5)	184.5	(27.3)	65.5	(11.5)	0.0		0.0		250.5	(34.5)
1997	2.5	(1.1)	58.0	(12.6)	86.5	(14.4)	0.5	(0.5)	0.0		147.5	(27.4)
1998	0.5	(0.5)	28.0	(4.3)	88.0	(15.0)	0.5	(0.5)	0.0		117.0	(19.0)
1999	14.0	(4.5)	13.0	(5.5)	10.5	(3.0)	0.0		0.0		37.5	(8.3)
2000	50.0	(12.7)	322.0	(23.1)	32.0	(13.6)	7.5	(3.8)	0.0		411.5	(41.2)
2001	19.0	(5.1)	211.5	(16.0)	122.0	(15.2)	0.0		0.0		352.5	(20.2)
2002	5.6	(1.7)	175.2	(22.9)	152.8	(27.7)	0.0		0.0		333.6	(44.7)
2003	33.6	(6.4)	141.6	(17.5)	128.8	(21.9)	0.0		0.0		304.0	(30.1)
2004	36.0	(16.0)	118.4	(32.4)	143.2	(29.3)	0.0		0.0		297.6	(56.4)

Dataset = cfdpsbvr.d04

Table 97. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from Beaver Lake in 2004.

		Age					
Year	No.	1	2	3	4	5	6
2003	8	2.4					
2002	23	2.1	3.9				
2001	7	2.0	3.8	5.6			
2000	6	2.5	4.5	5.8	6.6		
1999	8	2.1	4.2	5.6	6.4	7.1	
1998	2	1.6	4.4	5.4	5.9	6.2	6.5
Mean	54	2.1	4.0	5.6	6.4	6.9	6.5
Smallest		1.1	2.9	4.7	5.3	5.8	6.2
Largest		3.0	5.7	6.3	6.9	7.6	6.8
Std Error		0.1	0.1	0.1	0.1	0.2	0.3
95% ConLo		2.0	3.8	5.5	6.1	6.5	5.9
95% ConHi		2.3	4.2	5.8	6.6	7.3	7.1

Intercept value = 0.00
Dataset = cfdagbvr.d04

Table 98. Age frequency and CPUE (no./hour) per inch class of bluegill collected during 1.25 hours of electrofishing at Beaver Lake during May 2004. Fish were collected in 7.5-minute runs.

	Inch Class											STD
Age	0	1	2	3	4	5	6	7	Total	%	CPUE	ERR
1	1	17	22						40	11	31.68	14.51
2			5	71	45	6			128	34	102.24	30.83
3						22			22	6	17.92	5.27
4							48	16	63	17	50.62	10.87
5						3	19	78	100	27	79.85	16.04
6							19		19	5	15.29	3.59
Total	1	17	27	71	45	32	86	93	372	100	297.60	56.44
%	0	5	7	19	12	9	23	25	100			

Dataset = cfdagbvr.d04 and cfdpsbvr.d04

Table 99. Electrofishing catch rate (fish/hour) of each age of bluegill collected from Beaver Lake from 1994-2004.

	Year					
Age	1999	2000	2001	2002	2003	2004
1	12.7	62.0	44.8	10.2	31.1	31.7
2	11.9	243.2	167.7	70.4	100.1	102.2
3	3.9	52.1	140.0	201.7	26.4	17.9
4	6.3	43.5		49.5	119.6	50.6
5	0.7	3.2		1.8	26.8	79.9
6						15.3

Table 100. Population assessment for spring-collected bluegill collected from Beaver Lake in May 2004.

Parameter	Actual Value	Assessment Value
Mean length age-2 at capture	3.9 ± 0.1	2
Years to 6 inches	3 - 3+	3
CPUE of fish ≥ 6.0 in	143.2 ± 29.3	4
CPUE of fish ≥ 8.0 in	0.00	1
Assessment Total		10
Assessment Rating		Fair

Table 101. Electrofishing CPUE data (no./hour) for each size group of redear sunfish collected from Beaver Lake from 1992-2004; numbers in parentheses are standard errors.

	Inch Class											
Year	< 3.0		3.0 - 5.9		6.0 - 7.9		≥ 8.0		≥ 10.0		All Sizes	
1992	0.4	(0.4)	10.2	(2.8)	90.2	(12.9)	1.8	(1.0)	0.4	(0.4)	102.7	(13.2)
1993	0.0		2.0	(1.5)	57.0	(10.7)	5.0	(2.0)	0.0		64.0	(12.2)
1994	0.0		6.5	(1.8)	8.0	(2.6)	2.5	(1.3)	0.0		17.0	(4.1)
1995	0.0		2.0	(1.1)	12.5	(3.6)	7.0	(2.7)	0.0		21.5	(5.2)
1996	0.0		6.0	(2.0)	5.5	(2.5)	8.0	(2.6)	0.0		19.5	(5.1)
1997	0.0		13.0	(1.8)	9.0	(2.1)	8.0	(1.7)	0.0		30.0	(1.5)
1998	0.0		3.5	(1.2)	9.0	(2.0)	9.5	(4.6)	0.0		22.0	(5.7)
1999	0.0		0.0		0.5	(0.5)	7.5	(1.8)	2.0	(1.1)	8.0	(2.0)
2000	1.0	(0.7)	5.5	(2.0)	3.5	(1.8)	6.0	(2.0)	1.5	(1.1)	16.0	(3.7)
2001	0.5	(0.5)	34.5	(6.9)	30.0	(6.8)	8.5	(2.9)	0.5	(0.5)	73.5	(10.5)
2002	0.0		49.6	(11.1)	77.6	(18.1)	7.2	(3.9)	0.8	(0.8)	134.4	(27.8)
2003	0.8	(0.8)	21.6	(6.1)	87.2	(15.0)	7.2	(3.3)	0.0		116.8	(20.0)
2004	0.0		38.4	(9.0)	44.0	(8.7)	26.4	(7.4)	0.0		108.8	(17.1)

Dataset = cfdpsbvr.d04

Table 102. Age frequency and CPUE (no./hour) per inch class of redear sunfish collected during 1.25 hours of electrofishing at Beaver Lake during May 2004. Fish were collected in 7.5-minute runs.

	Inch Class										STD
Age	3	4	5	6	7	8	9	Total	%	CPUE	ERR
1	11							11	8	8.80	3.67
2		23	13					36	26	28.48	6.89
3			1	9	8			17	13	13.98	2.29
4				1	38	29	4	72	53	57.54	11.57
Total	11	23	14	10	45	29	4	146	100	108.80	17.08
%	8	17	10	7	33	21	3	100			

Dataset = cfdagbvr.d03 and cfdpsbvr.d04

Table 103. Electrofishing catch rate (fish/hour) of each age of redear sunfish collected from Beaver Lake from 1999-2004.

	Year					
Age	1999	2000	2001	2002	2003	2004
1	0.0	2.0	11.4	0.3	2.4	8.8
2	0.0	3.7	48.6	37.9	18.3	28.5
3	1.0	2.8	4.5	61.7	37.8	14.0
4	1.2	5.2	4.5	30.8	58.3	57.5
5	1.4	0.7	4.0	2.9		
6	4.5	1.8		0.8		

Table 104. Population assessment for spring collected redear sunfish collected from Beaver Lake in May 2004.

Parameter	Actual Value	Assessment Value
Mean length age-3 at capture*	6.6 ± 0.2	4
Years to 8 inches*	4 - 4+	3
CPUE of fish ≥ 8.0 in	26.40 ± 7.36	4
CPUE of fish ≥ 10.0 in	0.00	1
Assessment Total		12
Assessment Rating		Good

* 2003 age and growth dataset was used

Table 105. Number of fish and the relative weight (Wr) for each length category of largemouth bass, bluegill and redear sunfish collected at Beaver Lake on 9 September 2004. Standard errors are in parentheses.

	Size Range							
Species	No.	Wr	No.	Wr	No.	Wr	No.	Wr
	3.0 – 5.9 in		6.0 – 7.9 in				Total	
Bluegill	50	84.6 (2.9)	12	89.4 (1.8)			62	85.6 (2.4)
	1.0 – 3.9 in		4.0 – 6.9 in		7.0 – 9.0 in		Total	
Redear sunfish	7	85.7 (5.4)	13	89.2 (2.3)	8	93.3 (2.8)	28	89.5 (1.8)

Dataset = cfdwrbvr.d04

Table 106. Length frequency, relative abundance, and CPUE of largemouth bass collected in 2.0 hours of 15-minute electrofishing runs in Boltz Lake, April 2004; numbers in parenthesis are standard errors.

	Inch Class																				
Location/Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Largemouth bass	3	23	76	7	19	32	9	12	24	23	7	9	16	11	11	5	4	3	1	835	417.5 (20.3)

Dataset = cfdpsbol.d04

Table 107. Electrofishing CPUE data (no./hour) for each size group of largemouth bass collected from Boltz Lake from 1991-2004; numbers in parentheses are standard errors.

	Inch Class									
Year	< 8.0		8.0 - 11.9		12.0 - 14.9		≥ 15.0		All sizes	
1991			43.6	(4.9)	10.8	(2.0)	6.5	(1.2)	60.8	(6.6)
1993	25.2	(6.4)	70.0	(4.8)	12.0	(2.3)	7.3	(2.2)	114.8	(8.9)
1994	48.4	(9.5)	45.0	(5.7)	32.4	(6.5)	3.6	(1.4)	129.6	(9.6)
1995	155.2	(10.8)	50.0	(3.3)	31.5	(3.9)	6.0	(1.7)	242.4	(10.4)
1997	34.8	(8.6)	183.6	(29.4)	36.8	(4.6)	14.4	(2.2)	268.8	(38.6)
1998	43.2	(6.0)	172.0	(18.8)	22.4	(3.3)	9.6	(2.2)	247.2	(24.8)
1999	87.2	(16.6)	184.8	(42.4)	90.4	(16.0)	13.8	(6.8)	560.0	(31.2)
2000	92.0	(30.4)	148.0	(7.7)	226.4	(18.4)	8.8	(2.9)	475.2	(16.8)
2001	24.0	(5.2)	212.8	(15.8)	133.6	(13.0)	9.6	(3.5)	380.0	(26.3)
2002	5.6	(2.7)	101.6	(20.1)	67.2	(11.4)	45.6	(9.2)	220.0	(27.3)
2003	10.7	(2.9)	39.3	(10.4)	61.3	(12.9)	40.0	(5.0)	151.3	(25.1)
2004	64.0	(12.9)	38.5	(4.9)	19.5	(4.4)	25.5	(5.9)	147.5	(22.9)

Dataset = cfdpsbol.d04

Table 108. Age frequency and CPUE (no./hour) per inch class of largemouth bass collected during 2.00 hours of electrofishing at Boltz Lake during April 2004. 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	3	23	76																	102	35	51.0	10.0
2				7	19	29														55	19	27.4	4.2
3						3	7	6	88											33	11	16.3	3.0
4							2	6	13	13	3	5	1							42	14	21.1	4.4
5									3	2	2	2	1			1				11	4	5.6	1.0
6												1	7	4	2		2			16	5	7.8	2.2
7											1	1	7	4	7	1				20	7	10.2	2.2
8											1			4	2	2				9	3	4.3	0.9
9											1						2	3		6	2	2.8	1.0
10																1			1	2	1	1.0	0.5
Total	3	23	76	7	19	32	9	12	24	23	7	9	16	11	11	5	4	3	1	295	100	147.5	22.9
%	1	8	26	2	6	11	3	4	8	8	2	3	5	4	4	2	1	1	0	100			

Dataset = bbrscbol.d03 and cfdpsbol.d04

Table 109. Electrofishing catch rate (fish/hour) of each age of largemouth bass collected from Boltz Lake from 1997-2004.

	Year							
Age	1997	1998	1999	2000	2001	2002	2003	2004
1	0.4	25.9	77.7	55.0	0.8	0.8	0.0	51.0
2	71.4	45.8	86.1	52.6	29.6	11.2	16.1	27.4
3	72.8	71.4	212.2	50.8	115.3	101.8	23.8	16.3
4	61.5	70.5	92.2	115.0	81.6	27.2	47.0	21.1
5	33.0	11.8	47.8	132.0	42.3	18.8	16.5	5.6
6	14.2	7.9	30.2	62.2	55.3	18.1	15.4	7.8
7	9.8	6.1	3.5	5.2	41.9	23.0	20.9	10.2
8	1.8	2.2	3.4	1.6	10.1	12.0	8.2	4.3
9	2.2	3.2	3.5	0.8	3.2	7.0	2.6	2.8
10	1.3	1.0	2.7				0.8	1.0
11	0.4	1.0	1.1					

Table 110. Population assessment from largemouth bass collected from Boltz Lake during April 2004.

Parameter	Value	Assessment Score
Length at age 3*	10.6 ± 0.3	2
Spring CPUE of Age 1	51.00 ± 9.99	3
Spring CPUE 12-14.9 in fish	19.50 ± 4.37	1
Spring CPUE ≥ 15.0-in fish	25.50 ± 5.90	3
Spring CPUE ≥ 20.0-in fish	2.00 ± 0.76	3
Instantaneous mortality (z)	0.363	
Annual Mortality (A)	30.4%	
Total Score		12
Assessment Rating		Good

* 2003 Age and growth dataset was used

Table 111. Length frequency, relative abundance, and CPUE of largemouth bass collected in 2.0 hours of 15-minute electrofishing runs in Bullock Pen Lake, April 2004; numbers in parenthesis are standard errors.

	Inch Class																	
Location/Species	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Largemouth bass	2	11	21	13	8	21	31	26	33	22	29	27	22	10	4	1	281	140.5 (13.4)

Dataset = cfdpsbpl.d04

Table 112. Electrofishing CPUE data (no./hour) for each size group of largemouth bass collected from Bullock Pen Lake from 1991-2004; numbers in parentheses are standard errors.

	Inch Class									
Year	< 8.0		8.0 - 11.9		12.0 - 14.9		≥ 15.0		All sizes	
1991			36.6		22.8		16.4		75.2	
1994	10.0	(2.3)	17.5	(2.8)	37.6	(3.6)	40.0	(9.9)	104.0	(12.4)
1995	7.0	(1.6)	36.4	(4.7)	33.2	(4.4)	40.8	(5.6)	117.6	(9.9)
1996	10.5	(2.5)	26.5	(4.6)	26.0	(6.0)	30.5	(6.1)	93.6	(11.6)
1997	18.0	(3.5)	71.6	(8.7)	34.4	(3.3)	34.4	(6.1)	158.4	(17.3)
1998	18.0	(4.4)	43.6	(4.8)	39.6	(9.2)	33.2	(7.2)	139.2	(19.2)
1999	14.0	(3.6)	40.4	(4.0)	35.2	(4.0)	38.4	(12.0)	128.0	(14.0)
2000	15.1	(4.8)	35.5	(5.0)	21.0	(3.1)	42.4	(9.8)	113.5	(6.5)
2001	9.0	(3.2)	33.5	(4.3)	38.5	(7.2)	66.0	(15.2)	147.2	(16.4)
2002	6.5	(1.7)	29.5	(3.0)	41.5	(7.2)	54.5	(10.4)	132.0	(16.5)
2003	9.0	(2.5)	19.5	(2.3)	32.5	(4.1)	56.5	(8.8)	117.5	(9.8)
2004	6.5	(1.3)	31.5	(3.7)	45.0	(8.5)	57.5	(11.4)	140.5	(13.4)

Dataset = cfdpsbpl.d04

Table 113. Age frequency and CPUE (no./hour) per inch class of largemouth bass collected during 2.00 hours of electrofishing at Bullock Pen Lake during April 2004. Fish were collected in 15-minute runs.

	Inch Class																			STD
Age	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	%	CPUE	ERR
1																	0	0	0.0	0.0
2	2	10	19	3	1												34	12	17.1	2.3
3		1	2	8	7	14	16	3									50	18	24.8	1.7
4				3		5	12	10	4	2	12						48	17	23.8	3.0
5					1	2	3	8	22	7		5					47	17	23.5	2.8
6								3	7	7	6	5	6				32	12	16.2	2.5
7										4	12	9	6				31	11	15.3	3.1
8								3		2			6	2			12	4	6.2	1.2
9												5	6	2			12	4	6.0	1.4
10														4			4	1	2.0	1.1
11												5			2	1	8	3	3.8	0.8
12														2	2		4	1	2.0	0.5
Total	2	11	21	13	8	21	31	26	33	22	29	27	22	10	4	1	281	100	140.5	13.4
%	1	4	7	5	3	7	11	9	12	8	10	10	8	4	1	0	100			

Dataset = bbrscbpl.d03 and cfdpsbpl.d04

Table 114. Electrofishing catch rate (fish/hour) of each age of largemouth bass collected from Bullock Pen Lake from 1997-2004.

	Year							
Age	1997	1998	1999	2000	2001	2002	2003	2004
1	1.2	3.0	4.0	6.8	0.0	0.5	1.8	0.0
2	26.7	21.4	18.6	13.0	17.7	11.4	14.6	17.1
3	40.8	25.7	26.8	15.4	19.6	32.9	13.8	24.8
4	29.8	30.5	29.6	12.5	19.3	14.3	18.4	23.8
5	20.6	16.7	22.7	13.7	20.5	35.5	21.1	23.5
6	10.5	10.9	5.4	11.1	18.9	13.6	16.4	16.2
7	11.9	7.2	6.2	9.9	25.8	11.3	15.9	15.3
8	7.9	9.5	11.3	14.5	12.3	6.6	5.8	6.2
9	4.4	2.6	2.4	9.0	10.2	2.7	5.2	6.0
10	1.4	2.8	0.6	6.5	2.6	1.4	1.2	2.0
11	1.0	2.7		0.8			2.8	3.8
12	2.2	0.6				0.7	0.6	2.0

Table 115. Population assessment from largemouth bass collected from Bullock Pen Lake during April 2004.

Parameter	Value	Assessment Score
Length at age 3*	10.7 ± 0.3	2
Spring CPUE of Age 1	0.00 ± 0.00	0
Spring CPUE 12-14.9 in fish	45.00 ± 8.51	3
Spring CPUE ≥ 15.0-in fish	57.50 ± 11.41	4
Spring CPUE ≥ 20.0-in fish	2.50 ± 1.05	3
Instantaneous mortality (z)	0.267	
Annual Mortality (A)	23.4%	
Total Score		12
Assessment Rating		Good

* 2003 Age and growth dataset was used

Table 116. Length frequency, relative abundance, and CPUE of largemouth bass collected in 2.0 hours of 15-minute electrofishing runs in Corinth Lake, April 2004; numbers in parenthesis are standard errors.

	Inch Class																			
Location/Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE
Largemouth bass	4	23	12		7	45	39	30	41	53	25	2	4	1	1		2	2	291	145.5 (8.0)

Dataset = cfdpscor.d04

Table 117. Electrofishing CPUE data (no./hour) for each size group of largemouth bass collected from Corinth Lake from 1992-2004; numbers in parentheses are standard errors.

	Inch Class									
Year	< 8.0		8.0 - 11.9		12.0 - 14.9		≥ 15.0		All sizes	
1992	31.0	(9.3)	22.5	(5.3)	5.0	(2.6)	0		58.5	(9.8)
1993	34.0	(8.2)	111.3	(11.5)	7.3	(2.4)	2.0	(1.4)	154.7	(13.5)
1996	53.5	(10.1)	174.5	(16.7)	14.5	(2.0)	4.5	(1.6)	247.0	(18.1)
1998	15.5	(3.2)	111.5	(9.8)	19.0	(3.0)	4.0	(1.7)	150.0	(14.4)
1999	137.0	(14.2)	56.5	(5.2)	24.5	(4.3)	3.5	(1.2)	221.5	(16.4)
2000	312.8	(47.0)	136.0	(18.2)	22.4	(6.5)	4.8	(2.3)	476.0	(63.7)
2001	127.2	(16.6)	231.2	(8.0)	20.8	(5.1)	9.6	(3.2)	388.8	(13.5)
2002	40.7	(8.1)	153.3	(21.7)	13.3	(2.9)	16.7	(2.8)	224.0	(28.7)
2003	58.0	(13.6)	146.0	(16.4)	23.3	(3.8)	6.0	(2.0)	233.3	(28.2)
2004	23.0	(4.8)	77.5	(5.0)	40.0	(4.3)	5.0	(1.5)	145.5	(8.0)

Dataset = cfdpscor.d04

Table 118. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Corinth Lake in 2004; confidence intervals are in parentheses.

Species	No. fish > stock size	PSD	RSD_{15}
Largemouth bass	245	37 (± 6)	4 (± 2)

Dataset = cfdpscor.d04

Table 119. Age frequency and CPUE (no./hour) per inch class of largemouth bass collected during 2.00 hours of electrofishing at Corinth Lake during April 2004. 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	19	20	Total	%	CPUE	ERR
1	4	23	12		3													42	14	21.06	5.11
2					3	36	28	7										74	25	37.07	2.30
3					1	9	11	20	10									51	17	25.33	2.31
4								3	31	53	19	1	3					109	38	54.75	6.03
5											6	1	1	1				9	3	4.31	0.56
6															1	2		3	1	1.45	0.62
7															1			1	0	0.25	0.25
8													1					1	0	0.29	0.19
9																	2	2	1	1.00	1.00
Total	4	23	12		7	45	39	30	41	53	25	2	4	1	1	2	2	291	100	145.50	8.03
%	1	8	4		2	15	13	10	14	18	9	1	1	0	0	1	1	100			

Dataset = bbrsccor.d03 and cfdpscor.d04

Table 120. Electrofishing catch rate (fish/hour) of each age of largemouth bass collected from Corinth Lake from 1994-2004.

	Year					
Age	1999	2000	2001	2002	2003	2004
1	120.4	293.2	63.4	35.3	54.3	21.1
2	36.6	57.0	134.2	26.3	68.0	37.1
3	34.5	62.5	119.1	114.1	53.8	25.3
4	9.8	34.0	34.0	24.3	49.3	54.8
5	15.7	19.0	25.5	2.4	3.3	4.3
6	1.0	3.9	8.2	6.4	1.9	1.5
7	2.0	2.4	2.7	2.2	0.7	0.3
8	5	0.8	1.6	2.9	0.8	0.3
9	2.6	3.2			1.3	1.0
10	0.7					
11	5.8					
12	1.8					

Table 121. Population assessment from largemouth bass collected from Corinth Lake during April 2004.

Parameter	Value	Assessment Score
Length at age 3*	10.1 ± 0.3	2
Spring CPUE of Age 1	21.06 ± 5.11	2
Spring CPUE 12-14.9 in fish	40.00 ± 4.34	3
Spring CPUE ≥ 15.0-in fish	5.00 ± 1.46	2
Spring CPUE ≥ 20.0-in fish	1.00 ± 1.00	2
Instantaneous mortality (z)	0.660	
Annual mortality (A)	48.3%	
Total Score		11
Assessment Rating		Fair

* 2003 Age and growth dataset was used

Table 122. Length distribution and CPUE (no./hour) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Corinth Lake on 9 September 2004: 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	3	51	53	4	2	33	18	5	9	18	9	1	4	3	3	2	1	219	146.0 (12.5)

Dataset = cfdwrcor.d04

Table 123. Number of fish and the relative weight (Wr) for each length category of largemouth bass collected at Corinth Lake on 9 September 2004. Standard errors are in parentheses.

Species	Area	Size Range							
		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	50	83.3 (0.8)	14	89.4 (2.5)	9	103.7 (2.0)	734	87.0 (1.1)

Dataset = cfdwrcor.d04

Table 124. 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		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
1999	Total	4.3	0.1	74.0	12.3	8.0	2.9	293.2	46.0
2000	Total	4.3	0.1	35.3	7.4	3.3	1.9	63.4	10.9
2001	Total	4.6	0.1	112.7	15.6	32.0	6.8	35.3	7.4
2002	Total	4.6	0.1	163.3	13.7	42.0	4.5	54.3	13.4
2003	Total	4.1	0.1	73.7	9.2	4.6	1.8	21.1	5.1
2004	Total	4.0	0.1	74.0	6.2	2.7	1.3		

Table 125. Species composition, relative abundance, and CPUE of bluegill and redear sunfish collected in 1.25 hours of 7.5-minute electrofishing runs in Corinth Lake, May 2004; numbers in parenthesis are standard errors.

Species	Length Class												Total	CPUE
	1	2	3	4	5	6	7	8	9	10	11	12		
Bluegill	1	21	86	82	50	43	34						317	253.6 (22.7)
Redear sunfish		1	7	4	6	15	7	5	1	7	8	3	64	51.2 (6.8)

Dataset = cfdpscor.d04

Table 126. PSD and RSD values calculated for sunfish collected during 1.25 hours of electrofishing at Corinth Lake during May 2004. Fish were collected in 7.5-minute runs.

Species	No. fish > stock size	PSD	RSD
Bluegill	295	26 (± 5)	0
Redear sunfish	56	55(± 13)	34 (± 13)

Bluegill = RSD-8; Redear = RSD-9
Dataset = cfdpscor.d04

Table 127. Electrofishing CPUE data (no./hour) for each size group of bluegill collected from Corinth Lake from 1992-2004; numbers in parentheses are standard errors.

	Inch Class											
Year	< 3.0		3.0 - 5.9		6.0 - 7.9		≥ 8.0		≥ 10.0	All Sizes	
1992	3.0	(1.7)	36.0	(24.9)	49.0	(8.5)	10.0	(5.5)	0.0	98.0	(30.4)
1993	2.7	(1.3)	42.0	(13.1)	54.0	(10.9)	20.7	(5.2)	0.0	119.3	(26.2)
1996	6.0	(3.9)	75.0	(12.0)	54.5	(14.5)	1.5	(0.7)	0.0	137.0	(25.9)
1998	2.0	(1.1)	80.0	(19.4)	50.5	(10.3)	3.0	(1.0)	0.0	135.5	(23.7)
1999	42.0	(17.1)	113.0	(16.5)	32.5	(7.2)	17.0	(5.8)	0.0	204.5	(26.6)
2000	8.8	(2.5)	270.4	(20.1)	100.8	(12.0)	20.8	(3.6)	0.0	400.8	(25.9)
2001	7.2	(4.0)	185.6	(18.0)	140.0	(14.8)	5.6	(2.1)	0.0	338.4	(23.5)
2002	2.4	(1.2)	140.0	(16.7)	56.8	(12.1)	0.0		0.0	199.2	(26.6)
2003	14.2	(6.2)	164.4	(14.1)	91.6	(10.7)	0.9	(0.9)	0.0	271.1	(23.3)
2004	17.6	(4.9)	174.4	(15.9)	61.6	(10.9)	0.0		0.0	253.6	(22.7)

Dataset = cfdpscor.d04

Table 128. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from Corinth Lake in 2004.

		Age				
Year	No.	1	2	3	4	5
2003	13	2.5				
2002	28	1.8	4.0			
2001	8	2.0	4.5	5.9		
2000	6	2.2	4.5	6.1	6.7	
1999	10	2.0	4.4	6.0	6.8	7.1
Mean	65	2.0	4.2	6.0	6.8	7.1
Smallest		1.1	3.2	5.2	6.0	6.4
Largest		4.3	5.9	6.8	7.3	7.6
Std Error		0.1	0.1	0.1	0.1	0.1
95% ConLo		1.9	4.1	5.8	6.6	6.9
95% ConHi		2.2	4.4	6.2	7.0	7.4

Intercept value = 0.00
Dataset = cfdagcor.d04

Table 129. Age frequency and CPUE (no./hour) per inch class of bluegill collected during 1.25 hours of electrofishing at Corinth Lake during May 2004. Fish were collected in 7.5-minute runs.

	Inch Class										STD
Age	1	2	3	4	5	6	7	Total	%	CPUE	ERR
1	1	21	7					29	9	23.33	4.89
2			79	82	17			178	56	142.00	10.99
3					33	9		42	13	33.55	6.14
4						17	9	26	8	20.56	3.84
5						17	26	43	13	34.16	5.76
Total	1	21	86	82	50	43	34	317	100	253.60	22.66
%	0	7	27	26	16	14	11	100			

Dataset = cfdagcor.d04 and cfdpscor.d04

Table 130. Electrofishing catch rate (fish/hour) of each age of bluegill collected from Corinth Lake from 1994-2004.

	Year					
Age	1999	2000	2001	2002	2003	2004
1	37.7	32.0	11.5	2.4	14.2	23.3
2	81.2	295.5	167.5	108.4	153.8	142.0
3	8.9	37.9	140.9	71.8	47.8	33.6
4	26.1	2.2	1.5	16.6	22.1	20.6
5	6.4	13.3	3.9		33.2	34.2
6	2.3	2.2				
7	2.1	2.2				

Table 131. Population assessment for spring-collected bluegill collected from Corinth Lake in May 2004.

Parameter	Actual Value	Assessment Value
Mean length age-2 at capture	4.1 ± 0.1	2
Years to 6 inches	3 - 3+	3
CPUE of fish ≥ 6.0 in	61.60 ± 10.93	3
CPUE of fish ≥ 8.0 in	0.0	1
Instantaneous mortality (z)	0.4760	
Annual mortality (A)	37.9%	
Assessment Total		9
Assessment Rating		Fair

Table 132. Electrofishing CPUE data (no./hour) for each size group of redear sunfish collected from Corinth Lake from 1992-2004; numbers in parentheses are standard errors.

	Inch Class											
Year	< 3.0		3.0 - 5.9		6.0 - 7.9		≥ 8.0		≥ 10.0		All Sizes	
1992	0.0		0.0		0.0		0.0		0.0		0.0	
1993	0.0		0.0		0.0		2.0	(2.0)	1.3	(1.3)	2.0	(2.0)
1996	0.5	(0.5)	7.0	(2.8)	5.5	(2.7)	10.5	(3.5)	4.0	(1.7)	23.5	(3.9)
1998	0.0		4.0	(0.8)	0.5	(0.5)	19.0	(4.3)	15.5	(3.3)	23.5	(4.0
1999	0.0		3.7	(1.6)	2.7	(1.1)	5.3	(1.5)	3.2	(1.1)	21.5	(3.5)
2000	0.0		14.4	(4.1)	33.6	(15.8)	52.8	(6.6)	16.8	(4.2)	100.8	(21.9)
2001	1.6	(1.1)	20.8	(5.0)	54.4	(9.2)	72.8	(10.0)	44.0	8.7)	149.6	(15.6)
2002	0.0		4.0	(1.8)	6.4	(2.0)	82.4	(15.4)	52.0	(8.7)	92.8	(15.9)
2003	0.9	(0.9)	11.6	(3.6)	11.6	(2.4)	28.4	(5.2)	24.9	(5.6)	52.4	(6.1)
2004	0.8	(0.8)	13.6	(1.7)	17.6	(5.2)	19.2	(5.2)	14.4	(3.3)	51.2	(6.8)

Dataset = cfdpscor.d04

Table 133. Population assessment for spring collected redear sunfish collected from Corinth Lake in May 2004.

Parameter	Actual Value	Assessment Value
Mean length age-3 at capture	9.2 ± 0.3	4
Years to 8 inches	2 - 2+	4
CPUE of fish ≥ 8.0 in	19.20 ± 5.23	4
CPUE of fish ≥ 10.0 in	14.40 ± 3.33	4
Assessment Total		16
Assessment Rating		Excellent

Table 134. Number of fish and the relative weight (Wr) for each length category of bluegill and redear sunfish collected at Corinth Lake on 9 September 2004. Standard errors are in parentheses.

	Size Range							
Species	No.	Wr	No.	Wr	No.	Wr	No.	Wr
	3.0 – 5.9 in		6.0 – 7.9 in		≥ 8.0 in		Total	
Bluegill	76	96.6 (2.3)	14	76.2 (2.4)			90	93.5 (2.1)
	4.0 – 6.9 in		7.0 – 8.9 in		≥ 9.0 in		Total	
Redear sunfish	23	93.5 (5.5)	2	99.1 (6.9)	3	91.2 (1.4)	34	93.9 (3.9)

Dataset = cfdwrcor.d04

Table 135. Species composition, relative abundance, and CPUE of black bass collected in 2.0 hours of 15-minute electrofishing runs in Elmer Davis Lake, April 2004; numbers in parenthesis are standard errors.

Location/Species	Inch Class																			Total	CPUE
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
Largemouth bass	13	102	64	13	23	72	68	74	33	32	7	5	6	5	3	7	2	5	2	536	268.0 (17.4)

Dataset = cfdpselm.d04

Table 136. Electrofishing CPUE data (no./hour) for each size group of largemouth bass collected from Elmer Davis Lake from 1996-2004; numbers in parentheses are standard errors.

	Inch Class									
Year	< 8.0		8.0 - 11.9		12.0 - 14.9		≥ 15.0		All sizes	
1996	102.0	(15.3)	163.5	(19.5)	37.0	(6.2)	9.0	(3.4)	312.0	(32.7)
1997	113.5	(20.1)	252.0	(27.2)	39.0	(5.6)	19.0	(3.7)	423.5	(43.9)
1998	52.5	(9.5)	93.3	(6.8)	16.8	(2.3)	7.5	(1.7)	170.1	(15.1)
1999	247.1	(29.7)	50.2	(8.0)	34.2	(6.4)	16.4	(4.9)	348.0	(40.5)
2000	134.5	(14.7)	136.5	(11.0)	31.5	(6.0)	29.0	(4.4)	331.5	(21.3)
2001	121.0	(17.0)	220.0	(21.2)	18.5	(2.4)	21.0	(4.1)	380.5	(24.9)
2002	99.0	(16.3)	124.0	(12.3)	4.0	(1.3)	10.0	(2.7)	237.0	(26.2)
2003	96.0	(10.2)	189.5	(16.5)	14.5	(3.9)	15.0	(2.7)	315.0	(25.1)
2004	107.5	(10.0)	123.5	(10.0)	22.0	(3.5)	15.0	(1.7)	268.0	(17.4)

Dataset = cfdpselm.d04
Shad eradication in fall of 1997

Table 137. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Elmer Davis Lake in 2004; confidence intervals are in parentheses.

Species	No. fish > stock size	PSD	RSD_{15}
Largemouth bass	321	23 (± 5)	9 (± 3)

Dataset = cfdpselm.d04

Table 138. Mean back calculated lengths (in.) at each annulus for otoliths from largemouth bass collected at Elmer Davis Lake in 2004.

		Age										
Year Class	No.	1	2	3	4	5	6	7	8	9	10	11
2003	32	5.0										
2002	25	5.0	8.1									
2001	18	5.5	8.6	10.5								
2000	5	5.7	8.6	10.0	11.4							
1999	14	4.9	8.2	10.0	11.1	12.2						
1998	14	5.4	8.3	10.4	11.6	12.7	13.7					
1997	7	5.1	10.3	12.7	14.3	15.4	16.3	17.0				
1996	3	5.8	10.7	13.6	14.7	15.6	16.4	17.2	17.7			
1995	1	6.8	10.7	13.4	16.5	18.5	20.0	20.8	21.2	21.4		
1994	1	5.7	10.4	12.2	13.5	15.0	16.1	16.6	17.3	18.1	18.5	
1993	1	8.0	11.6	13.2	14.5	15.6	17.4	18.9	19.3	19.8	20.1	20.5
Mean	121	5.2	8.6	10.8	12.3	13.5	15.1	17.5	18.5	19.7	19.3	20.5
Smallest		2.6	6.1	8.7	9.4	10.1	11.0	14.7	15.2	18.1	18.5	20.5
Largest		8.0	12.7	15.5	16.9	18.5	20.0	20.8	21.2	21.4	20.1	20.5
Std Error		0.1	0.1	0.2	0.3	0.3	0.5	0.5	0.8	1.0	0.8	
95% ConLo		5.0	8.4	10.5	11.7	12.8	14.2	16.5	16.8	17.9	17.7	
95% ConHi		5.4	8.9	11.2	12.8	14.1	16.0	18.5	20.1	21.6	20.8	

Intercept Value = 0.00
Dataset = cfdaggcl.d04

Table 139. Age frequency and CPUE (no./hour) per inch class of largemouth bass collected during 2.00 hours of electrofishing at Elmer Davis Lake during April 2004. 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	13	102	64	10																189	35	94.38	9.93
2				3	23	72	34													132	25	66.13	7.85
3							27	51	15	3										96	18	47.88	5.30
4							7	6		8										20	47	10.25	1.38
5								17	7	16	2	3								45	8	22.62	2.40
6									11	5	5	3	2	4						29	5	14.38	1.35
7													3	1	3	2	1			11	2	5.29	0.98
8													2			2	1			5	1	2.42	0.53
9																			2	2	0	1.00	0.65
10																2				2	0	1.17	0.30
11																		5		5	1	2.50	1.30
Total	13	102	64	13	23	72	68	74	33	32	7	5	6	5	3	7	2	5	2	536	100	268.00	17.40
%	2	19	12	2	4	13	13	14	6	6	1	1	1	1	1	1	0	1	0	100			

Dataset = cfdagelm.d04 and cfdpscor.d04

Table 140. Electrofishing catch rate (fish/hour) of each age of largemouth bass collected from Elmer Davis Lake from 2000-2004.

	Year				
Age	2000	2001	2002	2003	2004
1	73.8	52.8	80.6	57.5	94.4
2	123.7	151.2	45.0	96.1	66.1
3	80.3	103.3	67.7	85.4	47.9
4	12.4	42.5	30.9	52.4	10.3
5	14.5	10.7	3.8	8.6	22.6
6	17.6	4.2	1.5	1.4	14.4
7	4.3	4.3	1.4	1.3	5.3
8	2.0	5.1	2.2	1.8	2.4
9	0.5	2.5	1.4	1.8	1.0
10	1.5	3.0	1.9	4.8	1.2
11	1.0	0.5	0.9	0.6	2.5
12				3.0	
13				0.5	
14		0.5			

Table 141. Population assessment from largemouth bass collected from Elmer Davis Lake during April 2004.

Parameter	Value	Assessment Score
Length at age 3	10.5 (0.2)	2
Spring CPUE of Age 1	94.38 (9.93)	4
Spring CPUE 12-14.9 in fish	22.00 (3.46)	1
Spring CPUE ≥ 15.0-in fish	15.00 (1.65)	2
Spring CPUE ≥ 20.0-in fish	3.50 (1.59)	3
Instantaneous mortality (z)	0.4560	
Anural mortality (A)	36.6%	
Total Score		12
Assessment Rating		Good

Table 142. Length distribution and CPUE (no./hour) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Elmer Davis Lake in September 2004: 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	21		
Largemouth bass	86	147	37		25	67	37	74	58	35	16	2	2	1	1	2		1	1	592	394.7 (44.0)

Dataset = cfdwrelm.d04

Table 143. Number of fish and the relative weight (Wr) for each length category of largemouth bass collected at Elmer Davis Lake on 10 September 2004. Standard errors are in parentheses.

Species	Area	Size Range							
		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	81	87.4 (0.9)	38	86.0 (1.0)	8	86.3 (3.4)	127	86.9 (0.7)

Dataset = cfdwrelm.d03

Table 144. 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		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2000	Total	3.8	(0.1)	269.6	(33.2)	14.4	(2.0)	52.8	(9.7)
2001	Total	4.5	(0.1)	210.7	(25.0)	47.3	(3.0)	80.6	(13.3)
2002	Total	4.3	(0.1)	67.3	(10.0)	13.3	(3.2)	57.5	(7.9)
2003	Total	4.2	(0.1)	179.0	(32.0)	27.0	(10.0)	94.4	(9.9)
2004	Total	4.3	(0.03)	180.0	(38.5)	24.7	(4.3)		

Table 145. Species composition, relative abundance, and CPUE of bluegill and redear sunfish collected in 1.25 hours of 7.5-minute electrofishing runs in Elmer Davis Lake, May 2004; numbers in parenthesis are standard errors.

Species	Length Class										Total	CPUE
	1	2	3	4	5	6	7	8	9	10		
Bluegill	18	32	51	45	30	61	88	11			336	268.8 (44.7)
Redear sunfish		5	3	1	6	40	43	19	8	4	74	103.2 (29.1)

Dataset = cfdpselm.d04

Table 146. PSD and RSD values calculated for sunfish collected during 1.25 hours of electrofishing at Elmer Davis Lake during May 2004. Fish were collected in 7.5-minute runs.

Species	No. fish > stock size	PSD	RSD
Bluegill	286	56 (± 6)	4 (± 2)
Redear sunfish	121	61 (± 9)	10 (± 5)

Bluegill = RSD-8; Redear-9
Dataset = cfdpselm.d04

Table 147. Electrofishing CPUE data (no./hour) for each size group of bluegill collected from Elmer Davis Lake from 1996-2004; numbers in parentheses are standard errors.

	Inch Class									
Year	< 3.0		3.0 - 5.9		6.0 - 7.9		≥ 8.0		All Sizes	
1994	1.0	(0.7)	12.0	(3.0)	29.0	(5.7)	1.5	(1.1)	43.5	(6.0)
1995	NS									
1996	42.0	(7.9)	75.0	(9.7)	55.0	(11.2)	20.0	(5.4)	192.0	(22.5)
1997	0.5	(0.5)	79.5	(12.5)	59.0	(16.3)	5.5	(2.1)	144.5	(28.6)
1998	2.7	(1.1)	17.1	(4.5)	7.7	(1.6)	2.9	(1.1)	30.4	(5.8)
1999	579.5	(74.5)	502.0	(65.4)	23.0	(7.6)	5.0	(3.4)	1,109.5	(130.9)
2000	NS									
2001	1.5	(0.8)	109.5	(28.0)	157.0	(23.5)	0.5	(0.5)	268.5	(49.6)
2002	33.6	(11.8)	78.4	(19.3)	272.8	(55.3)	0.8	(0.8)	385.6	(78.2)
2003	17.6	(4.7)	89.6	(12.9)	151.2	(30.1)	2.4	(1.7)	260.8	(37.1)
2004	40.0	(8.7)	100.8	(13.7)	119.2	(29.8)	8.8	(3.9)	268.8	(44.7)

Dataset = cfdpselm.d04

Table 148. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from Elmer Davis Lake in 2004.

		Age						
Year	No.	1	2	3	4	5	6	7
2003	9	2.4						
2002	29	2.2	4.2					
2001	8	2.2	4.6	6.3				
2000	4	2.9	4.9	6.4	7.2			
1999	1	2.4	4.9	6.5	7.6	7.9		
1998	12	3.1	5.0	6.4	7.0	7.5	8.0	
1997	1	1.1	3.6	5.5	6.9	7.4	7.8	8.5
Mean	64	2.4	4.5	6.3	7.1	7.5	8.0	8.5
Smallest		0.9	3.0	5.2	6.6	7.1	7.5	8.5
Largest		3.8	6.0	7.0	7.9	8.1	8.6	8.5
Std Error		0.1	0.1	0.1	0.1	0.1	0.1	
95% ConLo		2.2	4.3	6.2	6.9	7.4	7.8	
95% ConHi		2.6	4.7	6.5	7.3	7.7	8.1	

Intercept value = 0.00
Dataset = cfdagelm.d04

Table 149. Age frequency and CPUE (no./hour) per inch class of bluegill collected during 1.25 hours of electrofishing at Elmer Davis Lake during May 2004. Fish were collected in 7.5-minute runs.

	Inch Class											STD
Age	1	2	3	4	5	6	7	8	Total	%	CPUE	ERR
1	18	32	4						54	16	43.14	8.97
2			47	45	27				119	35	94.99	12.99
3					3	53	13		57	17	45.37	11.26
4						8	29		37	11	29.57	7.47
5							10		10	3	7.82	2.03
6							49	10	59	17	46.81	12.66
7								1	1	0	1.10	0.48
Total	18	32	51	45	30	61	88	11	336	100	268.80	44.72
%	5	10	15	13	9	18	26	3	100			

Dataset = cfdagcor.d04 and cfdpscor.d04

Table 150. Electrofishing catch rate (fish/hour) of each age of bluegill collected from Elmer Davis Lake from 1994-2004.

	Year			
Age	2001	2002	2003	2004
1	2.6	35.8	21.2	43.1
2	45.4	69.4	75.9	95.0
3	212.9	20.0	34.6	45.4
4	7.6	246.3	21.3	29.6
5		14.2	107.8	7.8
6				46.8
7				1.1

Table 151. Population assessment for spring-collected bluegill collected from Elmer Davis Lake in May 2004.

Parameter	Actual Value	Assessment Value
Mean length age-2 at capture	4.3 ± 0.2	2
Years to 6 inches	2 - 2+	4
CPUE of fish ≥ 6.0 in	128.00 ± 32.27	4
CPUE of fish ≥ 8.0 in	8.80 ± 3.86	3
Assessment Total		13
Assessment Rating		Good

Table 152. Electrofishing CPUE data (no./hour) for each size group of redear sunfish collected from Elmer Davis Lake from 1994-2004; numbers in parentheses are standard errors.

	Inch Class											
Year	< 3.0		3.0 - 5.9		6.0 - 7.9		≥ 8.0		≥ 10.0		All Sizes	
1994	0.0		0.5	(0.5)	0.5	(0.5)	2.5	(2.0)	1.5	(1.5)	3.5	(1.9)
1995	NS											
1996			7.5	(1.6)	23.5	(3.3)	4.0	(1.1)	1.0	(0.7)	35.0	(4.6)
1997	0.0		1.0	(1.0)	0.5	(0.5)	13.0	(3.8)	0.5	(0.5)	14.5	(4.6)
1998	0.0		0.3	(0.3)	0.0		0.0		0.0		0.3	(0.3)
1999	0.0		19.0	(4.4)	13.0	(2.2)	20.5	(5.3)	0.0		52.5	(7.5)
2000	NS											
2001	0.0		3.5	(2.1)	21.0	(5.1)	3.5	(1.6)	1.0	(0.7)	28.0	(4.8)
2002	0.8	(0.8)	4.0	(1.8)	8.8	(4.7)	15.2	(4.2)	0.8	(0.8)	28.8	(6.1)
2003	1.6	(1.1)	7.2	(5.5)	31.2	(7.4)	19.2	(6.2)	0.8	(0.8)	59.2	(13.5)
2004	4.0	(2.7)	8.0	(3.4)	66.4	(18.4)	24.8	(9.7)	3.2	(2.4)	103.2	(29.10

Dataset = cfdpselm.d04

Table 153. Age frequency and CPUE (no./hour) per inch class of redear sunfish collected during 1.25 hours of electrofishing at Elmer Davis Lake during May 2004. 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	5	3	1							9	7	7.20	4.37
2				6	40	43	10			99	76	78.80	23.35
3							10	1		11	8	8.67	3.33
4								7	4	11	8	8.53	3.61
Total	5	3	1	6	40	43	19	8	4	129	100	103.20	29.10
%	4	2	1	5	31	33	15	6	3	100			

Dataset = cfdagelm.d03 and cfdpselm.d04

Table 154. Electrofishing catch rate (fish/hour) of each age of redear sunfish collected from Elmer Davis Lake from 1994-2004.

	Year			
Age	2001	2002	2003	2004
1	0.0	35.8	7.2	7.2
2	0.5	69.4	34.4	78.8
3	13.5	20.0	4.1	8.7
4	7.9	246.3	13.5	8.5
5	5.6	14.2		
6	0.5			

Table 155. Population assessment for spring collected redear sunfish collected from Elmer Davis Lake in May 2004.

Parameter	Actual Value	Assessment Value
Mean length age-3 at capture	9.0 ± 0.2*	4
Years to 8 inches	2 - 2+*	4
CPUE of fish ≥ 8.0 in	24.80 ± 9.72	4
CPUE of fish ≥ 10.0 in	3.20 ± 2.44	3
Assessment Total		15
Assessment Rating		Excellent

* 2003 age and growth dataset was used.

Table 156. Number of fish and the relative weight (Wr) for each length category of bluegill and redear sunfish collected at Elmer Davis Lake on 10 September 2004. Standard errors are in parentheses.

	Size Range							
Species	No.	Wr	No.	Wr	No.	Wr	No.	Wr
	3.0 – 5.9 in		6.0 – 7.9 in		≥ 8.0 in		Total	
Bluegill	57	95.9 (2.7)	40	91.4 (1.4)	6	89.9 (2.3)	103	93.8 (1.6)
	4.0 – 6.9 in		7.0 – 8.9 in		≥ 9.0 in		Total	
Redear sunfish	50	99.5 (2.0)	41	107.4 (1.4)	7	103.7 (3.2)	101	102.9 (1.2)

Dataset = cfdwrelm.d04

Table 157. Species composition, relative abundance, and CPUE of black bass collected in 2.0 hours of 15-minute electrofishing runs in Kincaid Lake, April 2004; numbers in parenthesis 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	23	Total	CPUE
Spotted bass								2	5	4	3			1									15	7.5 (2.7)
Largemouth bass	1		1		5	7	6	35	64	47	27	30	20	23	20	34	26	20	15	2	1	1	385	192.5 (16.5)

Dataset = cfdpskin.d04

Table 158. Electrofishing CPUE data (no./hour) for each size group of largemouth bass collected from Kincaid Lake from 1992-2004; numbers in parentheses are standard errors.

	Inch Class									
Year	< 8.0		8.0 - 11.9		12.0 - 14.9		≥ 15.0		All sizes	
1992	4.0	(0)	34.0	(3.1)	13.3	(1.8)	53.3	(4.1)	104.7	(3.5)
1995	27.5	(3.4)	38.5	(4.5)	17.5	(2.9)	65.0	(6.5)	148.5	(11.9)
1997	13.5	(2.9)	59.0	(6.2)	53.0	(4.2)	92.0	(14.3)	217.5	(18.0)
1999	15.0	(4.3)	60.0	(8.6)	55.0	(3.7)	94.0	(6.8)	224.0	(8.6)
2000	15.3	(5.7)	64.5	(7.0)	36.5	(5.5)	70.0	(7.8)	186.0	(16.3)
2001	16.0	(2.9)	99.3	(13.7)	35.3	(5.8)	102.7	(10.6)	253.3	(23.5)
2002	10.0	(4.5)	35.3	(9.4)	36.7	(8.4)	110.0	(14.8)	192.0	(29.2)
2003	23.4	(5.8)	70.3	(12.1)	32.6	(4.0)	94.9	(15.8)	221.1	(22.8)
2004	7.0	(2.9)	76.0	(12.5)	38.5	(5.0)	71.0	(10.0)	192.5	(16.5)

Dataset = cfdpskin.d04

Table 159. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Kincaid Lake in 2004; confidence intervals are in parentheses.

Species	No. fish > stock size	PSD	RSD_{15}
Largemouth bass	371	59 (± 5)	38 (± 5)

Dataset = cfdpskin.d04

Table 160. Age frequency and CPUE (no./hour) per inch class of largemouth bass collected during 2.00 hours of electrofishing at Kincaid Lake during April 2004. Fish were collected in 15-minute runs.

	Inch Class																							STD
Age	2	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total	%	CPUE	ERR
1	1	1																				2	1	1.00	0.65
2				5	7	5	4		5													25	7	12.54	3.76
3						2	27	57	28	8												122	32	60.96	9.55
4							4	7	9	19	18	6	3		6							71	19	35.67	3.43
5											13	14	17	4								48	12	23.88	3.64
6									5				3	12	17	5						42	11	20.89	2.01
7																5	5					10	3	5.10	1.15
8														4	11	5	10	15				46	12	22.77	3.90
9																5	5					10	3	5.10	1.15
10																			2			2	1	1.00	0.65
11																5				1	1	7	2	3.60	0.99
Total	1	1	0	5	7	6	35	64	47	27	30	20	23	20	34	26	20	15	2	1	1	385	100	192.50	16.52
%	0	0	0	1	2	2	9	17	12	8	5	6	5	9	7	5	4	1	0	0	0	100			

Dataset = bbrsckin.d03 and cfdpskin.d04

Table 161. Electrofishing catch rate (fish/hour) of each age of largemouth bass collected from Kincaid Lake from 1999-2004.

	Year					
Age	1999	2000	2001	2002	2003	2004
1	3.5	1.5	0.0	0.0	0.0	1.0
2	26.0	26.8	17.4	15.5	39.9	12.5
3	32.5	28.1	26.9	24.8	48.1	61.0
4	28.6	27.6	45.6	43.6	31.2	35.7
5	31.3	23.2	29.8	22.3	26.7	23.9
6	10.2	15.4	28.6	35.0	30.0	20.9
7	28.3	11.0	20.9	4.5	6.5	5.1
8	11.1	17.3	13.4	5.3	28.4	22.8
9	16.0	15.2	9.3	1.3	6.5	5.1
10	7.3	5.8	9.2		0.6	1.0
11		9.5	9.2		3.1	3.6
12	13.3	3.3	2.3			
13	3.5	0.5	0.6			
14		1.0				
15				5.3		
16				1.3		

Table 162. Population assessment from largemouth bass collected from Kincaid Lake during April 2004.

Parameter	Value	Assessment Score
Length at age 3*	10.5 ± 0.2	2
Spring CPUE of Age 1	1.00 ± 0.65	1
Spring CPUE 12-14.9 in fish	38.50 ± 4.95	3
Spring CPUE ≥ 15.0-in fish	71.00 ± 10.02	4
Spring CPUE ≥ 20.0-in fish	9.50 ± 1.50	4
Instantaneous mortality (z)	0.3107	
Annual mortality (A)	26.7%	
Total Score		14
Assessment Rating		Good

*2003 age and growth dataset was used.

Table 163. Length distribution and CPUE (no./hour) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Kincaid Lake in September 2004: numbers in parentheses are standard errors.

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		
Spotted bass	10	1								5	4		1								21	14.0 (4.0)
Largemouth bass	10	9		2	11	9	6	11	15	17	18	15	6	7	7	2	4			1	150	100.0 (8.1)

Dataset = cfdwrkin.d04

Table 164. Number of fish and the relative weight (Wr) for each length category of largemouth bass collected at Kincaid Lake on 7 September 2004. Standard errors are in parentheses.

Species	Area	Size Range							
		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	49	91.4 (1.0)	39	89.8 (1.0)	21	98.1 (1.4)	109	92.1 (0.7)

Dataset = cfdwrkin.d04

Table 165. 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		Age 0		Age 0 ≥ 5.0		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
1999	25	3.1	(0.2)	16.7	(5.7)	0.0		1.5	(1.1)
2000	11	3.1	(0.2)	4.7	(1.6)	0.0		0.0	
2001	36	2.9	(0.1)	20.6	(6.7)	0.0		0.0	
2002	76	2.6	(0.1)	43.4	(10.6)	0.0		0.0	
2003	33	2.8	(0.1)	22.0	(4.7)	0.0		1.0	(0.7)
2004	19	3.0	(0.1)	12.7	(4.3)	0.0			

Dataset = cfdwrkin.d04

Table 166. Species composition, relative abundance, and CPUE of bluegill and redear sunfish collected in 1.00 hours of 7.5-minute electrofishing runs in Kincaid Lake, May 2004; numbers in parenthesis are standard errors.

Species	Length Class								Total	CPUE
	1	2	3	4	5	6	7	8		
Bluegill	23	93	259	272	188	42			877	877.0 (95.0)
Redear sunfish				3	2	5	2	1	13	13.0 (4.0)

Dataset = cfdpskin.d04

Table 167. PSD and RSD values calculated for sunfish collected during 1.25 hours of electrofishing at Kincaid Lake during May 2004. Fish were collected in 7.5-minute runs.

Species	No. fish > stock size	PSD	RSD
Bluegill	761	6 (± 2)	0
Redear sunfish	13	23 (± 23)	0

Bluegill = RSD-8; Redear-9
Dataset = cfdpskin.d04

Table 168. Electrofishing CPUE data (no./hour) for each size group of bluegill collected from Kincaid Lake from 1999-2004; numbers in parentheses are standard errors.

	Inch Class									
Year	< 3.0		3.0 - 5.9		6.0 - 7.9		≥ 8.0	All Sizes	
1999	64.0	(10.9)	659.2	(46.0)	23.2	(5.1)	0	756.0	(53.7)
2000	40.8	(5.8)	628.8	(67.8	24.8	(6.7)	0	692.8	(72.1)
2001	14.4	(3.9)	430.4	(26.7)	38.4	(8.7)	0	469.6	(29.3)
2002	74.4	(16.7)	564.8	(47.6)	26.7	(2.3)	0	677.6	(56.9)
2003	386.0	(35.8)	747.0	(62.9)	30.0	(7.7)	0	1,163.0	(67.5)
2004	116.0	(22.8)	719.0	(64.5)	42.0	(14.8)	0	877.0	(95.0)

Dataset = cfdpskin.d04

Table 169. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from Kincaid Lake in 2004.

		Age					
Year	No.	1	2	3	4	5	6
2002	15	1.9					
2001	16	2.4	3.6				
2000	10	2.1	3.8	4.9			
1999	15	2.4	4.1	5.0	5.7		
1998	3	2.3	3.8	4.6	5.4	6.0	
1997	3	1.9	3.3	4.0	4.5	4.9	5.3
Mean	62	2.2	3.8	4.8	5.5	5.4	5.3
Smallest		1.2	2.7	3.8	4.3	4.7	5.1
Largest		3.0	4.5	5.8	6.4	6.1	5.6
Std Error		0.1	0.0	0.1	0.1	0.3	0.2
95% ConLo		2.1	3.7	4.7	5.3	4.9	4.9
95% ConHi		2.3	3.9	5.0	5.8	6.0	5.6

Intercept value = 0.00
Dataset = cfdagkin.d04

Table 170. Age frequency and CPUE (no./hour) per inch class of bluegill collected during 1.25 hours of electrofishing at Kincaid Lake during May 2004. Fish were collected in 7.5-minute runs.

	Inch Class									STD
Age	1	2	3	4	5	6	Total	%	CPUE	ERR
1	23	93					116	13	116.0	22.8
2			259	109			368	42	367.8	25.0
3				163	47		210	24	210.2	23.4
4					94	33	127	14	126.7	27.6
5					12	9	21	2	21.1	5.3
6					35		35	4	35.3	6.2
Total	23	93	259	272	188	42	877	100	877.0	95.0
%	3	11	30	31	21	5	100			

Dataset = cfdagkin.d04 and bbrpskin.d04

Table 171. Electrofishing catch rate (fish/hour) of each age of bluegill collected from Kincaid Lake from 1994-2004.

	Year					
Age	1999	2000	2001	2002	2003	2004
1	61.5	78.4	13.9	106.1	412.1	116.0
2	455.5	150.4	115.4	266.3	287.3	367.8
3	108.2	343.9	168.0	167.2	243.8	210.2
4	59.3	102.1	136.2	106.1	172.9	126.7
5	38.9	4.6	15.5	28.1	39.3	21.1
6	3.5	2.3	2.7	3.8	7.5	35.3
7		11.0				

Table 172. Population assessment for spring-collected bluegill collected from Kincaid Lake in May 2004.

Parameter	Actual Value	Assessment Value
Mean length age-2 at capture	3.7 ± 0.1	2
Years to 6 inches	> 4+	1
CPUE of fish ≥ 6.0 in	42.00 ± 14.79	2
CPUE of fish ≥ 8.0 in	0.0	1
Instantaneous mortality (z)	0.6986	
Annual mortality (A)	50.3%	
Assessment Total		6
Assessment Rating		Poor

Table 173. Number of fish and the relative weight (Wr) for each length category of bluegill collected at Kincaid Lake on 7 September 2004. Standard errors are in parentheses.

Species	Size Range							
	No.	Wr	No.	Wr	No.	Wr	No.	Wr
	3.0 – 5.9 in		6.0 – 7.9 in		≥ 8.0 in		Total	
Bluegill	68	86.9 (2.0)	2	71.0 (9.3)			70	86.4 (2.0)

Dataset = cfdwrkin.d04

Table 174. Species composition, relative abundance, and CPUE of black bass collected in 1.5 hours of 15-minute electrofishing runs in McNeely Lake, April 2004; numbers in parenthesis are standard errors.

Location/Species	Inch Class																			Total	CPUE
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
Largemouth bass	3	23	9	2	4	11	17	39	20	13	8	14	12	9	5	7	5	3	1	205	136.7 (15.6)

Dataset = cfdpsmcl.d04

Table 175. Electrofishing CPUE data (no./hour) for each size group of largemouth bass collected from McNeely Lake from 1996-2004; numbers in parentheses are standard errors.

	Inch Class									
Year	< 8.0		8.0 - 11.9		12.0 - 14.9		≥ 15.0		All sizes	
1996	77.3	(9.2)	6.7	(2.0)	18.0	(3.4)	23.3	(2.8)	125.3	(11.0)
1998	80.0	(11.1)	134.7	(18.6)	7.3	(2.2)	14.0	(3.4)	236.0	(26.0)
1999	71.0	(10.6)	161.0	(4.4)	27.0	(7.4)	22.0	(5.3)	281.0	(7.5)
2000	44.7	(5.0)	144.7	(13.4)	104.7	(13.8)	20.7	(2.2)	314.7	(24.7)
2001	71.3	(10.1)	144.0	(6.4)	97.7	(16.4)	31.3	(3.8)	346.0	(28.1)
2002	28.7	(3.0)	48.0	(12.5)	43.3	(4.8)	9.3	(1.7)	129.3	(30.3)
2003	44.7	(8.2)	96.0	(12.4)	56.0	(10.7)	27.3	(3.2)	224.0	(19.7)
2004	27.3	(4.3)	58.0	(8.9)	23.3	(4.3)	28.0	(3.9)	136.7	(15.6)

Dataset = cfdpsmcl.d04

Table 176. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Elmer Davis Lake in 2004; confidence intervals are in parentheses.

Species	No. fish > stock size	PSD	RSD_{15}
Largemouth bass	164	47 (± 8)	26 (± 7)

Dataset = cfdpsmcl.d04

Table 177. Mean back calculated lengths (in.) at each annulus for otoliths from largemouth bass collected at McNeely Lake in 2004.

		Age									
Year Class	No.	1	2	3	4	5	6	7	8	9	10
2003	14	4.7									
2002	8	5.5	8.5								
2001	12	6.1	9.0	11.0							
2000	11	5.7	9.3	11.5	12.7						
1999	7	6.2	10.4	12.5	14.2	15.3					
1998	4	6.5	10.2	12.1	13.4	14.5	15.5				
1997	4	6.2	9.9	12.2	13.6	14.5	15.3	16.1			
1996	4	6.4	10.3	13.0	15.3	16.8	17.8	18.7	19.6		
1994	2	5.3	9.3	11.7	13.0	14.4	15.4	16.1	17.0	17.9	18.5
Mean	66	5.7	9.5	11.8	13.6	15.2	16.1	17.1	18.7	17.9	18.5
Smallest		3.0	7.9	9.1	10.8	12.6	13.3	14.7	16.2	17.3	17.8
Largest		8.0	12.1	15.1	17.5	19.4	19.9	20.4	21.0	18.4	19.2
Std Error		0.1	0.1	0.2	0.2	0.3	0.5	0.6	0.7	0.5	0.7
95% ConLo		5.5	9.2	11.4	13.1	14.5	15.2	16.0	17.3	16.8	17.1
95% ConHi		5.9	9.7	12.1	14.0	15.8	17.0	18.2	20.1	18.9	19.9

Intercept Value = 0.00
Dataset = cfdaggcl.d04

Table 178. Age frequency and CPUE (no./hour) per inch class of largemouth bass collected during 1.50 hours of electrofishing at McNeely Lake during April 2004. 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	3	23	9	2																37	18	24.67	3.49
2					4	11	6													21	10	13.78	1.84
3							11	33	16			2								62	30	41.44	6.71
4								7	4	13	4	5								32	16	21.44	2.96
5											2	5	4	7						17	8	11.61	1.43
6											2		4	2	1					10	5	6.33	0.38
7												2	4		3					9	4	5.89	0.90
8																7		3	1	11	5	7.33	3.64
9																				0	0	0.00	0.00
10															1		5			6	3	4.17	1.82
Total	3	23	9	2	4	11	17	39	20	13	8	14	12	9	5	7	5	3	1	336	100	136.67	15.61
%	1	11	4	1	2	5	8	19	10	6	4	7	6	4	2	3	2	1	0	100			

Dataset = cfdagmcl.d04 and cfdpsmcl.d04

Table 179. Electrofishing catch rate (fish/hour) of each age of largemouth bass collected from McNeely Lake from 1994-2004.

	Year			
Age	2001	2002	2003	2004
1	70.0	23.3	20.0	24.7
2	53.1	22.6	72.9	13.8
3	35.6	10.6	22.8	41.4
4	62.1	22.1	26.9	21.4
5	47.5	17.9	22.5	11.6
6	31.4	14.4	20.6	6.3
7	23.0	13.2	20.0	5.9
8	7.8	3.6	9.2	7.3
9	5.1	1.0	3.9	0.0
10	5.1		1.7	4.2
11	4.5	0.7	3.1	
12	0.8		0.4	

Table 180. Population assessment from largemouth bass collected from McNeely Lake during April 2004.

Parameter	Value	Assessment Score
Length at age 3	11.0 ± 0.4	3
Spring CPUE of Age 1	24.67 ± 3.49	2
Spring CPUE 12-14.9 in fish	23.33 ± 4.31	2
Spring CPUE ≥ 15.0-in fish	28.00 ± 3.86	3
Spring CPUE ≥ 20.0-in fish	2.67 ± 1.33	3
Instantaneous mortality (z)	0.3002	
Anural mortality (A)	25.9%	
Total Score		13
Assessment Rating		Good

Table 181. Length distribution and CPUE (no./hour) of largemouth bass collected in 2.0 hours of 15-minute electrofishing runs for black bass in McNeely Lake in September 2004: numbers in parentheses are standard errors.

Species	Inch Class																		Total	CPUE
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
Largemouth bass	3	40	48	7	13	55	17	19	21	51	44	17	8	4	9	6	4	1	367	183.5 (12.7)

Dataset = cfdwrmcl.d04

Table 182. Number of fish and the relative weight (Wr) for each length category of largemouth bass collected at McNeely Lake on 7 September 2004. Standard errors are in parentheses.

Species	Area	Size Range							
		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	81	83.8 (0.8)	50	85.4 (0.9)	24	94.1 (1.4)	155	85.9 (0.6)

Dataset = cfdwrmcl.d04

Table 183. 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		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2000	Total	3.8	(0.1)	87.3	(16.1)	10.0	(2.3)	70.0	(9.4)
2001	Total	4.1	(0.9)	20.7	(1.6)	2.0	(1.4)	23.3	(2.4)
2002	Total	4.7	(0.1)	24.0	(5.8)	10.7	(3.8)	20.0	(2.5)
2003	Total	4.1	(0.1)	56.0	(14.0)	7.0	(1.9)	24.7	(3.5)
2004	Total	4.0	(0.1)	49.0	(2.4)	3.5	(0.9)		

Table 184. Species composition, relative abundance, and CPUE of bluegill and redear sunfish collected in 1.25 hours of 7.5-minute electrofishing runs in McNeely Lake, May 2004; numbers in parenthesis are standard errors.

Species	Length Class								Total	CPUE
	1	2	3	4	5	6	7	8		
Bluegill		5	31	70	126	88	5		325	260.0 (27.3)
Redear sunfish			1	1	4	14	17	32	69	55.2 (9.9)

Dataset = cfdpsmcl.d04

Table 185. PSD and RSD values calculated for sunfish collected during 1.25 hours of electrofishing at McNeely Lake during May 2004. Fish were collected in 7.5-minute runs.

Species	No. fish > stock size	PSD	RSD
Bluegill	320	29 (± 5)	0
Redear sunfish	68	72 (± 11)	0

Bluegill = RSD-8; Redear-9
Dataset = cfdpsmcl.d04

Table 186. Electrofishing CPUE data (no./hour) for each size group of bluegill collected from McNeely Lake from 1996-2004; numbers in parentheses are standard errors.

	Inch Class									
Year	< 3.0		3.0 - 5.9		6.0 - 7.9		≥ 8.0		All Sizes	
1994	17.6	(3.7)	303.2	(59.6)	13.6	(2.4)	0.0		334.4	(59.1)
1996	2.7	(1.3)	187.3	(52.6)	95.3	(20.5)	0.0		285.3	(68.3)
1998	0		72.0	(31.8)	68.7	(15.4)	0.0		140.7	(44.8)
1999	8.0	(4.3)	108.0	(20.6)	108.0	(27.7)	0.0		224.0	(44.8)
2000	2.0	(0.9)	204.7	(36.6	110.0	(23.3)	0.0		316.7	(46.3)
2001	73.6	(23.8)	152.0	(17.0)	200.8	(29.1)	1.6	(1.1)	428.0	(35.2)
2002	53.6	(11.7)	270.4	(33.2)	335.2	(33.8)	0.8	(0.8)	660.0	(41.9)
2003	12.0	(2.2)	132.0	(31.9)	30.4	(10.6)	0.0		174.4	(40.9)
2004	4.0	(1.8)	181.6	(25.2)	74.4	(8.6)	0.0		260.0	(27.3)

Dataset = cfdpsmcl.d04

Table 187. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from McNeely Lake in 2004.

		Age						
Year	No.	1	2	3	4	5	6	7
2002	4	2.5						
2001	18	2.0	3.9					
2000	12	2.1	4.0	5.6				
1999	11	2.0	4.1	5.6	6.6			
1997	1	1.9	4.0	5.3	5.9	6.3	6.6	7.1
Mean	46	2.1	4.0	5.6	6.5	6.3	6.6	7.1
Smallest		1.0	2.8	5.0	5.6	6.3	6.6	7.1
Largest		2.9	4.9	6.7	7.0	6.3	6.6	7.1
Std Error		0.1	0.1	0.1	0.1			
95% ConLo		1.9	3.8	5.4	6.3			
95% ConHi		2.2	4.1	5.7	6.8			

Intercept value = 0.00
Dataset = cfdagmcl.d04

Table 188. Age frequency and CPUE (no./hour) per inch class of bluegill collected during 1.25 hours of electrofishing at McNeely Lake during May 2004. Fish were collected in 7.5-minute runs.

	Inch Class										STD
Age	1	2	3	4	5	6	7	Total	%	CPUE	ERR
1		4	3					7	2	5.48	1.53
2		1	28	70				99	31	79.32	15.56
3					113	22		135	42	108.32	11.48
4					13	66	3	81	25	64.88	6.60
7							3	3	1	2.00	0.89
Total		5	31	70	126	88	5	325	100	260.00	27.28
%		2	10	22	39	27	2	100			

Dataset = cfdagmcl.d04 and cfdpsmcl.d04

Table 189. Electrofishing catch rate (fish/hour) of each age of bluegill collected from McNeely Lake from 2001-2004.

	Year			
Age	2001	2002	2003	2004
1	131.7	53.6	27.4	5.5
2	76.0	244.7	39.2	79.3
3	142.1	128.0	96.6	108.3
4	40.2	186.1	9.5	64.9
5	37.2	14.9	0.5	
6		32.6	0.5	
7			0.9	2.0
8	0.8			

Table 190. Population assessment for spring-collected bluegill collected from McNeely Lake in May 2004.

Parameter	Actual Value	Assessment Value
Mean length age-2 at capture	3.9 ± 0.1	2
Years to 6 inches	3 – 3+	3
CPUE of fish ≥ 6.0 in	74.40 ± 8.60	3
CPUE of fish ≥ 8.0 in	0.00	1
Assessment Total		9
Assessment Rating		Fair

Table 191. Electrofishing CPUE data (no./hour) for each size group of redear sunfish collected from McNeely Lake from 1998-2004; numbers in parentheses are standard errors.

	Inch Class											
Year	< 3.0		3.0 - 5.9		6.0 - 7.9		≥ 8.0		≥ 10.0	All Sizes	
1998	0.0		0.7	(0.7)	5.3	(2.2)	1.3	(1.3)	0.0	7.8	(3.4)
1999	0.0		10.0	(3.8)	3.0	(1.9)	1.0	(1.0)	0.0	14.0	(3.5)
2000	0.0		3.3	(2.6)	14.7	(2.5)	0.7	(0.7)	0.0	18.7	(3.4)
2001	2.4	(1.7)	8.8	(3.0)	15.2	(4.8)	8.0	(4.8)	0.0	34.4	(7.8)
2002	1.6	(1.1)	49.6	(10.6)	22.4	(5.8)	6.4	(2.0)	0.0	80.0	(13.4)
2003	0.8	(0.5)	5.2	(1.2)	20.4	(3.8)	2.4	(1.2)	0.0	28.8	(5.4)
2004	0.0		4.8	(1.8)	24.8	(6.5)	25.6	(7.0)	0.0	55.2	(9.9)

Dataset = cfdpsmcl.d04

Table 192. Age frequency and CPUE (no./hour) per inch class of redear sunfish collected during 1.25 hours of electrofishing at McNeely Lake during May 2004. Fish were collected in 7.5-minute runs.

	Inch Class										STD
Age	2	3	4	5	6	7	8	Total	%	CPUE	ERR
1		1						1	1	0.80	0.80
2			1	4	14			19	28	15.20	3.03
3						17	32	49	71	39.20	8.80
Total		1	1	4	14	17	32	69	100	55.20	9.94
%		1	1	6	20	25	46	100			

Dataset = cfdagmcl.d04 and cfdpsmcl.d04

Table 193. Electrofishing catch rate (fish/hour) of each age of redear sunfish collected from McNeely Lake from 2001-2004.

	Year		
Age	2001	2003	2004
1	0.0	3.6	0.8
2	8.8	8.8	15.2
3	7.4	16.4	39.2
4	8.6		
5	5.6		
6			
7			
8	1.6		

Table 194. Population assessment for spring collected redear sunfish collected from McNeely Lake in May 2004.

Parameter	Actual Value	Assessment Value
Mean length age-3 at capture	7.7 ± 0.1*	4
Years to 8 inches	3 - 3+*	4
CPUE of fish ≥ 8.0 in	25.60 ± 7.04	4
CPUE of fish ≥ 10.0 in	0.00	1
Assessment Total		13
Assessment Rating		Good

* 2003 age and growth dataset was used.

Table 195. Number of fish and the relative weight (Wr) for each length category of bluegill and redear sunfish collected at McNeely Lake on 7 September 2004. Standard errors are in parentheses.

	Size Range							
Species	No.	Wr	No.	Wr	No.	Wr	No.	Wr
	3.0 – 5.9 in		6.0 – 7.9 in		≥ 8.0 in		Total	
Bluegill	74	97.8 (2.6)	30	84.0 (1.5)	1	89.2	105	93.8 (2.0)
	4.0 – 6.9 in		7.0 – 8.9 in		≥ 9.0 in		Total	
Redear sunfish	66	95.9 (2.0)	22	102.3 (1.1)	7	94.0 (3.4)	41	93.4 (0.8)

Dataset = cfdwrmcl.d04

Table 196. Length frequency, relative abundance, and CPUE of largemouth bass collected in 0.75 hours of 15-minute electrofishing runs in Lincoln Homestead Lake, April 2004; numbers in parenthesis 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	Total	CPUE
Largemouth bass	3	11	4	16	23	35	14	10	16	22	14	4	4		3			1	180	240.0 (54.3)

Dataset = cfdpslhl.d04

Table 197. Electrofishing CPUE data (no./hour) for each size group of largemouth bass collected from Lincoln Homestead Lake from 1999-2004; numbers in parentheses are standard errors.

	Inch Class									
Year	< 8.0		8.0 - 11.9		12.0 - 14.9		≥ 15.0		All sizes	
1999	164.0	(8.0)	10.0	(6.0)	68.0	(4.0)	16.0	(4.0)	258.0	(6.0)
2000	14.4	(2.0)	33.6	(5.2)	2.4	(1.0)	12.0	(2.5)	62.4	(5.6)
2001	64.0	(13.8)	26.0	(9.6)	17.0	(5.5)	14.0	(3.5)	121.0	(13.7)
2002	24.0	(6.9)	22.7	(5.8)	5.3	(2.7)	2.7	(1.3)	54.7	(5.3)
2003	188.0	(62.9)	65.3	(3.5)	40.0	(9.2)	4.0	(2.3)	297.3	(68.7)
2004	45.3	(13.9)	109.3	(25.4)	69.3	(17.9)	16.0	(8.3)	240.0	(54.3)

Dataset = cfdpslhl.d04

Table 198. PSD and RSD_{15} values obtained for largemouth bass from spring electrofishing samples in Lincoln Homestead Lake in 2004; confidence intervals are in parentheses.

Species	No. fish > stock size	PSD	RSD_{15}
Largemouth bass	146	44 (± 8)	8 (± 4)

Dataset = cfdpslhl.d04

Table 199. Age frequency and CPUE (no./hour) per inch class of largemouth bass collected during 0.75 hours of electrofishing at Lincoln Homestead Lake during April 2004. Fish were collected in 15-minute runs.

	Inch Class																		STD
Age	4	5	6	7	8	9	10	11	12	13	14	15	16	18	21	Total	%	CPUE	ERR
1	3	11	2													16	9	21.33	5.93
2			2	11	20	35										69	38	91.83	18.42
3				5	3		14		16							37	21	49.50	6.04
4								10		22						32	18	42.67	16.71
5											7					7	4	9.33	4.37
6											7	2	1			10	5	12.80	3.97
7												2	2			4	2	4.80	2.27
8												1	1	3		5	3	6.40	3.42
9															1	1	1	1.33	1.33
Total	3	11	4	16	23	35	14	10	16	22	14	4	4	3	1	180	100	240.00	54.31
%	2	6	2	9	13	19	8	6	9	12	8	2	2	2	1	100			

Dataset = cfdaglhl.d01 and cfdpslhl.d04

Table 200. Population assessment from largemouth bass collected from Lincoln Homestead Lake during April 2004.

Parameter	Value	Assessment Score
Length at age 3*	9.5 ± 0.7	1
Spring CPUE of Age 1	21.33 ± 5.93	2
Spring CPUE 12-14.9 in fish	69.33 ± 17.94	4
Spring CPUE ≥ 15.0-in fish	16.00 ± 8.33	2
Spring CPUE ≥ 20.0-in fish	1.33 ± 1.33	2
Instantaneous mortality (z)	0.5489	
Annual mortality (A)	42.2%	
Total Score		11
Assessment Rating		Fair

* 2000 age and growth dataset was used.

Table 201. Length distribution and CPUE (no./hour) of largemouth bass collected in 0.75 hours of 15-minute electrofishing runs for black bass in Lincoln Homestead Lake in September 2004: numbers in parentheses are standard errors.

Species	Inch Class															Total	CPUE
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
Largemouth bass	30	21	6	2	2	1	11	10	8	29	23	6	5	5	1	160	213.33 (63.09)

Dataset = cfdwrlhl.d03

Table 202. Number of fish and the relative weight (Wr) for each length category of largemouth bass collected at Lincoln Homestead Lake on 23 September 2004. Standard errors are in parentheses.

Species	Area	Size Range							
		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	49	89.6 (0.8)	31	91.1 (1.1)	6	89.4 (3.5)	86	90.2 (0.6)

Dataset = cfdwrlhl.d04

Table 203. 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 Lincoln Homestead 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
2002	Total	5.4	(0.1)	206.7	(33.7)	125.3	(19.2)	124.0	(41.9)
2003	Total	4.5	(0.1)	17.3	(7.4)	0.0		21.3	(5.9)
2004	Total	3.1	(0.1)	78.7	(28.2)	2.7	(1.3)		

Table 204. Species composition, relative abundance, and CPUE of bluegill and redear sunfish collected in 0.75 hours of 15.0-minute electrofishing runs in Lincoln Homestead Lake, May 2004; numbers in parenthesis are standard errors.

Species	Length Class									Total	CPUE
	1	2	3	4	5	6	7	8	9		
Bluegill	12	14	42	86	28	18	1			201	268.0 (92.0)
Redear sunfish		4	1	8	17	22	9	1	1	63	84.0 (20.0)

Dataset = cfdpslhl.d04

Table 205. PSD and RSD values calculated for sunfish collected during 0.75 hours of electrofishing at Lincoln Homestead Lake during May 2004. Fish were collected in 15.0 minute runs.

Species	No. fish > stock size	PSD	RSD
Bluegill	175	11 (± 5)	0 (± 0)
Redear sunfish	58	19 (± 10)	2 (± 2)

Bluegill = RSD-8; Redear-9
Dataset = cfdpslhl.d04

Table 206. Electrofishing CPUE data (no./hour) for each size group of bluegill collected from Lincoln Homestead Lake from 1999-2004; numbers in parentheses are standard errors.

	Inch Class									
Year	< 3.0		3.0 - 5.9		6.0 - 7.9		≥ 8.0		All Sizes	
2000	1.3	(1.3)	732.0	(69.3)	134.7	(31.0)	6.7	(3.2)	874.7	(91.5)
2001	0.0		50.0	(13.4)	60.0	(15.3)	2.7	(1.1)	112.7	(27.2)
2002	5.3	(2.3)	105.8	(12.8)	84.4	(12.2)	0.9	(0.9)	196.4	(19.1)
2003	70.9	(33.7)	234.3	(94.1)	109.7	(23.1)	8.0	(1.7)	422.9	(136.9)
2004	34.7	(22.8)	208.0	(70.2)	25.3	(5.8)	0.0		268.0	(92.0)

Dataset = cfdpslhl.d04

Table 207. Age frequency and CPUE (no./hour) per inch class of bluegill collected during 0.75 hours of electrofishing at Lincoln Homestead Lake during May 2004. Fish were collected in 15.0-minute runs.

	Inch Class										STD
Age	1	2	3	4	5	6	7	Total	%	CPUE	ERR
1	12	14	2	19				87	43	116.15	65.95
2				67	28	12		107	53	142.52	26.79
3						6	1	7	3	9.33	1.33
Total	12	14	42	86	28	18	1	201	100	268.00	92.00
%	6	7	21	43	14	9	0	100			

Dataset = cfdaglhl.d03 and cfdpslhl.d04

Table 208. Electrofishing catch rate (fish/hour) of each age of bluegill collected from Lincoln Homestead Lake from 2001-2004.

	Year			
Age	2001	2002	2003	2004
1	18.8	14.4	208.5	116.2
2	29.0	119.3	129.4	142.5
3	61.1	20.4	78.0	9.3
4	2.5	42.4	1.0	
5			6.0	
7				
8				
9	1.3			

Table 209. Population assessment for spring-collected bluegill collected from Lincoln Homestead Lake in May 2004.

Parameter	Actual Value	Assessment Value
Mean length age-2 at capture*	5.3 ± 0.2	4
Years to 6 inches*	4 – 4+	3
CPUE of fish ≥ 6.0 in	25.33 ± 5.81	2
CPUE of fish ≥ 8.0 in	0.00 ± 0.00	1
Assessment Total		10
Assessment Rating		Fair

* 2003 age and growth dataset was used.

Table 210. Electrofishing CPUE data (no./hour) for each size group of redear sunfish collected from Lincoln Homestead Lake from 2000-2004; numbers in parentheses are standard errors.

	Inch Class											
Year	< 3.0		3.0 - 5.9		6.0 - 7.9		≥ 8.0		≥ 10.0		All Sizes	
2000	0.0		16.0	(2.9)	105.3	(34.7)	5.3	(2.7)	0.0		126.7	(37.0)
2001	0.0		32.0	(10.1)	6.0	(4.1)	18.0	(7.7)	0.0		56.0	(16.9)
2002	0.0		29.3	(5.3)	76.4	(6.0)	15.1	(5.7)	2.7	(1.9)	120.9	(11.2)
2003	0.0		145.1	(32.8)	29.7	(11.9)	18.3	(7.4)	0.0		193.1	(36.8)
2004	5.3	(3.5)	34.7	(16.7)	41.3	(2.7)	2.7	(2.7)	0.0		84.0	(20.0)

Dataset = cfdpslhl.d04

Table 211. Age frequency and CPUE (no./hour) per inch class of redear sunfish collected during 0.75 hours of electrofishing at Lincoln Homestead Lake during May 2004. Fish were collected in 15.0-minute runs.

	Inch Class											STD
Age	2	3	4	5	6	7	8	9	Total	%	CPUE	ERR
1	4	1	8	11					24	38	31.50	16.80
2				6	22	9			37	60	50.21	1.62
3							1	1	2	2	2.29	2.29
Total	4	1	8	17	22	9	1	1	63	100	84.00	20.00
%									100			

Dataset = cfdaglhl.d03 and cfdpslhl.d04

Table 212. Electrofishing catch rate (fish/hour) of each age of redear sunfish collected from Lincoln Homestead Lake from 1994-2004.

	Year			
Age	2001	2002	2003	2004
1	0.0		137.9	31.5
2	18.8		40.9	50.2
3	12.5		13.2	2.3
4	6.1		1.1	
5	16.7			
6	2.0			

Table 213. Population assessment for spring collected redear sunfish collected from Lincoln Homestead Lake in May 2004.

Parameter	Actual Value	Assessment Value
Mean length age-3 at capture*	8.8 ± 0.2	4
Years to 8 inches*	2 - 2+	4
CPUE of fish ≥ 8.0 in	2.67 ± 2.67	1
CPUE of fish ≥ 10.0 in	0.00	1
Assessment Total		10
Assessment Rating		Fair

* 2003 age and growth dataset was used.

Table 214. Number of fish and the relative weight (Wr) for each length category of bluegill and redear sunfish collected at Lincoln Homestead Lake on 23 September 2004. Standard errors are in parentheses.

	Size Range							
Species	No.	Wr	No.	Wr	No.	Wr	No.	Wr
	3.0 – 5.9 in		6.0 – 7.9 in		≥ 8.0 in		Total	
Bluegill	59	87.1 (2.0)	29	90.1 (1.1)			88	88.1 (1.4)
	4.0 – 6.9 in		7.0 – 8.9 in		≥ 9.0 in		Total	
Redear sunfish	37	94.4 (1.5)	32	101.5 (1.4)			70	96.8 (1.4)

Dataset = cfdwrlhl.d04

Table 215. Species composition, relative abundance, and CPUE (fish/hour) of fish collected in 0.50 hours of in the Upper Game Farm Lake, March 2004.

Species	Inch Class 0	2	3	4	5	6	7	8	9	10	11	12	13	14	15	18	Total	CPUE (fish/hr)
Largemouth bass			1	19	37	5	1	2	2	4	9	11	5	3	2	1	102	204.0 (32.0)
Bluegill		17	49	28	18	13	3										128	256.0 (256.0)
Warmouth perch	2	1	1	1	3	4											12	24.0 (16.0)
Longear sunfish		2	9	64	38	2											115	230.0 (74.0)
Redear sunfish								1									1	2.0 (2.0)
Green sunfish				2													2	4.0 (0.0)
Yellow bass					7	4		6	6	2							25	50.0 (30.0)
White crappie					6												6	12.0 (8.0)
Black crappie			1	8	13			1	5	1							29	58.0 (14.0)

Dataset = cfdpsgfu.d04

Table 216. Species composition, relative abundance, and CPUE of fish collected in 0.25 hours of in the Lower Game Farm Lake, March 2004.

Species	Inch Class 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE (fish/hr)
Largemouth bass		2	5	8				2	2	5	6	3	3	1		1		1	39	156.0
Bluegill	20	83	59	11	3	7													183	732.0
Redear sunfish			2			5													7	28.0
Warmouth perch			1	2	2														5	20.0
Longear sunfish	4	3	13	17	3														40	160.0
Hybrid sunfish		2	3	4															9	36.0
Black crappie			1	1															2	8.0
Yellow bass						3	3	2											8	32.0

Dataset = cfdpsgfl.d04

Table 217. Length frequency, relative abundance, and CPUE of largemouth bass collected in 1.25 hours of 15-minute electrofishing runs in General Butler State Park Lake, April 2004; numbers in parenthesis are standard errors.

Species	Inch Class																	Total	CPUE (fish/hr)
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
Largemouth bass	1	4	1	3	1			2		3	6	5	6	9	13	3	3	60	48.00 (15.9)

Dataset = cfdpsgbs.d04

Table 218. Length frequency, relative abundance, and CPUE of largemouth bass collected in 0.50 hours of 15-minute electrofishing runs in Wilburn Lake, April 2004; numbers in parenthesis are standard errors.

Species	Inch Class																	Total	CPUE (fish/hr)
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
Largemouth bass	1	22	4			2	8	11	5	7		2		3	2		1	68	136.00 (32.00)

Dataset = cfdpswbn.d04

Table 219. Species composition, relative abundance, and CPUE of fishes collected in 0.50 hours of 15-minute electrofishing runs in Leary Lake, April 2004; numbers in parenthesis are standard errors.

Species	Inch Class															Total	CPUE (fish/hr)
	2	3	4	5	6	7	8	9	10	11	12	13	14	19	20		
Largemouth bass		2	1		3	6	11	6	7	21	17	4	1	1	1	81	162.00 (10.00)
Bluegill	1	3	6	11	8	4	6									39	78.00 (46.00)
White crappie								1	12							13	26.00 (14.00)

Dataset = cfdpslry.d03

Table 220. Length frequency, relative abundance, and CPUE of largemouth bass collected in 1.50 hours of 15-minute electrofishing runs in Williamstown Lake, April 2004; numbers in parenthesis are standard errors.

Species	Inch Class													Total	CPUE (fish/hr)
	4	5	6	7	8	9	10	11	12	13	14	15	16		
Largemouth bass	13	21	7	1	3	12	19	22	10	10	4	4	1	127	84.67 (13.12)

Dataset = cfdpswil.d04

Table 221. Length frequency, relative abundance, and CPUE of largemouth bass collected in 1.00 hours of 15-minute electrofishing runs in Jacobson Park Lake, May 2004; numbers in parenthesis are standard errors.

Species	Inch Class																Total	CPUE (fish/hr)
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
Largemouth bass	1		1	2	1	11	5	3	4	8	7	2		3	1	1	50	50.00 (9.6)

Dataset = cfdpsjac.d04

Table 222. Species composition, relative abundance, and CPUE (fish/hour) of fish collected in 0.25 hours of in the Kleber Pond, April 2004.

Species	Inch Class												Total	CPUE (fish/hr)
	2	3	4	5	6	7	8	9	10	11	12	13		
Largemouth bass		1	1	1			6	5	5	8	7	1	35	140.0
Bluegill	1	3	2	4	7	10	1						28	112.0
Redear sunfish			5	36	5	2	2						50	200.0
Black crappie			1										1	4.0

Dataset = cfdpsklb.d04

Table 223. Species composition, relative abundance, and CPUE (fish/hour) of fish collected in 0.50 hours of in the Upper Thomas Lake, April 2004.

Species	Inch Class																		Total	CPUE (fish/hr)
	3	4	5	6	7	8	9	10	11	13	14	18	20	21	27	29	30	33		
Largemouth bass	2	4	1			4	8	1	6	3	2	1	1	1					34	68.00 (4.00)
Bluegill	8	21	11	5	3														48	96.00 (40.00)
Redear sunfish	2	63	33	4	8	4	1												115	230.00 (110.00)
White crappie					1														1	2.00 (2.00)
Channel catfish																1	3	1	5	10.00 (10.00)
Striped bass															1	2			3	6.00 (6.00)

Dataset = cfdpsklb.d04

NORTHEASTERN FISHERY DISTRICT

Project 1: Lake and Tailwaters Fishery Surveys

FINDINGS

Cave Run Lake

Muskellunge Sampling (Spring)

A total of 80 (4.4 f/h – 5.2 f/h in 2003) muskellunge were collected during 18 hours of sampling on 05, 06 and 08 April 2004 (Table 1). This sampling was carried out to compare past year's CPUE data and also to obtain length and weight information. Not including age 1 fish (28.7%), the majority captured (58.7%) were ≥30-inches long; of these, 17.0% were ≥40-inches long. Based on the number and sizes sampled, the population assessment (Table 2) was good.

Black Bass Sampling (Spring)

As part of a largemouth bass slot size limit evaluation the district and Black Bass Research personnel sampled for four hours within each the upper, middle and lower sections (12 hours total) of the lake on the nights of May 10-12 (Table 3). All three species of black bass were sampled. Overall, largemouth bass comprised 68.2% of the black bass collected during this 12-hour period. Numbers of largemouth bass sampled were somewhat evenly distributed in the middle (39.2%) and lower (37.9%) sections where as the upper section made up 22.9% (96.3 in 2003). Smallmouth, once again, represented 1.5% of the total black bass sampled (one fish sampled in the upper section). Spotted bass were more numerous within the lower lake section making up 54.9% of the black bass population sampled within that area. Comparisons of largemouth bass catch rates for several size classes (compared to past years) are found in Table 4. Following shows 2004 catch rates compared to management objectives.

Inch Class	8.0 – 11.9	12.0- 14.9	≥ 15.0
2004 f/h	60.7	26.0	14.1
CPUE Objective	70.0	≥30.0	≥6.0

Currently there is a slot size limit (13-16 inches) for largemouth bass at Cave Run Lake. Catch (f/h) and percent of total for size ranges relating more to the current slot limit, compared to 2001 and 2003 findings (couldn't sample in the spring of 2002), are shown below.

	Inch Class					
	8 -12.9		13 - 15.9		> 16.0	
	CPUE	%	CPUE	%	CPUE	%
2004	75.3	58.1	16.5	12.7	8.9	6.9
2003	72.8	48.4	22.8	15.2	13.9	9.2
2001	64.2	54.5	24.0	20.4	6.7	5.7

Table 5 presents the PSD and RSD values for each black bass species by lake section, as well as that from other lakes in the NEFD. Results of a population assessment for largemouth bass was good (Table 6). The majority of the largemouth bass collected were two years old (Table 7.) For further information on the black bass found in Cave Run Lake, see the Black Bass Research Report.

Black Bass Sampling (Fall)

In October (11 and 12) the lake was once again sampled (nocturnal electrofishing) for black bass. At this time only the upper and lower lake sections were sampled (two hours each section); results are shown in Table 8. The primary reason for sampling at this time was to obtain information on current year class strength and numbers and relative weight value information. Indexing the largemouth bass year-class strength and recruitment continued for the second year (Table 9). Catch rate for age 0 (≥5 inch long) largemouth bass was 53.5 f/h (Table 8), it was 23.5 in 2003. At this time spotted bass represented 53.3% of the bass population collected from the lower lake and largemouth bass 99.0% from the upper lake samples. The greatest relative weight value (91, Table 10) was for largemouth bass ≥ 15 inches long collected from

the lower lake section (it was 87 in 2002). Relative weight values for largemouth bass within the other size groups (lower and upper lake) was ≤ 87. Spotted bass had Wr values over 89 for all inch classes sampled. The few smallmouth bass collected had low Wr values.

Crappie Trap Netting

During October (18-22) trap nets were set for crappie within the lake. This year a total of 15 nets (in all past years, 20 nets were set, 10 in each area) were set exclusively in the upper reaches of the lake for a total of 60 net days (set on a Monday, checked daily, pulled on a Friday). The decision to reduce the total number of nets and to place all nets in the upper reach was due to the practicality of man-power limitations and the fact that 75% (average over the past 5 years) of the total catch has been from the upper reach. Length frequencies of the crappie captured are shown in Table 11. A total of 1021 (150 in 2003) crappie were netted, representing a 493% increase over the past eleven year average catch. In the first 48 hours the lake level rose 3.14 ft which is the greatest increase experienced while trap netting since the inception of trap netting on the lake. White crappie made up the majority of the catch (92.4%) with young-of-year and age 1 comprising 67.7%. Stock density values (Table 12) were within the desired PSD range but below that desired for RSD. One of the fish management goals for white crappie is for a CPUE of ≥0.75 white crappie ≥8 inches long per trap net day. This management objective was well met this year and surpasses all previous years (best CPUE 0.78 in 1992) with a CPUE of 2.97/trap net day. Most white crappie collected were, young-of-year (41%) and averaged 3.2 inches long at capture, age one (27%) and two (16%) years old and averaged 3.2 and 5.7 inches long at these ages (Table 13 and 14). Due to the anomaly of the sample, mortality can not be reported. The white crappie assessment values are fair (has been poor since 1999) and are shown in Table 15. A total of 77 (15 in 2003) black crappie were collected and as in all past years, the assessment is poor (Table 17). Back-calculated lengths for black crappie are presented in Table 16 and age-frequency in Table 18.

Creel Survey

A daytime creel survey in the tailwaters of Cave Run Lake was conducted from 01 March through 30 October 2004. The survey was divided into four periods and these periods were adjusted based on the availability of daylight. Travis L. Gibson was hired as creel clerk to interview and record data from anglers. In the tailwater area, anglers fished 20,878 man-hours during daytime hours. A total of 28,011 fish were caught with a harvest of 10,165 fish that weighed 5,476 pounds. Anglers made 9,882 fishing trips averaging 2.11 hours per trip. The catch rate was 1.34 fish per hour; the harvest rate was 0.48 fish per hour (Table 19). This was the first time for a creel in the tailwater area; there is no comparative data. Crappie was the most sought after species and the most numerous caught (17,223). Bluegill were the second most sought after species followed by catfish and black bass. Anything anglers made the most trips of all anglers, over 49% of all fishing trips. White crappie were the most numerous species caught and harvested, and accounted for the most pounds harvested followed by bluegill and channel catfish. Channel catfish made up only 9.5% of the total numbers harvested but comprised 21.6% of the total pounds harvested. Rainbow trout made up 0.9% of the total numbers harvested. Muskellunge only made up 0.5% of the total numbers harvested and ranked third for the most pounds harvested behind crappie and channel catfish. Of the 70 muskie caught, 53 (76%) were harvested (Table 20). It took muskie anglers an average 18.3 hours per acre to catch a muskie ≥ 35 inches. The average length of muskie harvested was 38.2 inches long. Length frequencies for species harvested and released are found in Table 21. Monthly angling success for black bass, crappie and catfish are shown in Tables 22,23 and 24. Creel data print out results per acre were based on one acre and it was determined the approximate area was 2.9 acres, henceforth, per acre results are not reported.

Miscellaneous

78 donated x-mas trees were placed into Cave Run Lake with assistance form the USFS. With these trees, two fish attractor sites were re-brushed. During the fall, 2,800 muskellunge averaging 13.6 inches long were stocked into the lake.

Grayson Lake

Black Bass Sampling (Spring)

Sections of the upper, middle and lower lakes shorelines were sampled (boat electrofishing) for black bass on the nights of 3-5 May. Each section was sampled for three hours in half-hour time periods for a total of nine hours of sample time. Table 25 shows the black bass catch composition and length frequencies from each lake section and combined. Largemouth bass comprised 86.4% of the black bass catch; however, only 43.6% of these were "wild" while 56.4% were stocked bass. Spotted bass made up 13.4% and smallmouth bass 0.2% of the black bass total. No smallmouth bass were captured from the upper lake area. Strategic management plan catch rate (CPUE-f/h) goals for largemouth bass 8-11-inches long are 60 f/h, 20 f/h for bass 12-14.9-inches long, and 6 f/h for those 15-inches long and longer. Only the CPUE goal for 8-11.9- inch long largemouth bass was met in 2004 (77.8 f/h). This goal has been met for several years. The CPUE goal for 12.0-14.9-inch long largemouth bass was only met in 1999 and this goal set for 15-inch and longer bass was only met in 2000. It appears we must lower our management objective goals. Table 26 provides an example of the catch rates for the various size classes of largemouth bass captured from 1999-2004. Table 27 compares catch rates (f/h) for various ages (1-13), based on previous known ages, for largemouth bass from 1999-2004. Table 28 compares largemouth bass annual mortality between 2003 and 2004. Stock density values (PSD and RSD) for the black bass species by lake section are shown in Table 29 and compared with other district lakes in Table 10.

Black Bass Sampling (Fall)

Grayson Lake was once again sampled for black bass on the nights of 13-14 September. Findings from this sampling comparing the lower and mid portions of the lake are shown in Table 30; the upper section was too muddy to sample. Catch rates for bass from these areas were lower in 2004 than in 2003, which also had been below that found in previous years. Of the total largemouth bass 8-inches long or longer sampled from these areas (70.0 f/h), 18.7% were 12-inches long and 2.1% were 15-inches long or longer. Catch rates for smallmouth bass has been declining since 2000 and was 1.45 f/h in 2004. Relative weight values (Wr) were less than 90 for largemouth bass from all size categories (Table 31)

Crappie Electrofishing (Fall)

On 28 October, the upper end of Grayson Lake was sampled for three hours (6-30 min runs) during daylight hours for crappie. A total of 475 (158.3 f/h) white crappie that ranged in length from 2-11 inches long and 8 (2.7 f/h) black crappie that ranged from 3-9-inches long were sampled (Table 32). In 2003 there were 309 white crappie (88.3 f/h) and 6 black crappie (1.7 f/h) sampled from the same area. Table 33 shows age and growth data (derived from otoliths) for the white crappie which ranged up 5 years old. The majority of the crappie sampled were 7- and 8- inches long (Table 34). Few black crappies were sampled (8) and information for these fish is found in Tables 35 and 36. Table 37 provides PSD and RSD values for the crappie.

Miscellaneous

During March 23,329 largemouth bass averaging 5.1 inches long and in October 15,197 largemouth bass averaging about 5.0 inches long were stocked into the lake. A letter was prepared to Commissioner Webb by Director Kinman explaining our black bass program for the lake. Seven of 67 largemouth bass sampled from Grayson Lake were found positive for largemouth bass virus. The Black Bass Research Section continued to evaluate the advanced fingerling largemouth stocking impact to the existing population. For further details see their report in the Statewide Fisheries Investigation Project APR.

Lake Carnico

On April 29 the shoreline of Lake Carnico (Nicholas County) was nocturnally electrofished for black bass. During six 15-minute runs 350 largemouth bass were captured. Length frequency for all largemouth bass captured is shown in Table 38. The population assessment (Table 39) rates Lake Carnico as a "good" bass fishery. Tables 40 and 41 show largemouth bass catch rates by age and size structure. PSD values for largemouth are shown in Table 5.

Clear Creek Lake

The shoreline of Clear Creek Lake (Bath County) was nocturnally electrofished on May 26 for largemouth bass (Table 42). During the three 7.5 minute runs, 98 largemouth bass were captured. The PSD values (Table 5) were below desired levels.

Greenbo Lake

Spring Electrofishing

Greenbo Lake (Greenup County) was nocturnally shoreline electrofished on April 28. Ten 900 second runs produced 516 largemouth bass. Table 43 shows length frequencies and CPUE of all fish sampled during that time. Catch rates for largemouth bass were above designated levels as specified in the lake management plan ($\geq$ 8 inches long – desired = 100 f/h, actual = 192 f/h; $\geq$ 12 inches long –desired = 50 f/h, actual = 76 f/h; $\geq$ 15 inches long – desired = 15 f/h, actual = 17 f/h). Table 5 shows PSD values for Greenbo Lake, as compared to other lakes in the district. The largemouth PSD is slightly below the desired level. The age frequency of all captured largemouth bass is shown in Table 44, the CPUE by size class (and year) is shown in Table 45 and by age in Table 46. The population assessment rates Greenbo Lake as a good bass fishery (Table 47). Many channel catfish were observed due to a double stocking in 2003.

Fall Electrofishing

Nocturnal electrofishing for relative weights and length frequencies for largemouth bass was accomplished on 15 September. A total of 130 largemouth bass were collected during 1.5 hours of sampling (six 900 second runs). Table 48 shows relative abundance and CPUE of fall sampling. Largemouth bass Wr's (Table 10) were slightly below desirable values, but typical for fish in this area.

Miscellaneous

As of 01 March 2005 a 15 fish creel limit for bluegill in is effect. Efforts continued in establishing aquatic vegetation with the transplantation of elodea, najas, sagittaria and juncus from Carter Caves Smoky Valley Lake. Results are basically the same as they have been with the exception of some minute sprigs found outside of the enclosures. A few Nelumbo lutea plants were first observed this year after sowing seeds 6-7 years ago. Grass carp continue to be observed. During the year, 102,000 redear sunfish (1.5 inches long) and 15,000 rainbow trout were stocked.

Mill Creek Lake

Mill Creek Lake was electrofished for black bass on the night of 06 May. During 5-15 minute electrofishing runs, a total of 177 (141.6 f/h) largemouth bass were sampled ranging from 2-22-inches long (Table 49). Management plan objective for the lake are for a CPUE of 15 f/h largemouth bass 12-14.9 inches long, 5 f/h 15-inches long or longer, and a PSD value of at least 40. The values found in 2004 was a CPUE of 18 f/h for largemouth bass 12-14.9 inches long (the best since 1991), 4 f/h 15-inches long or longer (1 f/h shy of our goal), and a PSD level of 25. This PSD was the same as when last sampled in spring of 2001 (Table 5), which was much lower than our objective of 40.

Lake Reba

Largemouth bass were sampled on the night of 13 May and these findings are shown in Table 50. The total catch per effort (CPUE) was the lowest found since 2001 (Table51). The majority of the bass sampled were 8-12-inches long. Catch rates of largemouth bass 12-14.9-inches long was slightly below 2003 findings, but still above that found in 1999-2002. Catch rates for largemouth bass 15-inches long or longer have fluctuated over the years to the point it is difficult to make any comments. The stocking program (wild vs pellet reared) may have something to do with these results. Table 5 shows PSD (32) and RSD (4) values for these bass, which were the same as those found in 2003. Bluegill catch rates (Table 52) were the lowest since sampling began on the lake. Findings from various length frequencies can be compared to those found in 2003 (Table 53). Catch rates for redear sunfish were also low, the lowest since 1998 (Table 52 and 53). Predicted catch rates (f/h) by age are shown for bluegill in Table 54 and redear sunfish in Table 55. The lake was again sampled during fall (22 Sept) for largemouth bass and those findings are shown in Table 56. Relative weight values were 87 for bass 8-11.9-inches long, 90 for those 12-14.9- inches long, and 95 for bass 15-inches long and longer (Table10).

In addition to routine sampling, assistance was provided at a fishing event that was held for youth. This event was put together by Commissioner Brown. For this event district personnel blocked off a cove into which channel catfish were stocked. Also, an electrofishing demonstration was held for a fish biology class from EKU. We are waiting for a creel survey to be carried out at the lake in order to write a strategic management plan for the lake. One is scheduled for 2005 (10 years after impoundment).

Rebel Trace Lake

Results from spring nocturnal electrofishing (May 26) for largemouth bass in Rebel Trace Lake (Menifee County) are shown in Table 57. During three 7.5 minute runs, 41 largemouth bass were captured, only three were 12 inches or greater. The PSD values (Table 5) were well below the desired value.

Smoky Valley Lake

During the day of 18 May bluegill (191 f/h) were sampled at Smoky Valley Lake (Table 58). Most were less than or equal to four inches long. Numbers greater than six inches long (Table 59) were lower than that found in recent years. Catch rate management objectives for bluegill 8-inches long or longer is for 2f/h. It was 0.8 f/h in 2004 and 2.1 f/h in 2003. Proportional stock density values (Table 5) for these bluegill were below the desired value of 30; it was 16. Table 60 and 61 reflect age and growth values based upon similar information generated from fish collected in past years. The lake was again sampled on the night of 28 September, but this time for largemouth bass. Catch rates (262 f/h-Table 62) were very similar to that found in 2003 (260 f/h). However there were more bass captured greater than 12-inches long in 2004 (43 f/h) than in 2003 (24 f/h). There is a 15-inch minimum size limit regulation for largemouth bass at the lake, yet no fish were collected larger than 14-inches long. There is some serious jug fishing going on at the lake at night and it is wondered if this may be having an impact. Such methods of anling will be dis-allowed in 2007. Relative weight values were below 90 for each of the size groups listed (Table 10).

Lake Wilgreen

On the night of 23 September this lake was sampled (electrofished) for black bass. Catch rates for largemouth bass was 462 f/h (Table 63). Two spotted bass were collected (the first was seen in 2002). There were 80 f/h largemouth bass captured 12-inches long or longer; however, 66.7 f/h were within the 12-inch class. This is the greatest catch of 12-inch long bass collected during fall sampling since we have begun sampling the lake. Relative weight values for 8-14.9 inch long bass was 88 and 99 for those 15-inches long or longer.

Table 1. Relative abundance and CPUE (fish/hour) of muskellunge collected during 18 hours of electrofishing at Cave Run Lake on 05,06 and 04 April 2004.

	Inch class																											
Species	11	13	14	15	17	22	23	24	25	29	30	31	32	33	34	35	36	37	38	39	40	41	43	44	46	48	Total	CPUE	SE
Muskellunge	1	3	9	9	1	1	1	3	3	2	4	4	4	5	4	3	6	2	2	5	2	1	1	2	1	1	80	4.44	0.63

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Table 2. Population assessment for muskullenge from Cave Run Lake captured from 05-08 April 2004

Parameter	Assessment score
CPUE Age 1 muskellunge	1
CPUE ≥ 20.0 inch muskellunge	2
CPUE ≥ 30.0 inch muskellunge	3
CPUE ≥ 36.0 inch muskellunge	3
CPUE ≥ 40.0 inch muskellunge	3
Total score	12
Assessment rating	Good

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Table 3. Length frequency and CPUE (fish/hour) of black bass collected in 4.0 hours of 30-minute nocturnal electrofishing runs for black bass in each area of Cave Run Lake from 10-12 May 2004.

		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
Lower	Smallmouth bass	1	2	2		1	7			1	2			1							17	4.25	1.33
	Spotted bass	2	18	3	62	155	112	68	29	15	4	5	2								475	118.75	8.82
	Largemouth bass		4	21	26	8	23	55	68	54	45	20	10	11	13	5	4	1			372	93.00	9.14
Middle	Smallmouth bass	3	5				1		1			1	1	2				1	1		16	4.00	2.20
	Spotted bass	7	25	16	4	29	51	48	13	9	2		2	1							207	51.75	11.01
	Largemouth bass		9	45	68	13	27	84	88	95	92	50	25	23	26	14	9	2		2	672	168.00	20.25
	Smallmouth bass													1							1	0.25	0.25
Upper	Spotted bass						7	1	1												9	2.25	0.88
	Largemouth bass	5	34	58	44	9	47	91	34	62	39	13	18	28	16	7	4	2	1	1	513	128.25	10.82
Total	Smallmouth bass	4	7	2		1	8		1	1	2	1	1	4				1	1		34	2.83	0.91
	Spotted bass	9	43	19	66	184	170	117	43	24	6	5	4	1							691	57.58	10.92
	Largemouth bass	5	51	124	138	30	97	230	190	211	176	83	53	62	55	26	17	5	1	3	1557	129.75	10.14

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Table 4. Spring electrofishing catch-per-unit-effort (CPUE) for each size class of largemouth bass collected at Cave Run Lake in May 2004. CPUE = fish/hour.

	Inch class									
	<8.0		8.0-11.9		12.0-14.9		≥15.0		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2004	29.00	3.02	60.67	5.88	26.00	3.03	14.08	1.35	129.75	10.14
2003	41.00	5.99	64.58	5.15	24.75	2.28	20.25	2.85	150.58	13.02
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
2000	45.08	4.88	78.33	6.48	26.83	2.89	9.00	1.51	159.25	10.69
1999	67.58	7.18	51.25	3.47	21.58	1.79	8.58	1.49	149.00	8.73
1998	18.71	3.52	17.86	2.94	20.57	2.14	6.86	1.54	64.00	7.64

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Table 5. Proportional and relative stock density values (PSD, RSD) for black bass and bluegill sampled during 2004 spring electrofishing at NEFD lakes; 95% confidence interval in parentheses.

Lake	Largemouth bass				Smallmouth bass				Spotted bass				Bluegill			
	PSD		RSD		PSD		RSD		PSD		RSD		PSD		RSD	
Beech Fork	10	(±9)	10	(±9)												
Carnico	31	(±6)	11	(±4)												
Cave Run																
Lower	35	(±5)	11	(±3)	33	(±28)	8	(±12)	7	(±2)	1	(±1)				
Middle	45	(±8)	14	(±6)	75	(±32)	63	(±36)	9	(±5)	2	(±2)				
Upper	36	(±5)	16	(±4)												
Entire	40	(±3)	14	(±2)	52	(±22)	33	(±21)	7	(±2)	1	(±1)				
Clear Creek	21	(±11)	10	(±8)												
Greenbo	39	(±5)	9	(±3)												
Grayson																
Lower	15	(±4)	2	(±2)					8	(±5)	1	(±1)				
Middle	13	(±4)	2	(±2)	20	(±30)			4	(±4)						
Upper	31	(±8)	7	(±5)												
Entire	17	(±3)	3	(±2)	33	(±37)			6	(±3)	1	(±1)				
Mill Creek	25	(±8)	6	(±5)												
Reba	32	(±6)	4	(±3)									11	(±4)		
Rebel Trace	14	(±14)	9	(±11)												
Smoky Valley													16	(±5)	1	(±1)

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Table 6. Population assessment for largemouth bass based on spring sampling in 2003 and 2004 at Cave Run Lake.

Parameter	Year 2003	2004
Length at age 3	3	3
Spring CPUE of Age 1 Fish	3	2
Spring CUPE 12-14.9-in. fish	2	3
Spring CPUE > 15.0-in. fish	4	3
Spring CPUE > 20-in fish	2	2
Instantaneous mortality (z)	-0.724159	-0.846131
Annual mortality (A)	52	57
Total score	14	13
Assessment rating	Good	Good

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Table 7. Electrofishing catch rate (fish/hour) for each age of largemouth bass collected from Cave Run Lake from 1999 - 2004.

Age	Year 1999	2000	2001	2002	2003	2004
1	61.64	42.44	20.65	Did not sample	39.76	28.09
2	43.46	61.41	47.10		55.77	46.55
3	27.09	34.71	26.53		24.17	31.96
4	11.20	14.46	15.35		17.34	14.19
5	3.69	3.76	5.03		7.19	5.30
6	1.17	1.10	1.58		3.27	2.06
7	0.13	0.15	0.18		0.50	0.28
8	0.53	0.47	0.71		1.50	0.86
10	0.08	0.08	0.28		0.33	0.14
13		0.33	0.17		0.75	0.08

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Table 8. Length frequency and CPUE (fish/hour) of black bass collected in 4.0 hours (2 hours in each area) of nocturnal electrofishing (8-30 min runs) for black bass in Cave Run Lake on October 11-12 2004.

	Inch class																				Std
Species/area	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	20	Total	CPUE	error
Lower																					
Smallmouth bass	1	3	1	1		1													7	3.50	2.36
Spotted bass	9	30	26	7	27	32	40	31	16	9		2							229	114.50	28.38
Largemouth bass		6	7	12	23	34	7	25	22	20	12	11	4	2	3	2	3	1	194	97.00	29.03
Upper																					
Spotted bass			1					1	2										4	2.00	0.82
Largemouth bass	2	53	62	79	85	22	6	34	22	14	13	9	6	2	2	3	1		415	207.50	40.57
Entire																					
Smallmouth bass	1	3	1	1		1													7	1.75	1.28
Spotted bass	9	30	27	7	27	32	40	32	18	9		2							233	58.25	25.00
Largemouth bass	2	59	69	91	108	56	13	59	44	34	25	20	10	4	5	5	4	1	609	152.25	31.13

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Table 9. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall while noctural electrofishing at Cave Run 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
2004	Total	5.3	0.06	86.0	26.3	53.5	14.0	90.7	25.0
2003	Total	4.7	0.04	70.7	19.0	23.5	6.4	72.8	19.1

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Table 10. Number of fish and mean relative weight (Wr) values for length groups of black bass collected in NEFD lakes sampled by nocturnal electrofishing during September and October 2004. Standard error in parentheses.

Species	Location	No.	Wr	No.	Wr	No.	Wr
		8.0 - 11.9 in		12.0 - 14.9 in		≥ 15 in	
Largemouth bass	Cave Run Lake						
	Lower	74	87 (0.8)	27	85 (1.1)	11	91 (1.6)
	Upper	76	86 (0.5)	28	86 (1.0)	8	88 (1.7)
	Entire	150	87 (0.5)	55	86 (0.7)	19	90 (1.2)
	Grayson Lake						
	Lower	153	87 (0.4)	28	86 (1.3)	4	87 (1.3)
	Middle	160	87 (0.6)	36	83 (1.1)	4	84 (4.8)
	Entire	313	87 (0.4)	64	84 (0.9)	8	86 (2.4)
	Greenbo	61	85 (0.8)	14	83 (1.5)	8	90 (2.1)
	Reba	186	87 (0.6)	73	90 (0.7)	10	95 (1.9)
	Smoky Valley	108	85 (0.7)	43	84 (1.0)		
	Wilgreen	306	88 (0.4)	116	88 (1.6)	4	99 (9.2)
		7.0 - 10.9 in		11.0 - 13.9 in		≥ 14 in	
Spotted bass	Cave Run Lake						
	Lower	119	89 (0.6)	11	89 (1.6)		
	Upper	3	97 (1.3)				
	Entire	122	89 (0.6)	11	89 (1.6)		
	Grayson Lake						
	Lower	37	87 (1.0)	9	86 (2.0)		
	Middle	32	90 (2.8)	1	85		
	Entire	69	88 (1.4)	10	86 (1.8)		
Smallmouth bass	Cave Run Lake						
	Lower	1	85				
	Upper						
	Entire	1	85				
	Grayson Lake						
	Lower			1	73	1	97
	Middle	1	82			1	81
	Entire	1	82	1	73	2	89 (7.9)

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Table 11. Length frequency and CPUE for each species of crappie collected at Cave Run Lake (upper section only) in 60 net-nights during October 19-22 2004.

	Inch class														
Species	2	3	4	5	6	7	8	9	10	11	12	15	Total	CPUE	Std error
White crappie	188	182	18	141	138	99	96	46	25	8	2	1	944	15.7	3.44
Black crappie	19	28	1	2	5	9	7	5	1				77	1.3	0.28

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Table 12. PSD and RSD values for crappie collected in trap nets on Cave Run Lake during October 2004; 95% confidence limits are in parentheses.

Lake / Species	No.	PSD	RSD
Cave Run Lake			
White crappie	944	32 (±8)	6 (±4)
Black crappie	77	44 (±37)	3 (±13)

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Table 13. Mean back-calculated lengths (in) at each annulus for white crappie collected from Cave Run Lake in October 2004, including 95% confidence intervals for each mean length per age class. Average length for age 0 is at capture.

		Age								
Year	No.	0+	1	2	3	4	5	6	7	8
2004	29									
2003	19		2.7							
2002	16		3.1	5.6						
2001	13		3.4	5.7	7.4					
2000	19		3.5	5.8	7.2	8.4				
1999	3		3.8	5.6	6.8	7.5	8.7			
1998	1		3.8	6.0	7.9	9.0	10.8	12.0		
1996	1		3.1	7.2	9.1	10.6	11.9	12.8	13.5	14.4
Mean		3.4	3.2	5.7	7.3	8.4	9.7	12.4	13.5	14.4
Number	101	29	72	53	37	24	5	2	1	1
Smallest		2.4	2.3	4.5	5.1	5.5	7.8	12	13.5	14.4
Largest		4.6	4.7	7.9	9.4	10.6	11.9	12.8	13.5	14.4
Std error		0.7	0.1	0.1	0.2	0.3	0.7	0.4		
95% CI (±)			0.1	0.2	0.3	0.5	2.9	1.6		

Otoliths were used for age and growth determinations; Intercept = 0
nedaagcr.d04

Table 14. Age frequencies and CPUE of white crappie collected from trap nets fished in Cave Run Lake for 60 net nigl during October 2004.

	Inch class															St
Age	2	3	4	5	6	7	8	9	10	11	12	15	Total	%	CPUE	erro
0+	188	182	16										386	41	6.44	1.6
1+			2	141	110								253	27	4.22	1.3
2+					14	89	38	9					151	16	2.51	0.9
3+							38	28	3	2			71	7	1.18	0.3
4+					14	10	19	5	20	5	1		74	8	1.23	0.3
5+								5	3	1			8	1	0.14	0.0
6+											1		1	0	0.02	0.0
8+												1	1	0	0.02	0.0
Total	188	182	18	141	138	99	96	46	25	8	2	1	944	100		
%	20	19	2	15	15	10	10	5	3	1	0	0	100			

CPUE of ≥ 8 in (quality size) crappie =2.96
CPUE of ≥ 10 in (preferred size) crappie =0.6
nedaagcr.d04, nedctncr.d04.

Table 15. Population assessment for white crappie from Cave Run Lake in October 2004.

Parameter	Assessment value	Assessment score
CPUE of crappie (excluding age 0)	9.3	2
CPUE of age 1 crappie	4.2	2
CPUE of age 0 crappie	6.4	3
CPUE of crappie ≥ 8 inches	3.0	2
Mean age 2 length at capture	7.9	1
Instantaneous mortality (Z)	-0.855	
Annual mortality (A)	0.5	
Total score:		10
Assessment rating:		F

Table 16. Mean back-calculated lengths (in) at each annulus for black crappie collected from Cave Run Lake in October 2004, including 95% confidence intervals for each mean length per age class. Average length for age 0 is at capture.

		Age						
Year	No.	0+	1	2	3	4	5	6
2004	19							
2003	5		3.4					
2002	5		3.9	6.0				
2001	13		3.7	5.3	6.7			
2000	1		3.7	5.9	7.2	8.0		
1999	3		4.1	6.5	7.6	8.3	9.0	
1998	2		3.4	5.2	6.1	7.0	7.4	7.9
Mean		3.1	3.7	5.6	6.8	7.8	8.3	7.9
Number	48	19	29	24	19	6	5	2
Smallest		2.5	3.2	4.8	5.8	6.7	7.2	7.7
Largest		4.1	5.6	7.7	8.7	9.7	10.4	8.1
Std error		0.4	0.1	0.1	0.1	0.4	0.6	0.2
95% CI (±)			0.2	0.3	0.3	0.9	1.15	0.4

Otoliths were used for age and growth determinations; Intercept = 0
nedaagcr.d04

Table 17. Population assessment for black crappie from Cave Run Lake in October 2004.

Parameter	Assessment value	Assessment score
CPUE of crappie (excluding age 0)	0.48	1
CPUE of age 1 crappie	.08	1
CPUE of age 0 crappie	.80	1
CPUE of crappie ≥ 8 inches	.22	1
Mean age 2 length at capture	7.5	1
Instantaneous mortality (Z)	-0.248	
Annual mortality (A)	0.22	
Total score:		5
Assessment rating:		P

nedctncr.d04, nedaagcr.d04

Table 18. Age frequencies and CPUE of black crappie collected from trap nets fished in Cave Run Lake for 60 net nights during October 2004.

	Inch class												
Age	2	3	4	5	6	7	8	9	10	Total	%	CPUE	Std error
0+	19	28	1							48	62	0.80	0.22
1+				2	3					5	6	0.08	0.04
2+					1	3		1		5	6	0.08	0.03
3+					1	6	5	1		13	17	0.22	0.08
4+								1		1	1	0.02	0.01
5+							1	1	1	3	4	0.05	0.02
6+							1	1		2	3	0.03	0.01
Total	19	28	1	2	5	9	7	5	1	77	100		
%	25	36	1	3	6	12	9	6	1	100			

CPUE of ≥ 8 in (quality size) crappie =0.21
CPUE of ≥ 10 in (preferred size) crappie =0.01
nedaagcr.d04, nedctncr.d04.

Table 19. Fishery statistics derived form a daytime creel survey at Cave Run Lake tailwater during 01 March through 30 October 2004.

	2004
Fishing trips	
No. of fishing trips	9,882
Fishing pressure	
Total man-hours (S.E.)	20,878 (619.68)
Catch / harvest	
No. of fish caught (S.E.)	28,011 (3,639.71)
No. of fish harvested (S.E.)	10,165 (1,518.21)
Lbs. of fish harvested	5,476
Harvest rate	
Fish/hour	0.48
Catch rates	
Fish/hour	1.34
Misc. characteristics (%)	
Male	82.8
Female	17.1
Resident	96.0
Non-residence	3.9
Method (%)	
Still fishing	77.8
Casting	22.0
Fly fishing	0.07
Mode	
Boat	2.15
Bank	97.7
Dock	0.07

(S.E.) = standard error

Table 20. Fish harvest statistics derived from a creel survey at Cave Run Lake tailwater from 01 March through 30 October 2004.

Species	Muskellunge	Carp	Suckers	Buffalo	Redhorse	Bullhead	Channel catfish	Flathead catfish	White bass	Rock bass	Warmouth	Green sunfish	Bluegill	Longear sunfish	Smallmouth bass	Spotted bass	Largemouth bass	White crappie	Sauger	Walleye	Drum	Black crappie	Gar	Rainbow trout	Skipjack	Shad	Black bass group	Catfish group	Panfish group	Crappie group	Trout group	Illegal group	Anything
No. caught	70	408	77	24	6	14	1,710	78	706	469	7	201	4,446	40	173	69	987	13,441	40	58	702	3,783	20	422	7	46	1,229	1,802	5,163	17,223	422	7	
No. harvested	53	17	7	8	0	7	970	78	85	56	7	33	1,178	27	0	8	88	5,622	24	27	366	1,385	0	89	0	21	97	1,056	1,301	7,007	89	7	
% of total no. harvested	0.5	0.2	0.1	0.1		0.1	9.5	0.8	0.8	0.6	0.1	0.3	11.6	0.3		0.1	0.9	55.3	0.2	0.3	3.6	13.6		0.9		0.2	1.0	10.4	12.8	68.9	0.9	100.0	
Lbs. Harvested	765.3	115.2	8.7	37.3		1.0	1,182.2	347.6	40.3	11.4	1.6	3.8	196.3	2.1		3.8	131.3	1,531.2	40.9	74.6	485.4	441.0		51.2		3.8	135.1	1,530.8	215.2	1,972.2	51.2		
% of total Lbs. harvested	13.98	2.10	0.16	0.68		0.02	21.59	6.35	0.74	0.21	0.03	0.07	3.58	0.04		0.07	2.40	27.96	0.75	1.36	8.86	8.05		0.93		0.07	2.47	27.95	3.93	36.02	0.93		
Mean length (in)	36.3	24.5	14.0	20.0		6.0	15.1	22.8	11.0	6.6	7.0	6.0	6.1	5.0		10.0	14.0	8.5	16.0	19.0	14.6	8.5		11.6		8.0						6.0	
Mean weight (lb)	14.55	6.85	1.25	4.44		0.14	1.13	4.68	0.61	0.22	0.23	0.15	0.16	0.08		0.45	1.43	0.26	1.42	2.40	1.35	0.31		0.58		0.18						1.33	
No. fishing trips for that species	520	217							7											26	52						230	1,642	61	2,134	116		4,857
% of all trips	5.2	2.1							0.1											0.3	0.5						2.3	16.6	0.6	21.6	1.2		49.1
Hours fished for that species	1,098	459							14											56	110						486	3,470	128	4,509	248		10,261
No. harvested fishing for that species	45								10											14	14							622	222	5,797	17		
Lbs. harvested fishing for that species	676								7											51	53							943	34	1,664	11		
No. per hour fishing for that species	0.031								0.833											0.182	0.032							0.143	1.658	1.073	0.129		
% success fishing for that species	6.58								100[a]											25.0	28.57							17.57	62.5	27.5	11.76		12.47

[a] all white bass caught were harvested.

Table 21. Length distribution (length of released fish are estimates) for each species of fish harvested at Cave Run Lake tailwater from 01 March through 30 October 2004.

Species		Inch class																																		
		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	36	42	43	44
Musko-	H																														9	27		9	8
llung	R																	8															8		
Carp	H																			8									8						
	R											8			8		8	33	8	98	16	24	98	24	41	8		8		9					
Suckers	H													6																					
	R						7			7		14	7	21				7		7															
Buffalo	H																			8															
	R																			8	7														
Redhorse	R														5																				
Bullhead	H					6																													
	R					6																													
Channel	H							7		58	15	153	51	95	80	124	139	102	58	29	15	7	15	7	15										
catfish	R			7	14	49	28	70	85	183	42	35	14	28	70	21	42	21	7		14	9													
Flathead	H					7									7					13		7		7	7	7	13	7	3						
catfish																																			
White	H					9	9	17			26	17	7																						
bass	R				302	67	92	17	17	17	34	50	8	16																					
Rock	H				8	24	16	8																											
bass	R		15	15	218	128	15	22																											
Warmouth	H						6																												
Green	H				25		7																												
sunfish	R			22	44	102																													
Bluegill	H		52	15	45	455	589	21																											
	R	8	8	98	709	1,947	460	30	8																										
Longear	H				27																														
sunfish	R			7	6																														
Smallmouth	R					28		130				14																							
bass																																			
Spotted	H									8																									
bass	R						8	13		13		7																							
Largemouth	H											34	14	20			7		7		6													
bass	R			87	29	73	80	233	197	58	29	67	7	15			15	8																
White	H					8	179	2,762	2,055	455	130	16	8	8																					
Crappie	R			39	252	1,677	2,496	2,732	386	197	31		8																						
Sauger	H												8					8		7															
	R							6						6	4																				
Walleye	H															7			7	7				6											
	R											15	8	7																					
Drum	H					7			7	36	72	50	22		36	22	22	14	7	29	7	35													
	R				14	7		41	27	34	82	27	27	14	21	14		14		7		7												
Black	H						118	583	520	157			7																						
crappie	R				40	505	606	660	222	269	74	21																							
Gar	R															7									12										
Rainbow	H								7	7	15	52		7																					
trout	R						44	30	7		30	207		15																					
Skipjack	R												6																						
Shad	H							20																											
	R								25																										
Illegal Smallmouth bass	H					6																													

Table 22. Monthly black bass angling success at Cave Run Lake tailwater during the 2004 creel survey period.

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	59							
Apr	147							
May	135	34	42	88	25	0.329		
Jun	78	16						
Jul	327	14	86	181	84	0.754		
Aug	338		83	176	189	1.497		
Sep	75	17						
Oct	71	16						
Total	1,229	97	230	486	298	0.84	0	0

Table 23. Monthly crappie angling success at Cave Run Lake tailwater during the 2004 creel survey period.

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	1,176	395	438	925	1,117	1.285	344	0.396
Apr	2,023	1,080	522	1,102	2,022	1.786	1,080	0.954
May	5,904	2,641	535	1,131	5,391	3.573	2,355	1.560
Jun	3,300	1,455	199	421	2,802	4.793	1,230	2.103
Jul	3,017	1,126	211	445	1,668	3.488	660	1.380
Aug	446	230	96	203	162	0.944	128	0.748
Sep	316	80	12	26	138	2.086		
Oct	1,042		120	254	751	1.802		
Total	1,7223	7,007	2,133	4,508	14,051	2.694	5,797	1.073

Table 24. Monthly catfish angling success at Cave Run Lake tailwater during the 2004 creel survey period.

Month	Total number of catfish caught	Total number of catfish harvested	Number 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	17	8	121	256	16	0.056	8	0.028
Apr	29	20	59	126	20	0.105	20	0.105
May	311	261	487	1,028	269	0.263	227	0.222
Jun	241	62	153	322	39	0.109	16	0.043
Jul	709	431	573	1,211	341	0.241	202	0.142
Aug	365	216	199	420	230	0.241	149	0.156
Sep	75	57						
Oct	55		19	40	22	0.571		
Total	1,802	1,055	1,642	3,469	937	0.220	622	0.142

Table 25. Length frequency and CPUE (fish/hour) of black bass collected in 9.0 hours of nocturnal electrofishing (18-30 minute runs) for black bass at Grayson Lake on 03-05 May 2004.

Area	Species	Inch class 3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE	Std. error
Lower	Smallmouth bass										1										1	0.33	0.33
	Spotted bass	3	13	3	18	37	28	39	30	9		1	1								182	60.67	10.57
	Largemouth bass	14	226	458	31	11	107	72	56	77	32	10	6	2	2		2	1	1		1108	369.33	22.00
Middle	Smallmouth bass					1	1	1	1	1											5	1.67	0.80
	Spotted bass	7	17	1	24	31	21	45	10	3	2										161	53.67	8.14
	Largemouth bass	17	169	293	19	29	122	64	59	50	27	5	5			1	3	2	1	1	867	289.00	51.72
Upper	Spotted bass				1	3	3	3	3												13	4.33	2.44
	Largemouth bass	4	36	125	18	11	30	19	22	22	13	12	6	4	2		3	1			328	109.33	10.70
Total	Smallmouth bass					1	1	1	1	1	1										6	0.67	0.32
	Spotted bass	10	30	4	43	71	52	87	43	12	2	1	1								356	39.56	7.42
	Largemouth bass	35	431	876	68	51	259	155	137	149	72	27	17	6	4	1	8	4	2	1	2303	255.89	31.87

nedpsdql.d04

Table 26. Spring electrofishing catch-per-unit-effort (CPUE) for each size class of largemouth bass collected at Grayson Lake during May 1999-2004. CPUE = fish/hour.

	Inch class									
	<8.0		8.0-11.9		12.0-14.9		≥15.0		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
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.d04,03,02,01,00,99.

Table 27. Electrofishing catch rate (fish/hour) for each age of largemouth bass collected from Grayson Lake during 1999 - 2004.

	Year					
Age	1999	2000	2001	2002	2003	2004
1	167.02	130.80	218.11	127.20	125.23	158.93
2	68.45	63.35	36.37	40.52	57.68	50.79
3	21.00	9.04	11.76	10.94	14.31	16.01
4	16.49	7.52	4.97	4.08	5.41	9.84
5	18.48	8.30	7.37	6.48	8.55	12.22
6	9.69	6.12	3.58	3.44	3.57	5.68
7	0.39	0.81	0.24	0.43	0.35	0.25
8	1.19	1.21	0.61	0.33	0.25	0.62
9	0.22	0.11	0.11	0.67		0.22
10	0.17	0.55	0.13	0.35	0.26	0.18
11		0.11	0.11	0.17	0.50	0.11
13		0.30	0.07	0.22	0.06	0.15

nedpsdgl.d99,00,01,02,03,04.
nedagbgl.d03.

Table 28. Annual mortality (A) between 2003 and 2004,and CPUE (fish/hour) of the last five year classes estimated from largemouth bass captured in spring electrofishing samples at Grayson Lake.

Year Class	Age Intervals	CPUE (2003)	CPUE (2004)	Mortality of Cohort (%)
2002	1+ - 2+	125.23	50.79	60
2001	2+ - 3+	57.68	16.01	73
2000	3+ - 4+	14.31	9.84	39
1999	4+ - 5+	5.41	12.22	N/A
1998	5+ - 6+	8.55	5.68	34

nedagbgl.d03,nedpsdgl.g03,nedpsdgl.d04.

Table 29. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples in each area of Grayson lake from 03-05 May 2004; 95% confidence intervals are in parentheses.

Area	Species	No. fish ≥ 8"	PSD (+/- 95%)		RSD[a] (+/- 95%)	
Lower	Spotted bass	108	8	(+/-5)	1	(+/-1)
	Largemouth bass	368	15	(+/-4)	2	(+/-2)
Middle	Smallmouth bass	4	20	(+/-30)		
	Spotted bass	81	4	(+/-4)		
	Largemouth bass	340	13	(+/-4)	2	(+/-2)
Upper	Largemouth bass	134	31	(+/-8)	7	(+/-5)
Total	Smallmouth bass	5	33	(+/-37)		
	Spotted bass	198	6	(+/-3)	1	(+/-1)
	Largemouth bass	842	17	(+/-3)	3	(+/-2)

[a] Largemouth bass = RSD-15, spotted and smallmouth bass = RSD-14.
nedpsdgl.d04

Table 30. Length frequency and CPUE (fish/hour) of black bass collected in 5.5 hours of nocturnal electrofishing (11-30 minute runs) for black bass at Grayson Lake on 13-14 September 2004.

		Inch class																				Std.
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	19	20	Total	CPUE	error
Lower	Smallmouth bass	1	1								1							1		4	1.60	0.75
	Spotted bass	20	34	25	3	13	2	8	18	9	7	2								141	56.40	10.07
	Largemouth bass	9	18	35	29	8	11	47	36	26	44	18	8	2	2	1	1			295	118.00	20.66
Middle	Smallmouth bass		1			1			1							1				4	1.33	0.67
	Spotted bass	31	45	26	4	12	7	11	10	4	1									151	50.33	12.13
	Largemouth bass	23	38	37	17	7	27	63	21	33	43	25	5	6	1	1	1		1	349	116.33	14.07
Total	Smallmouth bass	1	2			1			1		1					1		1		8	1.45	0.47
	Spotted bass	51	79	51	7	25	9	19	28	13	8	2								292	53.09	7.71
	Largemouth bass	32	56	72	46	15	38	110	57	59	87	43	13	8	3	2	2		1	644	117.09	11.47

nedwrsgl.d04

Table 31. Number of fish and mean relative weight (Wr) values for length category of black bass collected at Grayson Lake in September 2004. Standard errors are in parentheses.

		Size range					
Species	Area	No.	Wr	No.	Wr	No.	Wr
		8.0 - 11.9 in		12.0 - 14.9 in		≥ 15 in	
Largemouth bass	Lower	153	87 (0.4)	28	86 (1.3)	4	87 (1.3)
	Middle	160	87 (0.6)	36	83 (1.1)	4	84 (4.8)
	Entire	313	87 (0.4)	64	84 (0.9)	8	86 (2.4)
		7.0 - 10.9 in		11.0 - 13.9 in		≥ 14 in	
Spotted bass	Lower	37	87 (1.0)	9	86 (2.0)		
	Middle	32	90 (2.8)	1	85		
	Entire	69	88 (1.4)	10	86 (1.8)		
Smallmouth bass	Lower			1	73	1	97
	Middle	1	82			1	81
	Entire	1	82	1	73	2	89 (7.9)

nedwrsgl.d04

Table 32. Length frequency and CPUE for each species of crappie collected at Grayson Lake while electrofishing (6-30 minute runs) in October 2004.

	Inch class												
Species	2	3	4	5	6	7	8	9	10	11	Total	CPUE	Std. Error
White crappie	25	65	5	23	44	166	108	30	8	1	475	158.3	35.62
Black crappie		1		1	1	2	1	2			8	2.7	1.98

nedcwrgl.d04

Table 33. Mean back calculated lengths (in) at each annulus for white crappie collected from Grayson Lake in October 2004, including 95% confidence intervals for each mean length per age class. Average length for age 0 is at capture.

Year		Age					
class	No.	0+	1	2	3	4	5
2004	25						
2003	15		3.3				
2002	12		3.3	5.5			
2001	23		3.5	5.6	7.1		
2000	8		3.9	5.8	7.3	8.7	
1999	2		3.7	6.0	7.2	8.7	9.8
Mean		3.1	3.5	5.6	7.1	8.7	9.8
Number	85	25					
Smallest		2.2	2.3	2.9	5.4	7.8	9.6
Largest		4.2	4.4	7.0	8.6	9.3	10.0
Std err		0.5	0.1	0.1	0.1	0.2	0.2
95% CI (±)			0.2	0.3	0.3	0.4	0.4

Otoliths were used for age-growth determinations; Intercept = 0
nedaaggl.d04

Table 34. Age frequencies and CPUE of white crappie collected while electrofishing (6-30 min runs) at Grayson Lake during October 2004.

	Inch class													Std
Age	2	3	4	5	6	7	8	9	10	11	Total	%	CPUE	error
0	25	65	4								94	20	31.33	8.62
1			1	21	24						46	10	15.38	5.15
2				2	15	91	18				126	26	41.84	12.10
3					5	75	90	23	1		194	41	64.61	16.88
4								8	6		14	3	4.50	1.36
5									1	1	2	0	0.67	0.47
Total	25	65	5	23	44	166	108	30	8	1	475	100		
%	5	14	1	5	9	35	23	6	2		100			

CPUE of ≥ 8 in (quality size) crappie = 49.0
CPUE of ≥ 10 in (preferred size) crappie = 0.7
nedaaggl.d04, nedcwrgl.d04

Table 35. Mean back calculated lengths (in) at each annulus for black crappie collected from Grayson Lake in October 2004, including 95% confidence intervals for each mean length per age class. Average length for age 0 is at capture.

		Age			
Year	No.	0+	1	2	3
2004	1				
2003	1		3.2		
2002	1		3.2	5.2	
2001	4		3.6	6.2	7.3
Mean		3.6	3.5	6.0	7.3
Number	7	1	6	5	4
Smallest		3.6	3.2	5.2	6.8
Largest		3.6	3.8	6.9	8.0
Std err			0.1	0.3	0.3
95% CI (±)			0.3	0.6	0.6

Otoliths were used for age-growth determinations; Intercept = 0
nedaaggl.d04

Table 36. Age frequencies and CPUE of black crappie collected from electrofishing at Grayson Lake during October 2004.

	Inch class										Std
Age	2	3	5	6	7	8	9	Total	%	CPUE	error
0		1						1	13	0.33	0.33
1			1					1	13	0.33	0.33
2				1				1	13	0.33	0.33
3					2	1	2	5	63	1.67	1.09
Total		1	1	1	2	1	2	8	100		
%		13	13	13	25	13	25	100			

CPUE of ≥ 8 in black crappie =1

nedaaggl.d04, nedcwrgl.d04

Table 37. PSD and RSD values for crappie collected while electrofishing during October 2004; 95% confidence limits are in parentheses.

Lake / Species	No.	PSD	RSD
Grayson Lake			
White crappie	475	39 (±10)	2 (±4)
Black crappie	8	42 (±79)	

nedcwrgl.d04

Table 38. Length frequency and CPUE (fish/hour) of black bass collected in 1.5 hours of nocturnal electrofishing (6-15 minute runs) for black bass at Lake Carnico (Nicholas Co.) on 29 April 2004.

	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
Largemouth bass	1	5	5	19	55	52	36	43	51	24	18	12	6	10	6	5	1	1	350	233.33	34.71

nedpsdlc.d04

Table 39. Population assessment for largemouth bass based on spring sampling at Lake Carnico from 2003 through 2004.

	Year	
Parameter	2003	2004
Length at age 3	4	4
Spring CPUE of age 1 fish	2	3
Spring CPUE of age 12-14.9 fish	2	2
Spring CPUE of age ≥ 15.0-in fish	2	3
Spring CPUE of age > 20-in fish	1	0
Total score:	11	12
Assessment rating:	Fair	Good

nedaaglc.d03,nedpsdlc.d03,nedpsdlc.d04

Table 40. Electrofishing catch rate (fish/hour) for each age of largemouth bass collected from Lake Carnico from 1999 - 2004.

	Year					
Age	1999	2000	2001	2002	2003	2004
1	18.80	27.00	34.20	45.80	39.33	54.13
2	62.45	34.50	47.30	41.45	66.00	98.37
3	14.25	9.50	11.50	16.25	19.33	24.50
4	19.17	12.33	18.67	22.83	25.33	34.33
5	3.00	7.00	3.00	4.00	5.33	10.67
6						
7	4.33	2.67	5.33	6.67	5.33	7.33
8	4.00			2.00	2.67	3.33

nedpsdlc.d99,00,01,02,03,04.
nedaaglc.d03.

Table 41. Spring electrofishing catch-per-unit-effort (CPUE) for each size class of largemouth bass collected at Lake Carnico in April 2004. CPUE = fish/hour.

	Inch class									
	<8.0		8.0-11.9		12.0-14.9		≥15.0		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2004	56.67	13.36	121.33	15.62	36.00	5.16	19.33	3.00	233.33	34.71
2003	42.67	9.50	74.67	6.25	34.00	4.70	13.33	4.09	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	120.00	11.31
2000	28.00	6.32	41.00	3.00	16.00	5.66	9.00	3.00	94.00	15.87
1999	21.00	1.00	70.00	8.08	26.00	5.03	10.00	1.15	127.00	13.00

nedpsdlc.d04,03,02,01,00,99.

Table 42. Length frequency and CPUE (fish/hour) of black bass collected in 0.37 hours of nocturnal electrofishing (3-7.5 minute runs) for black bass at Clear Creek Lake (Bath Co.) on 26 May 2004.

	Inch class																	Std.
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	17	20	Total	CPUE	error
Largemouth bass	5	9	7	5	20	27	5	4	5	4	1	1	3	1	1	98	261.33	34.67

nedpsdcc.d04

Table 43. Length frequency and CPUE (fish/hour) of black bass collected in 2.5 hours of nocturnal electrofishing (10-15 minute runs) for black bass at Greenbo Lake (Greenup Co.) on 28 April 2004.

	Inch class																					Std.
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	24	Total	CPUE	error
Largemouth bass	5	9	10	5	6	66	127	74	25	47	64	36	11	9	4	4	4	5	1	3	1	516	206.40	14.09
Smallmouth bass	1	1				1	1															4	1.60	1.22

nedpsdgb.d04

Table 44. Age frequency and CPUE (no./hour) of largemouth bass collected in 2.5 hours of nocturnal electrofishing at Greenbo Lake in April 2003.

	Inch class																			Std
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	%	CPUE	error
1	5	9	10	5	4	26												84	17	33.6	2.11
2					2	40	127	49										218	43	87.2	7.70
3									25	47								72	14	28.8	2.91
4											43	24						67	13	26.7	4.03
5											21	12	11					44	9	17.7	2.75
6															4	4		8	2	3.2	1.00
7														9			4	13	3	5.2	1.47
Total	5	9	10	5	6	66	127	74	25	47	64	36	11	9	4	4	4	506	100		
%	1	2	2	1	1	13	25	15	5	9	13	7	2	2	1	1	1	100			

nedaaggb.d04, nedpsdgb.d04

Table 45. Spring electrofishing catch-per-unit-effort (CPUE) for each size class of largemouth bass collected at Greenbo Lake in April 2004. CPUE = fish/hour.

	Inch class									
	<8.0		8.0-11.9		12.0-14.9		≥15.0		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
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

Table 46. Electrofishing catch rate (fish/hour) for each age of largemouth bass collected from Greenbo Lake from 1999 - 2004.

	Year					
Age	1999	2000	2001	2002	2003	2004
1	103.13	52.87	83.87		105.33	33.63
2	61.87	66.13	34.13		31.33	87.17
3	16.00	29.00	56.00		71.33	28.80
4	11.33	6.00	6.67		9.78	26.67
5	6.67	4.00	5.33		7.56	17.73
6	1.00	2.00	1.00		3.33	3.20
7	1.00	1.00	1.00		2.67	5.20

nedpsdgb.d99,00,01,03,04.
nedaaggb.d03.

Table 47. Population assessment for largemouth bass based on spring sampling at Greenbo Lake from 2003 through 2004.

	Year	
Parameter	2003	2004
Length at age 3	4	4
Spring CPUE of age 1 fish	4	2
Spring CPUE of age 12-14.9 fish	3	4
Spring CPUE of age ≥ 15.0-in fish	2	2
Spring CPUE of age > 20-in fish	1	0
Total score:	14	12
Assessment rating:	Good	Good

nedaaggb.d03,nedpsdgb.d03,nedpsdgb.d04

Table 48. Length frequency and CPUE (fish/hour) of black bass collected in 1.5 hours of nocturnal electrofishing (6-15 minute runs) for black bass at Greenbo Lake (Greenup Co.) on 15 September 2004.

	Inch class																			
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	19	Total	CPUE	Std. error
Largemouth bass	8	12	6	4	6	11	7	9	16	29	8	4	2	4	1	2	1	130	86.67	13.84
Smallmouth bass		1	1															2	1.33	0.84

nedwrsgb.d04

Table 49. Length frequency and CPUE (fish/hour) of black bass collected in 1.25 hours of nocturnal electrofishing (5-15 minute runs) for black bass at Mill Creek Lake (Powell/Wolfe Co.) on 06 May 2004.

	Inch class																			
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	16	17	19	21	22	Total	CPUE	Std. error
Largemouth bass	3	10	5	1	14	30	20	18	28	19	12	6	4	2	2	1	1	1	177	141.60	17.96

nedpsdmc.d04

Table 50. Length frequency and CPUE (fish/hour) of black bass collected in 1.5 hours of nocturnal electrofishing (6-15 minute runs) for black bass at Lake Reba (Madison Co.) on 13 May 2004.

	Inch class																			
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	19	Total	CPUE	Std. error
Largemouth bass	1	3	11	20	4	6	54	45	44	45	42	25	10	6	2	1	1	320	213.33	26.02

nedpsdlr.d04

Table 51. Spring electrofishing catch-per-unit-effort (CPUE) for each size class of largemouth bass collected at Lake Reba in May 2004. CPUE = fish/hour.

	Inch class									
	<8.0		8.0-11.9		12.0-14.9		>15.0		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2004	30.00	8.93	125.33	21.46	51.33	9.20	6.67	2.23	213.33	26.02
2003	110.00	17.85	126.00	10.92	52.00	6.11	8.00	2.53	296.00	27.34
2002	138.00	33.57	140.00	31.28	31.00	6.61	5.00	1.00	314.00	66.98
2001	196.00	24.98	30.67	15.38	9.33	5.33	4.00	2.31	240.00	33.55
2000	103.69	17.19	34.94	6.58	4.56	0.56	8.00	3.27	151.19	10.98
1999	115.20	34.86	11.20	4.08	8.80	2.33	20.00	5.22	155.20	33.12

nedpsdlr.d04,03,02,01,00,99.

Table 52. Length frequency and CPUE (fish/hour) of bluegill and redear sunfish collected in 1.25 hours of electrofishing (10-7.5 minute runs) in Lake Reba (Madison Co.) on 17 May 2004.

	Inch class								
Species	2	3	4	5	6	7	Total	CPUE	Std. error
Bluegill	249	122	71	41	29		512	393.85	56.00
Redear sunfish	22	12	34	28	78	6	180	138.46	29.21

nedsunlr.d04

Table 53. Length frequency and CPUE of bluegill and redear sunfish collected in spring electrofishing samples collected at Lake Reba from 2003 through 2004. CPUE = fish/hour.

	Inch class							
	<3.0		3.0-5.9		6.0-7.9		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
Bluegill								
2003	178.40	27.87	356.00	49.65	49.60	20.06	584.00	75.25
2004	191.54	37.87	180.00	25.93	22.31	6.73	393.85	56.00
Redear sunfish								
2003	13.60	5.73	119.20	19.83	178.40	68.83	311.20	82.91
2004	16.92	4.41	56.92	17.62	64.62	13.18	138.85	29.21

nedsunlr.d04,03.

Table 54. Electrofishing catch rate (fish/hour) for each age bluegill collected from Lake Reba from 2003 and 2004.

Age	Year 2003	2004
1	178.40	191.54
2	297.42	156.41
3	93.30	39.21
4	4.96	2.23
7	4.96	2.23
8	4.96	2.23

nedsunlr.d03,04.
nedaaglr.d03.

Table 55. Electrofishing catch rate (fish/hour) for each age redear sunfish collected from Lake Reba from 2003 and 2004.

Age	Year 2003	2004
1	24.00	26.15
2	108.80	47.69
3	156.07	56.15
4	4.20	1.73
5	15.33	5.58
6	2.80	1.15

nedsunlr.d03,04.
nedaaglr.d03.

Table 56. Length-frequency and CPUE (fish/hour) of largemouth bass collected in 1.5 hours of nocturnal electrofishing (15 minute runs) for largemouth bass at Lake Reba (Madison Co.) on 22 September 2004.

Species	Inch class 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total	CPUE	Std. error
Largemouth bass	10	28	54	22	6	55	58	25	40	63	40	23	10	7	2	1	444	296.00	29.41

nedwrslr.d04

Table 57. Length frequency and CPUE (fish/hour) of black bass collected in 0.37 hours of nocturnal electrofishing (3-7.5 minute runs) for black bass at Rebel Trace Lake (Menifee Co.) on 26 May 2004.

	Inch class													Std.
Species	2	3	4	5	7	8	9	10	11	13	15	Total	CPUE	error
Largemouth bass	1	3	11	1	3	7	7	3	2	1	2	41	109.33	39.28

nedpsdrt.d04

Table 58. Length frequency and CPUE (fish/hour) of bluegill collected in 1.125 hours of electrofishing (9-7.5 min runs) for bluegill at Smoky Valley Lake (Carter Co.) on 18 May 2004.

	Inch class									Std.
Species	2	3	4	5	6	7	8	Total	CPUE	error
Bluegill	29	62	71	30	18	12	1	223	190.60	27.31

nedsunsv.d04

Table 59. Length frequency and CPUE of bluegill collected in spring electrofishing samples collected at Smoky Valley Lake from 2003 through 2004. CPUE = fish/hour.

	Inch class									
	<3.0*		3.0-5.9		6.0-7.9		≥8.0		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2004	24.79	6.76	139.32	22.00	25.64	4.62	0.85	0.85	190.60	27.31
2003	200.00	61.11	102.00	30.30	107.00	32.39	4.00	2.14	413.00 (213 w/o 1 in)	99.80

nedsunsv.d04,03.

* Includes 1 inch long bluegill in 2003, not 2004.

Table 60. Age frequency and CPUE (No./hour) of bluegill collected in 1.125 hours of diurnal electrofishing at Smoky Valley Lake in May 2004.

	Inch class										
Age	2	3	4	5	6	7	8	Total	%	CPUE	Std error
1	12	7						19	9	16.22	3.84
2	17	41	12					70	31	59.90	12.79
3		14	59	30	7			110	49	94.14	12.84
4					4	4		8	4	6.81	1.32
5					7	4		12	5	9.88	1.78
6						2		2	1	2.08	0.57
7						1		1	0	0.93	0.31
9							1	1	0	0.43	0.43
Total	29	62	71	30	18	12	1	223	100		
%	13	28	32	13	8	5	0	100			

nedsunsv.d04,nedaagsv.d03

Table 61. Electrofishing catch rate (fish/hour) for each age of bluegill collected from Smoky Valley Lake from 2003 - 2004.

	Year	
Age	2003	2004
1	176.75	16.22
2	51.75	59.90
3	93.50	94.14
4	30.73	6.81
5	40.73	9.88
6	11.36	2.08
7	5.18	0.93
8	1.00	
9	2.00	0.43

nedsunsv.d03,04.
nedaagsv.d03.

Table 62. Length frequency and CPUE (fish/hour) of black bass collected in 1.0 hour of nocturnal electrofishing (4-15 min runs) for black bass at Smoky Valley Lake (Carter Co.) on 28 September 2004.

	Inch class															Std.
Species	2	3	4	5	6	7	8	9	10	11	12	13	14	Total	CPUE	error
Largemouth bass	6	21	19	12	11	42	15	10	46	37	31	10	2	262	262.00	41.07

nedwrssv.d04

Table 63. Species composition, relative abundance and CPUE (no./hour) of fish collected in 1.5 hours (6-900 second runs) of nocturnal electrofishing at Lake Willgreen (Madison Co.) on 23 September 2004.

	Inch class																	Std
Species	3	4	5	6	7	8	9	10	11	12	13	14	16	19	20	Total	CPUE	error
Spotted bass	1	1														2	1.33	1.33
Largemouth bass	54	72	90	42	9	26	73	68	139	100	10	6	1	2	1	693	462.00	56.16

nedwrslw.d04

SOUTHEASTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Lake Cumberland

Black Bass Sampling (Spring)

Nocturnal electrofishing studies were conducted at Wolf Creek dam, and in the Beaver Creek, Harmon Creek, Fishing Creek, and Lily Creek embayments of Lake Cumberland during May 2004 to assess the black bass populations. The length-frequency and CPUE of the three black bass species collected in each area are shown in Table 1. The catch-per-hour (by area and size group) for 2000-2004 is shown in Tables 2-5. The catch rates of largemouth bass were less than the management objectives for all categories except ≥ 20". The catch rate of Age 1 fish was 1.1 f/h, about one-third of the management objective of 3.0 f/h. The catch rate of 12-14.9" largemouth was 7.0 f/h, slightly less than the objective of 10.0 f/h. The catch rate of ≥ 15" fish (6.5 f/h) approached the management objective of 8.0 f/h and the catch rate of ≥ 20" fish (1.0 f/h) exceeded the objective of 0.5 f/h. Similarly, the catch rates for smallmouth bass were slightly less than the management objectives in all size categories. Age 1 smallmouth bass were captured at 1.9 f/h, narrowly missing the objective of 2.0 f/h. The catch rate of 11-13.9" smallmouth was 1.2 f/h, considerably less than the objective of 3.0 f/h and the catch rate of ≥ 14" fish (1.3 f/h) was less than the management objective of 2.0 f/h. No smallmouth bass ≥ 17" were captured. Spotted bass, however, exceeded the catch rate objectives for all categories except ≥ 17". Age- 1 spotted bass were captured at 6.0 f/h, exceeding the management objective of 4.0 f/h. The catch rate of 11-13.9" spotted bass was 10.5 f/h, doubling the management objective of 5.0 f/h and the catch rate of ≥ 14" fish (1.9 f/h) exceeded the management objective of 1.5 f/h. No spotted bass ≥ 17" were captured. The largemouth bass population exhibited excellent size structure, with a PSD value of 72 and an RSD_{15} value of 35(Table 6). Smallmouth bass also exhibited good size structure (PSD=45, RSD_{14}=24).

Black Bass Sampling (Fall)

Nocturnal electrofishing was conducted in the Fishing Creek embayments during October to index the largemouth bass year class strength (Tables 7,8). CPUE of age 0 largemouth bass was higher than in 2003, but still lower than the 2002 rates. Relative weight (Wr) values for largemouth bass and spotted bass collected during October sampling are shown in Table 9.

Walleye Sampling

Gill nets were used in November to evaluate the walleye population in Lake Cumberland. Twenty net-days captured 206 walleye for a catch rate of 10.3-fish/net-day. Length frequency and CPUE of walleye are shown in Table 10. Walleye range from 9 to 24 inches with the mode being the 17-in class (44 fish). Age-growth data for male and female walleye are shown in Tables 11 and 12, respectively. As expected, females grew faster than males. Females reached 21 inches at age 3 whereas males needed at least 5 years to reach that size. The age-growth for both sexes combined is shown in Table 13. Eight year-classes were represented in the catch (Table 14). The 2003 year class (Age 1+) was the most abundant, representing 44% of the catch. All of the catch rate objectives for the fishery were exceeded in 2004 and the population assessment was rated excellent (Table 16).

White bass Sampling

Excess white bass fry and fingerlings were stocked into Lake Cumberland in 2003-2004 to bolster their population in the lake. Gill nets were used in November to evaluate the white bass population in Lake Cumberland. Twenty-one white bass were collected during 20 net-days for a CPUE of 1.1 fish /net-day (Table 17). The age growth and age-frequency data are shown in Tables 18-19. All but one fish were 1+ (2003 year class). The lack of age 2 fish prevented a population assessment. The white bass exhibited excellent condition (Table 20).

Striped Bass Sampling

Gill nets were used in December to evaluate the striped bass population in Lake Cumberland. Twenty net-days captured 88 striped bass for a catch rate of 4.4-fish/net-day. Length-frequency and CPUE of striped bass are

shown in Table 21. Striped bass ranged from 8 to 39 inches with the mode being the 19-in class (8 fish). The age-growth of striped bass collected during 2004 is shown in Table 22. Age 2 fish at capture (2002 year class) averaged 23.4 inches, thereby exceeding the growth objective (≥ 21 inches at Age 2 at capture) for the striped bass fishery. The CPUE of ≥ Age 1+ fish was 4.4 f/nd, which exceeded the management objective of 4.0 f/nd. The catch rate of ≥ 24-inch fish was 2.1 f/nd, doubling the management objective of ≥ 1.0 f/nd. Only the recruitment objective (CPUE age-1 ≥ 2.0) was not met as age 1 striped bass were captured at a rate of 1.8 f/nd. Nine year-classes were represented in the catch (Table 23). The 2003 (Age 1+) year-class was the most abundant (41%) year-class captured, followed by the 2002 year-class (17%). Wr values (Table 24) were adequate, but condition decreased slightly as fish grew larger. The population assessment rating was "good", based on the new assessment rating system (Table 25).

2004 Daytime Creel Survey

A roving daytime creel survey was conducted on Lake Cumberland (50,250 acres) from 5 March - 30 October 2004. The lake was split into two strata (upper and lower) and each stratum was designed as a stand-alone survey. The lower lake (25,014 acres) contains four areas and the upper lake (25,014 acres) has 8 areas. The two strata were then combined to obtain an entire lake survey. The entire lake survey estimates are greater than the sum of the two survey areas due to limitations in the creel survey program. Creel data will be presented in three sections: lower lake, upper lake, and entire lake.

Lower Lake- Results are shown in Tables 26 through 33. Anglers made an estimated 87,304 fishing trips and expended 490,047 hours (19.6 man-hours/acre) during the survey periods for the lower lake. Striped bass fishermen accounted for about 43% of the fishing trips to the lower lake, followed by black bass (27%), and panfish (12%) anglers.

Upper Lake – Results are shown in Tables 34-41. Anglers made an estimated 53,601 fishing trips and expended 219,130 hours (8.8 man-hours/acre) during the survey periods for the upper lake. Black bass fishermen accounted for about 40% of the fishing trips to the upper lake, followed by crappie (25%), and walleye (11%) anglers.

Entire Lake - Results are shown in Tables 42-49. Anglers made an estimated 160,275 fishing trips and expended 821,750 hours (21.9 man-hours/acre) during the survey period for the whole lake. Black bass fishermen accounted for about one-third (33%) of the fishing trips to the lake, followed by striped bass (25%), crappie (14%), and panfish (10%) anglers.

Angler Attitude Survey

An angler attitude survey was conducted during the creel survey to gather opinions on the various fisheries (Figure 1). A total of 729 anglers were interviewed. Nearly two-thirds (61%) of the bass anglers were satisfied with the bass fishery at Lake Cumberland. Bass anglers were supportive of current black bass regulations with the exception of one-half (50%) preferring a 12-inch size limit on spotted bass.

Seventy-two percent of striped bass anglers were satisfied with the fishery in the lake and a large majority (84%) of striped bass anglers supported the current size limit of 24-inches and 2-fish creel limit. Two-thirds (68%) of striped bass anglers never kept fishing for striped bass after they catch their 2 fish limit and less than one-half (41%) of striped bass anglers reported that they released 24" and larger fish from the month of May through September.

Two-thirds (69%) of the crappie anglers were satisfied with the crappie fishery and an overwhelming majority supported both the 10-inch size limit (93%) and the 30 fish creel limit (92%).

Two-thirds (67%) of walleye anglers in Lake Cumberland were satisfied with the walleye fishery. An overwhelming majority of walleye anglers supported both the current size limit of 15-inches (96%) and the 10 fish creel limit (93%). A small percentage of walleye anglers (22.2%) were in favor of raising the size limit to 18 inches.

Laurel River Lake

Black Bass Sampling

Nocturnal electrofishing sampling was conducted during April and May 2004 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. The length-frequency and CPUE (no./hour) of black bass (by area) taken during the spring electrofishing surveys are shown in Table 50. The catch-per-hour (by area and size group) for 2000-2004 is shown in Tables 51-54. The mean catch rate of ≥ 15" largemouth bass in 2004 was similar to 2003 values, however, all other size groups were lower in 2004. Spotted bass exhibited a similar pattern, with large (≥ 14") spotted bass captured at over twice the 2003 rate, but catch rates for all other size groups were lower than 2003 values. Smallmouth bass catch rates were lower for every size group. Largemouth bass exhibited good size structure, with a PSD value of 75 and an RSD_{15} value of 32 (Table 55). Smallmouth bass PSD (41) and RSD_{15} (26) values were somewhat higher than 2003 values.

Black Bass Sampling (Fall)

Nocturnal electrofishing was conducted in the Laurel River arm during September to index the largemouth bass year class strength (Tables 56-57). CPUE of age 0 largemouth bass was about one-half of 2002 and 2003 rates, although large (>5.0") age 0 bass were captured at similar rates to 2002 and much higher than in 2003. Relative weight (Wr) values for largemouth and spotted bass collected during October sampling are shown in Table 58.

Crappie Sampling

Spring (April) and fall (November) electrofishing (3.5 hours total) was conducted in Laurel River Lake to evaluate the crappie population and to check for the contribution of stocked (2002, 2003) blacknose crappie. Spring electrofishing in the Laurel River arm yielded only seven crappie (4 white, 3 black, no blacknose) during 2.0 hours of effort (Table 59a). Fall electrofishing was only slightly better, capturing 20 crappie (19 white, 1 black—0 blacknose) during 1.5 hours of effort. Length frequency and CPUE for black and white crappie captured during November are shown in Table 59b. Age-growth data from white and black crappie are shown in Tables 61 and 62, respectively and age-frequency data is shown in Tables 63 and 64. Wr values for collected white and black crappie are shown in Table 65. A population assessment was not conducted due to insufficient numbers of crappie collected.

Dale Hollow Lake

Black Bass Sampling (Spring)

Nocturnal electrofishing studies were conducted at Illwill Creek and Sulphur Creek embayments of Dale Hollow Lake during April and May 2004 to assess the black bass population. The length-frequency and CPUE of the three black bass species are shown in Table 66. All three black bass species exhibited excellent size structure (Table 67). Age-growth data for smallmouth is shown in Table 68. Smallmouth bass exhibited excellent growth, surpassing 15 inches by age 4 (Table 68). Age-frequency data for smallmouth is shown in Table 69. The population assessment was excellent (Table 70).

Cedar Creek Lake (Lincoln Co.)

Cedar Creek Lake was nocturnally electrofished in the spring on 15 April 2004 to assess the largemouth bass population. The length-frequency and CPUE of largemouth bass are shown in Table 71 and CPUE by size classes are shown in Tables 72-73. Size structure for largemouth bass was good (PSD=70; Table 1), and a few fish were already recruiting into preferred size (RSD_{15}=6). Cedar Creek Lake was sampled again on 9 June to determine the abundance and size structure of bluegill in the lake. The length-frequency and CPUE of bluegill are shown on Table 75. Bluegill CPUE by inch-class, age-class, age-growth and PSD values are shown in Tables 76-79. Cedar Creek Lake was once again nocturnally electrofished for 3.5 hours on 28 September 2004 to index the largemouth bass year-class strength (Table 80, 82). Relative weight (Wr) values are found on Table 81 for largemouth bass and Table 84 for bluegill sunfish. Length-frequency for bluegill sampled in September is in Table 83.

Chenoa Lake (Bell Co.)

Chenoa Lake was diurnally electrofished on 17 May to assess the bluegill and redear sunfish populations. The length-frequency and CPUE of bluegill and redear sunfish are shown in Table 85. PSD and RSD values for both species are shown in Table 86. The population assessment was fair (8) for bluegill (Table 87) and good (10) for redear sunfish (Table 88).

Laurel Creek Reservoir (McCreary Co.)

Laurel Creek Reservoir was nocturnally electrofished for 1.0 hour on 13 May 2004 to assess the black bass population. The length-frequency and CPUE of largemouth bass are shown in Table 89. The PSD and RSD values for largemouth bass are shown in Table 90.

Wood Creek Lake (Laurel Co.)

Wood Creek Lake was nocturnally electrofished a total of 3.25 hours on 5 & 21 October to index the largemouth bass year class strength (Table 93). The length-frequency and CPUE of black bass are shown in Table 91 and Wr values are shown in Table 92.

Eighteen native walleye were also captured during this electrofishing effort, confirming the survival of our stocked fish.

Figure 1. LAKE CUMBERLAND ANGLER ATTITUDE SURVEY 2004

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 Lake Cumberland? (check all that apply)
272 (37.3%) Striped Bass 497 (68.2%) Black bass 266 (36.5%) Crappie 173 (23.7%) Walleye 121 (16.6%) Flathead Catfish 124 (17.0%) Channel Catfish 140 (19.2%) Other

4. Which one species do you fish for most at Lake Cumberland? (Check only one)
132 (19.1%) Striped Bass 337 (48.8%) Black bass 103 (14.9%) Crappie 41 (5.6%) Walleye 25 (3.6%) Flathead Catfish 18 (2.6%) Channel Catfish 35 (5.1%) Other

-Ask following questions relevant to each species fished for- (see question 3)

Striped bass Anglers

5. What level of satisfaction do you have with striped bass fishing at Lake Cumberland?
86 (32.1%) Very satisfied 106 (39.6%) Somewhat satisfied 38 (14.2%) Neutral 24 (9.0%) Somewhat dissatisfied 14 (5.2%) Very dissatisfied

6. How often do you continue to fish for striped bass after you catch your limit?
24 (9.0%) Always 11 (4.1%) 75% (3/4) of the time 30 (11.2%) 50% (1/2) of the time 21 (7.8%) 25% (1/4) of the time 182 (67.9%)Never

7. From May through September what percent (%) of the 24 in and larger striped bass that you catch do you release?
41 (15.8%) 100% 13 (5.0%)75% 31 (11.9%) 50% 26 (10.0%) 25% 108 (41.5%) None 20 (7.7%)Don't fish during time 21 (8.1%) Other

8. Do you support or oppose the 24" size limit, 2 fish creel limit on striped bass at the lake? 220 (83.7%) Support 38 (14.4%) Oppose 5 (1.9%)No opinion

9. What regulation would you prefer? 147 (55.7%) Current Regulation 50 (18.9%) Split Season 67 (25.4%) Other

current regulation of 24-inch size limit, 2-fish creel limit

split season, where the 24-inch or larger size limit would be in effect during the late fall and winter months in which striped bass can generally be released successfully, and a smaller or no size limit during the late spring through early fall months when catch-and-release mortality can be a problem.

2 (3.0%) 12" 2 (3.0%) 15" 6 (9.1%) 18" 10 (15.2%) 20" 2 (3.0%) 22" 24 (36.4%) 24" 3 (4.5%) 26" 10 (15.2%) 30" 1 (1.5%) 35" 4 (6.1%) 36" 1 (1.5%) 45" 1 (1.5%) take out period **Other Inch Size Limits**

1 (1.7%) 10 18 (30.5%) 2 1 (1.7%) 3-4 8 (13.6%) 3 1 (1.7%) 4-6 17 (28.8%) 4 1 (1.7%) 5-10 8 (13.6%) 5 4 (6.8%) 6 **Other Fish Creel Limit**

Black Bass Anglers

10. What level of satisfaction do you have with black bass fishing at Lake Cumberland?
83 (16.8%) Very satisfied 217 (44.0%) Somewhat satisfied 86 (17.4%) Neutral 78 (15.8%) Somewhat dissatisfied 29 (5.9%) Very dissatisfied

11. Do you support or oppose the 15-inch size limit on largemouth bass at the lake? 475 (96.0%) Support 17 (3.4%) Oppose 3 (0.6%) No opinion

11a. What size limit would you prefer on largemouth bass at the lake? 403 (81.7%) current (15") 53 (10.8%) 18" 37 (7.5%) Other

12. Do you support or oppose the 18-inch size limit on smallmouth bass at the lake? 362 (73.4%) Support 117 (23.7%) Oppose 14 (2.8%) No opinion

12a. What size limit would you prefer on smallmouth bass at the lake? 315 (64.0%) current (18") 132 (26.8%) 15" 45 (9.1%) Other

13. Do you support or oppose "no size limit" on spotted bass at the lake? 294 (59.8%) Support 173 (35.2%) Oppose 25 (5.1%) No opinion

13a. What size limit would you prefer on spotted bass at the lake? 216 (43.8%) current (none) 245 (49.7%) 12" 32 (6.5%) Other

Crappie Anglers

14. What level of satisfaction do you have with crappie fishing at Lake Cumberland?
76 (28.8%) Very satisfied 107 (40.5%) Somewhat satisfied 29 (11.0%) Neutral 26 (9.8%) Somewhat dissatisfied 26 (9.8%) Very dissatisfied

15. Do you support or oppose the 10-inch size limit on crappie at the lake? 243 (92.7%) Support 19 (7.3%) Oppose 0 (0.0%) No opinion

15a. What size limit would you prefer? 9 (3.4%) No size limit 8 (3.1%) 8" 10 (3.8%) 9" 224 (85.8%) Current (10") 10 (3.8%) Other

16. Do you support or oppose the 30 fish creel limit on crappie at the lake? 239 (91.6%) Support 20 (7.7%) Oppose 2 (0.8%) No opinion

16a. What creel limit would you prefer? 138 (52.5%) Current (30) 56 (21.3%) 20 62 (23.6%) 15 2 (0.8%) 10 5 (1.9%) Other

Walleye Anglers

17. What level of satisfaction do you have with walleye fishing at Lake Cumberland?
44 (26.0%) Very satisfied 70 (41.4%) Somewhat satisfied 33 (19.5%) Neutral 16 (9.2%) Somewhat dissatisfied 6 (3.6%) Very dissatisfied

18. Do you support or oppose the 15-inch size limit on walleye at the lake? 160 (96.4%) Support 4 (2.4%) Oppose 2 (1.2%) No opinion

18a. What size limit on walleye would you prefer? 125 (74.9%) Current (15") 37 (22.2%) 18" 2 (1.2%) 20" 3 (1.8%) Other

19. Do you support or oppose the 10-fish creel limit on walleye at the lake? 153 (93.3%) Support 9 (5.5%) Oppose 2 (1.2%) No opinion

19a. What creel limit on walleye would you prefer? 102 (62.2%) Current (10) 24 (14.6%) 8 31 (18.9%) 5 7 (4.3%) Other

Catfish Anglers

20. What level of satisfaction do you have with the channel catfish fishing at Lake Cumberland?
52 (42.3%) Very satisfied 40 (32.5%) Somewhat satisfied 21 (17.1%) Neutral 6 (4.9%) Somewhat dissatisfied 4 (3.3%) Very dissatisfied

21. Do you support or oppose the no size limit regulation on channel catfish at the lake? 103 (83.7%) Support 18 (14.6%) Oppose 2 (1.6%) No Opinion

21a. What size limit would you prefer on channel catfish at the lake? 71 (57.7%) Current (none) 18 (14.6%) 12" 23 (18.7%) 14" 11 (8.9%) Other

22. Do you support or oppose the no creel limit regulation on channel catfish at the lake? 96 (78.0%) Support 27 (22.0%) Oppose 0 (0.0%) No opinion

22a. What creel limit would you prefer on channel catfish at the lake? 85 (69.1%) Current (none) 4 (3.3%) 5 20 (16.3%) 15 9 (7.3%) 30 5 (4.1%) Other

23. What level of satisfaction do you have with the flathead catfish fishing at Lake Cumberland?
44 (34.4%) Very satisfied 31 (24.2%) Somewhat satisfied 38 (29.7%) Neutral 10 (7.8%) Somewhat dissatisfied 5 (3.9%) Very dissatisfied

24. Do you support or oppose the no size limit regulation on flathead catfish at the lake? 98 (76.6%) Support 25 (19.5%) Oppose 5 (3.9%) No Opinion

24a. What size limit would you prefer on flathead catfish at the lake? 75 (59.1%) Current (none) 26 (20.5%) 20" 26 (20.5%)Other

25. Do you support or oppose the no creel limit regulation on flathead catfish at the lake? 99 (77.3%) Support 27 (21.1%) Oppose 2 (1.6%) No Opinion

25a. What creel limit would you prefer on flathead catfish at the lake? 89 (69.5%) Current (none) 5 (3.9%) 5 14 (10.9%) 15 7 (5.5%) 30
13 (10.2%) Other

Table 1. Species composition, relative abundance, and CPUE (no./hr.) of black bass collected during 7.0 hours of 15-minute nocturnal electrofishing runs for black bass in Lake Cumberland during May 2004; 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						2	1			1		1	1		1	2					9	6.00 (3.69)
	Spotted bass		2	1	8	17	9	17	5	5	4	4	5	3	3							83	55.33 (6.96)
	Smallmouth bass		1		1	9	9	1	6	4	1	2	1		1							36	24.00 (12.22)
Beaver Creek	Largemouth bass				1		1		2	2	3	4	6	3	2	3	2	2	1	3	2	37	24.67 (4.55)
	Spotted bass	1	2	4			4	10	12	4	4	3	3									47	31.33 (4.78)
	Smallmouth bass																					0	0.00 (0.00)
Harmon Creek	Largemouth bass													1								1	0.67 (0.67)
	Spotted bass	4	6		1	3	5	9	12	6	4	1	1									52	34.67 (5.43)
	Smallmouth bass		1			1		2	1		3	2		2	4	3						19	12.67 (5.60)
Fishing Creek	Largemouth bass						1	1		7	16	9	7	8	10	5	5			1		70	46.67 (11.62)
	Spotted bass					3		7	9	3	5	3	1									31	20.67 (5.41)
	Smallmouth bass																					0	0.00 (0.00)
Lily Creek	Largemouth bass						1		2		4	6	4	2	2	5	2			1		29	19.33 (5.79)
	Spotted bass		10	2	1	11	23	41	33	18	22	14	5	5	3							188	125.33 (14.15)
	Smallmouth bass																					0	0.00 (0.00)
Total	Largemouth bass				1		5	2	4	9	24	19	18	15	14	14	11	2	1	5	2	146	19.47 (4.00)
	Spotted bass	5	20	7	10	34	41	84	71	36	39	25	15	8	6							401	53.47 (7.76)
	Smallmouth bass		2		1	10	9	3	7	4	4	4	1	2	5	3						55	7.33 (3.08)

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Table 2. Comparison of catch-per-hour of black bass (by area) captured during spring electrofishing on Lake Cumberland during the period of 2000-2004.

	Stock					Quality					Preferred				
Species/Area	2000	2001	2002	2003	2004	2000	2001	2002	2003	2004	2000	2001	2002	2003	2004
Largemouth bass															
Dam	13.3	8.0	6.7	1.3	4.7	12.7	5.3	6.7	1.3	3.3	7.3	4.0	4.0	1.3	2.0
Beaver Creek	22.7	36.0	14.0	24.7	23.3	12.7	23.3	12.0	11.3	18.7	3.3	10.7	6.7	7.3	10.0
Harmon Creek	2.7	4.7	1.3	1.0	0.7	2.7	4.0	0.7	1.0	0.7	2.7	4.0	0.7	1.0	0.0
Fishing Creek	56.0	31.3	45.3	48.7	46.0	34.0	18.0	40.0	42.7	30.0	8.0	2.7	10.0	23.3	14.0
Lily Creek	12.7	19.3	12.0	18.7	18.7	11.3	14.0	10.7	11.3	14.7	4.7	4.7	10.7	6.0	6.7
Mean	21.5	19.9	15.9	20.1	18.7	14.7	12.9	14.0	14.4	13.5	5.2	5.2	6.4	8.3	6.5
Spotted bass															
Dam	20.0	25.3	28.7	48.7	36.7	14.0	10.7	12.7	16.7	12.7	2.7	2.0	3.3	3.3	4.0
Beaver Creek	19.3	8.7	14.0	63.3	26.7	8.7	1.3	2.7	5.3	6.7	1.3	0.0	0.0	0.7	0.0
Harmon Creek	8.7	20.0	20.7	45.0	25.3	1.3	2.7	3.3	8.0	4.0	0.0	0.0	0.0	0.0	0.0
Fishing Creek	4.0	10.0	2.7	16.7	18.7	1.3	1.3	1.3	4.0	6.0	0.0	0.0	0.0	0.7	0.0
Lily Creek	17.3	50.0	27.3	88.0	109.3	8.7	15.3	13.3	24.7	32.7	2.0	6.0	4.0	8.7	5.3
Mean	13.9	22.8	18.7	52.9	43.3	6.8	6.3	6.7	12.0	12.4	1.2	1.6	1.5	2.9	1.9
Smallmouth bass															
Dam	14.0	4.7	21.3	22.7	16.7	8.7	2.7	8.7	11.3	3.3	2.7	1.3	0.7	8.0	0.7
Beaver Creek	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Harmon Creek	3.3	7.3	18.7	29.0	11.3	2.7	4.0	8.0	16.0	9.3	1.3	3.3	4.0	11.0	6.0
Fishing Creek	0.6	0.7	0.0	0.7	0.0	0.6	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0
Lily Creek	0.7	2.7	0.0	2.7	0.0	0.7	0.0	0.0	1.3	0.0	0.7	0.0	0.0	0.7	0.0
Mean	3.9	3.1	8.0	9.7	5.6	2.5	1.3	3.3	5.0	2.5	1.1	0.9	0.9	3.4	1.3

Largemouth bass - ≥ 8 in = stock, ≥12 in = quality, ≥15 in = preferred.

Smallmouth bass and spotted bass - ≥7 in = stock, ≥11 in = quality, ≥14 in = preferred.

* Not sampled.

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Table 3. Spring electrofishing catch-per-unit-effort (CPUE) for each size of largemouth bass collected at Lake Cumberland during May 2004. CPUE = fish/hour.

	Inch class									
	< 8.0		8.0-11.9		12-14.9		≥ 15.0		Total	
Year	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err
2004	0.8	0.3	5.2	1.5	6.9	1.4	6.5	1.6	19.5	4.0
2003	2.0	0.8	5.7	1.4	6.1	1.9	8.3	1.9	22.1	4.3
2002	0.4	0.2	1.9	0.6	7.7	2.5	6.3	1.0	16.3	3.3
2001	1.2	0.8	6.9	1.4	7.7	1.9	5.2	1.1	21.1	3.7
2000	2.4	0.7	6.8	1.7	9.5	2.0	5.2	1.3	23.9	4.6

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Table 4. Spring electrofishing catch-per-unit-effort (CPUE) for each size of spotted bass collected at Lake Cumberland during May 2004. CPUE = fish/hour

	Inch class									
	< 8.0		8.0-10.9		11-13.9		≥ 14.0		Total	
Year	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.
2004	15.6	2.7	25.5	3.9	10.5	2.1	1.9	0.7	53.5	7.8
2003	32.6	5.5	31.6	3.8	9.1	1.5	2.9	0.8	76.1	8.6
2002	8.1	1.8	10.3	1.7	5.2	1.1	1.5	0.5	25.1	3.7
2001	12.0	2.3	10.5	1.6	4.7	0.9	1.6	0.7	28.8	4.4
2000	3.7	1.2	5.9	1.1	5.6	1.0	1.2	0.4	16.4	2.4

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Table 5. Spring electrofishing catch-per-unit-effort (CPUE) for each size of smallmouth bass collected at Lake Cumberland during May 2004. CPUE = fish/hour

	Inch class									
	< 8.0		8.0-10.9		11-13.9		≥ 14.0		Total	
Year	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.
2004	2.9	1.8	1.9	0.9	1.2	0.5	1.3	0.7	7.3	3.1
2003	2.1	1.0	3.9	1.1	1.6	0.6	3.4	1.1	11.0	2.7
2002	2.9	1.1	3.5	1.3	2.4	0.8	0.9	0.5	9.7	2.9
2001	1.2	0.4	1.1	0.3	0.4	0.2	0.9	0.4	3.6	0.9
2000	0.1	0.1	1.2	0.5	1.5	0.7	1.1	0.4	3.9	1.3

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Table 6. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Lake Cumberland during May 2004; 95% confidence limits are in parentheses.

Area	Species	No. fish > stock size	PSD (+/- 95%)	RSD[a] (+/- 95%)
Dam	Largemouth bass	7	71 (± 36)	43 (± 39)
	Spotted bass	55	35 (± 12)	11 (± 8)
	Smallmouth bass	25	20 (± 16)	4 (± 8)
Beaver Creek	Largemouth bass	35	80 (± 13)	43 (± 17)
	Spotted bass	40	25 (± 14)	
	Smallmouth bass	0		
Harmon Creek	Largemouth bass	1	100	
	Spotted bass	38	16 (± 12)	
	Smallmouth bass	17	82 (± 18)	53 (± 24)
Fishing Creek	Largemouth bass	69	65 (± 11)	30 (± 11)
	Spotted bass	28	32 (± 17)	
	Smallmouth bass	0		
Lily Creek	Largemouth bass	28	79 (± 16)	36 (± 18)
	Spotted bass	164	30 (± 7)	5 (± 3)
	Smallmouth bass	0		
Total	Largemouth bass	140	72 (± 8)	35 (± 8)
	Spotted bass	325	29 (± 5)	4 (± 2)
	Smallmouth bass	42	45 (± 15)	24 (± 13)

[a]Largemouth bass = RSD-15, spotted and smallmouth bass = RSD-14
sedpsdcb.d04

Table 7. Species composition, relative abundance, and CPUE (no./hr.) of black bass collected during 1.5 hours of 15-minute nocturnal electrofishing runs for black bass in Fishing Creek of Lake Cumberland during October 2004; standard error is in parentheses.

	Inch class																	
Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	20	Total	CPUE
Largemouth bass	4	10	17	18	23	9	12	15	7	12	7	6	4	1	1	1	147	98.0 (15.1
Smallmouth bass								1									1	0.7 (0.7
Spotted bass	9	11	13	34	46	48	20	31	31	20	5	2	1				271	180.7 (37.3

sedyoycb.d04

Table 8. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall (October) in electrofishing samples in Fishing Creek at Lake Cumberland.

	Age 0		Age 0		Age 0 ≥ 5.0		Age 1	
Year Class	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2002	6.0	0.07	192.7	36.67	160.7	36.32	4.0	1.5
2003	5.8	0.42	6.0	2.68	4.0	2.53	1.3	0.8
2004	6.2	0.14	50.7	8.18	41.3	7.35		

sedyoycb.d04

Table 9. Number of fish and mean relative weight (Wr) for each length class of black bass collected in Fishing Creek of Lake Cumberland on 26 October 2004. Standard error is in parentheses.

	Size range					
Species	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	8.0 - 11.9 in		12.0 - 14.9 in		> 15.0 in	
	28	86 (1.5)	19	85 (1.3)	6	89 (3.1)
Spotted bass	7.0 - 10.9 in		11.0 - 13.9 in		> 14.0 in	
	69	91 (0.7)	34	89 (1.2)	3	106 (7.0)

sedyoycb.d04

Table 10. Length frequency and CPUE of walleye collected at Lake Cumberland in 20 net-days on 17-18 November 2004.

	Inch class																	
Species	9	10	11	12	14	15	16	17	18	19	20	21	22	23	24	Total	CPUE	Std. error
Walleye	2	6	18	3	2	8	34	44	24	29	13	17	3	2	1	206	10.3	1.49

sedgncbw.d04

Table 11. Mean back calculated lengths (in) at each annulus for male walleye collected from Lake Cumberland during 2004, including the 95% confidence interval (CI) for each mean length per age group.

		Age						
Year	No.	1	2	3	4	5	6	7
2003	39	12						
2002	34	12.3	17.1					
2001	13	12.1	16.8	19.0				
2000	1	10.5	16.2	19.5	20.7			
1999	3	11.8	15.8	18.4	19.9	20.9		
1998	2	10.2	15.9	17.4	18.8	20.5	21.2	
1997	2	9.1	13.9	16.8	18.3	19.7	20.4	21.2
Mean		12.0	16.8	18.6	19.3	20.4	20.8	21.2
Number		94	55	21	8	7	4	2
Smallest		6.2	12.0	16.4	18.2	19.5	20.2	21.2
Largest		15.8	19.6	20.5	20.7	21.6	21.3	21.3
Std error		0.2	0.2	0.3	0.3	0.2	0.3	0.0
95% CI ±		0.3	0.4	0.5	0.2	0.5	0.5	0.1

Otoliths were used for age-growth determinations; Intercept = 0
sedagcbm.d04

Table 12. Mean back calculated lengths (in) at each annulus for female walleye collected from Lake Cumberland during 2004, including the 95% confidence interval (CI) for each mean length per age group.

		Age			
Year	No.	1	2	3	4
2003	15	12.4			
2002	9	12.5	18.1		
2001	4	12.4	18.7	21.0	
2000	3	13.6	18.5	21.1	22.8
Mean		12.6	18.3	21.0	22.8
Number		31	16	7	3
Smallest		10.3	16.6	19.6	21.9
Largest		15.0	19.2	22.2	23.7
Std error		0.2	0.2	0.4	0.5
95% CI ±		0.5	0.4	0.7	1.1

Otoliths were used for age-growth determinations; Intercept = 0
sedagcbf.d04

Table 13. Mean back calculated lengths (in) at each annulus for walleye (both sexes) collected from Lake Cumberland during 2004, including the 95% confidence interval (CI) for each mean length per age group.

		Age						
Year	No.	1	2	3	4	5	6	7
2003	61	12.1						
2002	43	12.4	17.3					
2001	17	12.2	17.3	19.5				
2000	4	12.8	17.9	20.7	22.3			
1999	3	11.8	15.8	18.4	19.9	20.9		
1998	2	10.2	15.9	17.4	18.8	20.5	21.2	
1997	2	9.1	13.9	16.8	18.3	19.7	20.4	21.2
Mean		12.1	17.1	19.2	20.3	20.4	20.8	21.2
Number		132	71	28	11	7	4	2
Smallest		6.2	12.0	16.4	18.2	19.5	20.2	21.2
Largest		15.8	19.6	22.2	23.7	21.6	21.3	21.3
Std error		0.1	0.2	0.3	0.6	0.2	0.3	0.0
95% CI ±		0.3	0.4	1.0	1.1	1.0	1.0	0.1

Otoliths were used for age-growth determinations; Intercept = 0
sedagcbw.d04

Table 14. Age-frequency and CPUE of walleye gill netting for 20 net-day at Lake Cumberland during 17-18 November 2004. 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	6	18	3												29	14.1	1.45	
1					2	8	34	37	9	1						91	44.2	4.55	(0.68)
2								7	15	22	7	5				56	27.2	2.80	(0.53)
3										6	5	6	1	1		19	9.2	0.95	(0.21)
4												1	1	1	1	4	1.9	0.20	(0.08)
5											1	1	1			3	1.5	0.15	(0.04)
6												2				2	1.0	0.10	(0.04)
7												2				2	1.0	0.10	(0.04)
Total	2	6	18	3	2	8	34	44	24	29	13	17	3	2	1	206	100.0	10.30	
%	1.0	2.9	8.7	1.5	1.0	3.9	16.5	21.4	11.7	14.1	6.3	8.3	1.5	1.0	0.5				

sedgncbw.d04

Table 15. Number of fish and mean relative weight (Wr) for each length class of walleye collected in Lake Cumberland during November and December 2004. Standard error is in parentheses.

Size range					
10.0 - 14.9 in.		15.0 - 19.9 in.		≥ 20.0 in.	
No.	Wr	No.	Wr	No.	Wr
30	91 (0.7)	163	94 (0.4)	44	92 (0.8)

sedgncbs.d04
sedgncbw.d04

Table 16. Walleye population assessment for walleye gill netted at Lake Cumberland in November 2004.

Parameter	Actual value	Assessment score
Population density (CPUE age 1 fish and older)	4.6	3
Growth rate (Mean length of age 2+ fish at capture)	18.8	4
Size structure (CPUE ≥ 20.0 inch fish)	1.8	3
Recruitment (CPUE of age 1 fish)	4.6	4
Total score		14
Assessment rating		E
Instantaneous mortality (Z)	0.713	
Annual mortality (A)		51.0

sedgncbw.d04

Table 17. Length frequency and CPUE of white bass collected at Lake Cumberland in 20 net-days on 17-18 November 2004.

	Inch class								
Species	8	10	11	12	13	14	Total	CPUE	Std. error
White bass	1	3	3	7	6	1	21	1.05	0.35

sedgncbw.d04

Table 18. Mean back calculated lengths (in) at each annulus for white bass collected from Lake Cumberland during 2004, including the 95% confidence interval (CI) for each mean length per age group.

		Age
Year	No.	1
2003	16	8.8
Mean		8.8
Number		16
Smallest		6.6
Largest		10.4
Std error		0.3
95% CI ±		0.6

Otoliths were used for age-growth determinations; Intercept = 0
sedagwhb.d04

Table 19. Age-frequency and CPUE of white bass gill netting for 20 net-days at Lake Cumberland during 17-18 November 2004. Standard error is in parentheses.

	Inch class								
Age	8	10	11	12	13	14	Total	%	CPUE
0+	1						1	4.8	0.05
1+		3	3	7	6	1	20	95.2	1.00
Total	1	3	3	7	6	1	21	100.0	1.05
%	4.8	14.3	14.3	33.3	28.6	4.8	100.0		

sedgncbw.d04

Table 20. Number of fish and mean relative weight (Wr) for each length class of white bass collected in Lake Cumberland during 17-18 November 2004. Standard error is in parentheses.

Size range					
6.0 - 8.9 in.		9.0 - 11.9 in.		≥ 12.0 in.	
No.	Wr	No.	Wr	No.	Wr
1	105	6	101 (2)	12	103 (2)

sedgncbw.d04

Table 21. Length frequency and CPUE of striped bass collected at Lake Cumberland in 20 net-days on 1-2 December 2004.

	Inch class																											
Species	8	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	39	Total	CPUE	Std. error
Striped bass	1	2	3	3	3	3	4	7	8	3	1	3	5	6	5	3	2	6	6	3	3	5	1	1	1	88	4.4	0.91

sedgncbs.d04

Table 22. Mean back calculated lengths (in) at each annulus for striped bass collected from Lake Cumberland during 2004, including the 95% confindence interval (CI) for each mean length per age group.

		Age									
Year	No.	1	2	3	4	5	6	7	8	9	10
2003	57	10.2									
2002	17	13.1	20.2								
2001	13	11.4	19.4	24.0							
2000	12	12.4	20.1	24.2	27.2						
1999	8	12.6	20.4	24.3	27.3	29.5					
1998	3	13.1	20.4	25.1	28.7	30.4	32.4				
1996	1	8.9	17.9	21.7	25.5	27.4	29.3	31.2	31.9		
1995	1	13.2	21.8	24.7	26.4	29.0	29.7	31.0	33.0	34.6	
1994	1	14.6	22.2	26.2	30.3	31.7	33.5	35.4	36.4	37.2	38.6
Mean		11.3	20.1	24.2	27.4	29.7	31.6	32.5	33.8	35.9	38.6
Number		113	56	39	26	14	6	3	2	1	1
Smallest		4.8	16.1	20.9	23.1	27.4	29.3	31.0	31.9	34.6	38.6
Largest		15.7	22.3	26.2	30.3	32.0	33.7	35.4	36.4	37.2	38.6
Std error		0.3	0.2	0.2	0.3	0.4	0.8	1.4	1.4	1.3	
95% CI ±		0.5	0.4	0.5	0.6	0.8	1.5	2.8	2.7	2.5	

Otoliths were used for age-growth determinations; Intercept = 0

sedagcbs.d04

Table 23. Age-frequency and CPUE of striped bass gill netted for 20 net-days at Lake Cumberland in 1-2 December 2004. Standard error is in parentheses.

	Inch class																											
Age	8	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	39	Total	%	CPUE
0+	1																									1	1.1	0.05
1+		2	3	3	3	3	4	7	8	3																36	40.9	1.80 (0.44)
2+											1	3	4	3	4											15	17.0	0.75 (0.26)
3+													1	2	1	3	2	1	3							13	14.8	0.65 (0.19)
4+														1				5	1	2	1	1				11	12.5	0.55 (0.19)
5+																			2	1	2	2				7	8.0	0.35 (0.16)
6+																						1	1	1		3	3.4	0.15 (0.07)
8+																						1				1	1.1	0.05 (0.02)
10+																									1	1	1.1	0.05 (0.05)
Total	0	2	3	3	3	3	4	7	8	3	1	3	5	6	5	3	2	6	6	3	3	5	1	1	1	88	100.0	4.40
%	0.0	2.3	3.4	3.4	3.4	3.4	4.5	8.0	9.1	3.4	1.1	3.4	5.7	6.8	5.7	3.4	2.3	6.8	6.8	3.4	3.4	5.7	1.1	1.1	1.1			

sedgncbs.d04

Table 24. Number of fish and mean relative weight (Wr) for each length class of striped bass collected in Lake Cumberland during November and December 2004. Standard error is in parentheses.

Size range					
12.0 - 19.9 in.		20.0 - 29.9 in.		≥ 30.0 in.	
No.	Wr	No.	Wr	No.	Wr
59	94 (1.0)	58	86 (2.0)	17	79 (1.2)

sedgncbs.d04
sedgncbw.d04

Table 25. Striped bass population assessment for striped bass gill netted at Lake Cumberland in December 2004.

Parameter	Actual value	Assessment score
Population density (CPUE age 1 fish and older)	4.4	3
Growth rate (Mean length of age 2+ fish at capture)	23.4	4
Size structure (CPUE $\geq$ 24.0 inch fish)	2.1	4
Recruitment (CPUE of age 1 fish)	1.8	2
Total score		13
Assessment rating		G
Instantaneous mortality (Z)	0.425	
Annual mortality (A)		34.6

sedgncbs.d04

Table 26. Fishery statistics derived from a creel survey on lower Lake Cumberland (25,014 acres) from 5 March - 30 October 2004.

Fishing trips	
Number of fishing trips (per acre)	87,304 (3.49)
Average trip length	5.61
Fishing pressure	
Total man-hours (S.E.)a	490,047 (8,666)
Man hours/acre	19.59
Catch/harvest	
Number of fish caught (S.E.)	268,388 (25,294)
Number of fish harvested (S.E.)	144,097 (18,416)
Pounds of fish harvested	278,610
Harvest rates	
Fish/hour	0.29
Fish/acre	5.76
Pounds/acre	11.14
Catch rates	
Fish/hour	0.54
Fish/acre	10.73
Miscellaneous characteristics (%)	
Male	88
Female	12
Resident	71
Non-resident	29
Method (%)	
Still fishing	27
Casting	27
Trolling	14
Striped bass-Live bait fisherman	31
Mode (%)	
Boat	93
Bank	7
Dock	0

aS.E. = standard error

Table 27. Fish harvest statistics derived from a creel survey at lower Lake Cumberland (25,014 acres) from 5 March - 30 October 2004.

	Black bass group	Largemouth bass	Spotted bass	Smallmouth bass	Illegal bass	Illegal Smallmouth bass	Crappie group	White crappie	Black crappie	Illegal Black crappie	Striped bass	Illegal Striped bass	White bass	Walleye	Catfish group	Channel catfish	Flathead catfish	Panfish group	Bluegill	Longear sunfish	Green sunfish	Rock bass	Drum	Anything
No. caught	76,918	11,287	51,949	13,682	671	353	11,780	1,847	9,933	421	28,683	230	228	3,911	17,373	16,169	1,203	126,527	117,620	4,784	1,121	3,001	1,294	
(per acre)	3.08	0.45	2.08	0.55	0.03	0.01	0.47	0.07	0.40	0.02	1.15	0.01	0.01	0.16	0.70	0.65	0.05	5.60	4.70	0.19	0.05	0.12	0.05	
No. harvested	23,408	1,136	21,008	1,263	671	353	6,072	496	5,576	421	20,546	230	228	3,715	12,566	11,554	1,012	75,227	70,104	4,056	532	536	659	
(per acre)	0.94	0.05	0.84	0.05	0.03	0.01	0.24	0.02	0.22	0.02	0.82	0.01	0.01	0.15	0.50	0.46	0.04	3.01	2.80	0.16	0.02	0.02	0.03	
% of total no. harvested	16.2	0.8	14.6	0.9	0.5	0.2	4.2	0.3	3.9	0.3	14.3	0.2	0.2	2.6	8.7	8.0	0.7	52.2	48.7	2.8	0.4	0.4	0.5	
Lbs. harvested	21,211	2,913	14,068	4,210	785		5,823	266	5,557	108	215,152	199	211	9,350	16,036	11,938	4,097	7,994	7,592	209	36	156	1,741	
(per acre)	0.85	0.12	0.56	0.17	0.03		0.23	0.01	0.22	0.00	8.60	0.01	0.01	0.37	0.64	0.48	0.16	0.32	0.30	0.01	0.00	0.01	0.07	
% of total lbs harvested	7.6	1.1	5.1	1.5	0.3		2.1	0.1	2.0	0.0	77.2	0.1	0.1	3.4	5.8	4.3	1.5	2.9	2.7	0.1	0.0	0.1	0.6	
Mean length (in)		16.8	11.4	19.1	13.0	15.7		10.6	12.0	8.7	30.1	12.0	13.0	19.5		16.3	21.7		5.5	4.4	4.5	7.3	18.6	
Mean weight (lb)		2.51	0.66	3.28	1.12			0.56	0.96	0.28	10.81	0.86	0.91	2.57		1.58	4.27		0.11	0.06	0.07	0.27	2.59	
Number of fishing trips for that species	23,925						3,086				37,384			4,294	5,959			10,776					57	1,823.00
Percent of all trips	27.4						3.5				42.8			4.9	6.8			12.3					0.1	2.1
Hours fished for that species	134,294						17,324				209,837			24,103	33,451			60,489					319	10,230
Hours fished for that species (per acre)	5.37						0.69				8.39			0.96	1.34			2.42					0.01	0.41
Number harvested fishing for that species	18,419						5,765				20,375			3,124	8,522			67,068					101	
Lb harvested fishing for that species	16,234						5,456				212,863			7,303	11,611			6,959					405	
No./hr harvested fishing for that species	0.13						0.395				0.08			0.12	0.33			1.51					0.67	
Percent success fishing for that species	22.3						41.5				23.7			20.2	30.8			45.3						19.4

1 < 0.005 fish/hr or < 0.5%

Table 28. Length distribution for each species of fish harvested and released at lower Lake Cumberland (25,014 acres) during 5 March - 30 October 2004.

	Inch class																																				
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	46
Largemouth bass																																						
Harvested										192	96	383	310	207	207	103	207	102																				
Released						825	413	825	619	2372	722	1134	648	648	926	556	93	278	92																			
Spotted bass																																						
Harvested				295		785	884	3240	3829	7068	2552	1374	589	392																								
Released				915		7140	1007	7598	2197	5950	2746	2380	366	275	367																							
Smallmouth bass																																						
Harvested													177		176	583	194	292	97	97																	
Released						709	405	1824	810	1216	709	1013	1722	405	1115	1195	996	199	100																			
Striped bass																																						
Harvested										230												695	1092	1489	2084	2978	1290	3176	1588	2184	893	1588	496	596	99	99	99	100
Released					107					428		214	428	214	107	1713	428	1178	321	1606	431	214		107	214	107	107	107									106	
White bass																																						
Harvested										114		114																										
Released																																					
Walleye																																						
Harvested													100	100	703	502	703	301	201	703	201	100			101													
Released										98		98																										
White crappie																																						
Harvested								248	248																													
Released				791		316	158				86																												
Black crappie																																						
Harvested						211	210	756	1229	1890	756	378	567																										
Released	419			754	335	1843	1006																															
Channel catfish																																						
Harvested					104	312	1353		1665	1665	416	1353	416	1249	312	833	312	208	104	312	208	104	208	104	104	104		108										
Released				330		2088		1429		110			110	330		110					108																	
Flathead catfish																																						
Harvested														202	202			101		101	101	202											103					
Released																		96					95															
Bluegill																																						
Harvested	598	13562	15357	33407	4188	2493	399	100																														
Released	12923	20577	7356	4274	596	1790																																
Longear sunfish																																						
Harvested	495	2275	1286																																			
Released		208	416	105																																		
Green sunfish																																						
Harvested		213	319																																			
Released		589																																				
Rockbass																																						
Harvested				107	107	322																																
Released		95	190	1327	379	95				379																												
Freshwater drum																																						
Harvested														110	110	110	110		110	109																		
Released																	91	272		91		91				90												

Table 29. 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 5 March - 30 October 2004.

	Largemouth bass				Spotted bass				Smallmouth bass			
		C&R				C&R				C&R		
	Harvest	12.0-14.9	>15.0	Total	Harvest	12.0-14.9	>15.0	Total	Harvest	12.0-14.9	>15.0	Total
Total number of bass	1,136	4,228	3,241	11,287	21,008	11,076	1,008	51,949	1,263	2,938	5,733	13,682
% of black bass harvested by number	4.9				89.8				5.4			
Total weight of fish (lb)	2,913	3,147	8,583	16,639	14,088	5,902	536	30,576	4,210	2,859	10,896	21,612
% of black bass harvested by weight	13.7				66.4				19.8			
Mean length (in)	16.8				11.4				19.1			
Mean weight (lb)	2.51				0.66				3.28			
Rate (fish/hour)	0.002				0.042				0.003			

Table 30. Monthly black bass angling success at lower Lake Cumberland (25,014 acres) during the 2004 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
Mar	13,640	4,207	5,555	31,181	10,834	0.34	2,931	0.09
Apr	8,516	2,581	2,866	16,087	6,881	0.39	1,978	0.11
May	8,855	704	2,668	14,977	7,648	0.45	101	0.01
Jun	6,328	1,956	1,723	9,669	4,027	0.50	1,611	0.20
Jul	6,552	855	1,621	9,098	6,172	0.53	665	0.06
Aug	5,973	4,508	1,678	9,421	4,620	0.48	3,944	0.41
Sep	9,692	4,181	3,376	18,949	8,457	0.51	3,611	0.22
Oct	17,362	4,417	4,438	24,912	15,458	0.57	3,578	0.13
Total	76,918	23,408	23,925	134,294	64,097		18,419	
Mean						0.47		0.13

Table 31. Monthly striped bass angling success at lower Lake Cumberland (25,014 acres) during the 2004 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
Mar	4,462	1,530	3,086	17,323	3,697	0.19	1,530	0.08
Apr	5,161	3,355	6,960	39,069	4,903	0.12	3,183	0.08
May	1,308	1,208	3,804	21,350	1,208	0.05	1,208	0.05
Jun	5,177	3,336	4,749	26,656	5,062	0.17	3,336	0.11
Jul	2,374	2,374	2,918	16,376	2,374	0.17	2,374	0.17
Aug	3,832	3,268	4,264	23,935	3,606	0.12	3,268	0.11
Sep	4,846	4,181	5,320	29,860	4,561	0.13	4,181	0.12
Oct	1,523	1,295	6,283	35,268	1,371	0.03	1,295	0.03
Total	28,683	20,546	37,384	209,837	26,782		20,375	
Mean						0.11		0.08

Table 32. Monthly crappie angling success at lower Lake Cumberland (25,014 acres) during the 2004 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
Mar	382	382	309	1,732	382	0.32	382	0.32
Apr	1,462	1,290	512	2,873	1,462	0.64	1,290	0.56
May	1,711	1,308	568	3,187	1,308	0.77	1,308	0.77
Jun	1,381	1,150	372	2,091	1,265	0.24	1,035	0.20
Jul	190	190	0	0	0	*	0	*
Aug	563	0	272	1,528	451	1.25	0	*
Sep	760	380	256	1,436	380	0.29	380	0.29
Oct	5,330	1,371	798	4,478	5,330	1.69	1,370	0.43
Total	11,780	6,072	3,086	17,324	10,578		5,765	
Mean						0.78		0.40

Table 33. Monthly walleye angling success at lower Lake Cumberland (25,014 acres) during the 2004 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
Mar	0	0	0	0	0	*	0	*
Apr	172	172	0	0	0	*	0	*
May	201	101	114	637	101	0.04	101	0.04
Jun	1,035	1,035	745	4,181	805	0.18	805	0.18
Jul	1,899	1,804	741	4,159	1,804	0.29	1,804	0.29
Aug	451	451	1,270	7,130	338	0.05	338	0.05
Sep	0	0	1,125	6,316	0	*	0	*
Oct	152	152	299	1,679	76	0.11	76	0.11
Total	3,911	3,715	4,294	24,103	3,124		3,124	
Mean						0.12		0.12

Table 34. Fishery statistics derived from a creel survey on upper Lake Cumberland (25,014 acres) from 5 March - 30 October 2004.

Fishing trips	
Number of fishing trips (per acre)	53,601 (2.14)
Average trip length	4.09
Fishing pressure	
Total man-hours (S.E.)a	219,130 (7,359)
Man hours/acre	8.76
Catch/harvest	
Number of fish caught (S.E.)	225,589 (21,319)
Number of fish harvested (S.E.)	86,255 (9,243)
Pounds of fish harvested	66,371
Harvest rates	
Fish/hour	0.40
Fish/acre	3.45
Pounds/acre	2.65
Catch rates	
Fish/hour	1.05
Fish/acre	9.02
Miscellaneous characteristics (%)	
Male	88
Female	12
Resident	87
Non-resident	13
Method (%)	
Still fishing	39
Casting	43
Trolling	16
Fly	0
Other	2
Mode (%)	
Boat	94
Bank	5
Dock	1

aS.E. = standard error

Table 35 Fish harvest statistics derived from a creel survey at upper Lake Cumberland (25,014 acres) from 5 March - 30 October 2004

	Black bass group	Largemouth bass	Spotted bass	Smallmouth bass	Illegal bass	Illegal Smallmouth bass	Crappie group	White crappie	Black crappie	Illegal White crappie	Illegal Black crappie	Striped bass	White bass	Walleye	Illegal Walleye	Catfish group	Channel catfish	Flathead catfish	Panfish group	Bluegill	Longear sunfish	Redear sunfish	Green sunfish	Warmouth	Drum	Muskellunge	Gar	Carp	Anything
No. caught (per acre)	67,039 2 68	25,309 1.01	33,373 1 33	8,360 0 33	910 0 04	114 0 00	73,001 2 92	49,092 1 96	23,909 0 96	1,380 0 06	412 0 02	7,161 0 29	371 0 01	14,114 0 56	49 0 00	8,061 0 32	6,552 0 26	1,499 0 06	50,754 2 03	48,391 1 93	1,847 0 07	120 0 00	49 0 00	347 0 01	855 0 03	321 0 01	692 0 03	415 0 02	
No. harvested (per acre)	5,742 0 23	1,244 0 05	4,222 0 17	275 0 01	910 0 04	114 0 00	23,900 0 96	14,361 0 57	9,539 0 38	1,380 0 06	412 0 02	1,963 0 08	168 0 01	7,209 0 29	49 0 00	6,641 0 27	5,302 0 21	1,339 0 05	37,076 1 48	35,056 1 40	1,847 0 07	60 0 00		113 0 00	691 0 03				
% of total no. harvested	6 7	1 4	4 9	0 3	1 1	0 1	27 7	16 6	11 1	1 6	0 5	2 3	0 2	8 4	0 1	7 7	6 1	1 6	43 0	40 6	2 1	0 1		0 1	0 8				
Lbs. harvested (per acre)	6182 0 25	2,642 0 11	2,554 0 10	987 0 04	864 0 03		13,919 0 56	7,447 0 30	6,472 0 26	330 0 01	85 0 00	15,907 0 64	181 0 01	11,731 0 47	40 0 00	12,785 0 51	7,421 0 30	5,365 0 21	3,317 0 13	3,140 0 13	150 0 01	5 0 00		22 0 00	1,079 0 04				
% of total lbs harvested	9 3	4 0	3 8	1 5	1 3		21 0	11 2	9 8	0 5	0 1	24 0	0 3	17 7	0 1	19 3	11 2	8 1	5 0	4 7	0 2	0 0		0 0	1 5				
Mean length (in)		15 9	11 0	19 4	12 2	15 0		10 4	10 5	8 0	7 4	27 2	13 5	17 0	14 0		15 5	20 3		5 2	5 1	5 0		6 5	13 6				
Mean weight (lb)		2 08	0 59	3 51	0 93			0 51	0 62	0 25	0 17	8 13	1 01	1 56	0 82		1 23	3 45		0 09	0 06	0 09		0 19	1 17				
Number of fishing trips for that species	21,548						13,107					3,464		5,994		1,559			4,469										3,396 00
Percent of all trips	40 2						24 5					6 5		11 2		2 9			8 3										6 3
Hours fished for that species	68,092						53,584					14,163		24,504		6,375			18,268										13,883 00
Hours fished for that species (per acre)	3 52						2 14					0 57		0 98		0 25			0 73										0 55
Number harvested fishing for that species	3,543						23,382					1,733		6,078		4,512			27,492										
Lb harvested fishing for that species	4,531						13,676					14,300		9,572		10,441			2,393										
No./hr harvested fishing for that species	0 04						0 45					0 1		0 25		0 51			1 66										
Percent success fishing for that species	6 5						40 3					21 2		31 7		63 5			57 3						0 0				44 8

1 < 0 005 fish/hr or < 0 5%

Table 36. Length distribution for each species of fish harvested and released at upper Lake Cumberland (25,014 acres) during 5 March - 30 October 2004.

	Inch class																																				
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	43	46
Largemouth bass																																							
Harvested							57	114	57	171	284	227	487	325	379	53																							
Released						297	119	1425	416	3920	5345	4039	4007	2004	1700	486	182	61			60																	
Spotted bass																																							
Harvested						160	53	1178	962	1443	374	54																											
Released						3463	462	13161	2251	7100	2251	404	59																									
Smallmouth bass																																							
Harvested											57				57	110	55	55		55																		
Released							57	57		571	343	1085	1313	2055	1370	449	673	112																				
Striped bass																																							
Harvested																						231	404	462	231	289	115	58		58			58				57	
Released											54		108	216	433	1298	649	1136	216	433	433	166																55
White bass																																							
Harvested										56			112																									
Released								102		52																												
Walleye																																							
Harvested												49	1818	1596	1211	1048	605	385	165	110	220	55																
Released								53		528	2958	2695	58	338	224													55										
White crappie																																							
Harvested				110	276	717	277	10815	2441	738	511	56																										
Released		56	393	1291	6510	12795	13131	277	55	168	56																										
Black crappie																																							
Harvested					177	118	117	5801	1869	902	516	322	129																										
Released			123	737	2519	6389	4362	120	60		60																											
Channel catfish																																							
Harvested										221	1105	331	552	1105	387	663	276	276		221	55			55				55									
Released								341		227	511	57	57			57																						
Flathead catfish																																							
Harvested														107	107	161	54	268	54		107	214		107		107	53										
Released								53					53			54																						
Bluegill																																							
Harvested	57	6203	19065	8081	1480	170																																	
Released	986	7131	3827	754	406	231																																	
Longear sunfish																																							
Harvested			1732	115																																			
Redear sunfish																																							
Harvested			60																																				
Released			60																																				
Green sunfish																																							
Released			49																																				
Warmouth																																							
Harvested				57	56																																		
Released			176	58																																			
Freshwater drum																																							
Harvested										58	173	58	173	58	58	58		55																					
Released							55			55			54																										
Muskellunge																																							
Released																64	64	64		64	65																	
Gar																																							
Released													53	53		266		213					53					54										
Carp																																							
Released													52	52				155		52			104															

Table 37. 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 5 March - 30 October 2004.

	Largemouth bass				Spotted bass				Smallmouth bass			
		C&R				C&R				C&R		
	Harvest	12.0-14.9	>15.0	Total	Harvest	12.0-14.9	>15.0	Total	Harvest	12.0-14.9	>15.0	Total
Total number of bass	1,244	13,304	8,500	25,306	4,222	9,755	59	33,373	275	1,999	5,972	8,360
% of black bass harvested by number	21.7				73.5				4.8			
Total weight of fish (lb)	2,642	13,209	18,091	36,182	2,554	5,249	32	18,240	987	3,237	11,523	15,930
% of black bass harvested by weight	42.7				41.3				16.0			
Mean length (in)	15.9				11.0				19.4			
Mean weight (lb)	2.08				0.59				3.51			
Rate (fish/hour)	0.006				0.021				0.001			

Table 38. Monthly black bass angling success at upper Lake Cumberland (25,014 acres) during the 2004 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
Mar	13,703	385	5,523	22,578	13,473	0.52	154	0.01
Apr	6,508	368	2,539	10,379	5,953	0.55	122	0.01
May	6,891	240	2,792	11,413	6,472	0.55	120	0.01
Jun	6,956	1,381	2,710	11,077	6,371	0.60	1,115	0.11
Jul	6,915	576	2,365	9,670	6,338	0.67	346	0.04
Aug	6,199	994	1,768	7,229	5,773	0.83	710	0.10
Sep	8,806	1,174	1,703	6,963	8,024	1.11	636	0.09
Oct	11,061	624	2,149	8,783	10,265	0.98	340	0.03
Total	67,039	5,742	21,548	88,092	62,669		3,543	
Mean						0.69		0.04

Table 39. Monthly striped bass angling success at upper Lake Cumberland (25,014 acres) during the 2004 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
Mar	539	308	475	1,942	539	0.22	308	0.13
Apr	368	123	367	1,502	307	0.20	123	0.08
May	1,977	539	642	2,624	1,498	0.42	539	0.15
Jun	106	0	0	0	0	*	0	*
Jul	1,383	519	253	1,036	807	0.50	288	0.18
Aug	2,177	426	1,050	4,292	2,176	0.45	426	0.09
Sep	440	49	140	571	440	0.49	49	0.05
Oct	17	0	537	2,196	170	0.10	0	0.00
Total	7,161	1,963	3,464	14,163	5,937		1,733	
Mean						0.37		0.10

Table 40. Monthly crappie angling success at upper Lake Cumberland (25,014 acres) during the 2004 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
Mar	10,701	4,311	2,969	12,139	10,624	1.04	4,312	0.42
Apr	15,348	6,385	2,839	11,608	15,286	1.27	6,323	0.53
May	11,865	3,475	1,765	7,215	11,805	1.67	3,475	0.49
Jun	6,001	1,912	928	3,792	5,363	1.71	1,699	0.54
Jul	3,112	864	563	2,302	3,055	1.44	865	0.41
Aug	6,435	1,514	912	3,728	6,435	1.44	1,514	0.34
Sep	6,947	1,468	1,117	4,566	6,556	1.61	1,223	0.30
Oct	12,592	3,971	2,014	8,235	12,593	1.55	3,971	0.49
Total	73,001	23,900	13,107	53,584	71,717		23,382	
Mean						1.43		0.45

Table 41. Monthly walleye angling success at upper Lake Cumberland (25,014 acres) during the 2004 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
Mar	77	0	0	0	0	*	0	*
Apr	614	307	301	1,229	307	0.29	184	0.18
May	2,637	1,738	674	2,755	1,618	0.52	1,019	0.32
Jun	743	478	342	1,397	584	0.39	425	0.28
Jul	3,745	2,305	1,352	5,526	3,573	0.64	2,305	0.42
Aug	2,555	852	1,078	4,405	2,176	0.56	615	0.16
Sep	2,495	1,076	1,089	4,452	2,299	0.57	1,076	0.27
Oct	1,248	454	1,041	4,255	1,078	0.31	454	0.13
Total	14,114	7,209	5,994	24,504	11,635		6,078	
Mean						0.51		0.26

Table 42. Fishery statistics derived from a creel survey on Lake Cumberland (50,250 acres) from 5 March - 30 October 2004.

Fishing trips	
Number of fishing trips (per acre)	160,275 (4.27)
Average trip length	5.13
Fishing pressure	
Total man-hours (S.E.)a	821,750 (13,393)
Man hours/acre	21.9
Catch/harvest	
Number of fish caught (S.E.)	623,920 (42,018)
Number of fish harvested (S.E.)	278,232 (23,554)
Pounds of fish harvested	373,528
Harvest rates	
Fish/hour	0.34
Fish/acre	7.42
Pounds/acre	9.96
Catch rates	
Fish/hour	0.76
Fish/acre	16.63
Miscellaneous characteristics (%)	
Male	88
Female	12
Resident	79
Non-resident	21
Method (%)	
Still fishing	33
Casting	35
Trolling	15
Fly	0
Other	17
Mode (%)	
Boat	93
Bank	6
Dock	1

aS.E. = standard error

Table 43. Fish harvest statistics derived from a creel survey at Lake Cumberland (50,250 acres) from 5 March - 30 October 2004.

	Black bass group	Largemouth bass	Spotted bass	Smallmouth bass	Illegal bass	Illegal Smallmouth bass	Crappie group	White crappie	Black crappie	Illegal White crappie	Illegal Black crappie	Striped bass	Illegal Striped bass	White bass
No. caught	183,018	51,242	105,583	26,194	2,105	567	130,495	83,592	46,903	2,281	1,061	38,732	203	790
(per acre)	4.88	1.37	2.81	0.70	0.06	0.02	3.48	2.23	1.25	0.06	0.03	1.03	0.01	0.02
No. harvested	32,645	3,317	27,625	1,704	2,105	567	44,088	24,147	19,941	2,281	1,061	22,638	203	494
(per acre)	0.87	0.09	0.74	0.05	0.06	0.02	1.18	0.64	0.53	0.06	0.03	0.60	0.01	0.01
% of total no. harvested	11.7	1.2	9.9	0.6	0.8	0.2	15.8	8.7	7.2	0.8	0.4	8.1	0.1	0.2
Lbs. harvested	31,376	7,467	18,161	5,747	2,233		27,570	12,521	15,050	544	238	230,324	175	509
(per acre)	0.84	0.20	0.48	0.15	0.06		0.73	0.33	0.40	0.01	0.01	6.14	0.00	0.01
% of total lbs harvested	8.4	2.0	4.9	1.5	0.6	0.0	7.4	3.4	4.0	0.1	0.1	61.7	0.0	0.1
Mean length (in)		16.4	11.3	19.0	12.3	15.3		10.4	11.4	8.0	7.9	29.7	12.0	13.3
Mean weight (lb)		2.32	0.64	3.24	0.96			0.52	0.83	0.25	0.21	10.37	0.86	0.96
Number of fishing trips for that species	53,407						21,948					40,561		
Percent of all trips	33.3						13.7					25.3		
Hours fished for that species	273,823						112,528					207,962		
Hours fished for that species (per acre)	7.30						3.00					5.54		
Number harvested fishing for that species	24,115						42,805					22,084		
Lb harvested fishing for that species	23,695						26,781					225,335		
No./hr harvested fishing for that species	0.09						0.45					0.09		
Percent success fishing for that species	13.1						40.6					23.4		

t < 0.005 fish/hr or < 0.5%

Walleye	Illegal Walleye	Catfish group	Channel catfish	Flathead catfish	Panfish group	Bluegill	Longear sunfish	Redear sunfish	Green sunfish	Warmouth	Rock bass	Drum	Muskellunge	Gar	Carp	Anything
27,577	100	29,871	26,098	3,772	202,084	189,873	7,451	187	1,148	562	2,863	2,578	474	1,218	766	
0.73	0.00	0.80	0.70	0.10	5.39	5.06	0.20	0.00	0.03	0.01	0.08	0.07	0.01	0.03	0.02	
15,414	100	23,278	19,978	3,300	131,684	123,655	6,786	93	483	195	471	1,674				
0.41	0.00	0.62	0.53	0.09	3.51	3.30	0.18	0.00	0.01	0.01	0.01	0.04				
5.5	0.0	8.4	7.2	1.2	47.3	44.4	2.4	0.0	0.2	0.1	0.2	0.6	0.0	0.0	0.0	
27,741	82	36,834	23,604	13,230	12,866	12,219	434	8	33	37	135	3,038				
0.74	0.00	0.98	0.63	0.35	0.34	0.33	0.01	0.00	0.00	0.00	0.00	0.08				
7.4	0.0	9.9	6.3	3.5	3.4	3.3	0.1	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	
17.5	14.0		15.8	22.1		5.4	4.9	5.0	4.5	6.5	7.3	16.1				
1.75	0.82		1.32	4.43		0.10	0.07	0.09	0.07	0.19	0.27	1.76				
13,333		7,698			16,739							146				6444
8.3		4.8			10.4							0.1				4.0
68,358		39,468			85,822							748				33041
1.82		1.05			2.29							0.02				0.88
13,046		16,016			108,062							93				
22,363		29,121			10,407							373				
0.21		0.41			1.57							0.48				
28.3		42.1			54.5							33.3				39.7

Table 44. Length distribution for each species of fish harvested and released at Lake Cumberland (50,250 acres) during 5 March - 30 October 2004.

	Inch class																																			
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	43	46
Largemouth bass																																							
Harvested													1171	781	878	195	195	97																					
Released						1245	575	3066	1245	8527	9293	7570	6827	3793	3508	1327	379	379	95		96																		
Spotted bass																																							
Harvested				283		1037	943	5186	5374	9334	3111	1414	566	377																								
Released				928		12807	1763	28883	5847	17448	6125	3063	464	278	372																							
Smallmouth bass																																							
Harvested											95		189		283	757	284	379	95	189																		
Released						656	469	1780	750	2061	1218	2624	3748	3654	3093	1888	2077	378	94																			
Illegal bass																																							
Harvested								191	96	478	574	766																											
Striped bass																																							
Harvested										203												1051	1624	2101	2197	3343	1433	3152	1528	2197	860	1528	573	573	96	96	96	96	94
Released					96					384	96	192	576	480	864	3838	1439	2975	672	2207	1054	470		94	188	94	94	94								94		93
White bass																																							
Harvested										198		99	197																									
Released								197		99																												
Walleye																																							
Harvested												100	3176	2709	2616	2242	1682	841	467	841	561	187			92													
Released								93		1028	5140	4767	95	567	378													95										
White crappie																																							
Harvested				182	456	1188	457	17714	4289	1212	839	93																									
Released		94	655	3087	10759	21705	22079	484	97	291	194																										
Black crappie																																							
Harvested					289	388	388	9441	4048	3275	1541	867	771																									
Released	471		189	1980	4243	11880	7825	187	93		94																										
Channel catfish																																							
Harvested					97	290	1255		1544	1930	2318	1834	1351	3088	965	1930	772	676	97	676	290	97	193	193	97	97		97	93								
Released				287		1817		1817		478	861	96	191	287		191					95																
Flathead catfish																																							
Harvested														377	377	283	94	566	94	94	283	566		189		189	94					94					
Released								95					95			95		95					93														
Bluegill																																							
Harvested	660	23109	45557	44897	6320	2641	377	94																														
Released	13300	31128	13208	5282	1226	2078																																
Longear sunfish																																							
Harvested	465	2138	3997	188																																			
Released		190	380	95																																			
Redear sunfish																																							
Harvested			93																																				
Released			93																																				
Green sunfish																																							
Harvested		193	290																																				
Released		570	95																																				
Warmouth																																							
Harvested				97	98																																		
Released			276	91																																			
Rockbass																																							
Harvested				94	94	283																																	
Released		92	184	1288	368	92				367																													
Freshwater drum																																							
Harvested										93	279	93	279	186	186	186	93	93	93	93																		
Released							90			90			90				90	271		90		90				93											
Muskellunge																																							
Released																95	95	95		95	94																	
Gar																																							
Released													94	94		469		375					94					92										
Carp																																							
Released													96	96				287			96		191															

Table 45. Black bass catch and harvest statistics derived from a daytime creel survey at Lake Cumberland (50,250 acres) for each species of black bass caught and released by all anglers from 5 March - 30 October 2004.

	Largemouth bass				Spotted bass				Smallmouth bass			
		C&R				C&R				C&R		
	Harvest	12.0-14.9	>15.0	Total	Harvest	12.0-14.9	>15.0	Total	Harvest	12.0-14.9	>15.0	Total
Total number of bass	3,317	25,390	16,404	51,242	27,625	26,636	1,114	105,583	1,704	5,903	14,932	26,194
% of black bass harvested by number	10.2				84.6				5.2			
Total weight of fish (lb)	7,467	23,796	36,174	73,184	18,161	14,157	592	59,596	5,747	7,710	27,440	45,670
% of black bass harvested by weight	23.8				57.9				18.3			
Mean length (in)	16.4				11.3				19.0			
Mean weight (lb)	2.32				0.64				3.24			
Rate (fish/hour)	0.004				0.034				0.002			

Table 46. Monthly black bass angling success at Lake Cumberland (50,250 acres) during the 2004 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
Mar	28,449	3,793	10,492	53,794	25,953	0.44	2,495	0.04
Apr	20,111	3,532	7,114	36,473	17,364	0.46	2,452	0.07
May	18,406	1,028	6,318	32,394	16,724	0.50	280	0.01
Jun	18,851	4,358	6,056	31,048	15,709	0.57	3,547	0.13
Jul	16,964	1,705	4,834	24,784	15,708	0.61	1,168	0.05
Aug	17,182	5,696	4,267	21,878	15,221	0.70	4,669	0.21
Sep	27,884	6,796	6,463	33,138	24,986	0.80	5,097	0.16
Oct	35,172	5,737	7,863	40,313	31,929	0.71	4,407	0.10
Total	183,018	32,645	53,407	273,823	163,594		24,115	
Mean						0.59		0.09

Table 47. Monthly striped bass angling success at Lake Cumberland (50,250 acres) during the 2004 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
Mar	4,192	1,597	3,325	17,049	3,594	0.20	1,597	0.09
Apr	6,475	4,022	7,922	40,617	6,082	0.13	3,826	0.08
May	3,924	1,869	4,034	20,682	3,083	0.11	1,869	0.07
Jun	4,763	2,939	4,174	21,398	4,459	0.17	2,939	0.11
Jul	4,398	3,052	2,925	14,996	3,501	0.22	2,693	0.17
Aug	7,470	3,548	5,577	28,594	7,283	0.22	3,548	0.11
Sep	5,597	4,198	5,307	27,211	5,297	0.15	4,198	0.12
Oct	1,912	1,414	7,297	37,415	1,746	0.04	1,414	0.03
Total	38,731	22,639	40,561	207,962	35,045		22,084	
Mean						0.14		0.09

Table 48. Monthly crappie angling success at Lake Cumberland (50,250 acres) during the 2004 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
Mar	14,174	5,889	3,153	16,167	14,075	0.99	5,889	0.41
Apr	26,194	11,674	5,120	26,249	26,095	1.20	11,576	0.53
May	19,994	6,634	3,062	15,699	19,527	1.57	6,634	0.53
Jun	12,669	4,662	1,882	9,650	11,351	1.08	4,155	0.39
Jul	5,026	1,526	812	4,165	4,758	1.44	1,347	0.41
Aug	13,166	2,988	1,648	8,448	13,073	1.44	2,988	0.33
Sep	14,991	3,398	2,365	12,124	13,793	1.42	2,899	0.30
Oct	24,279	7,317	3,906	20,025	24,280	1.58	7,317	0.48
Total	130,495	44,088	21,948	112,528	126,952		42,805	
Mean						1.33		0.45

Table 49. Monthly walleye angling success at Lake Cumberland (50,250 acres) during the 2004 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
Mar	100	0	0	0	0	*	0	*
Apr	1,177	687	485	2,487	490	0.29	294	0.18
May	3,831	2,523	1,021	5,233	2,336	0.36	1,495	0.23
Jun	2,331	1,824	1,228	6,294	1,824	0.27	1,520	0.23
Jul	7,629	5,296	2,600	13,329	7,271	0.50	5,296	0.36
Aug	5,416	2,054	2,831	14,513	4,576	0.34	1,494	0.11
Sep	5,097	2,199	3,153	16,165	4,698	0.34	2,199	0.16
Oct	1,996	831	1,901	9,749	1,663	0.29	748	0.13
Total	27,577	15,414			22,858		13,046	
Mean			13,333	68,358		0.36		0.21

Table 50. Species composition, relative abundance, and CPUE (no./hr.) of black bass collected during 6.0 hours of 15-minute nocturnal electrofishing runs for black bass in Laurel River Lake during April and May 2004; standard error is in parentheses.

		Inch class																		
Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE
Dam	Largemouth bass				6	10	8	3	2	5		2	7	9	6	4			62	41.33 (8.86)
	Spotted bass				2	2	4	10	11	12	15	9	4	5					74	49.33 (10.05)
	Smallmouth bass		2			1	1					2	3	1	1				11	7.33 (1.91)
Spruce	Largemouth bass					2			4	7	15	19	11	13	11	3	1		86	57.33 (9.45)
Creek	Spotted bass							1	2	1	1	1	1						7	4.67 (1.91)
	Smallmouth bass					6	2	2		1	1			1	1				14	9.33 (2.23)
Laurel	Largemouth bass					1	4	1	4	12	10	17	11	16	6	3		2	87	58.00 (10.11)
River	Spotted bass				1		1		1	1		1							5	3.33 (1.23)
Arm	Smallmouth bass																		0	0.00 (0.00)
Upper	Largemouth bass				3	1	4	2	2	8	9	8	2	6	3	1		1	50	33.33 (7.71)
Craigs	Spotted bass				5	9	17	12	16	13	3	2	3						80	53.33 (5.02)
Creek	Smallmouth bass				1	2	1	1											5	3.33 (1.23)
Total	Largemouth bass				9	14	16	6	12	32	34	46	31	44	26	11	1	3	285	47.50 (4.77)
	Spotted bass				8	11	22	23	30	27	19	13	8	5					166	27.67 (5.62)
	Smallmouth bass		2		1	9	4	3		1	1	2	3	2	2				30	5.00 (1.06)

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Table 51. Comparison of catch-per-hour of black bass (by area) captured during spring electrofishing on Laurel River Lake during the period of 2000-2004.

Species/Area	Stock					Quality					Preferred				
	2000	2001	2002	2003	2004	2000	2001	2002	2003	2004	2000	2001	2002	2003	2004
Largemouth bass															
Dam	54.7	40.0	49.3	68.0	30.7	14.7	28.7	36.0	48.7	18.7	3.3	3.3	0.7	18.7	12.7
Spruce Creek	58.0	48.0	50.7	58.7	56.0	19.3	32.7	24.7	28.7	48.7	2.0	2.0	6.7	12.0	18.7
Marsh Branch	6.0	10.0	*	*	*	4.0	9.3	*	*	*	0.7	0.0	*	*	*
Laurel River Arm	100.0	88.7	98.0	151.3	57.3	50.0	23.3	52.0	75.3	43.3	5.0	4.7	8.7	19.3	18.0
Craigs Cr. headwaters	60.0	37.3	24.7	42.7	30.7	14.7	29.3	14.0	20.0	20.0	0.7	2.7	5.3	5.3	7.3
Mean	52.6	44.8	55.7	80.2	43.7	18.4	24.7	31.7	43.2	32.7	2.1	2.5	5.4	13.8	14.2
Spotted bass															
Dam	62.0	62.7	46.7	66.7	48.0	2.7	15.3	13.3	26.7	30.0	0.0	0.0	0.7	2.7	6.0
Spruce Creek	9.3	4.0	6.0	10.0	4.7	2.0	2.0	0.7	2.7	2.7	0.0	0.0	0.0	0.0	0.7
Marsh Branch	22.0	16.7	*	*	*	2.0	6.7	*	*	*	0.0	0.0	*	*	*
Laurel River Arm	11.0	15.3	24.0	14.0	2.7	6.0	4.0	6.7	5.3	1.3	0.0	0.7	0.7	0.7	0.0
Craigs Cr. headwaters	40.0	41.3	22.0	72.7	50.0	0.7	14.0	2.7	9.3	14.0	0.7	0.0	0.0	0.0	2.0
Mean	30.1	28.0	24.7	40.8	26.3	2.4	8.4	5.9	11.0	12.0	0.1	0.1	0.4	0.8	2.7
Smallmouth bass															
Dam	12.0	14.0	12.0	28.0	6.0	0.7	8.7	7.3	3.3	4.7	0.0	2.7	2.7	2.0	3.3
Spruce Creek	8.7	11.3	20.7	24.0	9.3	3.3	3.3	2.0	12.0	2.7	0.7	0.7	0.0	6.7	1.3
Marsh Branch	4.0	7.3	*	*	*	0.7	5.3	*	*	*	0.7	1.3	*	*	*
Laurel River Arm	4.0	2.0	2.0	1.3	2.7	3.0	1.3	1.3	*	0.0	2.0	0.0	0.0	0.0	0.0
Craigs Cr. headwaters	6.0	0.7	0.7	4.0	0.0	2.0	0.7	0.7	0.7	0.0	0.0	0.7	0.0	0.0	0.0
Mean	7.1	7.1	8.9	14.3	4.5	1.9	3.9	2.8	4.0	1.8	0.6	1.1	0.7	2.2	1.2

Largemouth bass - ≥ 8 in = stock, ≥12 in = quality, ≥15 in = preferred.

Smallmouth bass and spotted bass - ≥7 in = stock, ≥11 in = quality, ≥14 in = preferred.

* Not sampled.

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Table 52. Spring electrofishing catch-per-unit-effort (CPUE) for each size of largemouth bass collected at Laurel River Lake during April and May 2004. CPUE = fish/hour.

	Inch class									
	< 8.0		8.0-11.9		12-14.9		≥ 15.0		Total	
Year	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err
2004	3.8	1.5	11.0	1.4	18.5	3.0	14.2	1.9	47.5	4.8
2003	9.8	2.9	37.0	5.8	29.3	4.1	13.8	2.0	90.0	12.3
2002	21.7	5.0	24.0	3.8	23.3	3.3	8.3	1.4	77.3	9.7
2001	24.9	3.9	20.1	4.6	22.1	2.5	2.5	0.6	69.7	9.0
2000	3.0	1.4	34.1	4.9	16.3	2.9	2.1	0.5	55.6	7.8

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Table 53. Spring electrofishing catch-per-unit-effort (CPUE) for each size of spotted bass collected at Laurel River Lake during April and May 2004. CPUE = fish/hour.

	Inch class									
	< 8.0		8.0-10.9		11-13.9		≥ 14.0		Total	
Year	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err
2004	3.2	1.0	12.5	2.9	9.8	2.3	2.2	0.7	27.7	5.6
2003	23.3	5.3	17.8	3.1	10.2	2.0	0.8	0.5	52.2	8.9
2002	13.7	3.2	13.3	1.8	5.5	1.4	0.3	0.2	32.8	5.6
2001	13.3	2.7	17.2	3.2	8.3	1.5	0.1	0.1	38.9	6.3
2000	13.7	2.9	20.7	3.2	2.3	0.6	0.1	0.1	36.9	5.7

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Table 54. Spring electrofishing catch-per-unit-effort (CPUE) for each size of smallmouth bass collected at Laurel River Lake during April and May 2004. CPUE = fish/hour.

	Inch class									
	< 8.0		8.0-10.9		11-13.9		≥ 14.0		Total	
Year	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err
2004	2.0	0.6	1.2	0.4	0.7	0.4	1.2	0.5	5.0	1.1
2003	8.3	2.2	7.5	1.8	1.8	0.8	2.2	0.8	19.8	4.3
2002	8.2	2.5	4.5	1.5	2.2	0.6	0.7	0.3	15.5	3.8
2001	4.7	1.2	2.3	0.7	2.8	0.7	1.1	0.4	10.8	1.8
2000	3.3	0.8	3.1	0.6	1.3	0.5	0.6	0.3	8.3	1.3

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Table 55. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Laurel River Lake during April and May 2004; 95% confidence limits are in parentheses.

Area	Species	No. fish > stock size	PSD (+/- 95%)	RSD[a] (+/- 95%)
Dam	Largemouth bass	46	61 (± 14)	41 (± 15)
	Spotted bass	72	63 (± 11)	13 (± 7)
	Smallmouth bass	9	78 (± 28)	56 (± 35)
Spruce Creek	Largemouth bass	84	87 (± 7)	33 (± 10)
	Spotted bass	7	57 (±39)	14 (± 28)
	Smallmouth bass	14	29(± 25)	14 (±19)
Laurel River arm	Largemouth bass	86	76 (± 9)	31 (± 10)
	Spotted bass	4	50 (± 57)	
	Smallmouth bass	0		
Upper Craigs Creek	Largemouth bass	46	65 (± 14)	24 (± 13)
	Spotted bass	75	28 (± 10)	4 (± 5)
	Smallmouth bass	4	0	
Total	Largemouth bass	262	75 (± 5)	32 (± 6)
	Spotted bass	158	46 (± 8)	8 (± 4)
	Smallmouth bass	27	41 (± 19)	26 (± 17)

[a]Largemouth bass = RSD-15, spotted and smallmouth bass = RSD-14
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Table 56. Species composition, relative abundance, and CPUE (no./hr.) of black bass collected during 1.5 hours of 15-minute nocturnal electrofishing runs for black bass in Laurel River Lake during 27 September 2004; 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		
Laurel River Arm	Largemouth bass		3	6	17	21	26	13	5		2	4	1	7	1	1	107	71.3 (10.4)
	Spotted bass		2		1	9	3		3	2	2						22	14.7 (2.9)

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

Year Class	Area	Age 0 Mean length	Age 0 Std. error	Age 0 CPUE	Age 0 Std. error	Age 0 ≥ 5.0 CPUE	Age 0 ≥ 5.0 Std. error	Age 1 CPUE	Age 1 Std. error
2002	Laurel River Arm	4.5	0.11	30.7	5.81	8.7	3.49	10.3	4.1
2003	Laurel River Arm	3.4	0.05	36.7	13.99	0.7	0.67	2.6	1.0
2004	Laurel River Arm	4.9	0.15	14.0	5.82	8.0	3.43		

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Table 58. Number of fish and mean relative weight (Wr) for each length class of black bass collected at 312 Bridge in Laurel River Lake during 27 September 2004. Standard error is in parentheses.

Species	Size range					
	8.0 - 11.9 in.		12.0 - 14.9 in.		≥ 15.0 in.	
Largemouth bass	No.	Wr	No.	Wr	No.	Wr
	20	99 (1.7)	12	99 (2.1)	2	96 (0.4)
	7.0 - 10.9 in.		11.0 - 13.9 in.		≥ 14.0 in.	
Spotted bass	No.	Wr	No.	Wr	No.	Wr
	8	105 (3.2)	2	102 (14.7)	0	0 (0)

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Table 59a. Length frequency and CPUE for each species of crappie collected during 2.0 hours of diurnal electrofishing at 312 Bridge (1.0 hour) and near Hightop ramp (1.0 hour) in Laurel River Lake on 1 and 6 April 2004.

Species	Inch class				Total	CPUE	Std. error
	7	8	10	11			
White crappie	1	1	1	1	4	2..0	1.07
Black crappie			1	2	3	1.5	0.73

sedcrplr.d04

Table 59b. Length frequency and CPUE for each species of crappie collected during 1.5 hours of diurnal electrofishing at 312 Bridge in Laurel River Lake on 5 November 2004.

Species	Inch class								Total	CPUE	Std. error
	3	4	5	6	7	8	9	10			
White crappie	1	3	1	2	2	2	6	2	19	12.67	6.06
Black crappie							1		1	0.67	0.67

sedcrplr.d04

Table 60. PSD and RSD_{10} values calculated for crappie captured by electrofishing at 312 Bridge in Laurel River Lake during 5 November 2004; 95% confidence limits are in parentheses.

	No.	PSD	RSD_{10}
White crappie	16	67 (25)	13 (18)
Black crappie	1	100	0

sedcrplr.d04

Table 61. Mean back calculated lengths (in) at each annulus for white crappie collected from Laurel River Lake during 2004, including the 95% confidence interval (CI) for each mean length per age group.

		Age		
Year	No.	1	2	3
2003	2	3.6		
2002	9	3.9	5.4	
2001	5	4.2	7.0	8.2
Mean		3.9	6.0	8.2
Number		16	14	5
Smallest		2.4	4.4	7.7
Largest		5.7	7.8	9.2
Std error		0.2	0.3	0.3
95% CI ±		0.5	0.7	0.6

Otoliths were used for age-growth determinations; Intercept = 0
sedaglr.d04

Table 62. Mean back calculated lengths (in) at each annulus for black crappie collected from Laurel River Lake during 2004, including the 95% confidence interval (CI) for each mean length per age group.

		Age	
Year	No.	1	2
2002	1	3.0	5.7
Mean		3.0	5.7
Number		1	1
Smallest		3.0	5.7
Largest		3.0	5.7
Std error			
95% CI ±			

Otoliths were used for age-growth determinations; Intercept = 0
sedcrplr.d04

Table 63. Age-frequency and CPUE of white crappie collected during 1.5 hours of diurnal electrofishing at 312 Bridge in Laurel River Lake on 5 November 2004.

	Inch class											Std
Age	3	4	5	6	7	8	9	10	Total	%	CPUE	error
0+	1								1	5.6	0.67	
1+		3				1			4	22.2	2.67	1.61
2+			1	2	2		3	1	9	50.0	6.00	3.39
3+						1	3	1 4	4	22.2	2.67	1.33
Total	1	3	1	2	2	2	6	2	18	100.0	12.0	
%	5.6	16.7	5.6	11.1	11.1	11.1	33.3	11.1	105.6			

CPUE of > 8 in (quality size) crappie = 6.7
CPUE of > 10 in (preferred size) crappie = 1.3
sedaglr.d04

Table 64. Age-frequency and CPUE of black crappie captured during 1.5 hours of electrofishing at 312 Bridge in Laurel River Lake on 5 November 2004.

	Inch class					Std
Age	9	Total	%	CPUE		error
2+	1	1	100.0	0.67		0.67
Total	1	1	100.0	0.67		
%	100.0	100.0				

quality size) crappie =0.67
CPUE of > 10 in (preferred size) crappie = 0.0
sedaglr.d04

Table 65. Number of fish and mean relative weight (Wr) for each length class of crappie collected in Laurel River Lake at 312 bridge on 5 November 2004. Standard error is in parentheses.

	Size range					
Species	No.	Wr	No.	Wr	No.	Wr
	5.0 - 7.9 in		8.0 - 9.9 in		≥ 10.0 in	
White Crappie	5	89 (4)	8	84 (2)	2	86 (3)
Black crappie			1	75 (0)		

sedcrplr.d04

Table 66. Species composition, relative abundance, and CPUE (no./hr.) of black bass collected during 3.75 hours of 15-minute nocturnal electrofishing runs for black bass in Dale Hollow Lake during April & May 2004; standard error is in parentheses.

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			1	1				2	2	3	4	3	3	3	1	2			25	6.67 (3.69)
Spotted bass	3	1		2	8	21	17	14	15	15	9	8	2	2	1				118	31.47 (6.96)
Smallmouth bass	1	1	2		1	4	4	3	6	4	3	3	2	3	2	2	3	1	45	12.00 (12.22)

sedpsddh.d04

Table 67. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Dale Hollow Lake during April and May 2004; 95% confidence limits are in parentheses.

Area	Species	No. fish > stock size	PSD (+/- 95%)	RSD[a] (+/- 95%)
Illwill Creek	Largemouth bass	10	70 (± 30)	30 (± 30)
	Spotted bass	41	61 (±15)	22 (± 13)
	Smallmouth bass	23	78 (± 17)	56 (± 20)
Little Sulphur Creek	Largemouth bass	13	92 (± 15)	46 (± 28)
	Spotted bass	71	38 (± 11)	6 (± 5)
	Smallmouth bass	18	61 (± 23)	17 (± 17)
Total	Largemouth bass	23	83 (± 16)	39 (± 20)
	Spotted bass	112	46 (± 9)	12 (± 6)
	Smallmouth bass	41	71 (± 14)	39 (± 15)

[a]Largemouth bass = RSD-15, spotted and smallmouth bass = RSD-14

sedpsddh.d04

Table 68. Mean back calculated lengths (in) at each annulus for smallmouth bass collected from Dale Hollow Lake during 2004, 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
2002	10	6.2	9.1							
2001	16	5.4	9.1	12.2						
2000	7	6.1	10.2	13.8	15.6					
1999	2	7.5	11.5	14.9	17.3	17.9				
1998	2	5.6	10.5	14.5	17.3	18.9	19.6			
1997	1	5.1	8.8	13.9	16.8	17.9	19.0	19.7		
1995	2	4.3	8.8	11.8	15.0	16.8	17.9	18.6	19.1	19.9
Mean		5.8	9.5	12.9	16.1	17.8	18.8	19.0	19.1	19.9
Number		40	40	30	14	7	5	3	2	2
Smallest		3.9	6.9	9.0	13.2	15.7	16.7	17.4	18.1	18.8
Largest		8.3	12.2	15.3	17.6	18.9	19.6	19.8	20.2	20.9
Std error		0.2	0.2	0.3	0.4	0.4	0.5	0.8	1.0	1.0
95% CI ±		0.4	0.5	0.6	0.8	0.8	1.1	1.6	2.1	2.1

Otoliths were used for age-growth determinations; Intercept = 0
sedagdhs.d04

Table 69. Age-frequency and CPUE of smallmouth bass collected during 3.75 hours of nocturnal electrofishing at Dale Hollow Lake in April and May 2004.

	Inch class																				Std
Age	3	4	5	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	%	CPUE	error
1	1	1	2															4	8.9	1.07	
2				1	4	3	1	1										10	22.2	2.67	1.01
3						1	2	5	4	1	3							16	35.6	4.27	0.91
4										2		2	3					7	15.6	1.87	0.74
5														2	1			3	6.7	0.80	0.39
6																2		2	4.4	0.53	0.26
7																1		1	2.2	0.27	0.13
9															1		1	2	4.4	0.53	0.24
Total	1	1	2	1	4	4	3	6	4	3	3	2	3	2	2	3	1	45	100.0	12.00	
%	2.2	2.2	4.4	2.2	8.9	8.9	6.7	13.3	8.9	6.7	6.7	4.4	6.7	4.4	4.4	6.7	2.2				

sedpsddh.d04
sedagdhs.d04

Table 70. Population assessment for smallmouth bass collected from Dale Hollow Lake in April and May 2004.

Parameter	Actual value	Assessment score
Mean age-3 length at capture	11.7	3
Spring CPUE of Age 1 fish	1.1	3
Spring CPUE of 11-13.9-in fish	3.5	4
Spring CPUE of ≥ 14.0-in fish	4.3	4
Spring CPUE of ≥ 17.0-in fish	2.1	4
Instantaneous mortality (Z)	0.678	
Annual mortality (A)	49.3	
Total score		18
Assessment rating		E

sedpsddh.d04

Table 71. Species composition, relative abundance and CPUE (fish/hour) of black bass collected in 4.0 hours of 30-minute electrofishing runs (2.5 hours lower section; 1.5 hours upper section) from Cedar Creek Lake on 15 April 2004. 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	Total	CPUE
Lower	Largemouth bass	9	8	7	23	46	20	7	8	58	103	56	9	9	5	2	370	151.3 (22.5)
	Smallmouth bass																0	0.0 (0.0)
Upper	Largemouth bass	1	2	1	2	11	14	4	2	22	70	50	7	5	3	1	195	130.0 (24.1)
	Smallmouth bass								1								1	0.7 (0.7)
Total	Largemouth bass	10	10	8	25	57	34	11	10	80	173	106	16	14	8	3	565	143.3 (16.1)
	Smallmouth bass								1								1	0.3 (0.3)

Table 72. Spring electrofishing catch-per-unit-effort (CPUE) for each size class of largemouth bass collected from each section of Cedar Creek Lake. CPUE = fish/hour, number in parentheses are standard errors.

		Inch class					
Year		<8.0	8.0-11.9	12.0-14.9	15.0-20.0	≥20.0	Total
2004	Lower	37.8	38.3	68.7	6.5		151.3
		(7.3)	(5.7)	(15.1)	(3.1)		(22.5)
	Upper	11.3	28.0	84.7	6.0		130.0
		(3.5)	(7.2)	(11.7)	(2.0)		(24.1)
	Total	27.9	34.5	74.7	6.3		143.3
		(6.6)	(4.6)	(10.2)	(2.0)		(16.1)
2003	Lower	134.4	8.8	19.6	0.8		163.6
		(8.5)	(2.9)	(3.3)	(0.5)		(11.7)
	Upper	218.0	18.7	13.3			250.0
		(51.3)	(9.8)	(2.4)			(54.0)
	Total	165.8	12.5	17.3	0.5		196.0
		(23.3)	(4.1)	(2.4)	(0.3)		(24.7)

Table 73. Spring electrofishing catch-per-unit-effort (CPUE) for each size class of smallmouth bass collected at Cedar Creek Lake. CPUE = fish/hour, number in parentheses are standard errors.

	Inch class				
Year	<8.0	8.0-11.9	12.0-14.9	≥15.0	Total
2004		0.3			0.3
		(0.3)			(0.3)
2003					0.0
					(0.0)

Table 74. PSD and RSD values obtained for largemouth bass taken in spring electrofishing samples in each area of Cedar Creek Lake in 2004; 95% confidence intervals are in parentheses.

Area	No. fish ≥ stock size	PSD	RSD[a]
Lower	277	66 (61-72)	6 (3-9)
Upper	178	76 (70-83)	5 (2-8)
Total	455	70 (66-75)	6 (3-8)

Largemouth bass = RSD_{15}.

Table 75. Length frequency and CPUE of bluegill collected at Cedar Creek Lake in 2.5 hours (7.5-min runs) and redear sunfish in 1.25 hours of nocturnal electrofishing on 9 June 2004.

Species	Inch class 1	2	3	4	5	6	7	8	Total	CPUE	Std. error
Lower											
Bluegill	2	56	49	17	14	22			160	123.1	28.3
Upper											
Bluegill			5		2	21	3		31	23.9	7.2
Redear sunfish			2		1	34	35	1	73	56.2	18.6
Total											
Bluegill	2	56	54	17	16	43	3		191	73.5	18.2
Redear sunfish			2		1	34	35	1	73	56.2	18.6

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sedpsdcc.d04

Table 76. Spring electrofishing catch-per-unit-effort (CPUE) for each size class of bluegill collected at Cedar Creek Lake. CPUE = fish/hour, number in parentheses are standard errors.

	Inch class				
Year	<3.0	3.0-5.9	6.0-7.9	≥8.0	Total
2004	22.3	33.5	17.7		73.5
	(9.5)	(10.3)	(3.4)		(18.2)

Table 77. PSD values obtained for bluegill taken in spring electrofishing samples in each area of Cedar Creek Lake in 2004; 95% confidence intervals are in parentheses.

Area	No. fish ≥ stock size	PSD
Lower	102	22 (14-30)
Upper	31	77 (62-92)
Total	133	35 (27-43)

Table 78. Mean back-calculated length (in) at each annulus for bluegill from Cedar Creek Lake in 2004, including the range of lengths of bluegill at each age and the 95% confidence intervals for each age group.

Year		Age			
class	No.	1	2	3	4
2003	17	2.6			
2002	25	2.7	6.0		
2001	1	2.1	4.0	5.1	
2000	1	1.9	3.0	4.2	7.0
Mean		2.7	5.8	4.6	7.0
No.		44	27	2	1
Smallest		1.5	3.0	4.2	7.0
Largest		3.8	7.3	5.1	7.0
Std error		0.1	0.2	0.4	0.0
95% CI (+)		0.1	0.3	0.9	0.0

Intercept = 0

Table 79. Electrofishing catch rate (fish/hour) for each age of bluegill collected from Cedar Creek Lake. Numbers in parentheses are standard errors.

	Year
Age	2004
1	48.9 (16.9)
2	22.7 (3.8)
3	0.9 (0.4)
4	0.2 (0.1)

Table 80. Length-frequency and CPUE (fish/hour) of black bass collected in 3.5 hours of nocturnal electrofishing (2.0 hours in lower end; 1.5 hours in upper end) (30-min runs) at Cedar Creek Lake on 28 September 2004; numbers in parentheses are standard

	Inch class																	
Area	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	19	Total	CPUE
Lower	1	15	101	143	44	7	5	5	3	14	15	30	17	11	5		416	208.0 (29.8)
Upper		19	131	62	8	2	3	4	2	6	10	11	9	5	3	1	276	184.0 (4.2)
Total	1	34	232	205	52	9	8	9	5	20	25	41	26	16	8	1	692	197.7 (16.7)

Table 81. Number of fish and the relative weight (Wr) for each length category of black bass collected at Cedar Creek Lake on 28 September 2004. Standard errors are in parentheses.

		Size range					
Species	Area	No.	Wr	No.	Wr	No.	Wr
		8.0-11.9 in		12.0-14.9 in		≥15.0 in	
Largemouth bass	Upper	11	94 (2)	27	90 (2)	17	101 (3)
	Lower	20	89 (2)	59	92 (1)	33	100 (2)
	Total	31	91 (2)	86	91 (1)	50	100 (2)

Table 82. Index of largemouth bass year-class strength at age 0 and age 1 including mean length of fall collected age 0 bass taken at Cedar Creek Lake; numbers in parentheses are standard errors. CPUE are number/hour.

	Age 0			Age 1
Year class	No. of fish	Mean length (in)	CPUE	CPUE
2004	61	4.8 (0.04)	17.4 (3.1)	

Table 83. Length-frequency of bluegill collected in 3.5 hours of nocturnal electrofishing (2.0 hours in lower end; 1.5 hours in upper end) at Cedar Creek Lake on 28 September 2004.

	Inch class					
Area	3	4	5	6	7	Total
Lower	10	16	16	13	3	58
Upper	1	2	2		1	6
Total	11	18	18	13	4	64

Table 84. Number of fish and the relative weight (Wr) for each length category of bluegill collected at Cedar Creek Lake on September 2004. Standard errors are in parentheses.

Species	Area	Size range			
		No.	Wr	No.	Wr
		3.0-5.9 in		6.0-7.9 in	
Bluegill	Upper	5	87 (4)	1	92 (-)
	Lower	38	89 (3)	16	80 (4)
	Total	43	88 (2)	17	81 (4)

Table 85. Length frequency and CPUE of bluegill and redear sunfish collected at Chenoa Lake in 1.0 hours (15-min runs) of nocturnal electrofishing on 17 May 2004.

Species	Inch class									Total	CPUE	Std. error
	1	2	3	4	5	6	7	8	9			
Bluegill	13	12	14	23	6	22	19	1		110	110.0	16.7
Redear sunfish				2	3	7	14	5	1	32	32.0	7.1

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Table 86. PSD and RSD values obtained for bluegill and redear sunfish species taken in spring electrofishing sample at Chenoa Lake during May 2004; 95% confidence limits are in parentheses.

Bluegill		Redear sunfish	
PSD	RSD_8	PSD	RSD_9
49 (11)	1 (2)	63 (17)	3 (6)

sedpsdcl.d04

Table 87. Population assessment for bluegill collected from Chenoa Lake in May 2004.

Parameter	Actual value	Assessment Score
Mean length age-2 at capture	3.3	1
Years to 6 inches	3	3
CPUE of ≥ 6.0 inches	42.0	2
CPUE ≥ 8.0 inches	1.0	2
Instantaneous mortality (Z)	0.730	
Annual mortality (A)	51.8	
Total score		8
Assessment rating		F

sedpsdcl.d04

Table 88. Population assessment for redear sunfish collected from Chenoa Lake in May 2004.

Parameter	Actual value	Assessment Score
Mean length age-3 at capture	6.7	4
Years to 8 inches	3	4
CPUE of ≥ 8.0 inches	6.0	2
CPUE ≥ 10.0 inches	0.0	0
Instantaneous mortality (Z)	1.522	
Annual mortality (A)	78.2	
Total score		10
Assessment rating		G

sedpsdcl.d04

Table 89. Length frequency and CPUE of largemouth bass collected at Laurel Creek Reservoir in 1.0 hours (15-min runs) of nocturnal electrofishing on 13 May 2004.

Species	Inch class												Total	CPUE	Std. error
	4	5	7	8	9	10	11	12	13	14	22	23			
Largemouth bass	4	2	13	50	29	9	43	20	7	3	1	1	182	182.0	18.7

sedpsdlc.d04

Table 90. PSD and RSD values obtained for each largemouth bass taken in spring electrofishing samples at Laurel Creek Reservoir during 2004; 95% confidence limits are in parentheses.

Species	No. fish > stock size	PSD	RSD_{15}
Largemouth bass	163	20 (± 6)	1 (± 2)

sedpsdlc.d04

Table 91. Species composition, relative abundance, and CPUE (no./hr.) of black bass and walleye collected during 3.25 hours of 15-minute nocturnal electrofishing runs for black bass in Wood Creek Lake during October 2004; 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-001	Largemouth bass	3	2	3	2	1		4			1											16	32.00 (16.00)
	Spotted bass	1	2	1		3	3	9	10	6	2	1		1								39	78.00 (10.00)
	Smallmouth bass							1			1											2	4.00 (4.00)
	Walleye										1	1										2	4.00 (0.00)
Pump	Largemouth bass	8	3	9	7	2	4	6	1	2	3	7	9	2	2	2	2					69	69.00 (12.04)
Station-002	Spotted bass	4	12	5	5	4	2	3	3	12	7	2	4									63	63.00 (16.76)
	Smallmouth bass													1								1	1.00 (1.00)
	Walleye				1	5	1				1		1									9	9.00 (2.52)
Dock-003	Largemouth bass		4	12	3	1	3	12	4		3	7	4	6	4	1	2	3	2	1		72	41.14 (3.23)
	Spotted bass	1	1		2	2	1		5	2	4	5		1	2		1					27	15.43 (2.53)
	Walleye					2	2		1		2											7	4.00 (1.75)
Total	Largemouth bass	11	9	24	12	4	7	22	5	2	7	14	13	8	6	3	4	3	2	1		157	48.31 (5.83)
	Spotted bass	6	15	6	7	9	6	12	18	20	13	8	4	2	2		1					129	39.69 (9.15)
	Smallmouth bass							1			1			1								3	0.92 (0.66)
	Walleye				1	7	3		1		4	1	1									18	5.54 (1.32)

sedyoywc.d04

Table 92. Number of fish and mean relative weight (Wr) for each length class of black bass collected in Wood Creek Lake during October 2004. Standard error is in parentheses.

	Size range					
Species	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	8.0 - 11.9 in		12.0 - 14.9 in		> 15.0 in	
	35	85 (1.3)	35	91 (2.5)	19	96 (2.8)
	7.0 - 10.9 in		11.0 - 13.9 in		> 14.0 in	
Spotted bass	56	91 (1.0)	25	95 (2.1)	5	82 (11.8)
Smallmouth bass	1	82 (0.0)	1	82 (0.0)	1	82 (0.0)

sedyoywc.d04

Table 93. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall (October) in electrofishing samples at Wood Creek Lake.

	Age 0		Age 0		Age 0 ≥ 5.0		Age 1	
Year Class	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2004	4.2	0.13	17.9	4.78	4.3	1.46		

sedyoywd.d04

EASTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Buckhorn Lake

The muskellunge population was sampled by electrofishing in February and March 2004. One hundred fifty-five muskellunge ranging from 12-46 inches were captured during 9 hours of electrofishing (Table 1). Population assessments for Buckhorn Lake muskellunge have increased from "Fair" to "Good" from 1998-2004 due to increases in CPUE of muskellunge >36 inches and CPUE of muskellunge >40 inches. The musky assessment was "excellent" in 2004 (Table 2) due to increases in the catch rates of ≥20in. and ≥30in. musky. In the coming years we expect these increases in catch rates to extend into the 30 and 40 inch size classes as the effects of the 40-inch size limit are realized.

The black bass populations were sampled during the spring and fall of 2004. Three hundred seventy largemouth bass (3-19in) were captured during three hours of electrofishing on 10 May 2004 (Table 3). Spring CPUE was 123.3 fish/hour and 1.3 fish/hour for largemouth and spotted bass, respectively. The CPUE of largemouth bass are broken down by size class in Table 4. Ninety-two bass were collected for age and growth in 2004 (Table 5). Largemouth bass reach harvestable size between ages 5-6. The age distribution and CPUE by age of largemouth bass is shown in Table 6. PSD and RSD values were considerably higher in the lower lake than in the upper lake (Table 7). The population is rated as "good" due to the low catch rate of >15 inch largemouth bass (Table 8).

Three hours of fall electrofishing resulted in the collection of 379 largemouth bass (2-19in) and 17 spotted bass (2-10in). The CPUE (fish/hour) was 252.7 and 11.3 for largemouth and spotted bass, respectively (Table 9). The size of age-0 largemouth bass was lower than in recent years, however catch rates were considerably higher for both age-0 and age-1 bass in 2004 (Table 10).

The crappie population was sampled using fyke nets from 18-21 October 2004. A total of 170 white crappie (3-12 in.) were captured during 24 net-nights resulting in a CPUE of 6.26 fish/net night (Table 11). The PSD and RSD values are represented in Table 12. Otoliths were removed from 68 white crappie for age determination. Crappie ages ranged from 1-5. Crappie reached a size of 10 inches at age-4 (Table 13). Table 14 shows age-frequency and CPUE for each size class of crappie aged. The white crappie population at Buckhorn lake rated as "Poor" with an assessment score of 7 (Table 15). In recent years the crappie assessment rated the population as "good". The 2004 sample is not indicative of the poplulation that exists in the lake. This was the first year that the winter pool was held 6' higher. We suspect that this change in water level decreased the effectiveness of our sampling locations. The instantaneous mortality rate is 1.37 resulting in an annual mortality rate of 74%. The $\log_{10}$ length weight equation for white crappie was $-3.75 + 3.39$ ($\log_{10}$ length).

Carr Fork Lake

The black bass population was sampled twice (April and September) in 2004. During spring sampling, 1,592 largemouth bass, 386 spotted bass, and 14 smallmouth bass were captured in nine hours of electrofishing (Table 16). The CPUE of <8.0 inch largemouth bass was higher in 2004 than in recent years (Table 17). PSD and RSD values are shown in Table 18. The spring population assessment for largemouth bass remained "Fair" (11) in 2004 after being higher in 2002 due to the continued decrease in CPUE of age-1 fish (Table 19). Age frequencies and CPUE per inch class based on age data collected in 2003 are reported in Table 20. CPUE for each age of largemouth bass from 1998-present is presented in Table 21. The instantaneous mortality rate was 0.54 as determined using the catch curve method, and the annual mortality rate was 42.0%.

Fall sampling for black bass consisted of 4.5 hours of electrofishing in which 241 largemouth bass, 4 smallmouth bass, and 308 spotted bass were captured. Length frequencies and CPUE for all species are located in Table 22. After a poor year in 2003, catch rates of age-0 and age-1 largemouth bass were much higher in 2004 (Table 23). Relative weights (Wr) for all species of black bass collected in the fall are given in Table 24. The $\log_{10}$ length-weight equation for largemouth bass is $-3.55 + 3.21(\log_{10}$ length).

Walleye sampling was conducted in 1.25 hours of electrofishing on 22 March, 2004. Sixty-one walleye ranging in size from 17-25 inches were collected (Table 25). The walleye population assessment determined a rating of "Excellent" (15; Table 26). Relative weights for all walleye sampled are presented in Table 27.

Cranks Creek

Black bass were sampled in Cranks Creek Lake once on 22 May, 2004. A total of 135, 3, and 50 largemouth bass, smallmouth bass, and spotted bass were collected in 1.5 hours of electrofishing, respectively. The length-frequency distribution is dominated by 6 and 7 inch largemouth bass, but fish were collected up to 23 inches (Table 28). CPUE by size class is presented in Table 29. PSD's and RSD's for both spotted bass and largemouth bass are shown in Table 30.

Dewey Lake

Black bass were sampled in Dewey Lake in April, 2004. CPUE was 20.2 and 168.3 for spotted and largemouth bass, respectively (Table 31). The size distribution of largemouth bass was excellent with fish ranging from 3-20 inches. CPUE per size class is represented in Table 30. The population density was skewed by a large sample of 4 and 5 inch stocked bass that are stocked as part of BBR's research project. PSD values ranged from 48-53 for largemouth bass and from 35-47 for spotted bass (Table 33). The population assessment for largemouth bass resulted in a rating of "Good" (12). Table 35 shows age frequency and CPUE for all size classes of largemouth bass captured during spring electrofishing. The catch rate for each age-class of largemouth bass is represented in Table 36.

Fall black bass sampling took place in September 2004, resulting in catch rates of 42.2 and 139.4 for spotted and largemouth bass, respectively (Table 37). Relative weights ranged from 83-97 for largemouth bass and from 92-93 for spotted bass (Table 38). The $\log_{10}$ length-weight equation for largemouth bass is $-3.55+3.19(\log_{10}$ length).

Crappie were sampled in Dewey Lake at the end of November 2004. Sampling was limited to 16 net-nights due to a heavy rain event that caused lake levels to rise, leaving our nets broken and tangled. Catch rates of both white and black crappie were lower in 2004 than in previous samples (1999, 2002). The size distribution of crappie remains to be dominated by 6-7in fish (Table 39). PSD and RSD values for Dewey Lake crappie are presented in Table 40. Otoliths were collected from 60 white crappie for age analysis. Crappie growth remains slow as crappie reach a length of nine inches between age-5 and age-6 (Table 41). The age distribution and CPUE for each age-class of crappie is presented in Table 42. The crappie assessment for Dewey Lake dropped from "good" in 2002 to "poor" in 2004 (Table 43). This is due to the low catch of age-0 and age-1 crappie in this year's sample.

A day (1 March-31 October) creel survey was conducted at Dewey Lake during 2004. Each day that was surveyed consisted of 6-7 hours on the lake. Dates, times, and order of surveys were randomized. Total angler counts were conducted at the middle of a survey period. There were 7,349 estimated fishing trips (Table 44). Total angler hours during the survey amounted to 33,301. Anglers caught an estimated 22,998 fish and harvested 5,462 fish. Survey angler catch rate was estimated at 0.71 fish/hour. White Crappie were the most numerous caught fish at 10,570 (Table 45). The most numerous fish harvested was white crappie at 3,665 fish. Species composition and length distribution of each species caught is shown in Table 46. The Largemouth bass catch was highest in July and September while the angler effort for largemouth bass was highest from July-September (Table 47). Catch and release data is presented in Table 48 for largemouth bass. Appendix A lists anglers' responses to the attitude survey completed during the survey. The primary species fished for was black bass at 62.6%, following were crappie 20.5%, and channel catfish 11.6% (Appendix A). Angler satisfaction was greatest with black bass at 64.9% very satisfied, followed by channel catfish 63.2%, and crappie 47.1%.

Channel catfish were sampled in September and November by electrofishing and gillnetting, respectively. One and a half hours of electrofishing produced a catch of 2 channel catfish and 12 flathead catfish (3-23 inches; Table 53). November gillnetting yielded a catch of 50 channel catfish and a CPUE of 2.6 fish/net- night (Table 49). Relative weights for Dewey Lake channel catfish are shown in Table 50. Otoliths were collected from 21 individual channel catfish for age and growth analysis. Dewey Lake channel catfish exhibit good growth reaching 14-inches at age-5 (Table 51). The age frequency and CPUE for channel catfish in each age class are presented in

Table 52. This is the first year age and growth has been conducted on this population. This data should be considered preliminary due to the small sample size and high error rates.

Fishpond Lake

Black bass were sampled in Fishpond in April 2004 during 1.75 hours of nocturnal electrofishing. Two-hundred forty-nine largemouth bass were collected at a CPUE of 239.4 fish/hour (Table 54). Fish under 12 inches dominated the catch, however, the catch rate of fish over 15 inches was good (39.42 fish/hour; Table 55). PSD and RSD values for largemouth bass are presented in Table 56.

Fishtrap Lake

Spring black bass sampling was conducted in May 2004 during 3 hours of 15-minute nocturnal electrofishing runs. The CPUE was slightly higher than 2003 at 122.2, 21.8, and 17.5 fish/hour for largemouth, smallmouth, and spotted bass, respectively (Table 57). Catch rates for largemouth bass were bolstered by an increased catch of 12-14.9in fish in 2004 (Table 58). PSD and RSD values for largemouth bass are shown in Table 59. Otoliths were collected from a sample of 69 largemouth bass for age analysis. Growth of largemouth bass is excellent relative to other lakes in the region. Largemouth reach a length of 15 inches between age-3 and age-4 (Table 60). The frequency and CPUE for each age class of largemouth bass is presented in Table 61. The largemouth bass population assessment resulted in a rating of "Good" (15; Table 62).

Black bass sampling in October 2004 yielded extremely high catch rates of 387.1, 76.0, and 47.6 for largemouth, spotted, and smallmouth bass, respectively (Table 63). The higher catch rates were due to high numbers of YOY fish that were captured. Relative weights ranged from 86.3-102.4 for largemouth bass in each of three different size classes (Table 64). CPUE of age-0 largemouth bass was very high (256 fish/hour) in 2004 (Table 65). The $\log_{10}$ length-weight equation for largemouth bass was $-3.51+3.15(\log_{10}$ length).

Hybrid-striped bass sampling in December 2004 yielded a CPUE of 15.0 fish/net night (Table 66). The size distribution was good (6-22in). Otoliths were collected from a sample of 55 hybrid-stripers. Ages ranged from 1-5 years with fish reaching 15 inches between age-2 and age-3 (Table 67). The frequency and CPUE for each age class is presented in Table 68.

Martin County Lake (Milo Lake)

Largemouth bass were sampled in May 2004. The CPUE was good (165.4), but the size distribution only included fish up to 13 inches (Table 69). As expected, the dominant age class of bass in Milo Lake are 8-11.9in fish (Table 70). Furthermore, PSD values were very low for largemouth bass (Table 71). The size limit for largemouth bass here is 12 inches.

Martin County Reservoir

Spring electro fishing was completed for largemouth bass. CPUE was down from 2003 (172.5 fish/hour; Table 56) and primarily consisted of fish <12 inches. Recruitment of young fish is good with recruitment of older fish $\geq$ 12 inches being poor (Tables 73). PSD values are presented in Table 74.

Martins Fork Lake

Martins Fork Lake was sampled for black bass in the spring. Black bass length frequency and CPUE is presented in Table 75. Catch rates were lower for <8.0in bass and higher for 8.0-11.9in bass (Table 76). PSD and RSD values for black bass are presented in Table 77. The age frequency and CPUE was largely represented by age-1 fish based on 2003 age data (Table 78). The population assessment for largemouth bass rated as "fair" (Table 79). The largemouth bass electrofishing catch rate for each age is listed in Table 80 for 2003-2004. Walleye were not sampled during 2004.

Pikeville City Lake

It was requested by city officials that this lake be regulated by EFD in 2004. Due to high toxicity levels and excellent largemouth bass size distribution, a 20" minimum size limit was recommended. Largemouth bass were sampled in May 2004. The catch rate is fairly low for largemouth bass (64.1; Table 81). However, the majority of these fish are quality fish (Table 82). PSD and RSD values are very high for this region (Table 83).

Paintsville Lake

Spring electrofishing was completed for black bass on 29 April 2004. Total CPUE for largemouth bass was 173.67 fish/hr (Table 84). The length-frequency of largemouth bass <14 inches was very good, but only 6 fish ≥ 15 inches were sampled during the spring out of a total of 521. CPUE for largemouth bass size classes was similar to 2003 rates, but the CPUE of fish < 8.0 inches decreased and the CPUE of 8.0-11.9in fish increased (Table 85). The slot limit does not appear to be working as we are seeing the numbers below the slot increase and the numbers in the slot decrease. Continued monitoring is necessary to determine the fate of the slot limit. Table 86 contains PSD and RSD values for black bass with RSD values being low as expected and only a few fish collected exceeding 15 inches. The frequency and CPUE for each age-class of largemouth bass is presented in Table 87. Table 88 includes the CPUE for each age-class by year since 2003. The largemouth bass population assessment rated the population as "fair" (10) due to the low catch rate of fish over the slot (Table 89).

Fall electrofishing was completed for black bass on 4 October 2004. Total CPUE was 148.67, 1.00, and 15.33 for largemouth, smallmouth, and spotted bass, respectively (Table 90). Relative weights were all below 100 with most in the range of 70-90 (Table 91). Indices of age-0 and age-1 fall-collected largemouth bass are found in Table 92. Determination of the $\log_{10}$ length-weight equation for largemouth bass was equal to $-3.43 + 3.04(\log_{10}$ length).

Spring electrofishing was completed for walleye. Table 93 lists length frequency and CPUE for walleye collected in March. The assessment rating of "Fair" (Table 94) may be low due to the low number of fish collected.

Pan Bowl Lake

Sunfish were sampled in May 2004 in Pan Bowl Lake. Total CPUE was 209.23, 173.85, and 12.31 for bluegill, redear, and warmouth sunfish, respectively (Table 95). Table 96 shows the CPUE for each size class of redear and bluegill sampled. PSD and RSD values were low for both populations of sunfish (Table 97). Population assessments for bluegill and redear remain "poor" since 2002 (Table 98, Table 99).

Yatesville Lake

Spring and fall samples were collected for black bass in 2004. Total spring CPUE for largemouth bass was 85.7 fish/hr and for spotted bass was 1.0 fish/hour (Table 100). Table 101 lists CPUE for various size classes of largemouth bass. PSD and RSD indices were both greater for largemouth bass from the lower lake (Table 102). The population assessment for largemouth bass was lower in 2004 versus 2003 (Table 103). This is due to the absence of fish greater than 20 inches in the 2004 sample.

Total fall CPUE for largemouth bass was 138.5 fish/hr and for spotted bass was 33.0 fish/hour (Table 104). Age-0 CPUE of largemouth bass was greater in 2004 than 2003 (Table 105).

White crappie were sampled during the fall of 2004. The CPUE was 53.8 fish/net-night for white crappie (Table 106). Table 107 lists PSD and RSD indices for fish caught during trap netting. A good range of ages was used for back-calculation of age and growth (Table 108). Age-0 crappie accounted for the highest percentage of crappie in the trap net sampling (Table 109). The population assessment of white crappie has continued to improve since the introduction of gizzard shad to Yatesville Lake in 2000 (Table 110).

Table 1. Length frequency and electrofishing CPUE (no./hour) of muskellunge collected during spring sampling on Buckhorn Lake from 2000-2004; numbers in parentheses are standard errors.

	Inch class																																						
Year	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Total	CPUE
2000		1	3	2	3	1								4				1	2		7	1		1	1			2	1				1					31	8.2 (0.5)
2001					4	1	1				1			1									1		1	1		1									1	13	3.2 (0.7)
2002							1							2	1						3	1		1			2				1							12	6.0 (0.8)
2003	1		5	2	1	1									2	1	1		1	1	2	1	1				1									1		22	7.1 (1.9)
2004			2	9	23	16	2				1		6	7	19	9				3	5	6	6	6	4	5	7	5	8	3	1	1					1	155	16.7 (2.1)

Table 2. Population assessment for muskellunge from Buckhorn Lake captured during spring electrofishing from 1998-2003. Assessment scores for 2002 were derived from fall electrofishing data.

	Assessment Scores						
Parameter	1998	1999	2000	2001	2002	2003	2004
CPUE Age 1 muskellunge	2	2	2	1	1	2	3
CPUE $\geq$ 20.0 inch muskellunge	2	3	3	1	3	2	4
CPUE $\geq$ 30.0 inch muskellunge	1	2	3	1	4	3	4
CPUE $\geq$ 36.0 inch muskellunge	1	1	3	2	4	4	4
CPUE $\geq$ 40.0 inch muskellunge	1	1	2	3	3	3	3
Total Score	7	9	13	8	15	14	18
Assessment Rating	F	F	G	F	G	G	E

Table 3. Length frequency and electrofishing CPUE (no./hour) of black bass collected in 3 hours of 15-min nocturnal electrofishing runs in Buckhorn Lake on 10 May 2004; numbers in parentheses are standard errors.

		Inch class																			
Species/Area		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE
Upper																						
	LMB		1	11	17	6	4	3	17	23	2	7	4	5	1		1				102	102.0 (22.1)
	SB						1														1	1.0 (1.0)
Middle																						
	LMB		2	15	19	5	2	4	18	13	13	13	9	11	2	1		1			128	128.0 (19.9)
	SB								1												1	1.0 (1.0)
Lower																						
	LMB		1	9	9	9	4	9	19	28	6	12	17	10	5	1			1		140	140.0 (18.2)
	SB								1		1										2	2.0 (1.2)
Total																						
	LMB		4	35	45	20	10	16	54	64	21	32	30	26	8	2	1	1	1		370	123.3 (11.6)
	SB						1		2		1										4	1.3 (0.6)

LMB = largemouth bass
SB = spotted bass
EFDBLLSS.D04

Table 4. Spring electrofishing catch-per-unit-effort (CPUE) for each size class of largemouth bass collected at Buckhorn Lake. CPUE=fish/hour

	Inch Class							
	<8.0		8.0-11.9		12.0-14.9		≥15.0	
Year	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.
2003	22.7	3.5	18.7	2.3	28.3	3.8	6.3	1.2
2004	38.0	6.2	51.7	6.5	29.3	4.2	4.3	1.5

EFDBLLSS.D03
EFDBLLSS.D04

Table 5. Mean back-calculated length (in) at each annulus for largemouth bass collected from Buckhorn Lake in 2004, including the length range of bass at each age and the 95% confidence intervals for each age group.

Year		Age									
class	No.	1	2	3	4	5	6	7	8	9	10
2003	16	5.5									
2002	31	6.3	9.7								
2001	18	6.1	10.7	12.5							
2000	13	6.4	10.5	12.9	13.8						
1999	8	7.0	10.5	12.7	13.9	14.7					
1998	4	6.1	9.8	11.8	13.3	14.5	15.2				
1997	2	7.3	11.7	13.1	14.3	15.4	16.3	17.3			
Mean		6.2	10.2	12.6	13.8	14.7	15.6	17.3			
Smallest		3.3	7.6	10.8	12.2	12.9	13.5	16.8			
Largest		9.2	12.4	15.0	15.3	16.5	16.9	17.8			
Std error		0.1	0.1	0.1	0.1	0.2	0.5	0.5			
95% CI (±)		0.25	0.25	0.25	0.25	0.45	0.9	0.95			

intercept=0

Table 6. Age frequency and CPUE (no./hour) of largemouth bass collected by electrofishing at Buckhorn Lake in May, 2004.

Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	Age%	CPUE	
1	4	35	45	20	3															107	29	35.5	5.4
2					8	16	54	64	11											153	43	53.3	7.3
3									11	24	14	4								53	14	17.4	2.3
4											14	14	2							30	8	9.8	1.6
5											3	6	5	1						15	4	4.7	0.9
6												2	2	1						5	1	1.6	0.5
7															1	1				2	1	0.7	0.5
Total	4	35	45	20	11	16	54	64	22	24	31	26	9	2	1	1				365	100		
%	1	9	12	5	3	4	15	17	6	9	8	7	2	1						100			

EFDBLLSS.D04

Table 7. PSD and RSD values for largemouth bass taken in spring electrofishing samples in each area of Buckhorn Lake on 10 May 2004; 95% confidence intervals are in parentheses. Sample sizes were too small to figure PSDs for spotted bass.

Area	Species	No. fish ≥ 8"	PSD (+/- 95%)	RSD[a](+/- 95%)
Upper	Largemouth bass	63	28.6 (+/-11.2)	3.2 (+/-4.3)
Middle	Largemouth bass	85	43.5 (+/-10.6)	4.7 (+/-4.5)
Lower	Largemouth bass	108	42.6 (+/-9.4)	6.5 (+/-4.6)
Total	Largemouth bass	256	39.5 (+/-6.0)	5.1 (+/-2.7)
	Spotted bass	4		

EFDBLLSS.D04

Table 8. Population assessment for spring largemouth bass collected at Buckhorn Lake in 2003 and 2004.

	Year	
Parameter	2003	2004
Length at age 3	4	4
Spring CPUE of age 1 fish	2	3
Spring CPUE 12-14.9 in. fish	3	3
Spring CPUE ≥ 15.0 in. fish	2	2
Spring CPUE ≥ 20.0 in. fish	1	0
Total score	12	12
Assessment rating	G	G

EFDBLLSS.D03
EFDBLLSS.D04

Table 9. Length frequency and electrofishing CPUE (no./hour) of black bass collected in 3 hours of 15-min nocturnal electrofishing runs at Buckhorn Lake on October 2004; 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
Total																				
LMB	7	206	34	10	4	4	7	19	26	17	18	11	6	4	1	2	2	1	379	252.7 (30.3)
SB	1	5			1	5	2		3										17	11.3 (3.5)

LMB = largemouth bass
SB= spotted bass
EFDBLLSF.D04

Table 10. Indices of year class strength at age-0 and age-1 and mean lengths (in) of age-0 largemouth bass from Buckhorn Lake in 2001-2004.

Year class	Area	Age 0 Mean length	Age 0 Std. error	Age 0 CPUE	Age 0 Std. error	Age 0 ≥ 5.0 CPUE	Age 0 ≥ 5.0 Std. error	Age 1 CPUE	Age 1 Std. error
2001	Total			24.0		18.7		21.3	0.6
2002	Total	5.8	0.2	99.3	7.4	38.7	2.6		
2003	Total	4.7	0.5	106.0	13.8	39.7	4.6	22.7	3.5
2004	Total	3.6	0.0	176.7	34.0	9.3	4.6	35.5	5.4

Table 11. Length frequency and CPUE of white crappie collected at Buckhorn Lake in 24 net-nights from 18-21 October 2004. Standard errors are in parentheses.

Species	Inch class 1	2	3	4	5	6	7	8	9	10	11	12	Total	CPUE	
WC			11	13	17	20	49	28	17	11	2	2	170	6.26	(0.89)

WC = white crappie

EFDBLCTF.D04

Table 12. PSD and RSD_{10} values calculated for crappie collected in trap nets at Buckhorn Lake during October 2004; 95% confidence intervals are in parentheses.

Species	No. fish ≥ stock size	PSD	RSD_{10}
White crappie	145	40.7 (+/- 8.0)	9.7 (+/- 4.8)

EFDBLCTF.D04

Table 13. Mean back-calculated length (in) at each annulus for white crappie collected from Buckhorn Lake in October 2004, including 95% confidence intervals.

Year		Age				
Class	No.	1	2	3	4	5
2004	0					
2003	11	3.8				
2002	39	4.5	6.6			
2001	9	4.7	6.8	8.3		
2000	8	3.7	5.1	6.2	7.2	
1999	1	4.4	6.8	7.9	10.1	11.0
Mean		4.3	6.4	7.3	7.5	11.0
Smallest		2.0	3.1	3.7	4.5	11.0
Largest		5.9	8.5	9.0	10.3	11.0
STD error		0.1	0.2	0.4	0.9	
95% CI LO		4.1	6.1	6.5	5.8	
95% CI HI		4.5	6.8	8.1	9.2	

Intercept = 0
EFDBLCAF.D04

Table 14. Age frequency and CPUE (no./net day) of white crappie collected by trap netting for 24 net-nights at Buckhorn Lake in October 2004; numbers in parentheses are standard errors.

	Inch Class													
Age	2	3	4	5	6	7	8	9	10	11	12	Total	Age%	CPUE
0		9	12									21	12	0.75 (0.24)
1		2	1	9	4							16	10	0.65 (0.15)
2				6	11	44	23	14	4			102	60	3.77 (0.51)
3							5	3	5			13	8	0.50 (0.09)
4				2	4	5			2	2		15	9	0.55 (0.10)
5											1	1	1	0.04 (0.04)
Total		11	13	17	19	49	28	17	11	2	1	168	100	
%		7	8	10	12	29	17	10	7	1	1			

CPUE of ≥8 in (quality size) = 2.19
CPUE of ≥10 in (preferred size) = 0.52
EFDBLCAF.D04
EFDBLCTF.D04

Table 15. Population assessment for white crappie collected from Buckhorn Lake in 2003 and 2004.

	2003		2004	
Parameter	Assessment value	Assessment score	Assessment value	Assessment score
CPUE of crappie (excluding age 0)	28.8	4	6.3	2
CPUE of age 1 crappie	17.4	4	0.65	1
CPUE of age 0 crappie	28.2	4	0.75	1
CPUE of crappie ≥ 8 in.	4.2	2	2.2	2
Mean age 2 length @ capture	6.5	1	6.4	1
Instantaneous mortality (z)	1.316		1.373	
Annual Mortality (A)	73.2		74.7	
Total score		15		7
Assessment rating		Good		Poor

EFDBLCTF.D04
EFDBLCAF.D04

Table 16. Species composition, relative abundance and CPUE (fish/hour) of black bass collected in 9.0 hours of 30-minute electrofishing runs for black bass at Carr Fork Lake on 19-20 April 2004; lower = 3.0 hours, middle = 4.5 hours, and upper = 1.5 hours.

		Inch class																					
Area	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Lower	Smallmouth bass							1		1		2		1			2					7	2.3 (1.2)
	Spotted bass		1	4	9	25	17	37	19	14	4	9	12	3	1							155	51.7 (8.0)
	Largemouth bass		3	157	343	37	11	13	15	22	12	8	12	14	20	10	3	3	1			684	228.0 (34.0)
Middle	Smallmouth bass						1		1		2	1										5	1.1 (0.7)
	Spotted bass	5	5	4	21	38	35	24	29	13	13	5	4	2	3	2						203	45.1 (5.3)
	Largemouth bass	1	3	220	346	36	12	31	48	34	30	15	9	12	10	14	5	2	3	2		833	185.1 (10.2)
Upper	Smallmouth bass								9			1										10	1.3 (1.3)
	Spotted bass		1	1	2	7	14		2	1												28	18.7 (5.7)
	Largemouth bass			10	30	5	1	2	4	8	1	3	1	2	2	1	3	1	1			75	50.0 (16.0)
Total	Smallmouth bass						1	1	2	1	2	4		1			2					14	1.6 (0.6)
	Spotted bass	5	7	9	32	70	66	61	50	28	17	14	16	5	4	2						386	42.9 (4.6)
	Largemouth bass	1	6	387	719	78	24	46	67	64	43	26	22	28	32	25	11	6	5	2		1592	176.9 (18.8)

BBRPSCFL.D04

Table 17. Spring electrofishing catch-per-unit-effort (CPUE) for each size class of largemouth bass collected at Carr Creek Lake. CPUE = fish/hour.

	Inch class									
	<8.0		8.0-11.9		12.0-14.9		≥15.0		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2002	117.6	7.2	15.9	0.9	12.0	0.7	7.1	0.6	152.7	13.3
2003	67.6	11.3	15.9	2.2	11.1	1.5	10.7	1.5	105.2	14.4
2004	135.0	17.7	24.4	5.3	8.4	1.4	9.0	1.2	176.9	18.8

BBRPSCFL.D02
BBRPSCFL.D03
BBRPSCFL.D04

Table 18. PSD and RSD values for each species of black bass in each area of Carr Creek Lake in 2004. No. of fish 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_{14}	No.	PSD	RSD_{14}
Lower	133	53.4 (45-62)	27.8 (20-35)	7	71.4 (35-108)	42.9 (3-82)	116	25 (17-33)	3.4 (0.1-7)
Middle	215	33.5 (27-40)	16.7 (12-22)	5	60 (12-108)		130	22.3 (15-29)	5.4 (1-9)
Upper	29	48.3 (30-67)	27.6 (11-44)	2	50 (-48-148)		17		
Total	377	41.6 (37-47)	21.4 (17-26)	14	64.3 (38-90)	21.4 (-0.8-44)	263	22.1 (17-27)	4.2 (2-7)

BBRPSCFL.D04

Table 19. Population assessment for largemouth bass collected from Carr Creek Lake on 19-20 April 2004.

	Year		
Parameter	2002	2003	2004
Length at age 3	4	4	4
Spring CPUE of age 1 fish	4	3	2
Spring CPUE 12-14.9 in. fish	1	1	1
Spring CPUE ≥ 15.0 in. fish	2	2	2
Spring CPUE ≥ 20.0 in. fish	1	1	2
Instantaneous mortality (z)		0.52	0.54
Annual mortality (A)		40.3	42.0
Total score	12	11	11
Assessment rating	G	F	F

BBRPSCFL.D03
BBRWRCFL.D03
BBRPSCFL.D04
BBRWRCFL.D04

Table 20. Age frequency and CPUE (no./net day) of largemouth bass collected by electrofishing at Carr Fork Lake in April, 2004.

	Inch Class																					
Age	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	Age%	CPUE
1	1	6	387	719	70	15	6													1204	76	133.70 (17.5)
2					8	6	40	67	64	38	3									226	14	25.20 (5.1)
3						3				5	23	10	8							49	3	5.40 (0.8)
4												12	11	19	5	4				51	3	5.70 (1.0)
5													8	6	5		2	1		22	1	2.50 (0.4)
7														3	5	4		2	2	16	1	1.80 (0.2)
8														3	5	4	4	2		18	1	2.00 (0.3)
10															5					5	0	0.56 (0.1)
Total	1	6	387	719	78	24	46	67	64	43	26	22	27	31	25	12	6	5	2	1591	100	
%	0	0	24	45	5	2	3	4	4	3	2	1	2	2	2	1	0	0	0			

BBRPSCFL.D04
BBRSCCFL.D03

Table 21. Spring electrofishing catch rate (fish/hour) for each age of largemouth bass collected from Carr Creek Lake from 1998-2004.

	Year						
Age	1998	1999	2000	2001	2002	2003	2004
1	21.0	129.6	66.9	160.4	114.4	66.2	133.7
2	23.9	31.8	21.2	16.1	17.3	17.1	25.2
3	23.3	17.0	17.3	13.4	11.9	6.9	5.4
4	26.7	16.1	18.3	20.1	7.2	6.9	5.7
5	4.0	12.0	10.6	8.2	1.3	3.2	2.5
6	1.5	2.7	4.0	2.7	0.4	0.0	0.0
7	1.1	0.6	0.3	0.7		2.1	1.8
8	0.2	0.4				2.0	2.0
9		0.3				0.1	0.0
10						0.8	0.6

Table 22. Length frequency and electrofishing CPUE (no./hour) of black bass collected in 4.5 hours of 30-min nocturnal electrofishing runs at Carr Creek Lake on 5 October, 2004; 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	22	Total	CPUE
Upper																						
LMB					4	14	17	4	3	1	3	3	1	1	2		1		2		56	37.33 (7.42)
SMB		1				1		1													3	2.00 (2.0)
SB	2	2	5	6	12	11	7	10	9	5	3	6	2	1	1		1				83	55.33 (5.9)
Middle																						
LMB		4	6		5	39	27	4	2	4	5		1		2	1					100	66.67 (12.9)
SMB						1															1	0.67 (0.67)
SB	3	6	3	11	24	23	25	22	13	2	2	4	1								139	92.67 (5.2)
Lower																						
LMB	3	5	6	5	10	19	13	8	5	5		1	2					1	1	1	85	56.67 (34.1)
SMB																					0	0.00 0
SB	13	15	4	5	5	9	15	11	5	1	2			1							86	57.33 (13.4)
Total																						
LMB	3	9	12	5	19	72	57	16	10	10	8	4	4	1	4	1	1	1	3	1	241	53.56 (11.6)
SMB		1				2		1													4	0.89 (0.7)
SB	18	23	12	22	41	43	47	43	27	8	7	10	3	2	1		1				308	68.44 (7.5)

LMB = largemouth bass
SMB = smallmouth bass
SB= spotted bass
BBRWRCCL.D04

Table 23. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected on 5 October 2004 at Carr Creek 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
2003	Total	4.4	0.1	14.00	5.4	5.78	2.3	67.56	11.3
2004	Total	5.2	0.0	132.00	17.3	88.22	12.7	133.70	17.5

BBRWRCFL.D03
BBRWRCFL.D04
BBRPSCFL.D03
BBRPSCFL.D04

Table 24. Number of fish and relative weight (Wr) for each length class of bass collected at Carr Creek Lake on 5 October 2004. Standard errors are in parentheses.

Species	Area	Size range					
		No.	Wr	No.	Wr	No.	Wr
		8.0-11.9 in		12.0-14.9 in		≥15.0 in	
Largemouth bass	Upper	25	95.15 (1.8)	7	96.89 (5.8)	6	100.16 (4.4)
	Middle	37	88.43 (1.4)	6	93.41 (8.7)	3	92.93 (5.5)
	Lower	31	88.6 (1.2)	3	93.78 (3.6)	3	91.29 (5.2)
	Total	93	90.29 (0.88)	16	95.00 (4.0)	12	96.14 (2.9)
		7.0-10.9 in		11.0-13.9 in		≥14.0 in	
Smallmouth bass	Upper	2	91.0 (8.3)				
	Middle	1	90.21				
	Lower						
	Total	3	94.7 (5.3)				
Spotted bass	Upper	37	102.02 (1.4)	14	99.08 (3.0)	5	102.84 (2.9)
	Middle	69	92.54 (1.9)	8	91.08 (2.3)	1	94.87
	Lower	40	93.51 (1.0)	3	106.88 (8.3)	1	102.8
	Total	146	95.2 (1.0)	25	97.45 (2.2)	7	101.7 (2.3)

Table 25. Length frequency and CPUE (fish/hour) of walleye collected at Carr Creek Lake in 1.25 hour of electro fishing on 22 March 2004.

Species	Inch Class																			Total	CPUE	Std. Err.
	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27			
Walleye										1	3	13	10	13	13	4	3	1			61	27.1	(7.4)

EFDCLWSS.D04

Table 26. Electrofishing assessment for walleye population at Carr Fork Lake sampled on 22 March, 2004.

Parameter	Actual value	Assessment score
Population Density (CPUE all fish)	27.1	4
Growth rate (mean length of age 3 fish at capture)	17.8	3
Size structure (CPUE of fish ≥ 20 in.)	11.7	4
Recruitment (CPUE of fish < 13 in.)	12.3	4
Total Score		15
Assessment Rating		Excellent
Instantaneous mortality (Z)	0.72	
Annual mortality (A)	51.4	

EFDCLWSS.D04
EFDCLWAS.D03

Note: n=17 for mortality estimates

Table 27. Number of fish and relative weight (Wr) for each length category of walleye collected at Carr Fork Lake in March, 2004. Numbers in parentheses are standard errors.

Size range					
10.0-14.9 in		15.0-19.9 in		>20.0 in	
No.	Wr	No.	Wr	No.	Wr
		6	99.2 (4.5)	15	102.4 (2.9)

EFDCLWSS.D04

Table 28. Length frequency and electrofishing CPUE (no./hour) of black bass collected in 1.5 hours of 15-min nocturnal electrofishing runs in Cranks Creek on 22 May 2004; numbers in parentheses are standard errors.

	Inch class																			
Species/Area	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	23	Total	CPUE
LMB	2	5	13	5	36	46	5	7	2	1	2	2	2	1	2	1	2	1	135	88.0 (11.1)
SMB						1		1			1								3	2.0 (0.9)
SB		5	6	3	9	4	9	9	2		1	1	1						50	33.3 (5.7)

LMB = largemouth bass
SB = spotted bass
SMB = smallmouth bass
EFDCCLSS.D04

Table 29. Spring electrofishing catch-per-unit-effort (CPUE) for each size class of largemouth bass collected at Cranks Creek in 2004. CPUE=fish/hour

	Inch Class							
	<8.0		8.0-11.9		12.0-14.9		≥15.0	
Year	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.
2004	40.7	7.6	40.0	5.8	3.3	1.9	4.0	2.1

EFDCCLSS.D04

Table 30. PSD and RSD values for black bass taken in spring electrofishing samples from Cranks Creek on 22 May 2004; 95% confidence intervals are in parentheses.

Area	Species	No. fish ≥ 8"	PSD (+/- 95%)	RSD[a](+/- 95%)
Total	Largemouth bass	71	15.5 (7-24)	8.5 (2-15)
	Spotted Bass	27	11.1 (1-23)	3.7 (-4-11)

EFDCCLSS.D04

Table 31. Species composition, relative abundance and CPUE (fish/hour) of black bass collected in 3.0 hours of 30-minute electrofishing runs for black bass in each area (9 hours total) of Dewey Lake on 27-28 April 2004.

		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	3	5	3	13	11	16	6	5	4	3		2							71	35.5 (12.0)
	Largemouth bass	2	39	89	12	35	44	17	21	19	27	15	20	20	9	14	6	3	2	394	197.0 (31.6)
Middle	Spotted bass																			0	0.0
	Largemouth bass	3	54	58	30	37	13	9	16	11	10	10	14	7	5	3	4		2	286	143.0 (18.9)
Upper	Spotted Bass	4	2	4	5	11	15	4	4		1									50	25.0 (7.9)
	Largemouth bass	4	68	102	11	33	31	9	8	10	6	12	6	14	7	6	1		2	330	165.0 (17.0)
Total	Spotted bass	7	7	7	18	22	31	10	9	4	4		2							121	20.2 (6.2)
	Largemouth bass	9	161	249	53	105	88	35	45	40	43	37	40	41	21	23	11	3	6	1010	168.3 (13.9)

BBRPSDEW.D04

Table 32. Spring electro fishing catch-per-unit-effort (CPUE) for each size class of largemouth bass collected at Dewey Lake from 2003-2004. CPUE=fish/hour

	Inch Class							
	<8.0		8.0-11.9		12.0-14.9		≥15.0	
Year	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.
2003	71.1	10.1	55.6	4.4	23.1	1.8	22.0	2.1
2004	96.2	11.9	34.7	3.8	20.0	3.2	17.5	2.6

BBRPSDEW.D04

Table 33. PSD and RSD values for each species of black bass in each area of Dewey Lake in 2004. No. of fish is the number of stock-size or larger fish collected; numbers in parentheses are 95% confidence intervals.

	Largemouth bass			Spotted bass	
Area	No.	PSD	RSD_{15}	No.	PSD
Lower	217	53.4 (47-60)	24.9 (19-31)	47	19.1 (8-31)
Middle	104	52.9 (43-63)	20.2 (12-28)	0	
Upper	112	48.2 (39-58)	26.8 (19-35)	35	2.9 (-3-8)
Total	433	52 (47-57)	24.2 (20-28)	82	12.2 (5-19)

Table 34. Population assessment for largemouth bass collected from Dewey Lake in 2003 and 2004.

Parameter	Year 2003	2004
Length at age 3	1	1
Spring CPUE of age 1 fish	4	4
Spring CPUE 12-14.9 in. fish	2	2
Spring CPUE ≥ 15.0 in. fish	4	3
Spring CPUE ≥ 20.0 in. fish	2	2
Total score	13	12
Assessment rating	G	G

BBRPSDEW.D03
BBRPSDEW.D04

Table 35. Age frequency and CPUE (no./net day) of largemouth bass collected by electro fishing at Dewey Lake in April, 2004.

Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	Age%	CPUE
1	9	161	249	44	15														478	47	79.69 (10.5)
2				9	90	59	23												181	18	30.14 (3.2)
3						20	6	27	11	9	5								78	8	12.75 (1.5)
4						10	6	18	29	26	19								108	11	17.83 (2.3)
5										9	9	27	7	5					57	6	9.43 (1.3)
6											5		7						12	1	1.91 (0.3)
7													7	11	12	5			35	3	5.59 (0.9)
8												7		5	6	2			20	2	3.21 (0.5)
9												7	21		6	3	3		40	4	6.51 (1.2)
10																		6	6	1	1.00 (0.4)
13																2			2	0	0.26 (0.08)
Total	9	161	249	53	105	89	35	45	40	44	38	41	42	21	24	12	3	6	1010		
%	1	16	25	5	10	9	3	4	4	4	4	4	4	2	2	1	0	1			

BBRPSDEW.D04
BBRSCDEW.D03

Table 36. Spring electrofishing catch rate (fish/hour) for each age of largemouth bass collected from Dewey Lake from 1998-2004.

	Year						
Age	1998	1999	2000	2001	2002[a]	2003	2004
1	17.8	75.1	55.3	125.7		62.2	79.69
2	28.5	18.3	35.6	47.1		36.6	30.14
3	15.4	26.7	11.3	34.9		17.2	12.75
4	29.3	28.4	18.8	14.3		22.1	17.83
5	19.8	12.7	9.7	16.7		11.4	9.43
6	1.5	7.3	3.7	6.5		2.1	1.91
7	1.8	2.6	3.3	2.3		7.4	5.59
8	0.2	2.8	0.4	1.8		4.4	3.21
9	0.7	0.4	1.7	1.8		8.4	6.51
10			0.4	1.0		0.3	1.00
11						0.3	
12						0.3	
13							0.26

Table 37. Length-frequency distribution of each black bass species captured during 4.5 hours of 30-minute electrofishing runs (1.5 hours in each area) at Dewey Lake on 30 September 2004. Standard errors are in parentheses.

		Inch class																			
Species	Area	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE
Spotted bass	Upper	24	27	2	6	11	11	9	6	1	2									99	66.00 (43.7)
	Middle	23	44	5	9	4	8	6	1	4	3	3								110	73.33 (16.2)
	Lower	1			1															2	1.00 (0.6)
	Total	48	71	7	16	15	19	15	7	5	5	3								211	42.20 (16.5)
Largemouth bass	Upper	4	20	22	11	48	29	13	26	17	11	11	10	9	1	1	2			235	156.67 (21.5)
	Middle	9	37	29	7	43	31	17	12	4	2	4	4	8	2	1	1			211	140.67 (17.6)
	Lower		29	26	32	66	38	26	7	4	8	2	3	2	3	3		1	1	251	125.50 (42.0)
	Total	13	86	77	50	157	98	56	45	25	21	17	17	19	6	5	3	1	1	697	139.40 (17.5)

BBRWRDEW.D04

Table 38. Number of fish and the relative weight (Wr) for each length class of bass collected at Dewey Lake in 2004. Standard errors are in parentheses.

		Size range					
Species	Area	No.	Wr	No.	Wr	No.	Wr
		8.0-11.9 in		12.0-14.9 in		≥15.0 in	
Largemouth bass	Upper	85	83.68 (0.8)	32	91.10 (1.3)	13	99.64 (2.2)
	Middle	64	82.57 (0.9)	10	89.40 (2.5)	12	93.34 (2.0)
	Lower	75	82.83 (0.8)	13	91.93 (2.6)	10	96.26 (1.5)
	Total	224	83.08 (0.5)	55	91.0 (1.0)	35	96.5 (1.2)
		7.0-10.9		11-13.9		≥14.0	
Spotted bass	Upper	33	94.29 (1.9)	3	93.65 (3.9)		
	Middle	19	89.39 (1.5)	10	93.88 (2.5)		
	Lower						
	Total	52	92.5 (1.3)	13	93.83 (2.0)		

BBRWRDEW.D04

Table 39. Length frequency and CPUE of white crappie collected at Dewey Lake in 16 net-nights from 29 November-1 December 2004. Standard errors are in parentheses.

	Inch class													
Species	1	2	3	4	5	6	7	8	9	10	11	12	Total	CPUE
WC			3	5	41	152	67	25	8	9	2		312	19.50 (4.4)
BC					11	29	7	1					48	3.00 (0.89)

WC = white crappie
BC = black crappie
EFDDLCTF.D04

Table 40. PSD and RSD_{10} values calculated for crappie collected in trap nets at Dewey Lake during fall 2004; 95% confidence intervals are in parentheses.

Species	No. fish ≥ stock size	PSD	RSD_{10}
White crappie	304	14.5 (10.5-18.4)	3.6 (1.5-5.7)
Black crappie	48	2.1 (-2.0-6.2)	

EFDDLCTF.D04

Table 41. Mean back-calculated length (in) at each annulus for white crappie collected from Dewey Lake in fall 2004, including 95% confidence intervals.

Year Class	No.	Age 1	2	3	4	5	6
2004	0						
2003	4	3.7					
2002	17	3.9	5.3				
2001	8	4.2	6.0	7.2			
2000	11	4.4	6.1	7.1	8.0		
1999	15	4.2	5.8	6.8	7.6	8.3	
1998	5	4.6	6.3	7.2	7.9	8.7	9.5
Mean		4.1	5.8	7.0	7.8	8.4	9.5
Smallest		3.1	4.6	5.1	5.8	6.2	8.8
Largest		5.4	6.9	8.1	9.2	9.9	10.6
STD error		0.1	0.1	0.1	0.2	0.2	0.3
95% CI LO		4.0	5.6	6.8	7.5	7.9	8.8
95% CI HI		4.3	5.9	7.2	8.1	8.9	10.1

Intercept = 0
EFDDLCAF.D04

Table 42. Age frequency and CPUE (no./net day) of white crappie collected at Dewey Lake in fall 2004; numbers in parentheses are standard errors.

Age	Inch Class 2	3	4	5	6	7	8	9	10	11	Total	Age%	CPUE
0		3	5								8	3	0.50 (0.3)
1				15	13						28	9	1.75 (0.6)
2				26	114	20					160	51	9.98 (2.5)
3						20	8	2			30	9	1.84 (0.6)
4					13	7	10	4	1		35	11	2.12 (0.5)
5					13	20	8	2	5	1	49	15	3.00 (0.8)
6								1	3	1	5	2	0.31 (0.2)
Total		3	5	41	153	67	26	9	9	2	315		
%		1	2	13	49	21	8	3	3	1			

CPUE of ≥8 in (quality size) = 2.81
CPUE of ≥10 in (preferred size) = 0.69
EFDDLCAF.D04
EFDDLCTF.D04

Table 43. Population assessment for white crappie collected from Dewey Lake in 2002 and 2004.

Parameter	2002 Assessment value	2002 Assessment score	2004 Assessment value	2004 Assessment score
CPUE of crappie (excluding age 0)	48.2	4	19.2	3
CPUE of age 1 crappie	14.4	4	1.8	1
CPUE of age 0 crappie	27.5	4	0.5	1
CPUE of crappie ≥ 8 in.	4.8	2	2.8	2
Mean age 2 length @ capture	6.3	1	5.8	1
Instantaneous mortality (z)	0.72		0.64	
Annual Mortality (A)	51		47	
Total score		15		8
Assessment rating		Good		Poor

EFDDLCTF.D02
EFDDLCAF.D02
EFDDLCTF.D04
EFDDLCAF.D04

Table 44. Fish harvest statistics derived from creel surveys from 1 March-31 October at Dewey Lake (1100 acres) in 2004.

	Day
Fishing trips	
No. of fishing trips (per acre)	7,349
Fishing pressure	
Total angler hours (S.E.)a	33,301(704.72)
Man-hours/acre	30.27
Catch/harvest	
No. of fish caught (S.E.)	22,998(1,954.13)
No. of fish harvested (S.E.)	5,462(689.18)
Lb of fish harvested	3,089
Harvest rates	
Fish/hour	0.17
Fish/acre	4.97
Lb/acre	2.81
Catch rate	
Fish/hour	0.71
Fish/acre	20.91
Miscellaneous characteristics (%)	
Male	84.23
Female	15.77
Resident	97.06
Non-resident	2.94
Method (%)	
Still fishing	51.3
Casting	46.9
Fly fishing	0.1
Trolling	0.5
Spider Rigging	1.3
Mode (%)	
Boat	71.8
Bank	27.7
Dock	0.5

aS.E. = standard error

Table 45. Fish harvest statistics derived from a creel survey at Dewey Lake (1100 acres) from 1 March through 31 October 2003.

	Common Carp	Rock Bass	White Bass	Channel catfish	Redear	Longear Sunfish	Bluegill	Sauger	Spotted Bass	Largemouth Bass	White Crappie	Black Crappie
No. caught	38	68	31	489.00	61	33.00	4,753.00	27.00	65.00	6,600.00	10,570.00	83.00
per acre	.034	.062	.029	0.4	0.1	0.0	4.3	0.0	0.1	6.0	9.6	0.1
No. harvested	12.0			425.0	39.0	8.0	714.0	27.0	11.0	393.0	3665.0	83.0
per acre	.011			0.4	0.0	0.0	0.6	0.0	0.0	0.4	3.3	0.1
% of total no. harvested	0.2			7.8	0.7	0.1	13.1	0.5	0.2	7.2	67.1	1.5
Lb harvested	47.2			673.6	3.4	0.6	74.1	4.4	10.1	1066.3	772.2	16.1
per acre	.04291			0.6	0.0	0.0	0.1	0.0	0.0	1.0	0.7	0.0
% of total lb harvested	1.5			21.8	0.1	0.0	24.0	0.4	0.3	34.5	25.0	0.5
Mean length (in)	20.5	7.0	12.0	17.2	5.0	5.0	5.5	8.0	13.0	16.9	7.9	7.0
Mean weight (lb)	4.0	0.2	0.8	1.6	0.1	0.1	0.1	0.2	0.9	2.6	0.2	0.2

	Catfish group	Panfish group	Black bass group	Crappie group	Anything
No. of fishing trips for that species	450.84	139.75	3,165	1,079	2,514
% of all trips	6.135	1.902	43.076	14.683	34.21
Hours fished for that species	2043.05	633.32	14.344.86	4,889.46	11,390.66
(per acre)	1.857	.576	13.041	4.445	10.355
No. harvested fishing for that species	495.97	776	404	3,747	
Lb harvested fishing for that species	1093.6	78.1	1076.4	788.3	
No./hour harvested fishing for that species					
% success fishing for that species	25.547	6.383	5.346	37.386	3.995

Table 46. Species composition and length distribution of each species of fish harvested (H) and released (R) from a creel survey on Dewey Lake (1100 acres) from 1 March to 31 October 2003.

Species		4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	28	29	30	31
Common Carp	H														6							6						
	R														7						7	7			5			
Flathead Catfish	H														17	8						8					8	8
	R									6																		
Channel Catfish	H							21		21	7	21	57	50	57	28	43	64	35	7	7	7						
	R			7		7		14		14	7					7												8
White Bass	H																											
	R				6	6				6		6			7													
Bluegill	H	93	257	357	7																							
	R	625	2342	985	47																							
Rock Bass	H				68																							
	R																											
Spotted Bass	H										11																	
	R					8				23	15	8																
Largemouth Bass	H												49	175	42	28	42	21	7	7		14	8					
	R					630	492	2189	360	1025	492	416	123	253	97	52	26	39	13									
White Crappie	H		96	466	1130	926	415	402	147	57	26																	
	R	677	3093	2458	433	146	18	18	24	8																		
Black Crappie	H			32	25	13	13																					
	R																											
Longear Sunfish	H		8																									
	R		6	6	13																							
Redear Sunfish	H		39																									
	R	6	11	5																								
Illegal Bass	H																											
	R																											

Table 47. Monthly black bass angling success at Dewey Lake during the 2004 day 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
March	502	43.22	270	1,225	319	0.12	43	0.01
April	745	51.23	381	1,726	601	0.17	51	0.01
May	967	131.52	701	3,179	860	0.16	132	0.02
June	717	15.76	291	1,318	600	0.20	16	0.00
July	1,193	49.5	409	1,855	1,094	0.27	44	0.01
August	532	17.53	415	1,880	492	0.13	18	0.00
September	1,237	58.49	431	1,952	1,119	0.36	58	0.02
October	742	36.63	267	1,211	641	0.23	37	0.01
Total	6,665	404	3,165	14,345	5,726		399	
Mean						0.21		0.09

Table 48. Catch and harvest statistics derived from day creel surveys at Dewey Lake (1100 acres) in 2004.

	Largemouth bass			
		Catch & release		
	Harvest	12-14.9 in.	< 12 ≥ 15	Total
Total number	393	5,604	603	6,600
Total weight (lb)	1066	3343	1439	5848
Mean length (in)	17.0	10.6	16.6	
Mean weight (lb)	2.6	0.6	2.4	
Rate (fish/hour)	0.0	0.2	0.0	0.2

Table 49. Length frequency and gillnetting CPUE (no./hour) of catfish collected in 19 net-nights in Dewey Lake on 2-4 November 2004; numbers in parentheses are standard errors.

Species/Area	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total	CPUE
Total																				
Channel	1	2	11	4	2	4	4	1	2	3	2	4	4	4	1	1			50	2.63 (0.47)
Flathead											1	1				1			3	0.16 (0.12)

EFDDLMGF.D04

Table 50. Number of fish and the relative weight (Wr) for each length category of channel catfish collected at Dewey Lake on 4 November, 2004. Standard errors are in parentheses.

		Size range					
Species	Area	8.0-10.9 in		11.0-15.9 in		16-24 in	
		No.	Wr	No.	Wr	No.	Wr
Channel Catfish	Total			14	86.63 (1.61)	16	96.81 (1.97)

EFDDLMGF.D04

Table 51. Mean back-calculated length (in) at each annulus for channel catfish collected from Dewey Lake in 2004, including the length range of bass at each age and the 95% confidence intervals for each age group.

Year		Age														
class	No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2003	3	4.7														
2002	4	3.9	7.4													
2001	3	4.6	8.4	11.8												
2000	1	5.9	9.9	11.8	13.8											
1999	3	6.1	9.4	11.9	14.0	16.1										
1998	2	3.9	7.3	10.7	13.0	15.2	17.0									
1997	1	4.9	7.8	11.7	13.7	15.6	16.6	17.6								
1996	1	6.5	7.4	9.2	12.0	13.9	15.7	17.6	19.4							
1995	1	5.9	8.9	9.9	11.9	12.8	13.8	14.8	15.8	16.8						
1994	1	4.4	7.9	9.6	11.4	13.1	14.9	16.6	18.4	19.3	20.1					
1989	1	4.0	5.6	7.2	8.8	9.6	10.5	12.1	12.9	13.7	14.5	15.3	16.9	17.7	18.5	19.3
Mean		4.8	8.1	10.9	12.7	14.4	15.1	15.7	16.6	16.6	17.3	15.3	16.9	17.7	18.5	19.3
Smallest		3.3	5.6	7.2	8.8	9.6	10.5	12.1	12.9	13.7	14.5	15.3	16.9	17.7	18.5	19.3
Largest		7	11.2	15.0	17.5	20.0	17.7	17.6	19.4	19.3	20.1	15.3	16.9	17.7	18.5	19.3
Std error		0.2	0.3	0.5	0.6	0.8	0.9	1	1.5	1.6	2.8					
95% CI (+)		0.4	0.6	1.0	1.3	1.6	1.8	2.0	2.8	3.2	5.5					

intercept=0
EFDDLMGF.D04

Table 52. Age frequency and CPUE (no./hour) of channel catfish collected by gillnetting at Dewey Lake in November, 2004.

Age	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	Age%	CPUE
1	3													3	11	0.16 (0.07)
2	1	2		4										7	26	0.37 (0.11)
3					1	1								2	7	0.11 (0.06)
4						1								2	4	0.05 (0.04)
5							3	1					1	1	15	0.22 (0.10)
6								1		4				5	17	0.25 (0.12)
7											2			5	7	0.11 (0.06)
8											2			2	7	0.11 (0.06)
9								1						2	2	0.04 (0.02)
10													1	1	2	0.03 (0.03)
Total	4	2		4	1	2	3	3		4	4		2	30		
%	15	7		15	4	7	11	7		15	15		4			

EFDDLMGF.D04
EFDDLIAF.D04

Table 53. Length frequency and electrofishing CPUE (no./hour) of catfish collected in 1.5 hours of 15-min electrofishing runs in Dewey Lake on 27 September 2004; numbers in parentheses are standard errors.

	Inch class																								
Species/Area	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total	CPUE
Total																								
Channel							1								1								2	0.33 (0.21)
Flathead		1				2		1		2				1	1			1		1	1	1	12	2.00 (0.58)

EFDDLISF.D04

Table 54. Length frequency and electrofishing CPUE (no./hour) of black bass collected in 1 hour of 7.5-min electrofishing runs in Fishpond Lake on 21 April 2004; numbers in parentheses are standard errors.

	Inch class																					
Species/Area	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Total																						
LMB				9	33	40	23	28	15	13	21	16	10	12	9	8	5	3	4		249	239.42 (14.9)

LMB = largemouth bass
EFDFPLSS.D04

Table 55. Spring electro fishing catch-per-unit-effort (CPUE) for each size class of largemouth bass collected at Fishpond Lake in 2004. CPUE=fish/hour

	Inch Class							
	<8.0		8.0-11.9		12.0-14.9		≥15.0	
Year	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.
2004	78.85	12.2	75.96	7.9	45.19	5.9	39.42	6.7

EFDFPLSS.D04

Table 56. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples in Fishpond Lake on 21 April 2004; 95% confidence intervals are in parentheses.

Area	Species	No. fish ≥ 8"	PSD (+/- 95%)	RSD[a]
Total	largemouth bass	167	52.7 (45-60)	24.6 (18-31)

EFDFPLSS.D04

Table 57. Length frequency and electrofishing CPUE (no./hour) of black bass collected in 3 hours of.15-min nocturnal electrofishing runs in Fishtrap Lake on 11 May 2004; numbers in parentheses are standard errors.

		Inch class																				
Species/Area		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPUE
Upper																							
	LMB			7	26	20		4	20	23	16	6	13	7	2	5		2			1	152	121.6 (22.8)
	SMB									2			4	1	2		1					10	8.0 (4.2)
	SB				1	2	2		1	1												7	5.6 (2.4)
Lower																							
	LMB			5	31	27	7	1	16	30	14	14	6	7	4	5	5	6	3	1	2	184	122.7 (8.7)
	SMB			1	7	1	5	7	11	6	5	1	2	1			3					50	33.3 (9.4)
	SB				5		17	10	2	2	3	2										41	27.3 (7.5)
Total																							
	LMB			12	57	47	7	5	36	53	30	20	19	14	6	10	5	8	3	1	3	336	122.2 (10.7)
	SMB			1	7	1	5	7	11	8	5	1	6	2	2		4					60	21.8 (6.6)
	SB				6	2	19	10	3	3	3	2										48	17.5 (5.3)

LMB = largemouth bass
SB = spotted bass
SMB=smallmouth bass
EFDFLLSS.D04

Table 58. Spring electrofishing catch-per-unit-effort (CPUE) for each size class of largemouth bass collected at Fishtrap Lake in 2003-2004. CPUE=fish/hour

	Inch Class							
	<8.0		8.0-11.9		12.0-14.9		≥15.0	
Year	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.
2003	43.0	4.4	25.0	7.6	16.0	4.9	11.0	3.4
2004	44.7	6.8	45.1	5.8	19.3	2.2	13.1	3.9

EFDFLLSS.D03
EFDFLLSS.D04

Table 59. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples in each area of Fishtrap Lake on 11 May 2004; 95% confidence intervals are in parentheses.

Area	Species	No. fish ≥ 8"	PSD (+/- 95%)	RSD[a]
Upper	largemouth bass	99	36.4 (27-46)	10.1 (4-16)
	smallmouth bass	10	80.0 (54-106)	40.0 (8-72)
	spotted bass	4		
Lower	largemouth bass	114	46.5 (37-56)	22.8 (15-31)
	smallmouth bass	41	29.3 (15-43)	9.8 (1-19)
	spotted bass	36	13.9 (2-25)	
Total	largemouth bass	213	41.8 (35-48)	16.9 (12-22)
	smallmouth bass	51	39.2 (26-53)	15.7 (6-26)
	spotted bass	40	12.5 (2-23)	

EFDFLLSS.D04

Table 60. Mean back-calculated length (in) at each annulus for largemouth bass collected from Fishtrap Lake in 2004, including the length range of bass at each age and the 95% confidence intervals for each age group.

Year		Age									
class	No.	1	2	3	4	5	6	7	8	9	10
2004	0										
2003	31	7.0									
2002	10	6.1	11.2								
2001	11	7.0	10.9	13.3							
2000	7	7.2	11.0	13.1	15.4						
1998	5	6.7	11.8	13.9	15.2	16.4	17.4				
1997	5	7.8	11.6	14.6	15.9	16.6	17.3	17.9			
Mean		6.9	11.2	13.6	15.5	16.5	17.3	17.9			
Smallest		5.2	8.3	11.5	12.8	13.3	14.0	14.5			
Largest		10.5	14.4	16.4	18	18.8	19.7	20.3			
Std error		0.1	0.2	0.3	0.4	0.6	0.6	1.3			
95% CI (±)		0.3	0.4	0.5	0.6	1.1	1.3	2.6			

intercept=0
EFDFLLAS.D04

Table 61. Age frequency and CPUE (no./hour) of largemouth bass collected by electrofishing at Fishtrap Lake in May, 2004.

Age	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	Age%	CPUE	
1	12	57	28																97	29	35.35	(6.0)
2			19	7	5	36	53	21	3	2									146	44	53.43	(5.5)
3								9	10	10	4								33	9	11.48	(1.3)
4									7	5	11	2	4						29	8	10.30	(1.1)
5										2		1	4	4					11	3	4.12	(0.9)
6													2	1	8	3			14	4	5.18	(1.5)
7												2					2	2	6	2	2.33	(1.2)
Total	12	57	47	7	5	36	53	30	20	19	15	5	10	5	8	3	2	2	336			
%	4	17	14	2	1	11	16	9	6	6	4	2	3	1	2	1	1	1				

EFDFLLSS.D04
EFDFLLAS.D04

Table 62. Population assessment for largemouth bass collected from Fishtrap Lake from 2003 and 2004.

Parameter	Year 2003	2004
Length at age 3	4	4
Spring CPUE of age 1 fish	3	4
Spring CPUE 12-14.9 in. fish	2	2
Spring CPUE ≥ 15.0 in. fish	2	3
Spring CPUE ≥ 20.0 in. fish	3	2
Total score	14	15
Assessment rating	G	G

EFDFLLSS.D03
EFDFLLSS.D04

Table 63. Length frequency and electrofishing CPUE (no./hour) of black bass collected in 3 hours of 15-min nocturnal electrofishing runs at Fishtrap Lake on 29 October 2004; 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
Upper																			
SMB		1	2			1	2	1		1				1				9	12.0 (4.0)
SB	1	1					1											3	4.0 (2.3)
LMB	24	154	118	25	1	4	33	25	16	10		1			1	2		414	552.0 (79.4)
Lower																			
SMB	1	43	25		3	4	3	5	5	5				1	1	2		98	65.3 (14.5)
SB	7	61	24	3	10	16	30	13	3	1								168	112.0 (42.0)
LMB	12	110	104	29	9	31	61	37	21	22	7	4	2	2	2	3	1	457	304.7 (41.0)
Total																			
SMB	1	44	27		3	5	5	6	5	6				2	1	2		107	47.6 (13.0)
SB	8	62	24	3	10	16	31	13	3	1								171	76.0 (32.6)
LMB	36	264	222	54	10	35	94	62	37	32	7	5	2	2	3	5	1	871	387.1 (54.1)

LMB = largemouth bass
SMB = smallmouth bass
SB= spotted bass
EFDFLLSF.D04

Table 64. Number of fish and the relative weight (Wr) for each length category of black bass collected at Fishtrap Lake on 29 October 2004. Standard errors are in parentheses.

		Size range					
Species	Area	8.0-11.9 in		12.0-14.9 in		≥15.0 in	
		No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Upper	55	86.3	11	87.5	3	102.4
			(0.93)		(0.89)		(3.5)
	Lower	10	83.0	16	87.0	10	91.2
			(3.1)		(1.8)		(1.2)
	Total	65	85.8	27	87.2	13	93.8
			(0.92)		(1.1)		(1.8)

EFDFLLSF.D04

Table 65. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in 2003 and 2004 at Fishtrap Lake.

Year class	Age 0 Mean length	Age 0 Std. error	Age 0 CPUE	Age 0 Std. error	Age 0 ≥ 5.0 CPUE	Age 0 ≥ 5.0 Std. error	Age 1 CPUE	Age 1 Std. error
2003	5.1	0.04	106.20	32.9	59.60	15.90	43.00	4.4
2004	5.0	0.0	256.00	51.1	122.67	23.90	35.35	6.00

EFDFLLSF.D03
EFDFLLSF.D04

Table 66. Length frequency and gillnetting CPUE (no./net night) of hybrid striped bass collected in 6 net nights on Fishtrap Lake on 14 December 2004; numbers in parentheses are standard errors.

Species	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE
Hybrid Striped Bass		4	15	2	1	2	1	4	17	14	1	2		1	2	7	11	6	90	15.0 (4.

EFDFLHGF.D04

Table 67. Mean back-calculated length (in) at each annulus for hybrid striped bass collected from Fishtrap Lake in 2004, including the length range of bass at each age and the 95% confidence intervals for each age group.

Year		Age									
class	No.	1	2	3	4	5	6	7	8	9	10
2004	0										
2003	19	8.6									
2002	8	8.1	11.7								
2001	15	10.4	15.3	18.4							
2000	10	10.1	15.5	18.7	20.4						
1999	3	7.6	14.4	16.5	18.3	19.2					
Mean		9.2	14.5	18.3	19.9	19.2					
Smallest		5.3	8	12.4	15.1	15.8					
Largest		11.2	17.8	20.0	22.1	21.4					
Std error		0.2	0.4	0.4	0.6	1.7					
95% CI (±)		0.35	0.7	0.7	1.3	3.4					

intercept=0
EFDFLHAF.D04

Table 68. Age frequency and CPUE (no./hour) of hybrid striped bass collected at Fishtrap Lake in December, 2004.

	Inch Class																			
Age	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	Age%	CPUE
0	4	15	2	1														22	24	3.67 (1.7)
1					2	1		11	13	1								28	31	4.66 (1.1)
2							4	4	1				1					10	11	1.70 (0.6)
3								2						2	7	6		17	18	2.73 (1.8)
4											1					4	5	10	12	1.73 (0.8)
5											1					1	1	3	3	0.52 (0.2)
Total	4	15	2	1	2	1	4	17	14	1	2	0	1	2	7	11	6	90		
%	4	17	2	1	2	1	4	19	16	1	2		1	2	8	12	7			

EFDFLHAF.D04
EFDFLHGF.D04

Table 69. Length frequency and electrofishing CPUE (no./hour) of black bass collected in 3 hours of 7.5-min nocturnal electrofishing runs in Milo Lake on 10 May 2004; numbers in parentheses are standard errors.

	Inch class																			
Species/Area	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE
LMB		3	1	1	3	10	4	2	21	14	3	7								69	165.4 (13.5)

LMB = largemouth bass
EFDMCLSS.D04

Table 70. Spring electrofishing catch-per-unit-effort (CPUE) for each size class of largemouth bass collected at Milo Lake. CPUE=fish/hour

	Inch Class							
	<8.0		8.0-11.9		12.0-14.9		≥15.0	
Year	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.
2004	43.3	9.3	98.4	5.9	23.7	4.5		

EFDMCLSS.D04

Table 71. PSD and RSD values for largemouth bass taken in spring electrofishing samples in Milo Lake on 10 May 2004; 95% confidence intervals are in parentheses.

Area	Species	No. fish ≥ 8"	PSD (+/- 95%)	RSD[a] (+/- 95%)
Total	Largemouth bass	51	19.6 (8.6-30.6)	

EFDMCLSS.D04

Table 72. Length frequency and electrofishing CPUE (no./hour) of black bass collected in 7 7.5-min daytime electrofishing runs in Martin County Reservoir on 10 May 2004; 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
LMB		12	8	4	0	22	19	46	30	10	5	1					157	172.5 (25.4)

LMB =largemouth bass

EFDMRLSS.D04

Table 73. Spring electro fishing catch-per-unit-effort (CPUE) for each size class of largemouth bass collected at Martin County Reservoir on 10 May 2004. CPUE=fish/hour

	Inch Class							
	<8.0		8.0-11.9		12.0-14.9		≥15.0	
Year	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.
2004	26.37	8.0	128.57	16.7	17.58	4.0		

EFDMRLSS.D04

Table 74. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples in Martin County Reservoir on 10 May 2004; 95% confidence intervals are in parentheses.

Species	No. fish ≥ 8"	PSD (+/- 95%)	RSD[a] (+/- 95%)
largemouth bass	133	12.03 (6.5-17.6)	

EFDMRLSS.D04

[a]Largemouth bass = RSD-15

Table 75. Length frequency and electrofishing CPUE (no./hour) of black bass collected in 1.55 hours of 15-min nocturnal electrofishing runs in Martins Fork Lake on 10 May 2004; 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
LMB					2	10	29	23	5	1	2	0	1	1	2		76	101.33 (26.8)
RB					2	2	1										5	6.67 (3.5)
SB					8	11	3	2	1	1	0	1					27	36.00 (10.6)

LMB =largemouth bass

RB = redeye bass (coosa bass)

SB = spotted bass

EFDMLLSS.D04

Table 76. Spring electro fishing catch-per-unit-effort (CPUE) for each size class of largemouth bass collected at Martins Fork Lake in spring 2003 and 2004. CPUE=fish/hour

	Inch Class							
	<8.0		8.0-11.9		12.0-14.9		≥15.0	
Year	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.
2003	14.00	3.7	22.00	3.8	3.30	1.2	5.30	2.0
2004	2.67	2.7	89.33	19.2	4.00	2.3	5.33	3.5

EFDBLLSS.D03
EFDBLLSS.D04

Table 77. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples in Martins Fork Lake in May 2004; 95% confidence intervals are in parentheses.

Species	No. fish ≥ 8"	PSD (+/- 95%)	RSD[a](+/- 95%)
spotted bass	27	11.1 (-1-23)	3.7 (-4-11)
largemouth bass	74	9.5 (3-16)	5.4 (0.2-11)

EFDMLLSS.D04
[a]Largemouth bass = RSD-15, spotted bass = RSD-14

Table 78. Age frequency and CPUE (fish/hr) of largemouth bass collected at Martins Fork Lake in May, 2004.

	Inch class																	
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total	Age%	CPUE
1					2	10	25	18	3	0						58	80	77.45 (18.5)
2							4	5	3	1	2					15	19	18.55 (4.91)
3														1		1	1	1.33 (1.3)
Total					2	10	29	23	6	1	2			1		74		
%					3	14	40	32	7	1	3	1						

EFDMLLSS.D04
EFDMLLAS.D03

Table 79. Population assessment for largemouth bass collected from Martins Fork Lake in May 2003 and 2004.

	Year	
Parameter	2003	2004
Length at age 3	4	4
Spring CPUE of age 1 fish	1	4
Spring CPUE 12-14.9 in. fish	1	1
Spring CPUE ≥ 15.0 in. fish	2	2
Spring CPUE ≥ 20.0 in. fish	1	0
Total score	9	11
Assessment rating	Fair	Fair

EFDMLLSS.D03
EFDMLLSS.D04

Table 80. Spring electrofishing catch rate (fish/hour) for each age of largemouth bass collected from Martins Fork Lake in 2003.

	Year	
Age	2003	2004
1	32.2	77.5
2	5.9	18.6
3	2.7	1.3
4	0.7	
5		
6		
7		

Table 81. Length frequency and electrofishing CPUE (no./hour) of black bass collected in 0.75 hours of 7.5-min electrofishing runs in Pikeville City (Hambley) Lake on 13 May 2004; numbers in parentheses are standard errors.

	Inch class																						
Species/Area	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	CPU
Total																						
LMB			1	1			2	1	1	1	2	3	1	2	3	2	2	2	1		25	64.1 (2

LMB = largemouth bass
EFDHLLSS.D04

Table 82. Spring electro fishing catch-per-unit-effort (CPUE) for each size class of largemouth bass collected at Pikeville City (Hambley) Lake in 2004. CPUE=fish/hour

	Inch Class							
	<8.0		8.0-11.9		12.0-14.9		≥15.0	
Year	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.
2004	5.13	2.6	12.82	12.8	15.38	7.7	30.77	8.9

EFDHLLSS.D04

Table 83. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples in Pikeville City (Hambley) Lake on 13 May 2004; 95% confidence intervals are in parentheses.

Area	Species	No. fish ≥ 8"	PSD (+/- 95%)	RSD[a]
Total	largemouth bass	23	78.3 (61-95)	52.2 (31-73)

EFDHLLSS.D04

Table 84. Length frequency and electrofishing CPUE (no./hour) of black bass collected in 3.00 hours of 15-min nocturnal electrofishing runs in Paintsville Lake on 29 April, 2004; numbers in parentheses are standard errors.

		Inch class																					
Species/Area		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE	
Upper																							
	LMB		2	23	16	5	3	50	28	5	9	3	1	1							146	146.00	(37.40)
	SMB					1															1	1.00	(1.00)
	SB		2	17		5	2	2	5	3	2	1									39	39.00	(9.15)
Middle																							
	LMB		3	42	34	6	4	19	21	7	3	11	4	3	1	1			2		161	161.00	(28.02)
	SMB			1		1							1	1							4	4.00	(2.83)
	SB		1	3			4		2	1	1	2									14	14.00	(5.29)
Lower																							
	LMB		1	12	21	12	4	35	69	19	11	15	11	2	1		1				214	214.00	(63.53)
	SMB							1													1	1.00	(1.00)
	SB				1		2		3	4	1	2									13	13.00	(8.06)
Total																							
	LMB		6	77	71	23	11	104	118	31	23	29	16	6	2	1	1		2		521	173.67	(25.35)
	SMB			1		2		1					1	1							6	2.00	(1.04)
	SB		3	20	1	5	8	2	10	8	4	5									66	22.00	(5.40)

LMB = largemouth bass
SMB = smallmouth bass
SB= spotted bass
EFDPLLSS.D04

Table 85. Spring electrofishing catch-per-unit-effort (CPUE) for each size class of largemouth bass collected at Paintsville Lake. CPUE = fish/hour.

	Inch class									
	<8.0		8.0-11.9		12.0-14.9		≥15.0		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2002	41.80	1.8	70.50	2.7	36.00	1.4	2.20	0.2	150.90	14.2
2003	106.00	21.2	71.00	10.8	19.67	5.7	3.00	1.3	199.67	35.2
2004	62.67	10.9	92.00	19.2	17.00	3.4	2.00	0.9	173.70	25.4

EFDPLLSS.D02
EFDPLLSS.D03
EFDPLLSS.D04

Table 86. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples in each area of Paintsville Lake on 28 April 2004; 95% confidence intervals are in parentheses.

Area	Species	No. fish>8"	PSD (+/- 95%)	RSD[a](+/- 95%)
Upper	smallmouth bass			
	spotted bass	15	20.0 (-0.9-40.9)	
	largemouth bass	97	5.2 (0.7-9.6)	
Mid	smallmouth bass	2		
	spotted bass	10	30.0 (0.1-59.9)	
	largemouth bass	72	30.6 (19.8-41.3)	5.6 (0.2-10.9)
Lower	smallmouth bass	1		
	spotted bass	12	25.0 (-0.5-50.6)	
	largemouth bass	164	18.3 (12.4-24.2)	1.2 (-0.5-2.9)
Total	smallmouth bass	3	66.7 (1.3-132.0)	33.3 (-32.0-98.7)
	spotted bass	37	24.3 (10.3-38.3)	
	largemouth bass	333	17.1 (13.1-21.2)	1.8 (0.4-3.2)

[a]Largemouth bass = RSD-15, spotted and smallmouth bass = RSD-14.
EFDPLLSS.D04

Table 87. Age frequency and CPUE (fish/hr) of largemouth bass collected at Paintsville Lake in April, 2004.

	Inch class																	
Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total	Age%	CPUE
0	6	77	71	10												164	32	54.62 (10.0)
1				13	11	104	105	12								245	48	81.81 (17.6)
2							13	19	16	17	3					68	13	22.35 (4.1)
3									7	12	5	4				28	6	9.55 (1.5)
4											5	2	1			8	2	2.61 (0.7)
5											3			1		4	1	1.06 (0.3)
Total	6	77	71	23	11	104	118	31	23	29	16	6	1	1		517		
%	1	15	14	4	2	20	23	6	4	6	3	1						

EFDPLLSS.D04
EFDPLLAS.D03

Table 88. Spring electrofishing catch rate (fish/hour) for each age of largemouth bass collected from Paintsville Lake from 2003 and 2004.

Age	2003	2004
1	68.3	54.6
2	21.4	81.8
3	11.2	22.4
4	4.5	9.6
5	1.3	2.6
6	0.3	1.1
7		
8		
9		
10		

Table 89. Population assessments for largemouth bass collected in Paintsville Lake from 2002-2004.

Parameter	Year 2002	2003	2004
Length at age 3	4	4	3
Spring CPUE of age 1 fish	3	4	4
Spring CPUE 12-14.9 in. fish	4	2	2
Spring CPUE ≥ 15.0 in. fish	1	1	1
Spring CPUE ≥ 20.0 in. fish	1	2	0
Total score	13	13	10
Assessment rating	Good	Good	Fair

EFDPLLSS.D03
EFDPLLSS.D04
EFDPLLAS.D03

Table 90. Length frequency and electrofishing CPUE (no./hour) of black bass collected in 3.00 hours of 15-min nocturnal electrofishing runs in Paintsville Lake on 4 October, 2004; numbers in parentheses are standard errors.

		Inch class																
Species/Area		2	3	4	5	6	7	8	9	10	11	12	13	14	15	19	Total	CPUE
Upper																		
	LMB	1	10	24	26	6	3	31	28	10	8	2	3	1			153	102.00 (24.9)
	SMB																	
	SB		5	2		1	4	1	3	2	1						19	12.67 (5.8)
Lower																		
	LMB		6	44	50	31	3	33	54	23	26	14	6	1	1	1	293	195.33 (29.6)
	SMB			1				1				1					3	2.00 (1.4)
	SB		4	5	2	3	5		2	3	1	1		1			27	18.00 (6.8)
Total																		
	LMB	1	16	68	76	37	6	64	82	33	34	16	9	2	1	1	446	148.67 (23.2)
	SMB			1				1				1					3	1.00 (0.7)
	SB		9	7	2	4	9	1	5	5	2	1		1			46	15.33 (4.3)

LMB = largemouth bass
SMB = smallmouth bass
SB= spotted bass
EFDPLLSF.D04

Table 91. Number of fish and the relative weight (Wr) for each length category of black bass collected at Paintsville Lake on 4 October 2004. Standard errors are in parentheses.

Species	Area	Size range					
		8.0-11.9 in		12.0-14.9 in		≥15.0 in	
		No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Upper	19	66.7 (4.9)	6	83.5 (1.4)		
	Lower	29	83.4 (1.0)	15	80.8 (1.7)	2	78.8 (4.0)
	Total	48	76.8 (2.4)	21	81.6 (1.3)	2	78.8 (4.0)
		7-10.9 in		11-13.9 in		≥ 14.0 in	
Spotted bass	Upper	5	88.1 (1.2)	1	85.5		
	Lower	9	97.4 (2.6)	2	80.8 (0.8)	1	93.8
	Total	14	94.1 (2.1)	3	82.4 (1.7)	1	93.8
Smallmouth bass	Upper						
	Lower	1	88.8	1	86.9		
	Total	1	88.8	1	86.9		

EFDPLLSF.D04

Table 92. Indices of year class strength at age-0 and age-1 and mean lengths (in) of largemouth bass collected in 2003 and 2004 at Paintsville Lake.

Year class	Area	Age 0 Mean length	Age 0 Std. error	Age 0 CPUE	Age 0 Std. error	Age 0 ≥ 5.0 CPUE	Age 0 ≥ 5.0 Std. error	Age 1 CPUE	Age 1 Std. error
2003	Total	4.80	0.08	31.30	6.1	14.00	2.2	68.30	12.1
2004	Total	5.1	0.06	65.67	10.8	37.33	8.6	54.6	10

EFDPLLSF.D03
EFDPLLSF.D04

Table 93. Length frequency and electrofishing CPUE (no./hour) of walleye collected in 2.5 hours of 15-min daytime electrofishing runs in Paintsville Lake on 19 March 2004; numbers in parentheses are standard errors.

Inch class																				Total	CPUE	
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	22	23	24	25	26			
							2	1	5	2		2		1			2		1	13	6.40	(2.3)

EFDPLWSS.D04

Table 94. Electrofishing assessment for walleye population at Paintsville Lake on 19 March 2004.

Parameter value	Actual value	Assessment
Population density (CPUE all fish)	6.4	1
Growth rate (Mean length of age 3+ fish at capture)	18.4	4
Size structure (CPUE of age 1 and older fish > 20 in.)	1.6	2
Recruitment (CPUE of yoy)	0.0	0
Total score		7
Assessment rating		F
Instantaneous mortality (Z)	0.27	
Annual mortality (A)	23	

EFDPLWSS.D04

Table 95. Length frequency and electrofishing CPUE (no./hour) of bluegill and redear sunfish collected in 1.25 hours of daytime electrofishing in Panbowl Lake on 14 May 2004.

	Inch class										
Species	1	2	3	4	5	6	7	8	Total	CPUE	Std. Err.
BG	1	10	62	84	86	23	5	1	272	209.23	(42.8)
RE			6	46	78	85	11		226	173.85	(34.5)
WM		1	3	5	5	2			16	12.31	(7.0)

BG = bluegill
RE = redear sunfish
WM = warmouth
EFDPBBSS.D04

Table 96. Length frequency and CPUE of bluegill and redear sunfish collected in spring electrofishing samples at Panbowl Lake.

	Inch class							
	<3.0		3.0-5.9		6.0-7.9		8.0-9.9	
Species	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
Bluegill	8.46	3.7	178.46	38.6	21.54	6.4	0.77	0.8
Redear sunfish			100.00	17.2	73.85	21.3		

EFDPBBSS.D04
SE = Standard Error

Table 97. PSD and RSD values obtained for bluegill and redear sunfish collected at Panbowl Lake on 14 May 2004; 95% confidence intervals are in parenthesis.

Species	No. fish ≥ stock size	PSD	RSD
Bluegill	261	11.1 (7.3-14.9)	0.38 (-0.37-1.1)
Redear sunfish	220	5.0 (2.1-7.9)	

Bluegill = RSD-8; Redear = RSD-9

EFDPBBSS.D04

Table 98. Population assessment for bluegill collected from Panbowl Lake in 2002 and 2004.

Parameter	Year 2002	2004
mean length age-2 at capture	2	2
years to 6 inches	1	1
CPUE ≥ 6.0 inches	1	1
CPUE ≥ 8.0 inches	1	2
Total score	5	6
Assessment rating	Poor	Poor

EFDPBBSS.D02
EFDPBBSS.D04

Table 99. Population assessment for Redear collected from Panbowl Lake in 2002 and 2004.

Parameter	Year 2002	2004
mean length age-3 at capture	4	2
years to 8 inches	1	1
CPUE ≥ 8.0 inches	1	0
CPUE ≥ 10.0 inches	1	0
Total score	5	3
Assessment rating	Poor	Poor

EFDPBBSS.D02
EFDPBBSS.D04

Table 100. Length frequency and electrofishing CPUE (no./hour) of black bass collected at Yatesville Lake during 3.0 hours of 15 minute runs on 12 May 2004; numbers in parentheses are standard errors.

Species/Area	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE
Upper																				
LMB		2	3	2			2	6	5	3	6	3	1	3		1			37	24.67 (3.6)
SB			1			1	1												3	2.00 (1.4)
Lower																				
LMB		2	13	13	3	19	30	38	21	14	27	18	11	6	3	2			220	146.67 (12.7)
SB																				
Total																				
LMB		4	16	15	3	19	32	44	26	17	33	21	12	9	3	3			257	85.67 (19.4)
SB			1			1	1												3	1.00 (0.7)

LMB = largemouth bass
SB= spotted bass
EFDYLLSF.D04

Table 101. Electrofishing catch-per-unit-effort (CPUE) for each size class of largemouth bass collected at Yatesville Lake in 2003 and 2004. CPUE = fish/hour.

	Inch class									
	<8.0		8.0-11.9		12.0-14.9		≥15.0		Total	
Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
*2003	50.0	5.9	43.7	3.8	9.7	1.8	2.33	0.9	105.7	7.1
2004	12.67	2.8	40.33	10.5	23.67	5.1	9.00	2.2	85.67	19.4

EFDYLLSF.D03
EFDYLLSS.D04
* Sample collected in fall

Table 102. PSD and RSD values for largemouth bass taken in spring electrofishing samples in each area of Yatesville Lake on 12 May 2004; 95% confidence intervals are in parentheses. Sample sizes were too small to figure PSDs for spotted bass.

Area	Species	No. fish ≥ 8"	PSD (+/- 95%)	RSD[a] (+/- 95%)
Upper	Largemouth bass	30	42.9 (35.7-49.9)	11.6 (7.1-16.2)
Lower	Largemouth bass	189	56.7 (38.6-74.7)	16.7 (3.1-30.2)
Total	Largemouth bass	219	44.7 (38.1-51.3)	12.3 (8.0-16.7)

EFDYLLSS.D04

Table 103. Population assessment for spring largemouth bass collected at Yatesville Lake in 2002 and 2004.

Parameter	Year 2002	2004
Length at age 3	3	3
Spring CPUE of age 1 fish	4	3
Spring CPUE 12-14.9 in. fish	2	2
Spring CPUE ≥ 15.0 in. fish	3	2
Spring CPUE ≥ 20.0 in. fish	1	0
Total score	13	10
Assessment rating	G	F

EFDYLLSS.D02
EFDYLLSS.D04

Table 104. Length frequency and electrofishing CPUE (no./hour) of black bass collected at Yatesville Lake during 2.0 hours of 15 minute runs on 13 October 2004; numbers in parentheses are standard errors.

Species/Area	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	21	Total	CPUE
Upper																					
LMB		5	22	39	19	5	23	13	8	8	2	3	2	2	2		1	1	1	156	154.00 (19.9)
SB																				0	
Lower																					
LMB	3	23	21	8	3	4	7	7	15	10	7	7	2	1	4	1				123	123.00 (32.3)
SB	4	19	6	6	13	7	6	2	1			1	1							66	66.00 (17.9)
Total																					
LMB	3	28	43	47	22	9	30	20	23	18	9	10	4	3	6	1	1	1	1	279	138.50 (18.5)
SB	4	19	6	6	13	7	6	2	1			1	1							66	33.00 (15.0)

LMB = largemouth bass
SB= spotted bass
EFDYLLSF.D04

Table 105. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in 2003 and 2004 at Yatesville Lake.

	Age 0		Age 0		Age 0 ≥ 5.0		Age 1	
Year class	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2003	5.3	0.06	46.0	6.3	29.3	4.4	12.7	2.8
2004	4.8	0.08	69.5	13.5	32.5	10.8		

EFDYLLSF.D03
EFDYLLSF.D04

Table 106. Length frequency and CPUE of white crappie collected at Yatesville Lake in 20 net-nights from 8-10 November 2004. Standard errors are in parentheses.

	Inch class													
Species	1	2	3	4	5	6	7	8	9	10	11	12	Total	CPUE
WC		6	348	158	166	173	79	30	22	22	11	7	1,022	53.79 (12.2)

WC = white crappie

EFDYLCTF.D04

Table 107. PSD and RSD_{10} values calculated for crappie collected in trap nets at Yatesville Lake during November 2004; 95% confidence intervals are in parentheses.

Species	No. fish ≥ stock size	PSD	RSD_{10}
White crappie	510	18.0 (14.7-21.4)	7.8 (5.5-10.2)

EFDYLCTF.D04

Table 108. Mean back-calculated length (in) at each annulus for white crappie collected from Yatesville Lake in November 2004, including 95% confidence intervals.

Year		Age								
Class	No.	1	2	3	4	5	6	7	8	9
2004	0									
2003	4	3.3								
2002	4	3.8	4.6							
2001	15	4.1	5.4	6.4						
2000	25	4.7	5.8	6.7	7.4					
1999	16	4.6	5.9	6.7	7.6	8.6				
1998	11	4.1	5.7	6.6	7.3	8.3	9.7			
1997	2	3.6	5.5	6.2	6.8	7.5	8.5	9.6		
1995	1	3.4	5.3	6.2	7.1	7.8	8.9	9.4	10.5	11.7
Mean		4.3	5.6	6.6	7.4	8.4	9.4	9.5	10.5	11.7
Smallest		2.1	3.7	4.4	5.1	5.4	5.7	8.7	10.5	11.7
Largest		9.5	10.6	11.9	10.1	11.2	12.0	10.5	10.5	11.7
STD error		0.1	0.1	0.1	0.2	0.3	0.5	0.5		
95% CI LO		4.1	5.4	6.3	7.1	7.9	8.5	8.5		
95% CI HI		4.5	5.9	6.9	7.7	8.9	10.4	10.6		

Intercept = 0
EFDYLCAF.D04

Table 109. Age frequency and CPUE (no./net day) of white crappie collected by trap netting for 20 net-nights at Yatesville Lake in November 2004; numbers in parentheses are standard errors.

	Inch Class													
Age	2	3	4	5	6	7	8	9	10	11	12	Total	Age%	CPUE
0		348	105									453	45	23.86 (8.4)
1			53	17								70	7	3.65 (1.0)
2				66								66	7	3.49 (0.9)
3				33	96	16	15	2				162	16	8.54 (2.3)
4				17	77	47	6	11	15			173	17	9.12 (2.0)
5				17		8	9	9		7	1	51	5	2.64 (0.5)
6				17		8			4	3	5	37	4	1.94 (0.3)
7									2	1		3	0	0.17 (0.04)
9											1	1	0	0.06 (0.03)
Total		348	158	167	173	79	30	22	21	11	7	1016		
%		34	16	16	17	8	3	2	2	1	1			

CPUE of ≥8 in (quality size) = 4.84
CPUE of ≥10 in (preferred size) = 2.11
EFDYLCAF.D04
EFDYLCTF.D04

Table 110. Population assessment for white crappie collected from Yatesville Lake in 2002 and 2004.

	2002		2004	
Parameter	Assessment value	Assessment score	Assessment value	Assessment score
CPUE of crappie (excluding age 0)	19.5	4	28.2	4
CPUE of age 1 crappie	3.9	2	3.6	2
CPUE of age 0 crappie	1.5	1	23.9	4
CPUE of crappie ≥ 8 in.	3.0	2	4.8	2
Mean age 2 length @ capture	5.5	1	5.6	1
Instantaneous mortality (z)	1.078		0.47	
Annual Mortality (A)	66		37	
Total score		10		13
Assessment rating		Fair		Good

EFDYLCTF.D02
EDFYLCAF.D02
EFDYLCTF.D04
EFDYLCAF.D04

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 Dewy Lake? (check all that apply)
148 (76.7%) Bass 85 (44.0%) Crappie 39 (20.2%) Channel Catfish 23 (11.9%) Other bluegill

4. Which one species do you fish for most at Dewey Lake? (Check only one)
119 (62.6%) Bass 39 (20.5%) Crappie 22 (11.6%) Channel Catfish 10 (5.2%) Other bluegill

-Ask following questions relevant to each species fished for- (see question 3)

Bass Anglers

5. What level of satisfaction do you have with bass fishing at Dewey Lake?
96 (64.9%) Very satisfied 29 (19.6%) Somewhat satisfied 4 (2.7%) Neutral 9 (6.1%) Somewhat dissatisfied
10 (6.8%) Very dissatisfied

6. Do you support or oppose the 15-inch size limit on largemouth bass at the lake? 135 (90.6%) Support 13 (8.7%) Oppose
1 (0.7%) No opinion

6a. What size limit would you prefer on largemouth bass at the lake? 135 (90.6%) current (15") 5 (3.4%) 18"
9 (6.0%) Other 12-15" slot

7. Do you support or oppose "no size limit" on spotted bass at the lake? 139 (96.5%) Support 3 (2.1%) Oppose
2 (1.4%) No opinion

7a. What size limit would you prefer on spotted bass at the lake? 143 (97.3%) current (None) 2 (1.4%) 12" 2 (1.4%) Other
15"

Crappie Anglers

8. What level of satisfaction do you have with crappie fishing at Dewey Lake?
40 (47.1%) Very satisfied 26 (30.6%) Somewhat satisfied 1 (1.2%) Neutral 14 (16.5%) Somewhat dissatisfied
4 (4.7%) Very dissatisfied

9. Do you support or oppose the current "no size limit" on crappie at the lake? 59 (70.2%) Support 25 (29.8%) Oppose
0 (0.0%) No opinion

9a. What size limit would you prefer on crappie at the lake? 58 (69.0%) current (none) 7 (8.3%) 8" 4 (4.8%) 9"
14 (16.7%) 10" 1 (1.2%) Other 12"

10. Do you support or oppose the 30 fish creel limit on crappie at the lake? 79 (96.3%) Support 3 (3.7%) Oppose
0 (0.0%) No opinion

10a. What creel limit would you prefer? 81 (96.4%) Current (30) 2 (2.4%) 20 1 (1.2%) 15 0 (0.0%) 10 0
(0.0%)Other___

Channel Catfish Anglers

11. What level of satisfaction do you have with channel catfish fishing at Dewey Lake?
24 (63.2%) Very satisfied 8 (21.1%) Somewhat satisfied 1 (2.6%) Neutral 2 (5.3%) Somewhat dissatisfied
3 (7.9%) Very dissatisfied

12. Do you support or oppose the no size limit regulation on channel catfish at the lake? 30 (81.1%) Support 4 (10.8%)
Oppose 3 (8.1%) No opinion

12a. What size limit would you prefer on channel catfish at the lake? 34 (89.5%) current (none) 2 (5.3%) 12" 2 (5.3%) 14"
0 (0.0) Other_____

13. Do you support or oppose the no creel limit regulation on channel catfish at the lake? 31 (81.6%) Support 4 (10.5%)
Oppose 3 (7.9%) No opinion

13a. What creel limit would you prefer on channel catfish at the lake? 35 (92.1%) current (none) 3 (7.9%) 5 0 (0.0%) 15
0 (0.0%) 30 0 (0.0%) Other ___