

Commonwealth of Kentucky

Date: June 30, 2010

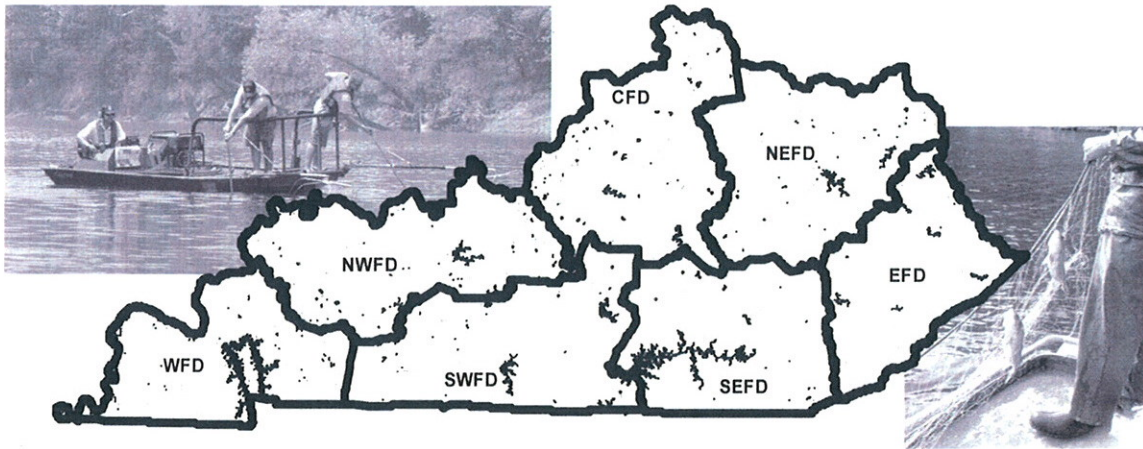
Sport Fish Restoration Grant F-50, Segment 32

Period: 01 April 2009
through
31 March 2010

ANNUAL PERFORMANCE REPORT

District Fisheries Management Part I

Project 1: Lake and Tailwater Fishery Surveys



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Department of Fish and Wildlife Resources
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STATE: Kentucky
GRANT NO: F-50-32
GRANT TITLE: District Fisheries Management
PERIOD COVERED: April 1, 2009 – March 31, 2010

GRANT OBJECTIVES: To conduct research and surveys and to manage the fishery resources statewide within each of the following seven fishery district: Western (WFD), Northwestern (NWF), Southwestern (SWFD), Central (CFD), Northeastern (NEFD), Southeastern (SEFD), and Eastern (EFD). Also to propagate, rear, and stock sport fish species to meet the angling and biological demands of the aquatic resources of Kentucky.

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 for this project.

A. ACTIVITY

Sport fish species were collected using electrofishing, gill netting, trap netting to gather biological data in order to best manage the sport fish resources of Kentucky. Otoliths were removed as needed to calculate age and growth. Other measures that were monitored included temperature/dissolved oxygen, physical limnological data, and creel surveys. Data was analyzed and compiled into this annual performance and will be used to effectively manage the sport fish resources of Kentucky.

B. TARGET DATES FOR ACHIEVEMENT AND ACCOMPLISHMENT

Planned achievement date: March 31, 2010
Work accomplished: March 31, 2010

C. SIGNIFICANT DEVIATIONS

None.

D. REMARKS

See accompanying report. Upon receipt and approval of this annual performance report and the SF-425, please close this segment (#32) of F-50.

E. COST

\$ 1,154,017.50

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WESTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

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

Kentucky Lake

During May, 1,649 black bass were collected by diurnal electrofishing (120 PPS) from standardized sampling locations on Kentucky Lake. Largemouth bass comprised almost 99% (112.55 f/h) of this catch (Table 2). The samples collected from each of the five embayments were similar, in that a majority of each sample was comprised of bass between 9.0 and 13.0 inches. One exception was the sample from Sugar Bay where there was also a high number (40%) of bass between 4.0 and 7.0 inches. An objective in the Kentucky Lake Fish Management Plan (KLFMP) for the largemouth bass population is to maintain a catch rate of at least 24.00 f/h that are <8.0 in. Using a regression model with a correlation of 0.64, it is estimated that this is the minimum value needed in order to produce an adequate number of harvestable-size (≥ 15.0 in) largemouth bass in five years. The catch rate of largemouth bass <8.0 in was 29.45 f/h (Table 3). The KLFMP objective for largemouth bass ≥ 15.0 in is to maintain a catch rate of at least 18.00 f/h. The catch rate of harvestable-size largemouth bass was 13.52 f/h during this year's sample. This value is down from the previous 6 years of data, but followed a trend of a decline in the number of 12.0-14.9 inch bass collected in 2008.

PSD values were similar at each of the five sampled embayments, with the exception of Jonathan Creek (Table 4). The PSD value calculated for all largemouth bass was 46, which falls below the targeted range (PSD, 55-75) suggested in the KLFMP. However, this decline can be attributed to the increase in numbers of bass <12.0 inches. The calculated RSD_{15} was 16, which falls below the range reported in the KLFMP (RSD_{15} , 20-40).

Age frequency was determined from this years catch and age growth data reported from the 2008 sample. The catch rate of age 1 and 2 largemouth bass comprised 70% of the 2009 sample (Table 5). The KLFMP objective for age-1 largemouth bass is to maintain a catch rate of at least 36.00 f/h. In this study it was 27.86 f/h. Table 6 lists the catch rates for all age groups of largemouth bass collected during the past eleven years.

A lake specific assessment for largemouth bass was used to evaluate the bass population in Kentucky Lake (Table 7). The assessment rating dropped from "good" to "fair" because of declines in the catch rate of age-1 largemouth and bass ≥ 15.0 inches.

During October, 819 black bass were collected by diurnal electrofishing at two locations that had been previously sampled during the spring. Largemouth bass comprised 94% (140.18 f/h) of this catch (Table 8). Samples at each embayment were similar in that there were high catch rates of bass between 9.0 and 14.0 inches, and 3.0 to 6.0 inches. Length and weight data were recorded from all bass collected to calculate relative weight values. The relative weight value for harvestable size largemouth bass was 97 (Table 9). Length-weight equations for black bass species at Kentucky Lake are:

$$\text{Largemouth bass } \text{Log}_{10}(\text{weight}) = -3.35295 + 3.05824 \times \text{Log}_{10}(\text{length})$$

$$\text{Smallmouth bass } \text{Log}_{10}(\text{weight}) = -3.52770 + 3.17670 \times \text{Log}_{10}(\text{length})$$

$$\text{Spotted bass } \text{Log}_{10}(\text{weight}) = -3.44559 + 3.11658 \times \text{Log}_{10}(\text{length})$$

The CPUE of age-0 largemouth bass during the fall sample was 30.91 f/h (Table 10). The catch rate for age-0 largemouth bass is down slightly, but similar to the historical median of the Age 0 data.

Trap nets were fished for crappie in Blood River and Jonathan Creek embayments for 80 net-nights (nn) during October and November. This sampling effort yielded 1,569 crappie (19.62 f/nn), of which 3.41 f/nn (17%) were white crappie and 16.20 f/nn (83%) were black crappie (Table 11). One of the management objects in the (KLFMP) is to maintain a catch rate of crappie (excluding age 0) of 20.00 f/nn. This sampling yielded 16.23 f/nn. The samples of white crappie collected from each embayment were different despite the catch rates being similar. At Blood River, there was a high (60%) catch of white crappie between 2.0 and 3.0 inches. As part of a three year study, Blood River was stocked with approximately 38,600 age 0 white crappie. The stocked crappie were OTC marked prior to stocking. Examination of the otoliths taken from all white crappie (<4.0 in) caught in trapnets at Blood River suggested that no stocked crappie were caught. At Jonathan Creek there was a high (70%) catch of white crappie between 7.0 and 9.0 inches. The catches of black crappie at each embayment were similar in length distribution.

The crappie population at Kentucky Lake continues to produce a quality fishery. The number of crappie ≥ 8.0 in collected in trap nets have stayed about the same (13.00 f/nn) for the past 4 years (Table 12). The number of crappie ≥ 10.0 in was up from the previous year's study, 10.38 and 8.46 f/nn respectively. The KLFMP objective for crappie is to maintain a catch rate of at least 9.00 f/nn for crappie ≥ 8.0 in, and 3.00 f/nn for crappie ≥ 10.0 in. Both of these objectives were met. However, declining numbers of age-0 crappie over the last three years warranted a regulatory reduction in the angler creel from 30 to 20 fish in 2008. PSD and RSD₁₀ values are reported in Table 13. Length-weight equations for white and black crappie are listed below.

$$\text{White crappie } \text{Log}_{10}(\text{weight}) = -3.51205 + 3.22633 \times \text{Log}_{10}(\text{length})$$

$$\text{Black crappie } \text{Log}_{10}(\text{weight}) = -3.50377 + 3.28909 \times \text{Log}_{10}(\text{length})$$

Growth determinations were made based on otoliths collected from 315 crappie. Tables 14 and 15 list the back calculated length by age for white and black crappie, respectively. The growth of crappie continues to be excellent with fish reaching 10.0 in (minimum length limit size) at age 3. The growth management object in the KLFMP is for age 2 crappie collected in the fall to reach 9.5 inches in length. Tables 16 and 17 list age frequencies for white and black crappie collected. Although age-1 white crappie comprised 54% (1.84 f/nn) of the white crappie sample, white crappie made up a very small part of the overall sample. Age 1 black crappie comprise only 3% (3.03 f/nn) of the black crappie collected. Combined, the catch of age-1 crappie was considered "poor" in the crappie population assessment (Table 18). One of the management objectives is to maintain a catch of age-1 crappie of at least 11.00 f/nn. However, this value has been below the management objective for the past few years, which is due to poor year classes. Overall, the crappie population at Kentucky Lake rated "good". This is mainly due to the

density of ≥ 8.0 in crappie in the population that has rated “good” to “excellent” over the past six years, along with good growth.

Catfish were collected by fishing trotlines baited with cut shiners during May. Areas targeted were main lake and secondary creek channel ledges. A total of 95 catfish were collected at a rate of 7.31 fish per line-night. The individual species catch rate is listed in Table 19. Using this data in contrast with the 2007 trotline sample, the catch was lower this year. In 2007, 7.93 channel catfish were collected per line-night, as compared to 6.15 in the most recent study.

Relative weight values of both blue and channel catfish indicate excellent condition and are listed in Table 20. The length-weight equations for blue and channel catfish are:

Blue catfish	$\text{Log}_{10}(\text{weight}) = -3.84180 + 3.35453 \times \text{Log}_{10}(\text{length})$
Channel catfish	$\text{Log}_{10}(\text{weight}) = -3.63511 + 3.19290 \times \text{Log}_{10}(\text{length})$

Age and growth determinations were made from otoliths removed from 13 blue catfish and 39 channel catfish. Growth of blue catfish appears to be good, with fish reaching 15.0 in as early as age-3 (Table 21). Growth of channel catfish appears to be better than blue catfish (Table 22). Channel catfish reach 15.0 in as early as age-2. Tables 23 and 24 list the age frequencies for the total sample collected. Scrutiny should be use with this age data due to the limited sample size.

Lake Barkley

Black bass were collected by diurnal electrofishing (120 PPS) from 27 April–1 May 2009 at standardized sampling sites on Lake Barkley. A total of 1,733 black bass were collected at a rate of 182.41 f/h (Table 25). Spotted and smallmouth bass accounted for less than 1% of the total black bass sampled. Largemouth bass had a catch rate of 179.26 f/h. This catch rate lies above the historical average catch of largemouth bass (136.47 f/h) at Lake Barkley (Table 26). The CPUE of harvestable largemouth bass remains above average while the catch rate of stock size fish remains within acceptable limits. The increased catch rate of small fish should maintain fishing success in the near future. The catch rate of largemouth bass ≥ 20.0 in was 2.40 f/h, a slight decrease from 2008.

The PSD value (63) for largemouth bass is lower than in previous years (Table 27). However, this value is above the twenty year average (61) for Lake Barkley, suggesting a better size distribution than in years past. The RSD_{15} (29) is above the twenty year average. The PSD value met its objective goals (PSD of 55-75) established in the BLFMP. The RSD_{15} value met the objective goal of 20-40.

Age and growth data collected in 2007 was used with 2009 catch data to construct an age frequency table (Table 28). The catch in 2009 of age-1 fish made up 39% of the sample, and the combined catch of fish ages 5-7 accounted for 20% of the catch. Catch rates for each age-class of largemouth bass from the last 10 years can be found in Table 29. The annual mortality of largemouth bass older than a year was 34% in 2009 as determined using catch-curve regression (Table 30).

Lake-specific assessment scores are presented in Table 30 for the period of 1999-2009. The score for Barkley Lake has varied between “fair” and “good” over the past five years. The score improved from “fair” to “good” in 2009 due to a much higher catch of age-1 bass.

Largemouth bass were sampled in October 2009 to collect length-weight data and determine the strength of the 2009 year-class. Six hundred sixty-five largemouth bass were collected at a catch rate of 133.0 f/h (Table 31). The length-weight equation for largemouth bass at Barkley Lake is:

$$\text{Log}_{10}(\text{weight}) = -3.44353 + 3.13351 \times \text{Log}_{10}(\text{length})$$

Very few smallmouth bass (17) and no spotted bass were collected during the fall sample and therefore length-weight equations were not calculated for these samples.

Relative weights for the 2009 data are listed in Table 32 for all size-classes of largemouth and smallmouth bass. These values have decreased slightly for the past three years. This may be an indicator of density dependence in the population. As catch rates of harvestable largemouth bass increase, the overall condition of individual fish may decline. Mean length of the age-0 cohort was smaller than the past two years (5.6 in; Table 33). Since year-class strength tends to be related to the relative size of age-0 fish during the fall of their first year, the 2009 year-class should contribute to the population in coming years. After near-record years in 2007 and 2008, year class strength (37.60 f/h) is near the 20 year average. CPUE of age-0 largemouth bass ≥ 5.0 in (29.20 f/h) was also near the 20 year average.

Redear sunfish sampling was attempted in May. However, reservoir elevation was 3 feet above summer pool. We sampled areas of the lake that typically hold redear sunfish as well as shallower flooded vegetation. We found very few fish and decided to wait until the water returned to normal to proceed. When the water fell, it was much later than our typical sampling time, so we aborted our redear sampling for the year.

Catfish sampling was conducted both with trotlines and low pulse electrofishing (15 PPS) in May and June, respectively. We captured 285 catfish representing three species during 14 line-nights of sampling (Table 34). Blue catfish ranged from 8.0-33.0 inches and channel catfish ranged from 11.0-21.0 inches in length. Catch per unit effort was higher for blue catfish than in previous years (16.71 f/line-night) and lower for channel catfish (3.57 f/line-night). We captured 163 catfish during 2.0 hours of low pulse electrofishing in June. Blue catfish from 4.0-22.0 inches were captured (Table 35). Relative weight values of both blue and channel catfish indicate excellent condition (Table 36). The length-weight equations of blue and channel catfish are:

$$\text{Blue catfish} \quad \text{Log}_{10}(\text{weight}) = -3.70830 + 3.17948 \times \text{Log}_{10}(\text{length})$$

$$\text{Channel catfish} \quad \text{Log}_{10}(\text{weight}) = -3.79417 + 3.26259 \times \text{Log}_{10}(\text{length})$$

Trap nets were fished for crappie in Little River and Donaldson Creek embayments for a total of 79 net-nights (nn) from 27 October to 6 November 2009. Six hundred crappie were collected at a rate of 7.60 f/nn (Table 37). White crappie accounted for 68% of the total catch, and were collected at a rate of 5.14 f/nn. Black crappie were collected at a rate of 2.46 f/nn. For the second year, the CPUE of harvestable-size (≥ 10.0 in) crappie was very low at 1.01 f/nn (Table 38). In twenty-three years of sampling, this value has ranged from 0.55-3.37 f/nn. The CPUE of quality-size (≥ 8.0 in) crappie was 2.56 f/nn, which is below the management objective (4.00 f/nn) set in

the BLFMP. In 2009, the PSD (68) and RSD_{10} (28) of white crappie were dramatically higher than 2008 values (Table 39). The 20-year average PSD and RSD_{10} values of white crappie are 59 and 27, respectively. The PSD (81) and RSD_{10} (30) values of black crappie also improved from 2008. The PSD exceeded the 20-year average of 55. The length-weight equations of white and black crappie from Barkley Lake are:

White crappie	$\text{Log}_{10}(\text{weight}) = -3.78370 + 3.46318 \times \text{Log}_{10}(\text{length})$
Black crappie	$\text{Log}_{10}(\text{weight}) = -3.80941 + 3.56464 \times \text{Log}_{10}(\text{length})$

Age frequencies were estimated using age and growth data from 2008 and catch data from 2009. The catch of black crappie was dominated by age-0 and age-1 fish (Table 40) while older black crappie were rare in our catch. The catch of age-0 white crappie (3.79 f/nn) comprised 74% of the total catch (Table 41). Little River was stocked with 30,800 OTC marked white crappie fingerlings (2.0-3.0 in) during October. No marked crappie were collected in the sample.

Assessment of the crappie population yielded a rating of “fair” at Lake Barkley in 2009 (Table 42). The assessment parameters that are lacking are overall catch rates of crappie and catch rates of older fish.

Lake Pennyrile

Lake Pennyrile was not sampled in the spring of 2009 because tree limbs from the ice storm were blocking access to the lake. Sampling will resume in 2010.

Lake Beshear

Largemouth bass were collected by diurnal electrofishing during May at Lake Beshear. A total of 118 largemouth bass were collected at a rate of 47.20 f/h (Table 43). The catch rate of harvestable-size (≥ 12.0 in) and ≥ 15.0 in largemouth bass was 35.60 and 29.60 f/h, respectively (Table 44). One objective in the Lake Beshear Fish Management Plan (LBFMP) is to maintain a catch rate of 40.00 f/h for harvestable-size largemouth bass. This is the second year in a row that the catch of harvestable size bass dropped below the objective, which is caused by an overall poor sample of the fishery. The poor samples were attributed to high muddy water conditions the past two years. Other objectives are to maintain a high catch rate of bass ≥ 15.0 and ≥ 20.0 inches. Ideally, these catch rates should be greater than 30.00 and 4.00 f/hr, respectively. The catch rate for the number of largemouth bass ≥ 15.0 in is near the objective, while the catch rate for the larger (≥ 20.0 in) bass was slightly over (4.40 f/h).

Age frequency distributions were made using age data collected during the 2006 spring sample and this year’s catch data. The age frequency data is presented in Table 45. A lake specific assessment rated the overall bass population as “good” (Table 46).

Largemouth bass were collected by diurnal electrofishing in October. The catch rate (60.80 f/h) was higher than that of the spring sample (Table 43). There was a higher catch of small fish (< 8.0 in) in the fall sample (40.40 f/h) as compared to the spring sample (4.40 f/h). Relative weight data suggests that the larger bass (≥ 15.0 in) are healthy with regard to their length-weight ratio. The average relative weight value was 102 for these larger bass and 98 for all sizes of bass. The length-weight equation for largemouth bass at Lake Beshear is:

$$\text{Log}_{10}(\text{weight}) = -3.66350 + 3.33349 \times \text{Log}_{10}(\text{length})$$

Otoliths were removed from a sub sample of largemouth bass ≤ 8.0 in to determine the mean fall length of the age-0 cohort. The catch rate for this year class was 24.80 f/h (Table 47). The average length of the age-0 bass was 3.6 in.

The catfish population was sampled with the use of baited (soy cake) tandem set hoop nets. Four sets of tandem hoop nets were fished for 3 days. Two nets fished in Clifty Creek caught 95% of the total catch. The two nets fished in Piney Creek caught very few fish. A total of 200 channel catfish were collected and 4 blue catfish. The length frequency of these catches is found in table 48. Otoliths were collected from a sample of the channel catfish; however aging was questionable due to the stunted growth of this population.

Lake Blythe

Lake Blythe is an 89 acre watershed lake located just north of Hopkinsville off Highway 41 in Christian County, Kentucky. The fishery in this lake is primarily largemouth bass, bluegill, redbreast, crappie and catfish. In recent years sampling has revealed a stunted bass population. Table 49 includes spring electrofishing data from 2009, which suggest that 83% of the bass population is less than 13.0 inches in length. This has been the trend for as long as the lake has been sampled. The PSD value was 41 and RSD₁₅ value was 8. The age frequency for bass collected in the spring is listed in Table 50. During the late summer the lake was partially drained to make repairs to the level, therefore no fall sample was collected.

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

Water body	Location	Species	Date	Time (24hr)	Gear	Weather	Water temp. °F	Water level (in)	Secchi (in)	Water Conditions	Pertinent sampling comments
Ballard WMA	Shelby Lake	everything	4/16/2009	900	shock	cloudy	59.0	normal	24	choppy	water muddy, fair sample
Ballard WMA	Mitchell Lake	everything	4/16/2009	1000	shock	cloudy	58.4	low	8	choppy	muddy water color, breezy and cold
Ballard WMA	Big Turner	everything	4/16/2009	1400	shock	partly sunny	60.0	normal	27	calm	Good sample
Barkley	Ford's	black bass	4/27/2009	900	shock	sunny	66.0	360.2	24	rough	water level above normal for 2-3 weeks
Barkley	Parsons	black bass	4/27/2009	1100	shock	sunny	66.0	360.2	30	rough	water level above normal for 2-3 weeks
Barkley	Donaldson	black bass	4/27/2009	1300	shock	sunny	66.0	360.2	18	rough	water level above normal for 2-3 weeks
Barkley	Little River	black bass	4/28/2009	900	shock	cloudy	68.2	359.7	30	calm	good sample
Barkley	Eddy Creek	black bass	4/30/2009	900	shock	rain	69.0	359.3	42	windy	good sample - Brent first time dipper
Barkley	Willow, Nichell	black bass	5/1/2009	900	shock	rain	66.0	359.0	calm	calm	good sample
Barkley	Denumbers	black bass	5/2/2009	900	shock	rain	66.0	359.0	calm	calm	good sample
Barkley	Hopson Bay	Crappie	5/26-5/29/09	900	trotlines	sunny	70.0	359.3	calm	calm	1 line cut on 5/27, baited with cut minnow s
Barkley	Devis Elbow	Crappie	6/29/2009	900	low pulse	sunny	85.0	359.4	calm	calm	1 chase boat
Barkley	Eddy Creek	black bass	10/12/2009	900	shock	sunny	62.5	355.6	12	muddy	heavy rain prior to sample, visibility limited
Barkley	Little River	black bass	10/15/2009	900	shock	cloudy/mist	60.4	355.5	12	muddy	sampled different runs outside of marina due to water visibility
Barkley	Donaldson	Crappie	10/27-10/30/09	800	trapnet	overcast/rain	58-60	355.1	normal	normal	good sample
Barkley	Little River	crappie	11/3-11/6/09	800	trapnet	sunny	57.0	358-361	muddy	calm	water rose drastically through week, muddy water and debris
Beshear		black bass	4/13/2009	900	shock	overcast	57.7	high	24/42	rough	rain prior to sample more rain forecasted, muddy in Piney Ck, clearer near dam, poor sample
Beshear		black bass	9/21/2009	900	shock	sunny	77.0	normal	18/48	calm	good sample of little fish, muddy in Piney Ck, clearer near dam, big bass scattered
Beshear		catfish	9/14-9/17/09	900	tandem hoop nets	cool / calm	77.7	normal	calm	calm	poor sample, 2 nets at Coat Island caught very few, 2 nets in Clifty Ck caught 95% of sample
Blythe		black bass	4/15/2009	900	shock	overcast	56.0	normal	21	muddy / rough	muddy water color, breezy and cold
Golden Pond		sportfish	10/5/2009	1000	shock	sunny	63.0	low	30	calm	tried low pulse for catfish - poor results, fair sample otherwise
Hennate		sportfish	10/5/2009	1100	shock	sunny	61.0	normal	60	calm	dense vegetation (raffo and coontail), poor sample
Kentucky	Sugar Bay	black bass	5/4/2009	900	shock	overcast	64.9	362.2	48	rising	rain most of week, high water levels with lots of current, fair sample
Kentucky	Blood River	black bass	5/6/2009	900	shock	cloudy	64.0	362.2	32	calm	high water levels, with lots of current, fair sample
Kentucky	Jonathan	black bass	5/6/2009	900	shock	overcast / rainy	66.0	362.0	28	calm	high water, muddy, lots of current, fair sample
Kentucky	Big Bear	black bass	5/7/2009	900	shock	overcast	66.0	361.5	36	calm	high water, falling water levels, muddy, current, fair sample
Kentucky	Boyd's Landing	catfish	5/18-5/21/09	900	trotlines	sunny	70.0	360.6	38	calm	hooks baited with cut shiners, water levels high and falling, lost one line last day, fair sample
Kentucky	Blood River	black bass	10/13/2009	900	shock	overcast / windy	65.5	355.3	30	choppy	falling water levels, windy, rain forecasted, fair sample
Kentucky	Jonathan	black bass	10/14/2009	900	shock	overcast / rainy	61.9	355.3	24	rough	poor weather conditions, fair sample
Kentucky	Blood River	crappie	10/27-10/30/09	900	trapnet	overcast, rainy	60.9	354.9	30	choppy / rising	rainy, water rose 1 foot during week, fair sample (stocked YOY WC 2 weeks prior)
Kentucky	Jonathan	crappie	11/3-11/6/09	900	trapnet	sunny / breezy	59.1	359.0	20	calm / rising	heavy rains prior to sampling, water rose 2 feet during week, fair sample
USFW Lake		sportfish	10/5/2009	1400	shock	sunny		normal	calm	calm	good sample

Table 2. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 14.5 hours (29 x 30-minute runs) of diurnal electrofishing at Kentucky Lake during May 2009.

Area	Inch class																						Total	CPUE	Std Err
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22					
Blood River																									
Smallmouth bass							1														1				
Spotted bass						1	1	1	1												5				
Largemouth bass	2	13	18	16	5	15	42	41	40	14	12	3	2	9	3	11	3	2			251				
Big Bear																									
Spotted bass							1														1				
Largemouth bass	1	7	18	24	24	12	20	39	62	41	17	13	13	12	3	2	2	1	1		325				
Sugar Bay																									
Smallmouth bass			2	1	1	1	2	1													8				
Spotted bass			1		1																2				
Largemouth bass	10	68	92	77	17	11	58	107	55	26	29	21	9	8	6	3	1				598				
Jonathan Creek																									
Largemouth bass	1	15	14	6	8	43	46	41	24	14	4	10	10	3	5	3	4	3			254				
Stedd Creek																									
Largemouth bass	2	9	10	2	11	27	49	42	16	6	11	6	5	4	1	2	1				204				
TOTAL																									
Smallmouth bass			2	1	1	1	3	1													9				
Spotted bass			1	1	1	1	1	1	1	1											8				
Largemouth bass	1	20	116	157	133	44	100	212	300	202	87	64	58	40	37	21	20	12	7	1	1,632				
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Table 3. Spring diurnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Kentucky Lake during May 1998 - 2009.

Year	Mean length age-3 at capture	Length group														Total CPUE	Total Std Err
		Age-1		<8.0 in		12.0 - 14.9 in		>15.0 in		>18.0 in		>20.0 in					
		CPUE	Std Err	CPUE	Std Err	CPUE	Std Err	CPUE	Std Err	CPUE	Std Err	CPUE	Std Err				
1998	12.7	51.95	3.62	18.00	1.99	9.83	1.80	10.43	1.76	3.91	0.79	1.39	0.29	46.78	4.67		
1999	13.9	41.89	3.44	18.70	3.33	11.40	1.53	11.90	1.68	3.10	0.66	0.80	0.30	52.00	4.90		
2000	13.9	21.80	2.17	19.43	3.84	19.05	1.83	22.48	3.55	5.14	0.86	1.52	0.41	74.38	6.21		
2001	14.4	73.90	4.28	63.70	6.99	12.80	1.55	12.60	1.49	2.80	0.60	0.40	0.18	116.70	9.63		
2002	13.7	35.50	2.83	32.40	5.36	21.80	2.26	13.10	1.14	4.00	0.73	0.90	0.34	94.00	5.90		
2003	13.7	30.90	2.70	21.81	3.75	43.62	5.20	15.62	1.92	4.38	0.90	0.95	0.26	105.43	11.40		
2004	13.7	11.99	1.56	17.70	2.60	22.70	2.14	18.10	1.84	3.70	0.87	1.30	0.41	83.60	5.77		
2005	13.8	28.70	3.01	24.50	2.49	46.50	4.36	23.60	2.21	3.70	0.70	0.80	0.37	107.40	7.59		
2006	13.8	31.79	7.05	28.30	6.30	23.60	2.44	20.90	2.32	3.30	0.64	0.60	0.21	85.40	5.51		
2007	13.8	22.16	3.95	18.00	3.29	28.75	2.80	26.08	1.74	5.42	0.74	1.25	0.40	93.33	7.06		
2008	13.8	73.05	8.57	51.71	7.22	19.05	2.26	24.19	3.08	6.00	0.96	1.90	0.42	134.76	11.10		
2009	13.8	27.92	5.03	29.45	5.32	24.34	2.21	13.52	1.20	4.21	0.56	1.38	0.30	112.55	10.26		
Average	13.7	37.63		28.64		23.62		17.71		4.14		1.10		92.19			

(Kentucky Bass Database.xls)

Data for 1985 - 1997 is listed in previous years report.

Table 4. PSD and RSD values calculated for black bass species collected during diurnal electrofishing at Kentucky Lake during May 2009; 95% confidence limits are in parentheses.

Area	Species	No. fish >8.0 in	PSD (+/- 95%)	RSD ^a (+/- 95%)
Blood River	Largemouth bass	202	49 (+/- 7)	16 (+/- 5)
Big Bear Creek	Largemouth bass	251	47 (+/- 6)	19 (+/- 5)
Jonathan Creek	Largemouth bass	218	37 (+/- 6)	17 (+/- 5)
Sugar Bay	Largemouth bass	351	45 (+/- 5)	14 (+/- 4)
Sledd Creek	Largemouth bass	183	51 (+/- 7)	16 (+/- 5)
TOTAL	Smallmouth bass	4		
	Spotted bass	5	60 (+/- 48)	20 (+/- 39)
	Largemouth bass	1,205	46 (+/- 3)	16 (+/- 2)

^aLargemouth bass = RSD₁₅, Spotted and smallmouth bass = RSD₁₄

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Table 5. Age frequency and CPUE (fish/hr) of largemouth bass collected during diurnal electrofishing for 14.5 hours (29 x 30-minute runs) at Kentucky Lake during May 2009.

Age	Inch class																				Total	%	CPUE	Std Err	
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21						
1	20	116	157	106	4																404	24.8	27.86	5.03	
2						27	40	100	212	250	121	25	41	39	14	2						750	46.0	51.72	4.64
3																					121	7.4	8.34	0.77	
4																					136	8.3	9.38	1.04	
5																					62	3.8	4.28	0.47	
6																					56	3.4	3.86	0.34	
7																					38	2.3	2.62	0.27	
8																					30	1.8	2.07	0.20	
9																					26	1.6	1.79	0.20	
10																					2	0.1	0.14	0.03	
11																					2	0.1	0.14	0.03	
12																					2	0.1	0.14	0.03	
13																					2	0.1	0.14	0.05	
Total	1	20	116	157	133	44	100	212	300	202	87	64	58	40	37	21	20	12	7	1,631				135.92	
%	0	1	7	10	8	3	6	13	18	12	5	4	4	2	2	1	1	1	1	0	100				

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Table 6. Electrofishing CPUE (fish/hr) for each age of largemouth bass collected from Kentucky Lake in spring samples.

Age	Year										
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	41.89	21.80	73.90	35.50	30.90	11.99	28.70	31.79	22.16	73.08	27.92
2	26.34	14.54	17.71	29.68	26.94	12.21	12.21	10.65	18.16	18.20	51.68
3	15.76	10.54	7.10	11.18	22.12	6.13	30.14	15.12	18.87	12.32	8.32
4	20.63	15.51	9.04	8.70	18.29	7.62	10.54	7.10	7.99	6.23	9.48
5	4.97	3.96	2.43	2.24	2.35	6.96	20.66	17.00	20.22	17.93	4.28
6	3.33	2.35	1.69	1.66	2.47	0.95	3.12	1.99	2.83	2.29	3.78
7	0.38	0.23	0.21	0.23	0.31	0.10	1.44	1.25	2.13	2.22	2.61
8	0.76	0.45	0.43	0.45	0.62	0.20	0.30	0.30	0.61	0.98	2.11
9	0.38	0.23	0.21	0.23	0.31	0.10	0.20	0.10	0.28	0.41	1.79

(Kentucky Bass Database.xls)

Table 7. Lake specific assessment for largemouth bass collected at Kentucky Lake from 1999 - 2009. This table includes the parameter estimates and the individual score as well as the total score and assessment rating. The final two columns list the instantaneous mortality (Z) and annual mortality (A).

Year	Mean length age-3 at capture	Age-1 CPUE	Length group			Total score	Assessment rating	Z	A
			12.0 - 14.9 in CPUE	>15.0 in CPUE	>20.0 in CPUE				
1999	13.9	20.60	11.40	11.90	0.80				
Score	4	1	1	1	1	8	F	0.535	41.4
2000 ^A	13.9	23.25	19.05	22.48	1.52				
Score	4	1	2	3	1	11	F	0.576	43.8
2001	14.4	73.90	12.80	12.60	0.40				
Score	4	4	1	1	1	11	F	0.633	46.9
2002	13.7	35.50	21.80	13.10	0.90				
Score	4	2	2	1	1	10	F	0.873	58.2
2003 ^A	13.7	30.12	43.62	15.62	0.95				
Score	4	2	3	2	1	12	G	0.728	51.7
2004 ^A	13.7	12.14	22.70	18.10	1.30				
Score	4	1	2	2	1	10	F	0.697	50.2
2005	13.8	28.70	46.50	23.60	0.80				
Score	4	2	3	3	1	13	G	0.639	47.2
2006 ^A	13.8	31.79	23.60	20.90	0.60				
Score	4	2	2	3	1	12	G	0.666	48.6
2007 ^A	13.8	22.16	28.75	26.08	1.25				
Score	4	1	2	4	1	12	G	0.560	32.2
2008 ^A	13.8	73.08	19.05	24.19	1.90				
Score	4	4	2	3	2	15	G	0.575	43.7
2009 ^A	13.8	27.90	24.30	13.50	1.40				
Score	4	2	2	1	1	10	F	0.429	34.9
Average	13.8	34.47	24.87	18.37	1.07				45.3

Data from 1985 to 1998 is listed in previous years reports.

^A age and growth data was not collected. Previous year's data used for age estimates.

Rating

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

(Kentucky Bass Database.xls)

Table 8. Species composition, relative abundance and CPUE (fish/hr) of black bass collected during 5.5 hours (10 x 30-minute runs) of diurnal electrofishing runs for black bass at Kentucky Lake during October 2009.

Area / Species	Inch class																				Total	CPUE	Std Err
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			
Blood River																							
Smallmouth bass		1	4	4				2	2		3	1				1	1				19	6.33	3.07
Spotted bass			1	2				1	1	3											8	2.67	0.99
Largemouth bass	12	18	23	16	4	5	22	36	49	63	37	20	12	5	7	5	4	4	1		343	114.33	11.75
Jonathan																							
Smallmouth bass							1	2								1	1				5	2.00	1.10
Spotted bass		2	2	1		3	1	3			1	2	1								16	6.40	2.79
Largemouth bass	1	26	21	25	22	3	12	38	45	56	54	28	22	35	14	11	9	2	2	2	428	171.20	30.45
TOTAL																							
Smallmouth bass		1	4	4			1	2	4		3	1				1	2	1			24	4.36	1.81
Spotted bass		2	3	3		3	1	1	4	3		1	2	1							24	4.36	1.42
Largemouth bass	1	38	39	48	38	7	17	60	81	105	117	65	42	47	19	18	14	6	6	3	771	140.18	16.92

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Table 9. Number of bass and relative weight (W_r) for each length group of black bass collected at Kentucky Lake during October 2009. Standard errors are in parentheses.

Species	Area	Length group								
		8.0-11.9 in		12.0-14.9 in			>15.0 in			
		No.	Wr	No.	Wr	(1)	No.	Wr	(1)	
Largemouth bass	Blood River	112	100	(1)	119	96	(1)	38	95	(1)
	Jonathan Creek	112	100	(1)	55	98	(1)	75	98	(1)
	Total	224	100	(1)	174	97	(1)	113	97	(1)
Species	Area	Length group								
		7.0-10.9 in		11.0-13.9 in			>14.0 in			
		No.	Wr	No.	Wr	(1)	No.	Wr	(9)	
Spotted bass	Blood River	2	104	(1)	3	100	(1)			
	Jonathan Creek	4	99	(6)	1	95		3	99	(9)
	Total	6	100	(4)	4	98	(1)	3	90	(9)
Smallmouth bass	Blood River	4	91	(2)	4	83	(1)	2	80	(9)
	Jonathan Creek	1	92	(0)	3	83	(8)	2	88	(0)
	Total	5	91	(2)	4	83	(1)	4	84	(4)

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Table 10. Age-0 CPUE (fish/hr) and mean length (in) of largemouth bass collected in the fall, and CPUE of age-1 largemouth bass collected the following spring during diurnal electrofishing at Kentucky Lake.

Year Class	Age 0 ^A		Age 0 ^A		Age 0 ≥5.0 in ^A		Age 1 ^B	
	mean length	Std Err	CPUE	Std Err	CPUE	Std Err	CPUE	Std Err
1998	6.4	0.15	27.66	5.02	21.92	4.51	41.89	6.40
1999	4.3	0.08	43.56	12.16	9.56	2.78	21.80	4.04
2000	6.2	0.11	42.20	3.62	32.40	3.38	73.90	7.96
2001	5.6	0.08	23.20	4.80	18.40	3.66	35.50	5.26
2002	5.7	0.12	36.20	9.62	23.40	4.13	30.90	0.00
2003	4.9	0.08	30.67	5.57	15.67	2.01	11.99	0.00
2004	4.6	0.09	26.00	6.16	9.83	1.66	28.70	5.60
2005	5.0	0.14	17.80	4.07	10.00	1.71	31.79	6.69
2006	4.8	0.13	19.00	3.77	8.80	1.72	22.16	3.95
2007	7.1	0.06	122.20	26.51	106.40	24.60	73.05	8.57
2008	5.8	0.08	33.80	6.94	27.20	4.81	27.92	5.03
2009	5.0	0.09	30.91	5.42	16.73	2.83		
Average	5.5		37.77		25.03		36.33	

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

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

Data from 1990 to 1997 is listed in previous years reports.

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Table 11. Species composition, relative abundance, and CPUE (fish/net-night) of crappie collected by trap nets fished during 80 net-nights in two embayments of Kentucky Lake during October - November 2009.

Area	Species	Inch class													Total	CPUE	Std Err
		2	3	4	5	6	7	8	9	10	11	12	13	14			
Blood River	White Crappie	42	41	5	6	6	1	13	13		6	3	1	1	138	3.45	0.64
	Black Crappie	89	39	9	34	37	30	18	48	96	103	21	7	3	534	13.35	1.47
Jonathan Cr.	White Crappie	6	7	2	2	9	16	42	39	6	4	2			135	3.38	0.52
	Black Crappie	13	9	1	21	24	34	26	57	335	173	56	12	1	762	19.05	2.33
TOTAL	White Crappie	48	48	7	8	15	17	55	52	6	10	5	1	1	273	3.41	0.41
	Black Crappie	102	48	10	55	61	64	44	105	431	276	77	19	4	1,296	16.20	1.41

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Table 12. Crappie population parameters used to manage the population at Kentucky Lake, with values determined from fall trap netting.

Year	Total CPUE (f/nn) excluding age-0			CPUE (f/nn) age-0			Mean length (in) age-2 at capture			CPUE (f/nn) for crappie >8.0 in			CPUE (f/nn) age-1			CPUE (f/nn) for crappie >10.0 in		
	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie
1998	9.60	31.27	40.87	9.49	8.64	18.13	9.3	9.3	9.3	5.75	11.27	17.02	3.21	17.49	20.70	1.68	1.34	3.02
1999	5.40	21.66	27.06	0.95	1.00	1.95	9.5	8.9	9.1	2.30	12.66	14.96	3.42	6.30	9.72	1.26	1.83	3.09
2000	2.70	18.63	21.33	0.45	1.31	1.76	10.0	8.9	9.4	2.38	10.57	12.95	1.01	7.56	8.57	0.77	2.17	2.94
2001	4.69	22.59	27.28	26.76	24.52	51.28	10.8	9.3	9.8	2.21	12.55	14.76	2.34	9.67	12.01	1.29	3.17	4.46
2002	3.90	15.14	19.04	0.71	3.06	3.77	10.8	9.9	10.4	2.74	8.60	11.34	3.30	9.80	13.10	0.68	4.21	4.89
2003 ^A	3.75	20.33	24.08	10.46	5.40	15.86	10.8	9.9	10.4	2.55	6.20	8.75	2.34	15.52	17.86	1.35	1.76	3.11
2004	7.47	32.46	39.93	0.65	0.98	1.63	10.8	9.2	9.7	2.71	11.67	14.38	6.20	18.60	24.80	1.09	2.99	4.08
2005 ^A	3.91	22.75	26.66	2.29	1.92	4.21	10.8	9.2	9.7	2.45	13.78	16.23	2.55	10.31	12.86	1.12	3.42	4.54
2006 ^A	2.62	16.07	18.69	1.24	1.18	2.42	10.8	9.2	9.7	1.60	11.86	13.46	1.68	6.60	8.28	1.10	2.78	3.88
2007	1.50	13.59	15.09	0.48	1.88	2.36	11.2	10.2	10.7	1.50	11.73	13.23	0.85	7.21	8.06	0.74	5.50	6.24
2008 ^A	0.36	14.92	15.28	0.35	1.43	1.78	11.2	10.2	10.7	0.36	12.95	13.31	0.16	6.15	6.31	0.21	8.25	8.46
2009	2.03	14.17	16.23	1.35	2.03	3.38	11.5	10.4	10.6	1.63	11.95	13.58	1.83	3.02	4.85	0.29	10.09	10.38
Average	3.99	20.30	24.29	4.60	4.45	9.04	10.6	9.6	10.0	2.35	11.32	13.66	2.41	9.85	12.26	0.96	3.96	4.92

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

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

Kentucky Lake Crappie Database

Table 13. Proportional stock density (PSD) and relative stock density (RSD₁₀) of white and black crappie collected with trap nets (80 net-nights) at Kentucky Lake during October 2009. 95% confidence interval is in parentheses.

Location	Species	N	PSD	RSD ₁₀
Blood River	White crappie	138	74 (± 12)	22 (± 12)
	Black crappie	534	75 (± 4)	58 (± 5)
Jonathan Creek	White crappie	135	78 (± 8)	10 (± 5)
	Black crappie	762	89 (± 2)	78 (± 3)
Total	White crappie	273	76 (± 6)	14 (± 5)
	Black crappie	1,296	84 (± 2)	71 (± 3)

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Table 14. Mean back-calculated length (in) at each annulus on otoliths from white crappie collected by trap netting (80 net-nights) at Kentucky Lake during October and November 2009, including the range in length of white crappie at each age and the 95% confidence interval.

Year-class	N	Age											
		1	2	3	4	5	6	7	8				
2008	83	3.9											
2007	11	4.1	9.0										
2006	3	4.3	10.3	11.1									
2003	4	4.1	6.5	8.7	10.4	11.6	12.5						
2001	1	3.9	8.0	10.3	12.5	13.6	14.5	14.7	15.0				
Mean		4.0	8.7	9.8	10.8	12.0	12.8	14.7	15.0				
Smallest		2.6	6.1	7.7	9.8	10.7	11.6						
Largest		5.4	12.2	11.6	12.5	13.6	14.2						
Std Err		0.1	0.3	0.5	0.5	0.5	0.5						
Low 95% CI		3.9	8.0	8.9	9.9	11.1	11.9						
High 95% CI		4.1	9.3	10.7	11.7	13.0	13.8						

* Intercept = 0.

(wfdnagk.d09)

Table 15. Mean back-calculated length (in) at each annulus on otoliths from black crappie collected by trap netting (80 net-nights) at Kentucky Lake during October and November 2009, including the range in length of black crappie at each age and the 95% confidence interval.

Year-class	N	Age											
		1	2	3	4	5	6	7	8				
2008	75	3.6											
2007	66	4.3	8.1										
2006	23	4.5	8.7	10.9									
2005	7	4.2	7.5	10.5	11.9								
2004	2	3.9	7.2	9.3	11.2	12.6							
2003	15	4.2	7.1	8.8	10.2	11.6	12.4						
2002	3	4.0	7.5	10.0	11.5	12.5	13.1	13.6					
2001	3	4.1	6.8	8.5	10.0	11.1	11.7	12.5	13.2				
Mean		4.0	8.0	10.0	10.8	11.7	12.4	13.0	13.2				
Smallest		2.4	5.8	7.3	8.3	9.4	10.1	12.3	13.0				
Largest		7.6	11.3	13.4	12.5	13.2	13.9	13.9	13.4				
Std Err		0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.1				
Low 95% CI		3.9	7.8	9.7	10.4	11.4	12.1	12.5	12.9				
High 95% CI		4.1	8.2	10.3	11.1	12.1	12.8	13.6	13.4				

* Intercept = 0.

(wfdnagk.d09)

Table 16. Age frequency and CPUE (fish/mn) of white crappie collected in trap nets fished for 80 net-nights in Kentucky Lake during October 2009. Age data was obtained using otoliths.

Age	Inch class															Total	%	CPUE	Std Err
	2	3	4	5	6	7	8	9	10	11	12	13	14	15					
0	48	48	7	5	3	15	17	55	52	5					108	39.6	1.35	0.30	
1										1	8	2			11	53.8	1.84	0.27	
2												2	1		3	4.0	0.14	0.03	
3															3	1.1	0.04	0.01	
4															0				
5															0				
6											2	1			3	1.1	0.04	0.02	
7															0				
8														1	1	0.4	0.01	0.01	
Total	48	48	7	5	3	15	17	55	52	6	10	5	1	0	1	273		3.41	
%	18	18	3	3	5	6	20	19	2	4	2	0	0	0		100			

wfdtpntk.d09, wfdtnagk.d09

Table 17. Age frequency and CPUE (fish/mn) of black crappie collected in trap nets fished for 80 net-nights in Kentucky Lake during October 2009. Age data was obtained using otoliths.

Age	Inch class															Total	%	CPUE	Std Err
	2	3	4	5	6	7	8	9	10	11	12	13	14	15					
0	102	48	10	3	52	61	64	39	9	17					163	12.6	2.04	0.43	
1															242	18.7	3.03	0.35	
2															675	52.1	8.44	0.91	
3															142	11.0	1.78	0.21	
4															22	1.7	0.28	0.04	
5															2	0.2	0.03	0.01	
6															44	3.4	0.55	0.08	
7															3	0.2	0.04	0.01	
8															3	0.2	0.04	0.01	
Total	102	48	10	3	55	61	64	44	105	432	277	76	18	4	1,296		16.20		
%	8	4	1	4	5	5	5	3	8	33	21	6	1	0		100			

wfdtpntk.d09, wfdtnagk.d09

Table 18. Lake specific assessment for crappie collected at Kentucky Lake from 1999 - 2009. This table includes the parameter estimates and the individual scores as well as the total scores and assessment ratings. The final columns list the instantaneous mortality (Z) and annual mortality (A).

Year	CPUE age-1 and older	Age 1 CPUE	Age 0 CPUE	Mean length		Total score	Assessment rating	Z	A
				CPUE >8.0 in	age-2 at capture				
1999	27.06	9.72	1.95	14.96	9.1			0.955	61.5
Score	3	2	1	4	2	12	G		
2000	21.33	8.56	1.75	12.96	9.4			0.885	58.7
Score	2	2	1	3	2	10	F		
2001	27.28	12.01	51.28	14.76	9.8			0.836	56.7
Score	3	2	4	4	3	16	G		
2002	19.04	13.10	3.77	11.34	10.4			0.673	49
Score	2	2	1	3	4	12	G		
2003	24.08	17.86	15.86	8.75	10.4			0.709	50.8
Score	3	3	2	2	4	14	G		
2004	39.93	24.80	1.63	14.38	9.7			0.649	47.7
Score	4	4	1	4	3	16	G		
2005	26.66	12.86	4.21	16.24	9.7			0.788	54.5
Score	3	2	1	4	3	13	G		
2006	18.69	8.28	2.42	13.46	9.7			0.729	51.7
Score	2	1	1	4	3	11	F		
2007	15.08	8.06	2.36	13.23	10.7			0.872	58.2
Score	2	1	1	3	4	11	F		
2008	15.28	6.31	1.78	13.31	10.7			0.440	35.6
Score	2	1	1	4	4	12	G		
2009	16.23	4.85	3.38	13.58	10.6			0.758	53.1
Score	2	1	1	4	4	12	G		
Average	22.79	11.49	8.22	13.36	10.0				52.5

Rating

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

Kentucky Lake Crappie Database

Table 19. Length frequency and CPUE (fish/line-night) of blue and channel catfish collected from Kentucky Lake in May 2009 using 5 100-hook trotlines baited with cut shiners. Lines were fished for three days, with two lines missing the last day; effort = 13 line-nights.

Species	Inch groups														Total	CPUE	Std Err	
	17	18	19	20	21	22	23	24	25	26	27	28	29	30				32
Channel catfish	1	1	2	7	2	5	16	13	8	15	3	6	1			80	6.15	0.73
Blue catfish	1	1	1				1	2	2	1	3	1	1		1	15	1.15	0.35

w fdcftlk.d09

Table 20. Relative weight (W_r) of each length group of blue and channel catfish collected at Kentucky Lake during May 2009. Fish were collected using trotlines baited with cut shiners.

Species	Length group											
	12.0 - 19.9 in.			20.0 - 29.9 in.			>30.0 in.			Total		
	N	Wr	Std Err	N	Wr	Std Err	N	Wr	Std Err	N	Wr	Std Err
Blue catfish	3	120	5	11	117	3	1	133		15	118	3

Species	Length group											
	11.0 - 15.9 in.			16.0 - 23.9 in.			>24.0 in.			Total		
	N	Wr	Std Err	N	Wr	Std Err	N	Wr	Std Err	N	Wr	Std Err
Channel catfish				34	115	2	46	113	1	80	114	1

w fdcftlk.d09

Table 21. Mean back-calculated length (in) at each annulus on otoliths from blue catfish collected on trotlines at Kentucky Lake during May 2009, including the range in length of blue catfish at each age and the 95% confidence interval.

Year-class	N	Age								
		1	2	3	4	5	6	7	8	
2006	3	7.9	12.4	17.5						
2004	3	8.6	14.4	19.3	23.1	26.2				
2003	3	7.2	12.4	15.5	19.8	23.2	26.2			
2002	2	8.3	12.3	15.6	19.0	22.3	26.2	28.6		
2001	2	8.2	10.8	14.5	16.3	20.5	24.5	27.9	31.1	
Mean		8.0	12.6	16.7	19.9	23.4	25.7	28.3	31.1	
Smallest		6.2	8.3	12.7	14.5	20.3	23.6	26.6	29.5	
Largest		9.6	16.0	20.4	24.4	28.0	26.9	29.3	32.6	
Std Err		0.3	0.5	0.7	1.0	0.8	0.5	0.6	1.6	
Low 95% CI		7.5	11.6	15.3	18.0	21.8	24.8	27.1	28.0	
High 95% CI		8.5	13.7	18.1	21.9	25.0	26.6	29.5	34.1	

* Intercept = 0.

(w fdcfagk.d09)

Table 22. Mean back-calculated length (in) at each annulus on otoliths from channel catfish collected on trotlines at Kentucky Lake during May 2009, including the range in length of blue catfish at each age and the 95% confidence interval.

Year-class	N	Age						
		1	2	3	4	5	6	7
2006	7	9.5	15.2	20.1				
2005	11	10.3	15.7	19.7	23.1			
2004	12	10.4	15.3	19.2	22.2	25.1		
2003	7	10.4	15.7	18.7	21.3	23.7	26.5	
2002	2	10.1	13.7	16.9	19.2	22.3	25.3	27.6
Mean		10.2	15.4	19.3	22.1	24.3	26.2	27.6
Smallest		7.3	12.4	16.1	18.8	20.7	24.1	26.5
Largest		11.9	18.1	22.2	26.3	28.2	28.2	28.6
Std Err		0.2	0.3	0.3	0.3	0.4	0.4	1.1
Low 95% CI		9.8	14.9	18.8	21.5	23.6	25.4	25.5
High 95% CI		10.5	15.9	19.8	22.8	25.1	27.0	29.6

* Intercept = 0.

(w fdcfagk.d09)

Table 23. Age frequency and CPUE (fish/line-night) of blue catfish collected on trotlines fished for 13 line days in Kentucky Lake during May 2009. Age data was obtained using otoliths.

Age	Inch class													Total	%	CPUE	Std Err			
	17	18	19	20	21	22	23	24	25	26	27	28	29					30	31	32
3	1	1															2	18.2	0.15	0.10
4																	0	0.0		
5							1	2			1						4	36.4	0.31	0.10
6							1		1								2	18.2	0.15	0.08
7											1						1	9.1	0.08	0.05
8													1			1	2	18.2	0.15	0.10
Total	1	1	0	0	0	0	2	2	1	0	2	1	0	0	0	1	11			
%	9	9	0	0	0	0	18	18	9	0	18	9	0	0	0	9	100			

w fdcftlk.d09, w fdtcfagk.d09

Table 24. Age frequency and CPUE (fish/line-night) of channel catfish collected on trotlines fished for 13 line-nights in Kentucky Lake during May 2009. Age data was obtained using otoliths.

Age	Inch class												Total	%	CPUE	Std Err	
	17	18	19	20	21	22	23	24	25	26	27	28					
3	1	2	5	1	1									10	12.8	0.77	0.20
4				2	1	3	11	3		3				23	29.5	1.77	0.28
5						1	5	10	2	3	2	2		25	32.1	1.92	0.26
6									6	6	1	2		15	19.2	1.15	0.19
7										3		2		5	6.4	0.38	0.11
Total	1	2	5	3	2	4	16	13	8	15	3	6		78			
%	1	3	6	4	3	5	21	17	10	19	4	8			100		

w fdcfllk.d09, w fdtcfagk.d09

Table 25. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 9.5 hours (19 runs; each 0.50 hours) of diurnal electrofishing at Lake Barkley from 27 April to 1 May 2009.

Area	Species	Inch class																			Total	CPUE	Std Err
		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			
Lower																							
Donaldson Cr.	Smallmouth bass									1		1									2	2.00	
	Spotted bass																						
	Largemouth bass			2	7	6	5	7	8	16	30	3	5		6	2	3		4		104	104.00	22.00
Ford's Bay	Smallmouth bass																						
	Spotted bass										1		1								2	2.00	2.00
	Largemouth bass	1	8	16	28	13	11	11	20	26	11	4	14	10	11	5	4	3	2		198	198.00	0.00
Parson's Bay	Smallmouth bass																						
	Spotted bass																						
	Largemouth bass			5	8	10	10	5	7	8	15	7	4	4	10	6	5	1	1		106	212.00	0.00
Middle																							
Little River	Smallmouth bass				2																2	0.80	0.49
	Spotted bass																						
	Largemouth bass	1	10	46	90	63	20	13	31	40	34	28	38	24	13	9	17	15	4	4	500	200.00	23.93
Eddy Cr.	Smallmouth bass			1				1		1											3	1.20	0.80
	Spotted bass																						
	Largemouth bass	5	29	46	45	14	17	33	63	40	22	24	33	17	16	5	7	3			419	167.60	17.47
Upper																							
Nickell Cr.	Smallmouth bass											1		1							2	2.00	2.00
	Spotted bass			1						1	2	1		1							6	6.00	6.00
	Largemouth bass	3	15	23	19	7	1	3	21	27	13	9	17	9	10	5	3	1			186	186.00	18.00
Willow Cr.	Smallmouth bass										1										1	2.00	0.00
	Spotted bass																						
	Largemouth bass	3	22	18	10	2		1	7	8	2	4	8	3	1	2					91	182.00	0.00
Demumbers Bay	Smallmouth bass	2		3	1	1							1								8	16.00	0.00
	Spotted bass	1	1									2									4	8.00	0.00
	Largemouth bass	2	25	23	18	4	1	4	1	4	5	6	3	2					1		99	198.00	0.00
Total	Smallmouth bass	2	1	5	1	1	1		1		2	1	1								16	1.68	0.86
	Spotted bass	1	2						1	1	4	3	1	1							14	1.47	0.75
	Largemouth bass	1	24	152	231	199	75	55	98	176	184	91	94	103	70	55	42	30	17	6	1,703	179.26	10.20

(wfdpsdb.d09)

Table 26. Spring diurnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Lake Barkley during late April/early May since 1998.

Year	Length group											
	<8.0 in		8.0 - 11.9 in		12.0 - 14.9 in		≥15.0 in		>20.0 in		Total	
	CPUE	Std Err	CPUE	Std Err	CPUE	Std Err	CPUE	Std Err	CPUE	Std Err	CPUE	Std Err
1998	22.20	4.7	26.20	4.2	28.60	3.0	29.80	3.5	7.05	1.0	106.80	5.90
1999	16.30	1.9	21.00	2.2	22.70	2.5	34.00	2.6	4.67	0.7	93.90	6.00
2000	32.80	4.2	28.60	2.3	24.70	2.3	27.90	2.4	2.74	0.7	114.10	6.00
2001	70.40	8.3	61.20	5.1	31.10	2.5	19.00	1.5	1.60	0.7	181.70	10.80
2002	26.40	3.6	49.70	5.9	40.60	4.1	16.30	1.8	1.33	0.4	133.00	8.50
2003	41.10	5.2	38.50	3.9	75.30	5.3	26.90	2.3	1.68	0.4	181.80	10.40
2004	11.30	1.3	40.90	2.9	29.30	1.6	24.70	2.2	1.80	0.4	106.20	5.10
2005	36.60	4.9	19.30	1.9	59.40	4.8	37.50	3.3	2.00	0.6	152.70	10.30
2006	15.60	2.2	26.70	2.2	51.80	3.9	30.80	2.4	2.10	0.6	124.20	7.40
2007	4.80	0.9	21.36	2.6	66.50	4.7	47.60	4.5	1.80	0.5	140.27	9.73
2008	24.10	3.5	25.80	3.9	32.60	3.9	41.20	4.5	3.00	0.5	123.70	6.30
2009	63.90	7.5	42.53	3.5	38.80	2.7	34.00	3.4	2.40	0.4	179.30	10.20
Average	30.46		33.48		41.78		30.81		2.68		136.47	

(Barkley_LMB_Database.xls)

Data is available since 1985 in previous annual reports

Table 27. PSD and RSD₁₅ values calculated for largemouth bass collected during 9.5 hours (19 runs; each 0.50 hours) of spring diurnal electrofishing at each area of Lake Barkley from 27 April to 1 May 2009. 95% confidence intervals are in parentheses.

Area	No. fish ≥ 8.0 in	PSD (+ 95% CI)	RSD ₁₅ (+ 95% CI)
Donaldson	89	60 (11)	17 (8)
Ford's	145	62 (8)	34 (8)
Parson's	83	64 (11)	33 (11)
Little River	290	64 (5)	30 (6)
Eddy Creek	294	57 (6)	28 (6)
Willow	38	74 (15)	37 (16)
Nickell	126	75 (8)	36 (9)
Demumbers	31	68 (17)	19 (14)
Total	1,096	63 (3)	29 (2)

(wfdpsdb.d09)

Table 28. Age frequency and CPUE (fish/hr) of largemouth bass collected during diurnal electrofishing at Lake Barkley in April and May 2009.

Age	Inch class																Total	%	CPUE	Std Err
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20				
1	152	231	199	75													657	39.3	69.16	7.35
2					50	87	123	33									293	17.5	30.92	2.75
3					5	11	53	151	66	16							302	18.1	31.69	2.34
4										16							16	1.0	1.65	0.21
5									17	47	41	23	22	8			158	9.5	16.68	1.43
6									8	16	41	23					88	5.3	9.31	0.81
7											21	23	22	8	15		89	5.3	9.40	1.06
8														17			17	1.0	1.77	0.35
9													11		15		26	1.6	2.74	0.43
10															8		8	0.5	0.88	0.17
12																17	17	1.0	1.79	0.34
Total	152	231	199	75	55	98	176	184	91	95	103	69	55	41	30	17	1,671		175.99	
%	9.1	13.8	11.9	4.5	3.3	5.9	10.5	11.0	5.4	5.7	6.2	4.1	3.3	2.5	1.8	1.0				

wfdpsdb.d09, wfdibagb.d07

Table 29. Electrofishing CPUE (fish/hr) for each age of largemouth bass collected from Lake Barkley spring samples from 2000-2009.

Age	Year									
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	23.40	76.86	25.10	59.04	29.00	42.50	18.43	6.69	28.8	69.16
2	21.50	70.04	72.40	13.11	17.80	9.10	27.78	17.90	15.85	30.92
3	15.20	8.88	10.70	65.91	25.50	50.90	28.63	41.34	17.9	31.69
4	14.90	11.04	10.80	33.67	23.30	35.70	23.30	3.92	2.58	1.65
5	4.90	0.48	0.70	5.72	5.50	8.30	14.06	31.42	22.18	16.68
6	10.60	5.29	4.70	0.00	2.10	2.70	7.68	17.97	12.41	9.31
7	1.32	0.48	0.40	1.64	1.20	1.70	1.48	12.92	11.02	9.4
8		1.48	0.10	0.00	0.20	0.30	0.74	1.85	2.32	1.77
9		0.48	0.70	1.00	0.70	0.90		2.70	2.47	2.74
10				0.21				0.93	1.16	0.88
11				0.55						
12								1.18	1.90	1.79

(Barkley_LMB_Database.xls)

Table 30. Lake specific assessment for largemouth bass collected at Lake Barkley from 1999 - 2009. This table includes the parameter estimates and the individual score as well as the total score and assessment rating. The final two columns list the instantaneous mortality (Z) and annual mortality (A).

Year	Mean length	Age-1 CPUE	Length group			Total Score	Assessment Rating	Z	A
	age-3 at capture		12.0 - 14.9 in CPUE	>15.0 in CPUE	>20.0 in CPUE				
1999	12.6	17.30	22.70	34.00	4.70	11	F	0.500	39.4
Score	2	1	2	3	3				
2000 ^A	12.6	37.30	24.70	27.90	2.70	10	F	0.370	31.6
Score	2	2	2	2	2				
2001	14.7	81.00	31.10	19.00	1.60	13	G	0.692	49.9
Score	4	4	2	2	1				
2002 ^A	14.7	28.90	40.60	16.30	1.30	10	F	0.693	50.0
Score	4	2	2	1	1				
2003	12.9	59.20	75.30	26.90	1.70	14	G	0.658	48.2
Score	3	4	4	2	1				
2004 ^A	12.9	29.20	29.30	24.70	1.80	10	F	0.632	47.0
Score	3	2	2	2	1				
2005 ^A	12.9	42.50	59.40	37.50	2.00	14	G	0.674	49.0
Score	3	3	4	3	1				
2006	13.4	18.40	51.80	30.80	2.00	12	G	0.431	40.0
Score	4	1	3	3	1				
2007 ^A	12.6	6.70	66.50	47.60	1.80	12	G	0.317	27.0
Score	2	1	4	4	1				
2008 ^A	12.6	28.80	32.60	41.20	3.00	11	F	0.339	29.0
Score	2	2	2	3	2				
2009 ^A	12.6	69.16	38.80	34.00	2.40	13	G	0.422	34.0
Score	2	4	2	3	2				
Average	13.1	38.04	42.98	30.90	2.27	11.82			40.5

Data from 1985 to 1998 is listed in previous years reports.

(Barkley LMB Database.xls)

* Data not available

^A age and growth data was not collected. Previous year's data used for age estimates.

Rating

5-7 = Poor (P)

8-11 = Fair (F)

12-16 = Good (G)

17-20 = Excellent (E)

Table 31. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 5.0 hours of diurnal electrofishing (10 runs; each 0.50 hours) for black bass in each area of Lake Barkley on 12 and 15 October 2009.

Area/Species	Inch class																			Total	CPUE	Std Err
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20				
Middle																						
Eddy Creek																						
Largemouth bass	4	16	37	23	14	31	66	52	17	24	13	8	17	9	4	5	1	324	129.60	2.40		
Spotted bass																						
Smallmouth bass	1	1	2			1	2	2					1				7	2.80	1.74			
Lower																						
Little River																						
Largemouth bass		22	43	23	6	16	53	33	16	36	24	18	11	11	7	4	1	341	136.40	19.36		
Spotted bass																						
Smallmouth bass			1		1	2	1	1			1						10	4.00	1.79			
Total																						
Largemouth bass	4	38	80	46	20	47	119	85	33	60	37	26	28	20	11	9	1	665	133.00	9.27		
Spotted bass																						
Smallmouth bass	1	1	3		1	3	3	3			1		1			17	3.40	1.19				

(w fdw rb.d09)

Table 32. Number of fish and the relative weight (W_r) values for each length group of largemouth and smallmouth bass collected at Lake Barkley during 5.0 hours (10 runs; each 0.50 hours) of diurnal electrofishing on 12 and 15 October 2009.

Species	Area	Length Group									Total		
		8.0 - 11.9 in			12.0 - 14.9 in			≥15.0 in			N	Wr	Std Err
		N	Wr	Std Err	N	Wr	Std Err	N	Wr	Std Err	N	Wr	Std Err
Largemouth bass													
	Eddy Creek	118	105	8	78	95	1	34	105	3	230	102	4
	Little River	166	96	1	45	92	1	36	97	1	247	96	1
	Total	284	100	3	123	94	1	70	101	1	477	98	2
Smallmouth bass													
	Eddy Creek	5	87	4				1	77		6	86	4
	Little River	5	91	4				1	73		6	88	4
	Total	10	89	3				2	75	2	12	87	3

(w fdw rb.d09)

Table 35. Length frequency and CPUE (fish/hr) of blue, flathead, and channel catfish collected with low pulse electrofishing at Lake Barkley on 29 June 2009. Shocking was conducted in and near the main channel around Devil's Elbow.

Species	Inch class																						Total	CPUE	Std Err
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22					
Blue catfish		1	11	2	1	6	19	7	15	24	19	12	12	4	1	2				1	1	138	55.20	17.04	
Channel catfish	1	1	13	7	1				2													25	10.00	5.06	

(w fdclpb.d09)

Table 36. Relative weight (W_r) of each length group of blue and channel catfish collected at Lake Barkley from 26-29 May 2009.

Species	Length group											
	12.0 - 19.9 in.			20.0 - 29.9 in.			≥30.0 in.			Total		
	N	Wr	Std Err	N	Wr	Std Err	N	Wr	Std Err	N	Wr	Std Err
Blue catfish	106	99	1	24	98	2				130	99	1
Flathead catfish	11.0 - 15.9 in.			16.0 - 23.9 in.			≥24.0 in.			Total		
	N	Wr	Std Err	N	Wr	Std Err	N	Wr	Std Err	N	Wr	Std Err
	1	118								1	118	
Channel catfish	11.0 - 15.9 in.			16.0 - 23.9 in.			≥24.0 in.			Total		
	N	Wr	Std Err	N	Wr	Std Err	N	Wr	Std Err	N	Wr	Std Err
	9	101	8	17	101	3				26	101	3

(w fdcatb.d09)

Table 37. Length frequency and CPUE (fish/net-night) of each inch class of white and black crappie collected by trap-net (79 net-nights) at Lake Barkley from 27 October-6 November 2009.

Location	Species	Inch class											Total	CPUE	Std Err	
		2	3	4	5	6	7	8	9	10	11	12				13
Little River	White crappie	2	22	44	28	1	3	15	42	27	11	3		198	4.95	0.77
	Black crappie	3	12	4	2		2	8	8	6	3	2	1	51	1.35	0.37
Donaldson Creek	White crappie	28	59	61	23	5		9	11	7	3	1	1	208	5.33	0.84
	Black crappie	2	48	33	8	2	3	15	14	8	5	1	1	140	3.59	0.55
Total	White crappie	30	81	105	51	6	3	24	53	34	14	4	1	406	5.14	0.56
	Black crappie	5	60	37	10	2	5	23	22	14	8	3	2	191	2.46	0.65

(w fdtptnb.d09)

Table 38. CPUE (fish/net-night) for length-groups of crappie collected from multiple years of trap netting on Barkley Lake. Includes mean lengths at capture for age 2 crappie and % of trap netting catch that is age-4 or older (catch excludes age-0 fish).

Year	CPUE >8.0 in			CPUE >10.0 in			Mean length age 2 at capture		% Age 4 and older		
	WC	BC	WC & BC	WC	BC	WC & BC	WC	BC	WC	BC	WC & BC
1999	1.92	1.00	2.92	1.35	0.09	1.44	10.3	9.2	1.03	1.65	1.27
2000	2.03	1.86	3.89	0.79	0.60	1.39	11.4	10.5	9.19	0.95	3.99
2001	1.08	1.55	2.63	0.94	1.03	1.96	11.3	10.2	2.17	7.78	5.79
2002	2.56	2.74	5.30	1.10	0.64	1.74	10.4	10.0	2.71	6.80	4.88
2003	2.26	1.63	3.89	1.09	1.13	2.21	11.1	10.3	4.20	4.27	4.24
2004	5.47	1.82	7.29	1.04	0.74	1.78	11.1*	10.3*	1.83	3.43	2.30
2005	3.80	1.40	5.20	2.75	0.62	3.37	11.3	10.8	0.58	0.29	1.14
2006	2.68	0.96	3.64	0.96	0.38	1.34	10.7	10.5	0.66	0.93	0.51
2007	1.82	1.44	3.26	1.38	0.49	1.82	10.7*	10.5*	0.30	0.00	0.90
2008	1.65	1.08	2.73	0.65	0.36	1.01	11.3	11.3	3.70	8.70	0.67
2009	1.65	0.91	2.56	0.67	0.34	1.01	11.3*	11.3*	0.00	1.05	0.34
Average	2.45	1.49	3.94	1.16	0.58	1.73	11.0	10.3	2.40	3.26	2.37

(Barkley_Crappie_Database.xls)

* Age and growth not collected; value from previous year used

Data since 1985 are available in previous annual reports

Table 39. Proportional stock density (PSD) and relative stock density (RSD₁₀) of white and black crappie collected by trap-nets (79 net-nights) at Lake Barkley from 27 October - 6 November 2009. Numbers in parentheses represent 95% confidence intervals.

Location	Species	N	PSD	RSD ₁₀
Little River	White crappie	130	75 (7)	32 (8)
	Black crappie	32	88 (12)	38 (18)
Donaldson	White crappie	60	53 (12)	20 (10)
	Black crappie	57	77 (11)	26 (11)
Total	White crappie	190	68 (6)	28 (6)
	Black crappie	89	81 (8)	30 (9)

(w fdtpntb.d09)

Table 40. Age frequency and CPUE (fish/net-night) of black crappie collected during 79 net-nights of trap-netting at Lake Barkley from 27 October - 6 November 2009.

Age	Inch class												Total	Percent	CPUE	Std. Err.	
	2	3	4	5	6	7	8	9	10	11	12	13					
0	5	60	37	10	2		2							116	61.00	1.47	0.24
1						5	20	22	4		1			52	27.00	0.65	0.13
2									6	6				12	6.00	0.15	0.04
3								2		4	2	2		10	5.00	0.12	0.03
4													2	2	1.00	0.03	0.02
Total	5	60	37	10	2	5	23	22	14	8	3	2	192			2.42	
%	3	31	19	5	1	3	12	7	4	2	1						

(w fdtpntb.d09) (w fdtmagb.d08)

Table 41. Age frequency and CPUE (fish/net-night) of white crappie collected during 79 net-nights at Lake Barkley during 27 October - 6 November 2009.

Age	Inch class											Total	Percent	CPUE	Std Err	
	2	3	4	5	6	7	8	9	10	11	12					
0	30	81	105	51	6	3	24						300	74.0	3.79	0.52
1								53	26	4			83	21.0	1.06	0.15
2									8	9			17	4.0	0.21	0.03
3										1	3		4	1.0	0.06	0.02
Total	30	81	105	51	6	3	24	53	34	14	21		404		5.12	
%	7	20	26	13	1	1	6	13	8	3	1					

(w fdtptnb.d09) (w fdtngab.d08)

Table 42. Lake specific assessment for crappie collected at Lake Barkley from 1999 - 2009. This table includes the parameter estimates and the individual scores as well as the total scores and assessment ratings. The final columns list the instantaneous mortality (Z) and annual mortality (A).

Year	CPUE age-1 and older	Age-1 CPUE	Age-0 CPUE	Mean length		Total score	Assessment rating	Z	A
				CPUE >8.0 in	age-2 at capture				
1999	4.01	1.71	3.60	2.92	9.8			1.06	65.3
Score	1	1	1	2	2	7	P		
2000	6.45	5.28	1.34	3.89	10.9			0.94	60.8
Score	1	2	1	2	4	10	F		
2001	3.25	1.57	36.66	2.63	10.4			0.83	56.3
Score	1	1	4	1	3	10	F		
2002	5.85	3.62	1.90	5.30	10.2			1.1	66.7
Score	1	1	1	3	3	9	F		
2003	7.33	4.80	12.03	3.89	10.7			1.23	70.8
Score	2	2	2	2	4	12	G		
2004	9.18	6.32	3.23	7.29	10.7			1.51	77.8
Score	2	2	1	4	4	13	G		
2005	6.50	3.10	8.60	5.20	10.7			1.42	75.8
Score	1	1	1	3	4	10	F		
2006	7.60	6.00	0.20	3.60	10.6			1.49	77.5
Score	2	2	1	2	3	10	F		
2007	3.78	1.80	2.00	3.20	10.6			0.91	59.9
Score	1	1	1	2	3	8	F		
2008	2.80	1.99	4.85	2.73	11.3			0.87	58
Score	1	1	1	1	4	8	F		
2009	2.30	1.71	5.26	2.56	11.3			1.33	73.6
Score	1	1	1	1	4	8	F		
Average	5.37	3.45	7.24	3.93	10.7				67.5

Rating

5 - 7 = Poor (P)

8 - 12 = Fair (F)

13 - 17 = Good (G)

18 - 20 = Excellent (E)

(Barkley_Crappie_Database.xls)

Table 43. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during diurnal electrofishing at Lake Beshear during 2009.

Season	Species	Inch class																				Total	CPUE	Std Err
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			
Spring	Largemouth bass		1	4	2	1	1	2	8	5	5	3	6	6	13	14	13	16	7	8	3	118	47.20	4.59
Fall	Largemouth bass	4	43	10	3	6	19	16	7	1	1	4	2	12	10	5	4	3	1		1	152	60.80	10.63

wfdpsdlb.d09 and wfdwrlb.d09

Table 44. Spring diurnal electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Lake Beshear.

Year	Mean length		Length group														Total	
	age-3 at capture	Age-1	<8.0 in		≥12.0 in		12.0 - 14.9 in		≥15.0 in		≥18.0 in		≥20.0 in		CPUE	Std Err		
			CPUE	Std Err	CPUE	Std Err	CPUE	Std Err	CPUE	Std Err	CPUE	Std Err	CPUE	Std Err				
1998		0.00		5.00	1.3	70.00	8.7	17.00	4.4	53.00	5.3	22.00	2.2	8.50	1.7	88.00	8.3	
1999		3.50		4.00	1.8	39.50	6.7	14.00	2.9	25.50	4.9	8.00	2.7	1.00	1.0	55.00	8.8	
2000		3.20		11.20	3.7	36.00	8.7	4.00	2.1	32.00	7.6	16.40	3.1	2.80	0.5	65.20	10.9	
2001	14.1	1.00	2.0	5.00	2.4	26.00	6.1	10.50	2.5	15.50	3.8	5.50	1.3	1.50	1.0	73.00	6.7	
2002		3.50		11.50	1.7	64.50	10.7	28.00	4.2	36.50	8.6	11.50	2.9	3.50	1.3	100.00	16.4	
2003	14.0	0.80	3.8	5.20	2.9	33.60	7.8	8.00	1.9	25.60	7.2	3.60	0.7	2.00	1.1	45.20	9.5	
2004		6.40		4.40	1.6	52.00	9.3	9.60	2.6	42.40	8.5	16.00	3.7	2.80	1.4	68.40	11.7	
2005		38.80		30.80	4.9	51.60	6.2	7.20	2.1	44.40	5.9	19.60	2.4	3.60	1.2	94.80	8.5	
2006	12.7	24.80	7.8	27.60	8.2	41.20	5.6	7.20	2.9	34.00	3.0	18.00	1.9	4.80	1.5	84.00	13.3	
2007		13.00	2.4	15.00	3.3	50.33	8.6	15.00	4.2	35.33	5.2	16.00	2.6	4.67	1.0	83.00	12.8	
2008		10.15	1.4	8.40	3.9	32.00	4.6	11.20	3.8	20.80	3.4	10.00	2.7	3.60	1.7	51.60	6.8	
2009		4.80	1.6	3.60	1.7	35.60	3.0	6.00	0.6	29.60	2.9	13.60	1.7	4.40	1.6	47.20	4.6	
Average	13.6	9.16		10.98		44.36		11.48		32.89		13.35		3.60		71.28		

wfdpsdib.dxx

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

Table 45. Age frequency and CPUE (fish/hr) of largemouth bass collected from Lake Beshear in May 2009 during 2.5 hours of diurnal sampling. Used WFDLBAGB.d06 data set to determine age frequencies.

Age	Inch class																Total	%	CPUE	Std Err		
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19						
1	4	2	1	1	2	2											12	11.2	4.80	1.6		
2						6	5	5	1									17	15.9	6.75	0.8	
3								1	1	2	5	2						11	10.3	3.95	0.5	
4									1	4	1	3						9	8.4	3.65	0.5	
5											7	5	13	6				31	29.0	12.23	2.0	
6											2	9			7			18	16.8	7.18	0.1	
7															6			6	5.6	2.56	0.4	
8															3			3	2.8	1.28	0.2	
Total	4	2	1	1	2	8	5	6	3	6	6	14	14	13	15	7	107		42.40			
%	4	2	1	1	2	7	5	6	3	6	6	13	13	12	14	7		100				

wfdpsdib D09. wfdibbag D06

Table 46. Lake specific assessment for largemouth bass collected at Lake Beshear from 1999 - 2009. This table includes the parameter estimates and the individual score as well as the total score and assessment rating. The final two columns list the instantaneous mortality (Z) and annual mortality (A).

Year	Mean length age-3 at capture	Age-1 CPUE	Length group			Total score	Assessment rating	Z	A
			12.0 - 14.9 in CPUE	>15.0 in CPUE	>20.0 in CPUE				
1999	11.3	3.50	14.00	25.50	1.00			0.455	36.6
Score	1	1	2	2	1	7	P		
2000	14.1	3.20	4.00	32.00	2.80			0.475	37.8
Score	4	1	1	3	2	11	F		
2001 ^A	14.1	1.00	10.50	15.50	1.50			0.803	55.2
Score	4	1	2	1	1	9	F		
2002 ^A	14.1	3.50	28.00	36.50	3.50			0.547	54.7
Score	4	1	4	3	2	14	G		
2003 ^A	14.1	0.80	8.00	25.60	2.00			0.430	34.9
Score	4	1	1	2	1	9	F		
2004 ^A	14.1	6.40	9.60	42.40	2.80			0.547	54.7
Score	4	1	1	4	2	12	G		
2005	13.8	38.80	7.20	44.40	3.60			0.430	34.9
Score	4	4	1	4	2	15	G		
2006	13.8	24.80	7.20	34.00	4.80			0.262	23
Score	4	3	1	3	3	14	G		
2007 ^A	13.8	25.00	15.00	35.33	4.67			0.344	29.1
Score	4	3	2	3	3	15	G		
2008 ^A	13.8	10.00	11.20	20.80	3.60			0.316	27.1
Score	4	1	2	2	2	11	F		
2009 ^A	13.8	4.80	6.00	29.60	4.40			0.142	13.2
Score	4	1	1	3	3	12	G		
Average	13.7	11.07	10.97	31.06	3.15				36.5

Data from 1985 to 1998 is listed in previous years reports.

^A age and growth data was not collected. Previous year's data used for age estimates.

Rating

5-7 = Poor (P)

8-11 = Fair (F)

12-16 = Good (G)

17-20 = Excellent (E)

Lake Beshear Bass Data Base

Table 47. Age-0 CPUE (fish/hr) and mean length (in) of largemouth bass collected in the fall, and CPUE of age-1 largemouth bass collected the following spring during diurnal electrofishing at Lake Beshear.

Year-class	Age 0 ^A		Age 0 ^A		Age 0 \geq 5.0 in ^A		Age 1 ^B	
	Mean length	Std Err	CPUE	Std Err	CPUE	Std Err	CPUE	Std Err
2001	4.5	0.2	4.40	1.60	0.80	0.49	15.00	2.94
2002	4.2	0.2	5.00	1.29	0.00		13.50	1.33
2003	3.3	0.1	24.00	4.76	0.50	0.5	4.32	1.94
2004	3.8	0.1	17.60	4.12	0.00		38.80	1.80
2005	4.4	0.1	21.00	7.68	0.00		37.04	9.50
2006	4.2	0.1	23.00	7.51	3.00	1.91	25.00	4.24
2007	4.8	0.1	21.60	3.49	9.60	2.32	10.00	1.42
2008	4.3	0.1	12.40	1.17	2.00	0.89	4.8	1.59
2009	3.6	0.1	24.80	5.31	2.00	0.63		

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

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

WFDWRLB.Dxx, WFDWRAGB.Dxx, WFDPSDLB.Dxx

Table 48. Species composition, relative abundance, and CPUE (fish/set-night) of catfish collected by fish 4 tandem set hoop nets in Lake Beshear for three nights during September 2009.

Species	Inch class																Total	CPUE	Std Err		
	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				25	26
Channel catfish	1	36	40	38	18	26	17	4	7	7	2		2	1				1	200	50.00	31.42
Blue catfish	1						1				2								4	1.00	0.41

wfdccib.d09

Table 49. Species composition, relative abundance, and CPUE (fish/hr) of fish collected during diurnal electrofishing at Lake Blythe in April, 2009. Eight 900-sec. runs for bass, and four 900-sec runs for all species.

Species	Inch class																						Total	CPUE	Std Err
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22			
Largemouth bass			10	15	4	3	1	3	26	19	14	19	13	3	3	2					2	1	138	69.00	9.61
White crappie								2	2		3		1										8	8.00	2.73
Black crappie							3	1	3	1	4												12	12.00	3.12
Redear sunfish				9	4	7	5	3															28	28.00	7.33
Bluegill	1	4	4	5	32	44	21	2															113	113.00	23.11

wfdblyth.d09

Table 50. Age frequency and CPUE (fish/hr) of largemouth bass collected from electrofishing at Lake Blythe in April 2009. Age data was obtained using otoliths collected in 2007.

Age	Inch class												Total	%	CPUE	Std Err				
	4	5	6	7	8	9	10	11	12	13	14	15								
1	15	4	3		1	2	9										34	27.4	17.00	2.59
2					2	17	19	12									50	40.3	25.00	7.00
3									14								14	11.3	7.00	1.13
4								2	5			3	3				13	10.5	6.50	1.19
5											13						13	10.5	6.50	2.26
Total	15	4	3	1	4	26	19	14	19	13	3	3					124		62.00	
%	12	3	2	1	3	21	15	11	15	10	2	2						100		

wfdblyth.d09 wfdblyag.d07

NORTHWESTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Table 1 presents a summary of conditions encountered while sampling at state-owned lakes and ACOE reservoirs during the 2009 field season.

Nolin River Lake

Black Bass Sampling

Electrofishing to monitor the black bass population at Nolin Lake was conducted during April 2009 (Tables 2-7). The total catch rate for largemouth bass declined as did the catch rate for each of their length groups except the 12.0-14.9 in group. These declines are most likely due to sampling inefficiencies rather than any significant change in the population. The catch rate of 12.0-14.9 in largemouth is slightly higher than the 2008 catch rate and has been gradually increasing for the last several years. Age data will be collected in 2010 to determine if growth rates are slowing.

Fall electrofishing to determine CPUE and mean length of age 0 largemouth bass (Tables 8 and 9) was conducted in October 2009. The mean length and catch rate of age 0 fish are similar to what was collected in 2008. The Nolin Lake Strategic Management Plan (SMP) objectives for largemouth bass state: a mean length at age 3 of ≥ 12.5 in, a CPUE of ≥ 30.00 f/h for age 1 fish, a CPUE of ≥ 25.50 f/h for 12.0-14.9 in fish, a CPUE of ≥ 12.50 f/h for ≥ 15.0 in fish, and a CPUE of ≥ 1.00 f/h for ≥ 20.0 in fish. Catch rate objectives for largemouth bass ≥ 15.0 and ≥ 20.0 in were not met in 2009.

Crappie Sampling

Trap netting was completed during October 2009 to assess Nolin Lake's crappie population (Tables 10-13). A total of 1,229 crappie (5.1% black) were collected during 80 net-nights of effort for a total CPUE of 16.15 crappie/net-night. Catch rates in 2009 increased dramatically over those collected during the last several years. The CPUE increase in 2009 is due primarily to a three-fold increase in the catch rate of age 1 crappie resulting from high water and a very successful year class in 2008. The length-weight equation is $\log W = -3.63 + 3.29 (\log L)$. Nolin Lake SMP objectives for white crappie management state: a CPUE (excluding age 0 fish) of ≥ 10.00 f/nn, a CPUE for age 1 fish of ≥ 6.00 f/nn, a CPUE of age 0 fish of ≥ 3.00 f/nn, a CPUE of ≥ 8.0 in fish of ≥ 7.00 f/nn, and a mean length of age 2+ fish at capture of ≥ 9.6 in. All objectives were met in 2009 with the exception of the age 0 CPUE objective (1.22 f/nn).

Walleye Sampling

Gill netting to assess the walleye population was conducted during November 2009 (Tables 14-18). The catch rate in 2009 was significantly greater than when the population was last sampled in 2007. The total CPUE as well as the CPUE of age 1 fish are the highest recorded since sampling began in 1991. Walleye numbers at Nolin have been erratic over the years due to both netting inefficiencies and survival of stocked fingerlings. Growth rates continue to be good and the large number of age 1 fish in the population should help keep this a viable fishery for the next few years. The log 10 length weight equation is $\log W = -3.55 + 3.07 (\log L)$. The Nolin Lake SMP objectives state: a CPUE of ≥ 4.00 f/nn for \geq age 1 fish, a mean length of ≥ 17.0 in for age 2+ fish, a CPUE of ≥ 0.75 f/nn for ≥ 20.0 in fish, and a CPUE of ≥ 1.50 f/nn for age 1 fish. The management objective for CPUE of ≥ 20.0 in fish was not met in 2009 (0.50 f/nn).

White Bass Sampling

White bass were gill netted during November in conjunction with walleye to assess their population parameters (Tables 19-23). Catch rates observed in 2009 were slightly lower than those recorded in 2007, but are still substantially greater than any collected since the mid 1990's. Few age 2 fish were collected indicating poor survival

of that age group. Mean length at age 1 (7.6 in) declined 1.3 in from 2007. Mean lengths at age 3 and 4 are similar to previous collections. The lack of age 2 fish and the slower growth rate of age 1 fish may negatively impact the number of harvestable fish in the population in 2010 and 2011. The log 10 length weight equation is $\log W = -3.13 + 2.80 (\log L)$. The Nolin Lake SMP objectives for white bass management state: a CPUE of ≥ 20.00 f/nn for age 1 and older fish, a mean length of ≥ 13.0 in for age 2+ fish at capture, a CPUE of ≥ 10.00 f/nn for ≥ 12.0 in fish, and a CPUE of ≥ 10.00 f/nn for age 1 fish. All management objectives were met in 2009.

Channel Catfish Sampling

Channel catfish were sampled in conjunction with walleye and white bass during gill netting in November (Tables 24-26). A total CPUE of 7.00 f/nn is an increase from the 5.00 f/nn collected in 1997, but below the 9.53 f/nn collected in 2006. This is the first year age data has been collected for channel catfish at Nolin Lake. Both mean length at age and relative weight values are considered good.

Rough River Lake

Black Bass Sampling

Rough River Lake was electrofished in April 2009 to assess the black bass population (Tables 27-33). Sampling could not be accomplished in 2008 because of high water throughout the sampling period. The total CPUE of largemouth bass in 2009 increased from that collected in 2007. The majority of the increase is due to substantially higher catch rates of largemouth in the 8.0-11.9 in and 12.0-14.9 in length groups. Catch rates of the remaining length groups were similar to 2007 catch rates. Otoliths were collected in 2009 to determine mean length at age. Growth rates continue to be good and are similar to when last collected in 2004. Rough River Lake SMP objectives for largemouth bass management state: a mean length age 3 fish at capture of ≥ 12.5 in, a spring CPUE of age 1 fish ≥ 30.00 f/h, a spring CPUE of ≥ 25.50 f/h for 12.0-14.9 in fish, a spring CPUE of ≥ 12.20 f/h for ≥ 15.0 in fish, and a spring CPUE of ≥ 0.50 f/h for fish ≥ 20.0 in. All objectives were met with the exception of the CPUE of age 1 fish (28.40 f/h) which was slightly less.

Fall sampling for mean length and CPUE of age 0 fish could not be conducted in 2009 due to a high lake level throughout the sampling time frame.

Crappie Sampling

Trap netting to assess Rough River Lake's crappie population was conducted during the first week of December 2009 (Tables 34-38). Sampling is normally conducted the last week or two of October, but had to be delayed until December because frequent heavy rains kept the lake above summer pool elevation through November. The total catch rate for crappie in 2009 is much higher than ever recorded. The high catch rate is due to exceptionally successful year classes in 2008 and 2009. High, stable water levels several feet above summer pool during the spring of both years account for the success of these year classes. The highest ever recorded CPUE of age 0 fish in 2008 resulted in the highest ever recorded CPUE of age 1 fish in 2009. The CPUE of age 0 fish in 2009 was again much greater than normally collected. Mean length at age 1 decreased 1.2 inches from 2007 and previous collections presumably due to the increased number of small crappie and competition. Mean lengths at ages 2-4 are similar to prior collections. The log 10 length weight equation is $\log W = -3.67 + 3.36 (\log L)$. Rough River Lake SMP objectives for white crappie management state: a CPUE of ≥ 10.0 f/nn (excluding age 0 fish), a CPUE of 7.00 f/nn for age 1 fish, a CPUE of ≥ 3.00 f/nn for age 0 fish, a CPUE of ≥ 6.00 f/nn for white crappie ≥ 8.0 in, and a mean length of ≥ 9.8 in for age 2+ fish at capture. All crappie management objectives were met in 2009.

Lake Malone

Largemouth Bass Sampling

Electrofishing data for the largemouth bass population assessment was collected during April 2009 (Tables 39-43). The total CPUE decreased in 2009 as did the catch rate for each of the length groups. Most significant was the

decrease in the CPUE of <12.0 in fish. A trend over the last several years has been an increase in the catch rate of <12.0 in bass and a decrease in growth rates. Largemouth less than 12.0 in are not protected under the current 12.0-14.9 in protective slot limit and efforts have been made to convince anglers to keep these small fish. Spring sampling in 2010 and 2011 will determine if the reduction in catch rates of <12.0 in bass continues or was an anomaly in 2009. Age data will be collected in 2010 to document changes in growth rate. Lake Malone was again electrofished in October for relative weight and mean length and CPUE of age 0 fish (Tables 44-46). Relative weights are good and similar to those collected in previous years. The mean length of age 0 bass is similar to previous years. The CPUE of age 0 bass in 2009 is similar to the 2008 CPUE and much less than in years past. The log 10 length weight equation is $\log W = -3.47 + 3.13 (\text{Log } L)$. Lake Malone SMP objectives for management of largemouth bass state: a mean length of ≥ 12.0 in at age 3 at capture, a CPUE of ≥ 20.00 f/h for age 1 fish, a CPUE of ≥ 35.00 f/h for 12.0-14.9 in fish, a CPUE of ≥ 40.00 f/h for ≥ 15.0 in fish, and a CPUE of ≥ 6.00 f/h for ≥ 20.0 in fish. Objectives not met in 2008 were mean length of age 3 fish and spring CPUE of age 1 fish.

Bluegill/Redear Sunfish Sampling

Electrofishing to assess the bluegill and redear sunfish populations at Lake Malone was conducted during May 2009 (Tables 47-51). Similar to the largemouth bass population, catch rates for both bluegill and redear sunfish were much lower in 2009 than in previous years. The lower catch rates occurred across all size ranges for both species. This is more than likely a function of sampling rather than any population change. The trend since 2000 has been an increase in the number of 3.0-5.9 in bluegill most likely the result of a long-term decrease in the number of 8.0-11.9 in largemouth bass following implementation of a 12.0-14.9 in protective slot limit in 1996. The number 8.0-11.9 in bass has been increasing, but is still much lower than in the early 1990's. The growth rate for bluegill is fair and mean length at age data is similar to that last collected in 2006. The Lake Malone SMP objectives for bluegill management state: a mean length of 4.5 in for age 2 fish at capture, 3-3+ years to reach 6.0 in, a CPUE of ≥ 50.00 f/h for ≥ 6.0 in fish, and a CPUE of at least 1.00 f/h for ≥ 8.0 in fish. With the exception of the CPUE of ≥ 8.0 inch fish, all objectives were met.

Mauzy Lake

Mauzy Lake was drawn down in October 2008 to replace the leaking water control structure. The lake remained 6-10 feet below normal pool until September-October 2009 when it was lowered to 13 feet below normal pool to replace the structure. Repair work was completed in November 2009 and the lake is beginning to re-fill. As of January 2010 the lake is approximately 6-7 feet below normal pool. Low water level prevented electrofishing in 2009 but sampling should resume in April 2010.

Carpenter Lake

Largemouth Bass

Largemouth bass were electrofished at Carpenter Lake during April 2009 to assess population parameters (Tables 41, 52-55). The total catch rate of largemouth bass at Carpenter Lake decreased in 2009 due mainly to a decrease in the catch rate of bass <12.0 in. Catch rates at Carpenter Lake can be erratic, but for the last few years the number of bass <12.0 in has increased while the number of bass ≥ 12.0 in has decreased. That trend reversed in 2009 with the catch rate of >12.0 in bass increasing. Future monitoring will determine if this trend continues. Age data will be collected during 2010 to document any changes in growth rate. Carpenter Lake SMP objectives for largemouth bass management state: a mean length of ≥ 11.5 in at age 3 at capture, a CPUE of ≥ 46.00 f/h for age 1 fish, a CPUE of ≥ 35.00 f/h for 12.0-14.9 in fish, a CPUE of ≥ 20.00 f/h for ≥ 15.0 in fish and a CPUE of ≥ 1.0 f/h for ≥ 20.0 in fish. The CPUE of age 1 fish was the only objective met in 2009. Largemouth bass were electrofished again in October to determine relative weights and build an index of mean length and CPUE data for age 0 fish and (Tables 45, 56-57). Mean length of age 0 fish decreased in 2009 while the CPUE of age 0 fish was in between values collected in 2007 and 2008.

Bluegill Redear Sunfish Sampling

Electrofishing to assess the bluegill/redear sunfish populations was conducted in May 2009 (Tables 49, 58-61). Bluegill catch rates at Carpenter Lake are highly variable, due in part to sampling inefficiencies. Although erratic, the trend for past several years has been an increasing catch rate of bluegill <8.0 in and a decreasing catch rate of bluegill ≥8.0 in. Gizzard shad were first discovered in Carpenter Lake in 2006. The addition of this forage species may be leading to an increased number of small bluegill from a decrease in largemouth bass predation. Carpenter Lake SMP bluegill management objectives state: a mean length of ≥5.0 in at age 2 at capture, 2-2+ years to reach 6.0 in, a CPUE of at least 50.00 f/h for bluegill ≥6.0 in, and a CPUE of at least 15.00 f/h for bluegill ≥8.0 in. The only objective met in 2009 was the CPUE objective for bluegill ≥6.0 in.

Channel Catfish Sampling

Channel catfish were sampled with tandem hoop nets in October and November 2009 to determine length distribution and growth rate to assess the stocking rate. Three tandem hoop net sets (3 nets in a series) were fished for 3 days during the third week of October and 3 days during the first week of November. No catfish were caught during the October sampling. Results from the November sets are contained in Tables 62-63). Excellent growth rates and few fish over age 2 in the population indicate channel catfish are being well utilized and not stock piling.

Creel Survey

A creel survey was conducted on Carpenter Lake in conjunction with a survey at Washburn Lake. A roving, 5-day per week creel survey was conducted April 01 – October 31, 2009 to estimate angler pressure and angler catch/harvest statistics (Tables 64-68). The lake was surveyed for a 3-hour time period during either a morning or afternoon time period. A random draw was used to determine morning or afternoon time period and determine which lake was surveyed first. Once the first lake was surveyed, a 1.5 hour time period was allotted for travel to the second lake at which time the second lake was surveyed.

Anglers expended an estimated 6,289 hours during 2,296 trips fishing at Carpenter Lake in 2009 catching an estimated 11,187 fish and harvesting an estimated 6,944 fish. When species were ranked by preference anglers expended an estimated 2,986 man-hours pursuing panfish, 1,052 man-hours for catfish, 942 man-hours for black bass, 804 man-hours for crappie and 505 man-hours for “anything”. Bluegill were by far the most numerous fish harvested (5,116), followed by black crappie (1,010), channel catfish (494), redear sunfish (165), and largemouth bass (49).

An angler attitude survey was also conducted during the creel survey to determine angler opinions regarding regulations and their satisfaction with angling at Carpenter Lake (Figure 1). Results indicate bluegill, crappie, redear sunfish, and catfish anglers are mostly satisfied with angling at Carpenter Lake, while largemouth bass fishermen are mostly neutral or unsatisfied with their angling experience.

New Kingfisher Lake

Largemouth Bass Sampling

Electrofishing to assess the largemouth bass population at New Kingfisher Lake was performed in April 2009 (Tables 41, 69-72). New Kingfisher Lake's largemouth bass population has been dominated by an abundance of slow-growing 8.0-11.0 in fish. Sub-legal bass have been removed on multiple occasions via electrofishing to reduce competition. In April 2008 the catch rate of 8.0-11.9 in bass began decreasing and the catch rate of 12.0-14.9 in bass increased. However, a major fish kill occurred at both New and Old Kingfisher Lakes in September 2008 killing a large number of fish in both lakes. The catch rate for largemouth bass in 2009 is dramatically lower than any collected for the last several years, especially the catch rate for 8.0-11.0 in bass. Old and New Kingfisher Lakes are both highly eutrophic and have been experiencing periodic late summer oxygen declines leading to shad die-offs for many years. Total renovation (draining and dredging) would enhance the long term viability of these lakes tremendously. New Kingfisher Lake was again electrofished in October (Tables 45, 73) to determine relative weights which were acceptable.

Bluegill Sampling

The bluegill population was electrofished during May 2009 to determine population statistics (Tables 49, 74-77). The bluegill catch rate at New Kingfisher nearly doubled from 2008 with the most dramatic increases occurring in the CPUE of <3.0 and 3.0-5.9 in bluegill. This increase is most likely in response to the loss of bass and lack of predation due to the fish kill in 2008.

Water Quality Sampling

Dissolved oxygen and temperature data were collected during September. Results are presented in Table 78.

Old Kingfisher Lake

Largemouth Bass

Old Kingfisher Lake was electrofished during April 2009 (Table 41, 79) to document size structure and CPUE for largemouth bass. This is the second year Old Kingfisher Lake has been sampled. Historically, Old and New Kingfisher Lakes were connected via a large drainage tile and fish populations were similar. Over the last several years the tile has become occluded and their fish populations vastly different. The catch rate for largemouth at Old Kingfisher Lake is much lower than at New Kingfisher, but size distribution is much better. Recruitment does however appear limited at Old Kingfisher, most likely due to the abundance of small bluegill and crappie.

Bluegill

Electrofishing to document bluegill population parameters at Old Kingfisher Lake was conducted during May 2009 (Table 80). The bluegill population is dominated by an overabundance of 5.0-in fish. Largemouth bass numbers are too low to provide adequate predation to keep this population in balance.

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

Water Quality Sampling

Dissolved oxygen and temperature data were collected during September. Results are presented in Table 81.

Washburn Lake

Largemouth Bass

Electrofishing to assess largemouth bass population parameters at Washburn Lake was conducted during April 2009 (Tables 41, 82-85). Washburn's largemouth population has never stabilized following renovation in 2000. Surveys conducted from 2002-2004 revealed an abundance of slow growing 8.0-11.9 in bass. A fertilization program was initiated in the spring of 2004 and growth rates increased until 2008. A phytoplankton bloom could not be achieved following fertilizer applications during the spring of 2008. A subsequent alkalinity test revealed a level of 40 ppm. Approximately 50 tons of lime was applied in July 2008 increasing the alkalinity to 60 ppm by December 2008. Fertilizer applications again produced plankton blooms during 2009 although the blooms dissipated after approximately a week. Additional liming may be necessary in 2010.

Largemouth bass catch rates have declined after the initial cohorts were stocked following renovation in 2000-2001. The catch rate for <12.0 in bass has now been stable for 3 years but the catch rate for ≥ 12.0 in bass continues to decline. Age data will be collected in 2010 to document mean length at age changes in growth rate.

Washburn was electrofished again in October to determine relative weights and begin building an index of CPUE and mean length of age 0 bass (Tables 40, 86-87). Relative weights have declined and are less than desirable. The mean length of age 0 bass as well as the total catch rate and catch rate of ≥ 5.0 in age 0 bass declined during 2009.

Bluegill Sampling

Sampling to assess Washburn Lake's bluegill population was conducted in May 2009 (Tables 49, 88-93). The catch rate of 3.0-5.9 in bluegill increased annually from 2001 to its peak in 2007 then began declining. The catch rate of 6.0-7.9 in bluegill decreased during 2009, but is still greater than historically collected. Age data collected in 2009 indicate growth rates have declined and more year classes are present in the population than when last examined in 2006. A slower growth rate and older fish in the population indicate fewer fish are reaching a harvestable size and being removed. The slower growth rate is probably due to the decreased alkalinity/fertility during 2007-2008. Liming and fertilization applications will continue in an effort to increase growth rates.

Channel Catfish Sampling

Channel catfish were sampled with tandem hoop nets in October 2009 to determine length distribution and growth rate to assess the 50-fish per acre stocking rate (Tables 94-95). Three tandem hoop net sets (3 nets in a series) were fished for 3 days during the second week of October. Good growth rate and length distribution data indicate channel catfish are growing well and being utilized. No change in stocking rate is recommended.

Creel Survey

A creel survey was conducted on Washburn Lake in conjunction with the survey at Carpenter Lake. This is the first creel survey conducted at Washburn Lake. A roving, 5-day per week creel survey was conducted April 01 – October 31, 2009 to estimate angler pressure and angler catch/harvest statistics (Tables 96-100). The lake was surveyed for a 2-hour time period during either morning or afternoon. A random draw was used to determine morning or afternoon time period and determine which lake was surveyed first. Once the first lake was surveyed a 1.5 hour time period was allotted for travel to the second lake at which time the second lake was surveyed.

Anglers expended an estimated 2,033 hours during 957 trips fishing at Washburn Lake in 2009 catching an estimated 3,269 fish and harvesting an estimated 1,524 fish. When ranked by preference, anglers expended an estimated 1,218 man-hours pursuing panfish, 251 man-hours for catfish, 245 man-hours for black bass, 216 man-hours for "anything", and 102 man-hours for crappie. Bluegill were by far the most numerous fish harvested (1,325), followed by black crappie (116), channel catfish (41), and largemouth bass (41).

An angler attitude survey was also conducted during the creel survey to determine angler opinions regarding regulations and their satisfaction with angling at Washburn Lake (Figure 2). Results indicate bluegill anglers are mostly satisfied with their angling experience at Washburn, while largemouth bass and channel catfish anglers indicate more dissatisfaction with their angling experience.

Peabody WMA

SCUBA transects to assess fish populations at Goose, Bottom, and Musky Lakes on Peabody WMA could not be conducted due to frequent rains and low visibility throughout the survey period. Survey efforts will continue in 2010.

Merlin Lake

Largemouth Bass Sampling

Merlin Lake was electrofished in April 2009 to document catch rate, size structure and growth rate for largemouth bass (Table 101-102). The lower clarity and conductivity of this mine lake allow for effective electrofishing. The largemouth population is comprised mainly of slower-growing fish ≤ 12.0 in. This is not atypical of mine lakes with their clearer water and abundant vegetation that prohibit effective predation summer through fall. A fertilization

program was initiated in 2008 in efforts to boost fertility and reduce macrophyte growth through shading. Limited chemical treatment is also being used to reduce vegetation.

Bluegill/Redear Sunfish Sampling

Electrofishing was again conducted during May to assess the bluegill and redear sunfish populations (Tables 103-105). While growth rates are slower than many non-mine lakes, both the bluegill and redear sunfish populations have decent growth rates and good length distribution, typical for most of the highly vegetated mine lakes. A fertilization program initiated in 2008 will continue in an effort to increase growth rates.

Audubon State Park

Largemouth Bass

Audubon State Park Lake was electrofished during April 2009 to assess the largemouth bass population (Tables 106-107). Audubon SP Lake is a relatively infertile lake in a wooded watershed as is indicated by the slow growth rate. The lake was again electrofished in October (Table 108) to collect relative weight data (Table 47) which is less than ideal. Efforts will be made in 2010 to work with State Park personnel and implement fertilization and habitat improvement programs. Annual sampling will continue to monitor the population.

Bluegill Sampling

Audubon State Park Lake was electrofished during May to assess the bluegill population (Tables 109-110). Mean length at age data indicate bluegill are slow growing. The abundance of older fish in the population suggests both angling and natural mortality are low. The majority of fish collected were either age 2 or age 6 with very poor year class strength for ages 3-5.

Table 1. Annual summary of sampling conditions by waterbody, species sampled and date for NWFD lakes during 2009

Water body	Species	Date	Time (24hr)	Cear	Weather ^a	Water temp. F	Water level	Secchi (in)	Conditions ^b	Pertinent sampling comments
Nolin River Lake	LMB	5/4/09	1000	shock	Mostly cloudy	65	517	36	fair	water clear, fish holding deep
Nolin River Lake	LMB	5/5/09	1000	shock	Cloudy	66	518	35	Good	
Nolin River Lake	LMB	10/13/09	1000	shock	Cloudy, breezy	69	514.5	40	Good	fish holding in 3-5' in rocks
Nolin River Lake	LMB	10/16/09	1000	shock	Cloudy, misty	64	513	26	Fair	
Nolin River Lake	Crappie	10/26-30/09	Trap Net	shock	Cloudy, 60-72°	58-61	511-512	27-48	Good	
Nolin River Lake	WE/WB	11/11-13/09	Gill Net	shock	Sunny, breezy, 55-60	56	500-504	24	Good	one net stolen
Rough River Lake	LMB	4/27/09	1000	shock	Sunny, windy	64	pool	36	Good	
Rough River Lake	LMB	4/29/09	1000	shock	Cloudy	68	pool	30	Good	
Rough River Lake	Crappie	11/30-12/4/09	Trap Net	shock	Cloudy, cool, rain, wind	44-49	487-483		Good	water falling quickly - approx. 1 ft/day
Lake Malone	LMB	4/23/09	900	shock	Partly cloudy, breezy	60	pool	25	Fair	water muddy, low conductivity
Lake Malone	BG	6/5/2009	900	shock	Sunny, cool	76	pool	28	Fair	Sherwood arm 12" secchi
Lake Malone	LMB	10/1/09	1000	shock	Cloudy	71	pool	18	Good	
Carpenter Lake	LMB	4/22/09	900	shock	Sunny	61	pool	30	Good	
Carpenter Lake	BG	5/19/2009	1230	shock	Sunny	76	pool	35	Good	
Carpenter Lake	LMB	9/30/09	1300	shock	Sunny	73	pool	23	Good	
Carpenter Lake	CC	10/18-22/09	Hoop Net	shock	Sunny, 60s	58	pool	30	Good	No fish caught
Carpenter Lake	CC	11/2-5/09	Hoop Net	shock	Sunny, clam, 55	54	pool	30	Good	
New Kingfisher Lake	LMB	4/22/09	1100	shock	Sunny, light breeze	60	pool	19	Good	
New Kingfisher Lake	BG	5/19/09	900	shock	Sunny	75	pool	25	Good	
New Kingfisher Lake	LMB	9/30/09	1100	shock	Sunny	71	pool	11	Good	
Old Kingfisher Lake	LMB	4/22/09	1300	shock	Sunny, light breeze	59	pool	20	Good	
Old Kingfisher Lake	BG	5/19/09	1030	shock	Sunny	76	pool	18	Good	
Washburn Lake	LMB	4/24/09	900	shock	Sunny, windy	62	pool	25	Good	
Washburn Lake	BG	5/12/09	900	shock	Sunny, light breeze	75	pool	32	Good	
Washburn Lake	LMB	9/30/09	900	shock	Sunny	71	pool	30	Good	
Washburn Lake	CC	10/12-15/09	Hoop Net	shock	Cloudy		0.5 ft. high		Good	
Audubon State Park	LMB	4/15/09	1000	shock	Cloudy, cool	55	pool	20	Good	
Audubon State Park	BG	6/2/09	1000	shock	Sunny	76	pool	18	Fair	water murky
Audubon State Park	LMB	9/29/09	1000	shock	Cloudy, breezy	70	pool	18	Good	
Merlin Lake	LMB	4/24/09	1100	shock	Sunny, windy	64	2.0 low	45	Good	
Merlin Lake	BG	6/1/2009	1000	shock	Sunny, breezy	74	2.0 low	48	Fair-poor	water very clear, fish difficult to capture

Table 2. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 4.5 hours of 30-minute diurnal electrofishing runs at Nolin River Lake in April 2009.

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	Largemouth bass	6	18	11	17	17	11	12	33	32	46	41	14	5	2	2	3	1	1	1	1	273	109.20	5.31		
	Spotted bass			1	1	2	10	16	1	4												35	14.00	5.10		
Lower	Largemouth bass	2	19	33	6	6	4	9	8	4	19	28	14	5	2	1					1	161	80.50	9.95		
	Spotted bass		1		9	17	13	13	4	9	2	1										69	34.50	10.28		
Total	Largemouth bass	8	37	44	23	23	15	21	41	36	65	69	28	10	2	4	4	1	1	2	434	96.44	7.05			
	Spotted bass	1	1	10	19	23	29	5	13	2	1										104	23.11	6.15			

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Table 3. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples in each area of Nolin River Lake during April 2009; 95% confidence intervals are in parentheses.

Area	Species	No.		
		≥ stock size	PSD (+ 95%)	RSD ^a (+ 95%)
Upper	Largemouth bass	204	57 (+/-7)	7 (+/-4)
	Spotted bass	33	12 (+/-12)	
Lower	Largemouth bass	95	74 (+/-9)	9 (+/-6)
	Spotted bass	59	20 (+/-10)	
Total	Largemouth bass	299	62 (+/-5)	8 (+/-3)
	Spotted bass	92	17 (+/-7)	

^a Largemouth bass = RSD₁₅, spotted bass = RSD₁₄.

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Table 4. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Nolli River Lake during spring electrofishing 1999-2009.

Year	Length group												Total	
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in		Total			
	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2009	30.00	5.73	25.11	4.32	36.00	3.64	5.33	1.05	0.67	0.33	96.44	7.05		
2008	50.44	7.87	45.78	5.42	34.22	4.33	11.33	1.56	3.56	1.04	141.78	11.24		
2007	53.33	9.95	17.33	2.24	27.56	4.86	8.22	1.31	0.67	0.47	106.44	14.21		
2006	17.78	2.82	15.78	1.54	23.56	2.68	7.56	1.48	0.44	0.44	64.67	5.68		
2005	27.11	4.98	27.11	4.14	25.33	3.86	14.22	2.32	0.44	0.29	93.78	10.08		
2004	23.74	1.61	16.44	3.65	16.22	2.41	8.89	2.58	0.44	0.29	65.33	6.76		
2003	12.89	3.73	10.22	2.30	8.89	2.21	7.56	1.99	0.00	0.00	39.56	9.16		
2002	4.00	1.33	9.78	2.59	8.00	3.13	8.00	1.63	0.00	0.00	29.78	5.44		
2001	5.50	1.68	27.00	7.44	18.00	3.30	9.00	2.80	0.00	0.00	59.50	11.72		
2000	9.50	3.11	35.00	6.27	41.50	5.12	14.00	4.34	0.50	0.50	100.00	13.07		
1999	n/d		61.33	16.84	56.89	9.18	8.00	1.76	0.44	0.44	126.22	26.01		

Table 5. Age-frequency and CPUE (fish/hr) per inch class of largemouth bass electrofished at Nolli River Lake in April 2009.

Age	Inch class																				No.	CPUE	(Std. Error)	Age (%)
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20						
1	8	37	44	23	19																131	29.15	5.61	30.3
2					4	15	21	41	23	7											110	24.50	3.94	25.5
3									10	46	35	4									94	20.85	2.59	21.7
4										13	35	20	7	1	1						77	17.00	1.35	17.8
5									3			4	3	1							12	2.65	0.33	2.8
6														1	1						1	0.22	0.22	0.2
7															1	4					6	1.41	0.42	1.4
8																		1			1	0.22	0.22	0.2
Total	8	37	44	23	23	15	21	41	36	65	69	28	10	2	4	4	1	1			432			100
(%)	1.8	8.6	10.2	5.3	5.3	3.5	4.9	9.5	8.3	15.0	16.0	6.5	2.3	0.5	1.0	1.0	0.2	0.2						

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Table 6. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Nolich River Lake during spring sampling 2002-2009.

Age	Year								
	2002	2003	2004	2005	2006	2007	2008	2009	
1	3.78	11.33	22.89	26.22	17.04	51.63	49.67	29.15	
2	8.33	9.64	14.82	23.38	15.39	18.16	41.72	24.5	
3	8.90	9.08	16.35	27.24	12.81	15.26	23.86	20.85	
4	1.59	1.57	1.86	3.57	13.12	14.67	15.74	17.00	
5	0.73	0.82	0.97	1.60	2.53	3.02	3.53	2.65	
6	1.78	2.44	2.44	3.11	0.67	0.67	0.89	0.22	
7					2.67	2.37	2.81	1.41	
8					0.44	0.44	2.44	0.22	

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Table 7. Population assessment for largemouth bass based on spring electrofishing at Nolin River Lake from 2000-2009 (scoring based on statewide assessment).

Parameter	Year																			
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009										
Mean length age 3 at capture	13.1	4	13.1	4	13.1	4	12.6	4	12.6	4	12.6	4	12.6	4						
Spring CPUE age 1	9.00	1	5.00	1	3.78	1	11.33	1	22.89	2	26.22	2	17.04	1	51.63	4	49.67	4	29.15	2
Spring CPUE 12.0-14.9 in	41.50	4	18.00	2	8.00	1	8.89	1	16.22	2	25.33	3	23.56	2	27.56	3	34.22	3	36.00	4
Spring CPUE ≥15.0 in	14.00	3	9.00	2	8.00	2	7.56	2	8.89	2	14.22	3	7.56	2	8.22	2	11.33	3	5.33	2
Spring CPUE ≥20.0 in	0.50	2	0.00	0	0.00	0	0.00	0	0.22	2	0.44	2	0.44	2	0.67	2	3.56	4	0.67	2
Instantaneous Mortality (z)				0.534	0.684	0.617	0.447	0.609	0.553											
Annual Mortality (A)%				41.4	49.5	46.0	36.0	45.0	42.5											
Total score	14	9	8	8	12	14	11	15	18	14	11	11	11	15	15	18	18	18	14	14
Assessment rating	G	F	F	F	G	G	F	G	F	G	F	F	F	G	F	G	E	E	G	G

Table 8. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 4.0 hours of 30-minute diurnal electrofishing runs at Nolin River Lake in October 2009.

Area	Species	Inch class																				Total	CPUE	Std. Error
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20				
Upper	Largemouth bass	167	205	50	16	28	24	18	43	33	24	29	19	16	5	2	1	1	1	691	276.40	48.91		
	Spotted bass	19	23	5	3	5	18	10	10	11	13	1								118	47.20	14.57		
Lower	Largemouth bass	3	3	5	10	7	8	28	23	11	12	24	22	9	2	1	1			169	112.67	19.81		
	Spotted bass	7	3	1	1	16	23	11	23	18	14	13								130	86.67	18.77		
Total	Largemouth bass	170	208	55	26	35	32	46	66	44	36	63	41	25	7	1	2	2	1	860	215.00	42.35		
	Spotted bass	26	26	6	4	21	41	21	33	29	27	14								248	62.00	12.87		

nw dnlrmb.d09

Table 9. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in fall electrofishing samples at Nolin River Lake 2001-2009.

Year class	Area	Age 0		Age 0 >= 5.0 in		Age 1			
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error		
2001	Total	3.0		76.00	29.20	7.30	0.90	3.78	1.10
2002	Total	4.5		28.60	11.80	14.40	1.40	11.33	3.11
2003	Total	4.4		28.40	4.90	14.20	2.60	22.89	1.57
2004	Total	4.1	0.07	41.30	11.20	9.60	1.60	26.22	4.70
2005	Total	5.0	0.08	92.00	34.94	41.78	15.36	17.04	2.67
2006	Total	4.9	0.07	84.00	22.97	40.22	7.47	51.63	9.65
2007	Total	4.1	0.07	66.44	14.34	12.89	2.81	49.67	7.78
2008	Total	3.6	0.04	139.33	45.55	16.67	4.08	29.15	5.61
2009	Total	3.6	0.06	128.75	47.37	20.50	3.18		

Table 10. Length frequency and CPUE (fish/net-night) for each species of crappie collected in 80 net-nights of sampling at Nolin River Lake during October 2009.

Species	Inch class												Total	CPUE	Std. Error
	2	3	4	5	6	7	8	9	10	11	12	13			
White crappie	1	50	47	5	136	276	460	185	40	19	9	1	1229	15.36	1.97
Black crappie		10		1	17	16	9	7	1	2			63	0.79	0.17

nwdnltn.d09

Table 11. PSD and RSD₁₀ values calculated for crappie collected in trap nets from Nolin River Lake during October 2009; 95% confidence limits are in parentheses.

Lake/Species	No.	PSD	RSD ₁₀
Nolin River Lake			
White crappie	1131	63 (+/-3)	6 (+/-1)
Black crappie	53	36 (+/-14)	6 (+/-6)

nwdnltn.d09

Table 12. Age-frequency and CPUE (fish/net-night) per inch class of white crappie trap netted for 80 net-nights at Nolin River Lake in October 2009.

Age	Inch class												No.	CPUE	Std. error	Age (%)
	2	3	4	5	6	7	8	9	10	11	12	13				
0	1	50	47										98	1.22		8.0
1				5	136	276	460	53	2				932	11.65	1.51	75.8
2								119	38	14			171	2.13	0.34	13.9
3								13		3	3		19	0.24	0.04	1.5
4											1		1	0.02	0.01	< 0.1
5										2	3		5	0.05	0.01	0.4
6												1	1	0.02	0.01	< 0.1
7													1	0.01	0.01	< 0.1
8												1	1	0.02	0.01	< 0.1
Total	1	50	47	5	136	276	460	185	40	19	9	1	1229			
(%)	< 0.1	4.1	3.8	< 0.1	11.1	22.4	37.4	15.0	3.2	1.5	0.7	< 0.1				

nwdnltn.d09, nwdnlcag.d07

Table 13. Population assessment for white crappie based on fall trapnetting at Nolin River Lake from 1999-2009 (scoring based on statewide assessment).

Parameter	Year																			
	1999		2001		2002		2003		2004		2005		2006		2007		2008		2009	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
CPUE (excluding age 0)	8.72	2	10.21	2	11.99	2	13.23	3	8.56	2	8.76	2	5.91	2	7.43	2	6.03	2	14.14	3
CPUE age 1	4.85	2	4.82	2	10.02	3	8.00	3	4.15	2	3.64	2	3.20	2	3.71	2	3.45	2	11.65	3
CPUE age 0	0.18	1	2.62	1	4.26	2	2.04	1	5.09	2	1.42	1	2.02	1	0.38	1	2.35	1	1.22	1
CPUE ≥ 8.0 in	5.55	3	3.87	2	8.78	3	8.65	3	6.93	3	7.41	3	4.37	2	6.14	3	4.79	2	8.92	3
Mean length age 2+ at capture	9.8	4	9.1	3	9.5	3	9.8	4	9.7	4	9.7	4	9.7	4	10.4	4	10.4	4	10.4	4
Instantaneous Mortality (z)	1.040		0.910		1.571		1.107		0.630		0.749		0.876		0.882		0.976		1.638	
Annual Mortality (A)%	64.7		59.7		79.2		66.9		46.7		52.7		58.3		58.6		62.3		80.6	
Total score		12		10		13		14		13		12		11		12		11		14
Assessment rating		F		F		G		G		G		F		F		F		F		G

Table 14 Length frequency and CPUE (fish/net-night) for walleye collected in 14 net-nights of gill netting at Nolin River Lake during November 2009.

Species	Inch class														Total	CPUE	Std error	
	8	9	10	11	12	13	14	15	16	17	18	19	20	21				22
Walleye	3	7	7	2	3	8	26	21	15	10	10	5	2	3	1	123	8.79	1.31

nw dnrgn.d09

Table 15. Mean back calculated lengths (in) at each annulus for walleye collected at Nolin River Lake in November 2009.

Year class	Age						
	No.	1	2	3	4	5	6
2008	33	10.4					
2007	17	9.7	13.9				
2006	15	9.7	13.6	16.3			
2005	9	9.3	13.6	15.7	17.0		
2004	5	8.9	13.8	16.2	17.7	18.8	
2003	1	7.6	10.8	14.5	16.1	16.9	17.7
Mean		9.9	13.7	16.0	17.2	18.5	17.7
No.		80	47	30	15	6	1
Smallest		7.2	10.8	13.8	15.4	15.9	17.7
Largest		12.7	16.8	19.2	20.4	20.9	17.7
Std error		0.1	0.2	0.2	0.4	0.8	
95% CI (+)		0.2	0.3	0.5	0.8	1.5	

nwdnlwag.d09

Table 16. Age-frequency and CPUE (fish/net-night) per inch class of walleye gill netted for 14 net-nights at Nolin River Lake in November 2009.

Age	Inch class														No.	CPUE	Std. Error	Age %	
	8	9	10	11	12	13	14	15	16	17	18	19	20	21					22
0	3	7	7													17	1.21		13.8
1				2	3	8	22	16	1							52	3.68	0.63	42.3
2							4	5	6	2	3	1				21	1.55	0.28	17.1
3									3	6	3	3				15	1.13	0.22	12.2
4									3	2	2		1	2		10	0.73	0.15	8.1
5									1			1	1	2	1	6	0.40	0.09	4.9
6											1					1	0.08	0.02	0.8
Total	3	7	7	2	3	8	26	21	14	10	9	5	2	4	1	123			
(%)	2.4	5.7	5.7	1.6	2.4	6.6	21.3	17.2	11.3	8.2	7.4	4.1	1.6	3.3	0.8				

nw dnrlgn.d09, nw dnlw ag.d09

Table 17. Population assessment for walleye based on fall gill netting at Nolin River Lake from 1991-2009 (scoring based on statewide assessment).

Parameter	Year																			
	1991		1996		1998		2000		2001		2002		2003		2006		2007		2009	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
CPUE age 1 and older	5.70	3	3.00	2	6.28	4	1.25	1	1	1	2.56	2	1.85	1	6.27	4	1.99	1	7.57	4
Mean length age 2+ at capture	15.8	1	15.0	1	15.5	1	16.2	2	17.8	3	17.5	3	16.9	2	16.6	2	15.9	1	16.6	2
CPUE >20.0 in	0.50	2	0.00	1	0.00	1	0.13	1	0.25	1	0.42	1	0.57	2	0.00	0	0.18	1	0.50	2
CPUE age 1	2.20	3	2.08	3	1.71	2	0.75	1	0.00	0	0.33	1	0.40	1	1.71	2	1.02	2	3.68	4
Instantaneous Mortality (z)															1.152		0.532		0.599	
Annual Mortality (A)%															68.4		41.3		45.1	
Total score		9		7		8		5		5		7		6		8		5		12
Assessment rating		F		F		F		P		P		F		F		F		P		G

Table 18. Number of fish and the relative weight (Wr) for each length group of walleye collected at Nolin River Lake during November 2009. Standard errors are in parentheses.

		Length group					
		10.0-14.9 in		15.0-19.9 in		>20.0 in	
No.	Wr	No.	Wr	No.	Wr		
43	91 (1)	56	90 (1)	6	94 (4)		

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Table 19. Length frequency and CPUE (fish/net-night) for white bass collected in 14 net-nights of sampling at Nolin River Lake during November 2009.

Species	Inch class														Total	CPUE	Std. Error
	4	5	6	7	8	9	10	11	12	13	14	15	16	17			
White bass	1		13	49	14	4	68	122	34	82	114	38	2	1	542	38.71	9.59

nw dnrlgn.d09

Table 20. Mean back calculated lengths (in) at each annulus for white bass collected at Nolin River Lake in November 2009.

Year class	No.	Age				
		1	2	3	4	5
2008	43	7.1				
2007	4	8.2	11.8			
2006	25	7.8	11.6	13.4		
2005	7	8.7	11.5	13.4	14.3	
2004	2	8.0	12.6	13.8	14.5	15.1
Mean		7.6	11.6	13.4	14.4	15.1
No.		81	38	34	9	2
Smallest		5.3	9	12.1	13.2	15.1
Largest		10.4	13.7	15.0	15.4	15.1
Std error		0.1	0.1	0.1	0.2	0.0
95% CI (+)		0.2	0.2	0.2	0.4	0.0

nwdnwbag.d09

Table 21. Age-frequency and CPUE (fish./net-night) per inch class of white bass gill netted for 14 net-nights at Nolin River Lake in November 2009.

Age	Inch class												No.	CPUE	Std error	Age (%)	
	4	5	6	7	8	9	10	11	12	13	14	15					
0	1		13	49	14									77	5.50		14.3
1						4	68	122	24					218	15.59	4.51	40.4
2									10	13				22	1.59	0.41	4.1
3										63	105	14		181	12.96	3.98	33.6
4										6	10	17		33	2.36	0.81	6.1
5												7		7	0.49	0.20	1.3
Total	1		13	49	14	4	68	122	34	82	115	38		539			
(%)	0.2		2.4	9.0	2.6	0.7	12.6	22.6	6.3	15.2	21.3	7.0					

nwdnwbag.d09, nwdnrfgn.d09

Table 22. Population assessment for white bass based on fall gill netting at Nolin River Lake from 1996-2009 (scoring based on statewide assessment).

Parameter	Year																			
	1996		1998		2000		2001		2002		2003		2006		2007		2009			
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score		
CPUE >age 1 fish	26	10	4	27.40	4	3.90	1	2.50	1	10.23	3	18.70	3	7.93	2	37.9	4	33.21	4	
Mean length age 2+ at capture	13.3	4	12.0	3	13.8	4	13.6	4	13.3	4	13.4	4	13.3	4	13.9	4	13.2	4		
CPUE \geq 12.0 in	14	80	4	22.00	4	2.80	2	1.60	1	5.25	3	6.21	3	4.27	2	26.6	4	19.36	4	
CPUE age 1	15	10	4	7.50	3	1.40	1	1.10	1	5.20	3	15.27	4	5.38	3	15.98	4	15.59	4	
Instantaneous Mortality (z)												1.387		1.134		0.717		0.629		
Annual Mortality (A)%												75.1		67.8		51.18		46.7		
Total score			16		14		8		7		13		14		11		16		16	
Assessment rating			E		E		F		F		G		E		G		E		E	

Table 23. Number of fish and the relative weight (Wr) for each length group of white bass collected at Nolin River Lake during November 2009. Standard errors are in parentheses.

Length group					
6.0-8.9 in		9.0-11.9 in		>12.0 in	
No.	Wr	No.	Wr	No.	Wr
31	96	110	92	162	92
	(1)		(1)		(1)

nwdnr1gn.d09

Table 24. Length frequency and CPUE (fish/net-night) for channel catfish collected in 14 net-nights of sampling at Nolin River Lake during November 2009.

Species	Inch class														Total	CPUE	Std. error				
	6	7	8	9	10	11	12	13	14	15	16	17	18	19				20	21	22	25
Channel catfish	1	3	2	3	2	4	4	4	12	9	7	8	16	9	7	8	2	1	98	7.00	1.14

nwdnr1gn.d09

Table 25. Number of fish and the relative weight (Wr) for each length group of channel catfish collected at Nolin River Lake during November 2009. Standard errors are in parentheses.

Length group					
11.0-15.9 in		16.0-23.9 in		>24.0 in	
No.	Wr	No.	Wr	No.	Wr
34	87	42	94	1	102
	(2)		(2)		

nwdnr1gn.d09

Table 26. Mean lengths (in) at each age for channel catfish collected at Nolin River Lake in November 2009.

	Age														
	1+	2+	3+	4+	5+	6+	7+	8+	9+	10+	15+				
Mean length	8.6	12.7	13.5	15.7	18.1	17.1	18.0	18.4	19.1	16.0	21.9				
No.	8	6	12	6	5	3	13	4	7	1	1				
Smallest	6.7	11.3	10.8	13.4	15.6	15.9	15.4	13.4	17.5	16.0	21.9				
Largest	10.1	13.7	15.8	17.8	21.0	18.2	22.2	25.4	22.7	16.0	21.9				

Table 27. Species composition, relative abundance and CPUE (fish/hr) of black bass collected during 4.5 hours of 30-minute diurnal electrofishing runs at Rough River Lake in April 2009.

Area	Species	Inch class																					Total	CPUE	Std. Error
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21				
Upper	Largemouth bass	1	10	8	26	20	24	5	27	38	58	48	33	20	11	7	5	4	5	1	1	1	344	137.60	7.41
	Spotted bass				2	2	2	5	5	9	7	4											34	13.60	6.45
Lower	Largemouth bass	1	10	8	13	10	8	12	23	27	25	44	32	15	9	14	4	9	8	1	1	273	136.50	14.08	
	Spotted bass				1	4	20	13	9	10	10	1										68	34.00	5.35	
Total	Largemouth bass	1	11	18	39	30	32	17	50	65	83	92	65	35	20	21	9	13	13	2	1	617	137.11	6.95	
	Spotted bass				1	6	22	18	14	19	17	5										103	22.89	5.36	

nw dripsd.d09

Table 28. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Rough River Lake during spring samples 1999-2009.

Year	Length group										Total	
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in			
	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2009	29.11	3.15	47.78	4.17	42.67	4.26	17.56	2.49	0.67	0.33	137.11	6.95
2008*												
2007	26.44	3.46	27.33	4.70	27.78	4.06	13.11	1.16	0.22	0.22	94.67	8.92
2006	21.11	2.58	28.67	10.06	28.22	4.38	11.33	2.81	0.44	0.29	89.33	16.73
2005	26.89	6.15	34.00	7.60	38.89	5.15	14.22	2.48	0.67	0.33	114.00	41.65
2004	31.11	3.86	35.56	5.12	12.89	2.16	9.78	1.08	0.22	0.22	89.33	9.50
2003	61.56	7.01	27.78	6.93	20.00	5.56	18.44	3.18	0.67	0.33	127.78	15.36
2002	7.33	1.70	7.11	2.29	2.00	0.88	1.56	0.44	0.00	0.00	18.00	3.82
2001	30.67	7.45	21.33	4.47	16.44	4.96	3.11	1.74	0.00	0.00	71.56	11.18
2000	15.11	3.45	32.89	4.31	21.78	2.76	5.33	2.11	1.78	0.97	75.11	6.42
1999	n/d		28.44	2.05	21.33	4.11	8.89	2.38	0.44	0.44	58.67	4.57

nwdrlpsd.d09

*Lake too high to sample

Table 29. PSD and RSD values obtained for each black bass species collected in spring electrofishing samples in each area of Rough River Lake during April 2009; 95% confidence intervals are in parentheses.

Area	Species	No. >stock size	PSD (+/- 95%)	RSD ^a (+/- 95%)
Upper	Largemouth bass	263	51 (+/-6)	13 (+/-4)
	Spotted bass	33	36 (+/-16)	3 (+/-6)
Lower	Largemouth bass	223	61 (+/-6)	20 (+/-5)
	Spotted bass	63	17 (+/-9)	0
Total	Largemouth bass	486	56 (+/-4)	16 (+/-3)
	Spotted bass	96	24 (+/-9)	1 (+/-2)

^a Largemouth bass = RSD₁₅, spotted bass = RSD₁₄.

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Table 30. Mean back calculated lengths (in) at each annulus for largemouth bass collected at Rough River Lake in April 2009.

Year class	No.	Age								
		1	2	3	4	5	6	7	8	9
2008	33	6.3								
2007	29	5.6	9.5							
2006	30	5.3	10.2	12.4						
2005	14	6.2	10.5	12.9	14.7					
2004	10	5.3	11.0	13.5	15.1	16.4				
2003	6	5.1	10.5	12.9	14.4	15.7	16.8			
2002	4	6.4	11.9	15.1	16.9	18.1	19.2	20.0		
2000	1	6.0	11.0	13.8	15.0	15.8	16.5	17.3	18.3	19.3
Mean		5.7	10.2	12.9	15.1	16.5	17.7	19.5	18.3	19.3
No.		127	94	65	35	21	11	5	0	1
Smallest		3.3	7.6	8.9	12.1	13.0	14.5	17.3	18.3	19.3
Largest		9.6	13.8	17.6	18.7	19.7	20.8	21.3	18.3	19.3
Std error		0.1	0.1	0.2	0.2	0.4	0.6	0.7		
95% CI (+)		0.2	0.2	0.3	0.5	0.7	1.1	1.3		

nwdrimag.d09

Table 31. Age-frequency and CPUE (fish/hr) per inch class of largemouth bass electrofished from Rough River Lake in April 2009.

Age	Inch class																					No.	CPUE	Std Error	Age (%)
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21						
1	12	18	39	30	23	6	6	11	50	52	25										128	28.44	3.36	20.7	
2					9																	147	32.66	2.74	23.8
3									13	58	92											220	48.84	4.65	35.6
4											20	12	8	3								55	12.24	0.83	8.9
5											6	8	8	8	3	10						35	7.77	0.97	5.7
6											6			4	3	3						20	4.34	0.46	3.2
7																	7	2	1			10	2.11	0.59	1.6
9																	3					3	0.72	0.19	0.5
Total	12	18	39	30	32	17	50	65	83	92	65	35	20	21	9	13	13	2	1		617				
(%)	1.9	2.9	6.3	4.9	5.2	2.7	8.1	10.5	13.4	14.9	10.5	5.7	3.2	3.4	1.4	2.1	2.1	0.3	0.2						

nw drlmag.d09, nw drlpsd.d09

Table 32. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Rough River Lake during spring samples 2002-2009.

Age	Year								
	2002	2003	2004	2005	2006	2007	2008*	2009	
1	7.93	44.30	32.82	28.04	21.98	27.06		28.44	
2	6.19	25.63	34.10	34.65	29.91	28.42		32.66	
3	2.33	11.40	12.00	32.94	24.57	25.36		48.84	
4	0.22	8.00	5.75	12.33	7.76	8.79		12.24	
5	0.00	0.00	1.01	1.14	0.58	0.86		7.77	
6	0.00	0.00	2.31	2.44	1.20	1.51		4.34	
7	0.00	0.00	0.89	0.44	1.78	1.56		2.11	
8								0.00	
9								0.72	

nw drlpsd.d09, nw drlmag.d09

*Lake too high to sample

Table 33. Population assessment for largemouth bass based on spring electrofishing at Rough River Lake from 1999-2009 (scoring based on statewide assessment)

Parameter	Year																	
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2009								
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score						
Mean length age 3 at capture	12.5	4	12.5	4	12.5	4	12.5	4	12.5	4	13.6	4	13.6	4	12.6	4		
Spring CPUE age 1	2.96	1	10.52	1	28.00	2	7.93	1	44.30	3	32.82	3	21.98	2	27.06	2	28.44	2
Spring CPUE 12.0-14.9 in	21.33	2	21.78	2	16.44	2	2.00	1	20.00	2	12.89	1	28.22	3	27.78	3	42.67	4
Spring CPUE ≥15.0 in	8.89	2	5.33	2	3.11	1	1.56	1	18.4	3	9.78	2	11.33	2	13.11	3	17.56	3
Spring CPUE ≥20.0 in	0.44	2	1.78	2	0.00	1	0.00	1	0.67	2	0.22	2	0.44	2	0.22	2	0.67	2
Instantaneous Mortality (z)					0.797	0.862	0.759	0.773	0.576	0.884								
Annual Mortality (A)%					54.9	57.8	53.2	53.8	42.3	58.7								

60

Table 34. Length frequency and CPUE (fish/net-night) for each species of crappie collected in 80 net-nights of sampling at Rough River Lake during December 2009.

Species	Inch class													Total	CPUE	Std. error
	2	3	4	5	6	7	8	9	10	11	12	13				
White crappie	15	337	639	278	1089	258	280	209	74	42	14	4	3239	40.49	6.34	
Black crappie	1	33	2	15	5	3	9	12	7		2	89	1.11	0.25		

nw.drrfn.d09

Table 35. PSD and RSD₁₀ values calculated for crappie collected in trap nets from Rough River Lake during December 2009; 95% confidence limits are in parentheses.

Lake/Species	No.	PSD	RSD ₁₀
Rough River Lake			
White crappie	2,248	28 (+/- 2)	6 (+/-1)
Black crappie	53	57 (+/-13)	17 (+/-10)

nwdrltn.d09

Table 36. Mean back calculated lengths (in) at each annulus for white crappie collected at Rough River Lake in December 2009.

Year class	No.	Age			
		1	2	3	4
2008	54	4.4			
2007	6	5.4	8.8		
2006	12	4.8	8.0	9.9	
2005	11	5.0	7.8	9.4	10.6
Mean		4.6	8.1	9.7	10.6
No.		83	29	23	11
Smallest		3.1	5.9	6.6	7.6
Largest		6.3	9.8	11.1	12.1
Std error		0.1	0.2	0.2	0.4
95% CI (+)		0.1	0.3	0.4	0.7

nwdrlcag.d09

Table 37. Age-frequency and CPUE (fish/net-night) per inch class of white crappie trap netted for 80 net-nights at Rough River Lake in December 2009.

Age	Inch class												No.	CPUE	Std. error	Age (%)	
	2	3	4	5	6	7	8	9	10	11	12	13					
0	15	337	639											991	12.39		30.6
1				278	1089	226	249	209	37					2088	26.10	4.09	64.5
2						32			6	14	1			54	0.67	0.10	1.7
3									31	14	6			50	0.63	0.10	1.5
4							31			14	7	4		56	0.70	0.12	1.7
Total	15	337	639	278	1089	258	280	209	74	42	14	4		3,239			
(%)	0.5	10.4	19.7	8.6	33.6	8.0	8.6	6.4	2.3	1.3	0.5	0.1					

nwdrltn.d09, nwdrlcag.d09

Table 38. Population assessment for white crappie based on fall trapnetting at Rough River Lake from 1998-2009 (scoring based on statewide assessment).

Parameter	Year																	
	1998		2000		2002		2003		2004		2005		2006		2008		2009	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
CPUE (excluding age 0)	12.11	2	4.03	1	11.99	2	13.10	3	8.22	2	4.64	2	8.16	2	4.64	2	28.10	4
CPUE age 1	7.50	3	1.36	1	10.02	3	10.8	3	5.5	2	3.5	2	7.52	3	3.10	2	26.10	4
CPUE age 0	1.87	1	2.12	1	4.26	2	18.85	4	1.8	1	4.61	2	2.33	1	20.00	4	12.39	4
CPUE ≥8.0 in	5.46	3	3.07	2	8.78	3	9.92	3	7.10	3	3.25	2	3.89	2	4.31	2	7.79	3
Mean length age 2+ at capture	9.5	3	9.2	3	9.5	3	10.6	4	10.4	4	10.4	4	10.7	4	10.7	4	10.8	4
Instantaneous Mortality (z)	1.231		1.160		0.871		1.066		0.734		0.869		2.180		1.030		2.04	
Annual Mortality (A)%	70.8		68.7		58.5		65.5		52.0		58.1		88.7		64.3		87.1	
Total score		12		8		13		17		12		12		12		14		19
Assessment rating		F		F		G		G		F		F		F		G		E

Table 39. Relative abundance and CPUE (fish/hr) of largemouth bass collected during 2.5 hours of 30-minute diurnal electrofishing runs at Lake Malone in April 2009.

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					
Largemouth bass	3	3	2	6	11	23	17	10	24	40	41	47	33	18	11	9	8	6	7	1	320	128.00	11.71		

Table 40. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Lake Malone 1999-2009.

Year	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in		Total	
	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2009	10.00	1.41	29.60	4.40	51.20	7.55	37.20	3.56	5.60	0.40	128.00	11.71
2008	18.80	6.47	78.80	6.59	77.20	4.96	43.60	8.06	6.40	1.47	218.40	12.35
2007	29.20	3.98	80.40	10.40	30.80	1.96	37.60	10.34	3.60	1.33	178.00	17.80
2006	31.60	3.71	81.60	14.33	22.40	2.14	28.00	5.87	5.20	1.62	163.60	19.82
2005	32.40	4.83	69.20	14.31	32.00	8.74	53.60	5.71	8.40	1.17	187.20	30.12
2004	28.40	3.87	53.60	5.74	26.40	4.17	53.20	3.93	6.00	1.55	161.60	12.75
2003	57.00	3.32	76.50	6.75	35.00	5.00	57.50	4.86	9.50	2.75	226.00	12.08
2002	8.57	3.32	43.43	4.97	43.43	8.48	41.71	7.55	8.00	3.02	137.14	17.45
2001	18.00	8.05	66.00	12.03	50.00	7.98	31.33	6.32	0.67	0.67	165.33	15.55
2000	13.33	3.37	46.00	4.23	51.33	7.83	24.00	4.00	2.00	0.89	134.67	14.52
1999	n/d		48.67	9.82	61.33	6.98	23.33	4.89	2.67	1.33	133.33	12.72

Table 41. PSD and RSD₁₅ values obtained for largemouth bass taken in spring electrofishing samples at Lake Malone, Carpenter Lake, Kingfisher Lakes, Mauzy Lake, Washburn Lake, Audubon State Park Lake and Merlin Lake during April 2009; 95% confidence intervals are in parentheses.

Lake	Species	No. ≥8.0 in	PSD (+/- 95%)		RSD ₁₅ (+/- 95%)	
			PSD (+/- 95%)	RSD ₁₅ (+/- 95%)		
Malone	Largemouth	295	75 (+/- 5)	31 (+/- 5)		
Carpenter	Largemouth	145	14 (+/- 6)	4 (+/- 3)		
New Kingfisher	Largemouth	21	38 (+/- 21)	0		
Old Kingfisher	Largemouth	15	67 (+/- 25)	33 (+/- 25)		
Washburn	Largemouth	35	11 (+/- 11)	11 (+/- 11)		
Audubon St. Pk.	Largemouth	24	17 (+/- 15)	13 (+/- 14)		
Merlin Lake (P-WMA)	Largemouth	52	19 (+/- 11)	2 (+/- 4)		

Table 42. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Lake Malone during spring samples 2002-2009.

Age	Year									
	2002*	2003	2004	2005	2006	2007	2008	2009		
1	6.00	35.00	19.00	19.00	20.20	29.20	16.40	8.80		
2	28.3	69.16	37.54	49.74	59.13	43.00	26.38	16.42		
3	28.85	34.51	29.81	37.52	36.43	9.62	11.06	2.83		
4	31.09	30.13	23.43	27.49	20.01	23.74	48.92	20.12		
5	15.78	16.03	13.93	13.87	8.65	21.14	40.20	23.02		
6	6.84	9.31	8.74	8.34	4.45	25.04	40.20	30.91		
7	7.37	12.39	12.24	11.85	5.42	12.25	12.77	12.29		
8	2.86	7.03	6.77	7.89	3.17	0.00	0.00	0.00		
9	5.71	9.53	7.57	9.49	4.37	0.00	0.00	0.00		
10	1.49	1.90	1.36	1.60	0.96	6.00	5.20	3.20		

*nocturnal sample

nwdlrmlg.d07

Table 43. Population assessment for largemouth bass based on spring electrofishing at Lake Malone from 2000-2009 (scoring based on statewide assessment).

Parameter	Year																						
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009													
Mean length age 3 at capture	12.9	4	12.9	4	11.5	4	11.5	4	11.5	4	11.5	4	10.3	2	10.3	2	10.3	2	10.3	2			
Spring CPUE age 1	2.44	1	14.00	1	6.00	1	35.00	2	19.00	2	19.00	2	20.20	2	29.20	2	16.40	2	16.40	2	8.80	1	
Spring CPUE 12.0-14.9 in	51.33	4	50.00	4	43.43	4	35.00	3	26.40	3	32.00	3	22.40	2	30.80	2	77.20	4	43.60	4	51.20	4	
Spring CPUE ≥15.0 in	24.00	3	31.33	4	41.71	4	48.00	4	53.20	4	53.60	4	28.00	3	37.60	4	43.60	4	43.60	4	37.20	4	
Spring CPUE ≥20.0 in	2.00	3	0.67	1	8.00	4	8.50	4	6.00	4	8.40	4	5.20	4	3.60	3	6.40	4	6.40	4	5.60	4	
Instantaneous Mortality (z)				0.416			0.365		0.387		0.526		0.330		0.357		0.293						
Annual Mortality (A)%				34.1			31.1		32.0		40.9		28.1		30.0		25.4						
Total score	15		14		17		17		17		17		15		13		16		16		15		
Assessment rating	G		G		E		E		E		E		G		G		G		G		G		

nw dlmlag.d07. nw dlmpsd.d09

Table 44. Relative abundance and CPUE (fish/hr) of largemouth bass collected during 2.5 hours of 30-minute diurnal electrofishing runs at Lake Malone in October 2009.

Area	Species	Inch class																					Total CPUE	Std. Error		
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21					
Total	Largemouth bass	2	8	15	7	14	11	9	20	14	13	22	30	21	17	11	8	1	3	1	3	1	3	230	92.00	10.53

nw dlmlmb.d09

Table 45. Number of fish and relative weight (Wr) for length groups of largemouth bass collected in NWFD lakes during October 2009. Standard errors are in parentheses.

Species	Location	8.0-11.9 in			12.0-14.9 in			>15.0 in		
		No.	Wr	Std. error	No.	Wr	Std. error	No.	Wr	Std. error
Largemouth Bass	Malone	31	86 (2)		40	92 (2)		31	90 (2)	
Largemouth Bass	Carpenter	72	87 (1)		4	93 (4)		2	98 (7)	
Largemouth Bass	New Kingfisher	25	91 (1)		1	88 (0)		1	91 (0)	
Largemouth Bass	Washburn	38	82 (1)							
Largemouth Bass	Audubon St. Pk.	15	83 (1)		3	90 (3)		5	97 (3)	

Table 46. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in fall electrofishing samples at Lake Malone 2002-2009

Year class	Area	Age 0			Age 0 > 5.0 in			Age 1						
		Mean length	Std. error	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error				
2002	Total	4.3			39.20			14.40			35.00			5.12
2003	Total	3.1			103.20			2.40			19.00			2.88
2004	Total	4.1	0.07	49.20	10.73	8.40	1.72	19.00	5.00	2.08	20.20	2.08	3.98	7.14
2005	Total	4.9	0.09	50.00	10.00	25.50	3.71	29.20	3.98	8.80	1.02			
2006	Total	5.2	0.07	65.60	5.15	42.40	2.58	16.40	1.02					
2007	Total	4.5	0.17	30.40	7.36	11.20	2.37	8.80	1.02					
2008	Total	4.6	0.12	14.80	4.76	6.00	2.37	8.80	1.02					
2009	Total	4.1	0.14	12.00	4.43	2.00	0.63							

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Table 47. Length frequency and CPUE (fish/hr) for bluegill and redear sunfish collected in 1,25 hours of electrofishing at Lake Malone in May 2009.

Species	1	Inch class										Total CPUE	Std. error				
		2	3	4	5	6	7	8	9	10	11						
Bluegill	1	30	55	115	52	32	33								318	254.40	44.31
Redear sunfish								1	1	7	5	2	16	12.80	4.33		

nwdlmbg.d09

Table 48. Spring electrofishing CPUE (fish/hr) for each length group of bluegill and redear sunfish collected at Lake Malone.

Bluegill	Length group												
	<3.0 in		3.0-5.9 in		6.0-7.9 in		>8.0 in		≥10.0 in		Total		
	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	
2009	24.80	6.36	177.60	35.01	52.00	16.62	0.00					254.40	44.31
2008	70.40	17.15	343.20	34.39	100.00	19.71	0.80	0.80	0.00			514.40	44.49
2007	75.20	17.12	324.00	28.85	90.40	9.77	0.00		0.00			489.60	39.89
2006	48.00	18.51	320.00	36.19	92.80	13.76	0.80	0.80				461.60	57.01
2005	27.69	8.21	376.92	44.63	46.15	10.76	0.00					450.77	54.06
2004	16.15	9.62	300.77	49.90	73.08	15.44	0.00					390.00	56.47
2003	25.38	6.49	173.08	24.06	22.31	6.22	0.00					220.77	25.54
2002	16.67	6.21	331.67	40.59	59.17	10.50	0.00					407.50	50.54
2001	7.33	2.17	222.00	30.51	46.67	8.98	0.67	0.67				276.67	34.54
2000	21.33	5.23	130.67	21.95	50.67	15.79	2.00	0.89				204.67	30.51
1999	53.33	14.30	20.67	4.31	0.67	0.67	0.00					74.67	18.03

Redear	Length group											
	<3.0 in		3.0-5.9 in		6.0-7.9 in		>8.0 in		≥10.0 in		Total	
	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2009	0.00		0.00		0.80	0.80	12.00	4.17	5.60	2.08	12.80	4.33
2008	0.00		3.20	1.77	7.20	3.86	17.60	4.89	7.20	2.78	28.00	8.11
2007	0.00		4.80	3.99	9.60	4.74	16.80	4.84	12.00	4.50	31.20	9.35
2006	0.00		4.80	2.13	1.60	1.60	5.60	3.38	2.40	2.40	12.00	6.56
2005	0.00		0.77	0.77	3.08	1.26	9.23	3.59	4.62	2.61	13.08	3.98
2004	0.00		1.54	1.03	0.77	0.77	2.31	1.64	0.77	0.77	4.62	2.05
2003	0.00		0.00		0.77	0.77	4.62	1.7	1.54	1.03	5.38	2.00

Table 49. PSD and RSD values obtained for bluegill and redear sunfish collected in spring electrofishing samples at NWFD lakes during April 2009; 95% confidence intervals are in parentheses.

Lake	Species	No.	PSD (+/- 95%)	RSD ^a (+/- 95%)
		≥stock size		
Malone	Bluegill	287	23 (+/- 5)	0
	Redear sunfish	16	100	87 (+/- 17)
Carpenter	Bluegill	198	53 (+/- 7)	0
	Redear sunfish	36	89 (+/- 10)	14 (+/- 11)
New Kingfisher	Bluegill	155	18 (+/-6)	0
Old Kingfisher	Bluegill	242	37 (+/- 5)	0
Washburn	Bluegill	109	63 (+/- 9)	0
Audubon St. Pk.	Bluegill	107	34 (+/- 9)	0

^a Bluegill = RSD₈, redear = RSD₉

Table 50. Mean back calculated lengths (in) at each annulus for bluegill collected at Lake Malone in May 2009.

Year class	No.	Age						
		1	2	3	4	5	6	7
2008	10	2.2						
2007	14	2.2	3.4					
2006	16	1.6	3.5	4.7				
2005	11	2.8	4.6	5.9	6.5			
2004	7	3.2	4.9	5.9	6.4	6.8		
2003	1	2.5	4.4	5.6	6.1	6.5	6.9	
2002	1	2.0	3.6	4.9	5.8	6.3	6.7	7.4
Mean		2.3	4.0	5.3	6.4	6.7	6.8	7.4
No.		60	50	36	20	9	2	1
Smallest		0.8	2.7	3.6	5.5	5.8	6.7	7.4
Largest		4.0	5.3	6.8	7.3	7.9	6.9	7.4
Std error		0.1	0.1	0.1	0.1	0.2	0.1	
95% CI (+)		0.2	0.2	0.2	0.2	0.4	0.2	

nwdmbag.d09

Table 51. Population assessment for bluegill based on spring electrofishing at Lake Malone from 2000-2009 (scoring based on statewide criteria).

Parameter	Year															
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009						
Mean length age 2+ at capture	3.9	2	3.9	2	3.9	2	3.9	2	4.4	2	4.4	2	4.4	2	4.9	3
Years to 6.0 in	3-3+	3	3-3+	3	3-3+	3	3-3+	3	3-3+	3	3-3+	3	3-3+	3	3-3+	3
CPUE ≥ 6.0 in	52.67	3	47.33	2	56.80	3	7.75	1	73.08	3	48.00	2	93.60	4	100.80	4
CPUE ≥ 8.0 in	2.00	2	0.67	2	0.00	1	0.00	1	0.00	1	0.00	1	0.80	2	0	1
Instantaneous Mortality (z)	1.028										0.452	0.573	0.599	0.957		
Annual Mortality (A)%	64.2										36.4	43.6	45.0	61.6		
Total score	10	9	9	7	9	8	11	10	11	10	11	10	11	11	9	9
Assessment rating	F	F	F	P	F	F	G	F	G	F	G	F	G	G	F	F

nw dmbag.d09

Table 52. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.75 hours of 15-minute diurnal electrofishing runs at Carpenter Lake in April 2009.

Species	Inch class																			Total	CPUE	Std. error
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19					
Largemouth bass	1	4	46	26	21	34	38	32	9	1	4	2	2	1	1	222	296.00	27.23				

nw dcapsd.d09

Table 53. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Carpenter Lake 1999-2009.

Year	Length group												
	<8.0 in			8.0-11.9 in			12.0-14.9 in			>15.0 in			Total
	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	
2009	102.67	18.67	166.67	26.26	18.67	4.81	8.00	2.31	296.00	27.23			
2008	136.00	17.66	229.00	28.82	9.00	2.52	11.00	4.12	385.00	50.32			
2007	45.33	7.42	128.00	24.33	12.00	2.31	10.67	3.53	196.00	31.75			
2006	97.33	12.00	134.67	8.74	24.00	1.33	9.33	2.31	265.33	55.44			
2005	157.33	3.53	165.33	48.57	30.67	3.53	2.67	1.33	356.00	54.60			
2004	80.00	16.65	128.00	28.00	22.67	3.53	21.33	8.74	252.00	47.72			
2003	181.33	49.33	97.33	11.39	18.67	4.81	36.00	12.22	333.33	63.43			
2002	12.00	4.62	52.00	4.62	12.00	0.00	21.33	3.53	97.33	4.81			
2001	14.67	8.74	29.33	5.33	90.67	9.33	66.67	2.67	201.33	17.64			
2000	2.67	1.33	45.33	7.06	48.00	2.31	0.00	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 2002-2009.

Age	Year								
	2002	2003	2004	2005	2006	2007	2008	2009	
1	12.00	162.67	56.00	132.00	78.67	39.87	120.30	97.87	
2	36.93	57.60	90.13	88.93	101.60	64.27	58.50	45.07	
3	25.73	55.73	56.53	107.07	55.73	61.20	150.87	85.07	
4	1.33	2.67	4.00	0.00	1.33	17.33	39.17	46.22	
5	0.00	0.00	0.00	0.00	5.33	1.33	4.17	7.11	
6	10.67	14.67	8.00	0.00	0.00	0.00	0.00	0.00	

nwdcalag.d07. nwdcapsd.d09

Table 55. Population assessment for largemouth bass based on spring electrofishing at Carpenter Lake from 2000-2009 (scoring based on statewide assessment).

Parameter	Year									
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age 3 at capture	11.6	4	11.6	4	11.6	4	11.6	4	10.3	2
Spring CPUE age 1	2.67	1	8.00	1	12.00	1	162.67	4	56.00	4
Spring CPUE 12.0-14.9 in	48.00	3	90.67	4	12.00	1	54.67	4	22.67	2
Spring CPUE ≥15.0 in	0.00	1	66.67	4	21.33	4	36.00	4	21.33	3
Spring CPUE ≥20.0 in	0.00	0	1.33	2	0.00	0	1.33	2	2.67	3
Instantaneous Mortality (z)				0.943	1.155			1.160	0.560	0.561
Annual Mortality (A)%				61.1	68.5			68.67	42.86	42.94
Total score	9	15	9	18	16	11	13	9	11	9
Assessment rating	F	G	F	E	G	G	G	F	G	F

nw dcllag.d07 nw dcapd.d09

Table 56. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.75 hours of 15-minute diurnal electrofishing runs at Carpenter Lake in October 2009.

Species	Inch class																	Total	CPUE	Std. Error
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17					
Largemouth bass	2	24	34	4	4	4	29	23	17	4	1	3	1	1	1	147	196.00	18.33		

nw dcalmb.d09

Table 57. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in fall electrofishing samples at Carpenter Lake 2007-2009.

Year class	Area	Age 0			Age 1		
		Mean length	Std. error	CPUE	Mean length	Std. error	CPUE
2007	Total	5.7	0.12	52.00	20.72	41.00	15.00
2008	Total	5.7	0.05	113.00	15.78	102.00	13.22
2009	Total	5.0	0.08	85.33	18.52	50.67	15.38

nwdcalmb.d09

Table 58. Length frequency and CPUE (fish/hr) for bluegill and redear sunfish collected during 0.75 hours of electrofishing at Carpenter Lake in May 2009.

Species	Inch class										Total	CPUE	Std. error
	2	3	4	5	6	7	8	9	10				
Bluegill	13	15	41	37	53	52					211	281.33	42.85
Redear sunfish			1	3	12	15	3	2	36	48.00	13.86		

nwdcabg.d09

Table 59. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Carpenter Lake during spring samples 1999-2009.

Year	Length group												Total		
	<3.0 in			3.0-5.9 in			6.0-7.9 in			>8.0 in			>10.0 in		
CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2009	17.33	9.56	124.00	24.42	140.00	17.86	0.00					281.33	42.85		
2008	0.00		88.00	18.76	150.00	50.74	0.00					238.00	68.54		
2007	2.67	2.67	61.33	17.73	168.00	38.53	1.33	1.33				233.33	9.10		
2006	1.33	1.33	57.33	10.00	102.67	12.12	0.00					161.33	21.31		
2005	12.09	9.77	190.11	17.09	98.90	6.80	18.68	9.02				319.78	23.07		
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 60. Electrofishing catch rate (fish/hr) for each age of bluegill collected from Carpenter Lake during spring samples 2002-2009.

Age	Year								
	2002	2003	2004	2005	2006	2007	2008	2009	2009
1	2.30	7.69	12.31	10.99	4.39	15.11	120.30	44.48	
2	14.71	98.80	25.23	180.24	121.69	27.42	58.50	62.32	
3	9.43	27.26	33.23	66.76	32.09	108.67	150.87	97.73	
4	2.30	7.26	6.15	26.62	2.22	80.80	39.17	76.80	
5	0.00	0.00	0.00	0.00	0.00	1.33	4.17	0.00	

nwdcabg.g09, nwdcabag.d07

Table 61. Population assessment for bluegill based on spring electrofishing at Carpenter Lake from 2000-2009 (scoring based on statewide assessment).

Parameter	Year															
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009						
Mean length age 2+ at capture	5.6	4	5.6	4	5.6	4	5.6	4	4.6	3	4.6	3	4.6	3		
Years to 6.0 in	2-2+	4	2-2+	4	2-2+	4	2-2+	4	2-2+	4	3-3+	3	3-3+	3		
CPUE \geq 6.0 in	22.67	1	145.67	4	18.39	1	53.33	3	47.69	2	117.58	4	169.33	4	140.00	4
CPUE \geq 8.0 in	12.00	3	41.33	4	1.15	1	4.00	2	1.54	2	18.68	4	0.00	0	0.00	0
Instantaneous Mortality (z)				1.427			1.657	0.386	0.571							
Annual Mortality (A)				76.0			80.9	32.0	43.9							
Total score	12	16	10	13	12	16	12	12	10	12	12	10	10	10	10	10
Assessment rating	G	E	F	G	G	E	G	G	F	G	G	F	F	F	F	F

Table 62. Length frequency of channel catfish collected during 3 nights of tandem (3 nets) hoop net sampling at Carpenter Lake during November 2009.

Species	Inch class																			Total	
	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27		28
Channel catfish nw dcachn.d09	2	7	9	7	2	5	5	5	5	4				1	1	1	1	1	1	1	55

Table 63. Mean length (in) at capture for each age of channel catfish collected from Carpenter Lake in November 2009.

	Age			
	1+	2+	3+	4+
Mean length	11.5	15.7	17.9	20.5
No.	24	20	4	2
Smallest	9.6	12.9	17.2	18.3
Largest	13.4	18.4	18.4	22.6

Table 64. Fishery statistics derived from a daytime creel survey at Carpenter Lake (64 acres) from 1 April through 31 October 2009.

<u>Fishing trips</u>		
No. of fishing trips (per acre)	2,296	(33.28)
<u>Fishing pressure</u>		
Total man-hours (S.E.) ^a	6,289	(166.57)
Man-hours/acre	91.14	
<u>Catch/harvest</u>		
No. of fish caught (S.E.)	11,187	(1,072.06)
No. of fish harvested (S.E.)	6,944	(3,276.22)
Lb of fish harvested	2,298	
<u>Harvest rates</u>		
Fish/hour	1.08	
Fish/acre	100.64	
Lb/acre	33.3	
<u>Catch rates</u>		
Fish/hour	1.75	
Fish/acre	162.13	
<u>Miscellaneous characteristics (%)</u>		
Male	84.86%	
Female	15.14%	
Resident	99.27%	
Non-resident	0.73%	
<u>Method (%)</u>		
Still fishing	78.60%	
Casting	18.63%	
Fly fishing	0.58%	
Trolling	2.18%	
<u>Mode (%)</u>		
Boat	68.7	
Bank	7.71	
Dock	23.58	

t < 0.5%

^aS.E. = standard error

Table 65. Fish harvest statistics derived from a creel survey at Carpenter Lake (64 acres) from 1 April through 31 October 2009.

	Flathead catfish	Channel catfish	Green sunfish	Warmouth	Redear sunfish	Bluegill	Largemouth bass	White crappie	Black crappie	Black bass group	Catfish group	Panfish group	Crappie group	illegal bass	Anything
No. caught (per acre)	4.33 0.06	720.36 10.44	3.50 0.05	28.146 3.79	177.48 2.57	7050.03 102.32	17.10.32 24.79	10.86 0.16	1225.77 17.77	17.10.32 24.79	724.69 10.50	7,502.47 103.73	1236.62 17.92	12.98 0.19	
No. harvested (per acre)	4.33 0.06	493.82 7.15		88.98 1.29	165.33 2.40	5133.53 74.15	48.51 0.70	3.50 0.05	110.29 14.64	48.51 0.70	498.15 7.22	53,70.85 77.84	103.79 14.69	12.98 0.19	
% of total no. harvested	0.06	7.11		1.28	2.38	73.66	0.70	0.05	14.55	0.70	7.17	77.34	14.60	0.19	
Lb. harvested (per acre)	3.00 0.04	564.40 8.18		20.90 0.30	66.00 0.96	1553.80 15.27	48.60 0.70	2.20 0.03	532.50 7.72	48.60 0.70	567.40 8.22	140.70 15.53	534.70 7.75	6.30 0.09	
% of total lb. harvested	0.13	24.56		0.91	2.87	45.86	2.11	0.10	23.16	2.12	24.69	49.65	23.27	0.27	
Mean length (in)	12.00	15.13		6.78	8.35	6.68	12.63	11.00	10.14					10.00	
Mean weight (lb)	0.65	1.14		0.21	0.40	0.19	1.02	0.63	0.57					0.49	
No. of fishing trips for that species										343.82	383.94	1090.30	293.74		184.27
% of all trips										11.97	15.72	47.49	12.79		8.03
Hours fished for that species (per acre)										94.166 13.65	105.154 15.24	2,986.15 43.28	804.50 11.66		504.69 7.31
No. harvested fishing for that species										33.00	363.00	5,082.00	939.00		
Lb. harvested fishing for that species										30.10	429.80	1081.20	491.50		
No./hour harvested fishing for that species										0.03	0.40	164	0.86		
% success fishing for that species										3.88	28.21	49.65	53.75		

Table 66. Length distribution for each species of fish harvested or released at Carpenter Lake from 1 April - 31 October 2009.

Species	Inch class																		
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
Channel catfish																			
Harvested				4				4											
Sublegal			4	12	59	47	39	16	31	4	4	121	61	24	53	4	28	4	
Flathead Catfish																			
Harvested										4									
Sublegal																			
White crappie																			
Released																			
Harvested									3										
Sublegal					4	3													
Black Crappie																			
Released																			
Harvested			4	4	54	221	459	221	42										
Sublegal			8	49	61	45	45	7											
Redear																			
Harvested			8	12	81	48	8	8											
Sublegal			8		4														
Warmouth																			
Harvested			8	72	9														
Sublegal			4	52	94	22													
Bluegill																			
Harvested			53	1,173	3,100	786	5												
Sublegal			49	645	900	288	61												
Largemouth bass																			
Harvested										32	12		5						
Released										78	47	4	4	4					
Sublegal					255	365	655	243	3										3
Illegal Bass																			
Harvested																			13

Table 67. Monthly black bass angling success at Carpenter Lake during 1 April - 31 Oct. 2009 creel survey period; data does not include bass <8.0 in that were caught and released.

Month	Total no. of bass caught	Total no. of bass harvested	No. of black bass fishing trips	Hours fished by bass anglers	Bass caught by bass anglers	Bass caught/hour by bass anglers	Bass harvested by bass anglers	Bass harvested/hour by bass anglers
Apr	567.00	10.00	47.00	130.00	346	1.72	3	0.02
May	429.00	22.00	87.00	238.00	347	1.58	22	0.10
Jun	333.00	8.00	85.00	234.00	306	1.31	8	0.03
Jul	251.00	0.00	51.00	139.00	173	1.48	0	0.00
Aug	18.00	0.00	29.00	81.00	15	0.37	0	0.00
Sep	26.00	4.00	16.00	44.00	0	0.00	0	0.00
Oct	87.00	5.00	28.00	77.00	61	0.75	0	0.00
Total	1,711.00	49.00	343.00	943.00	1,248		33	
Mean						1.03		0.02

Table 68. Black bass catch and harvest statistics derived from a creel survey at Carpenter Lake (64 a) from 1 April - 31 October 2009.

	Largemouth bass					
	Harvest			Catch and release		
	12.0-14.9 in	>15.0 in	>20.0 in	8.0-11.9 in	12.0-14.9 in	>15.0 in
Total no. of bass	44	4	0	1,518	128	3
% of black bass harvested by no.			100.00			
Total weight of fish (lb)			48.60			
% of bass harvested by weight			100.00			
Mean length			12.63			
Mean weight			1.02			
Rate (f/hr)			0.01			

Table 69. Length frequency, and CPUE (fish/hr) of largemouth bass collected during 0.37 hours of 7.5-minute diurnal electrofishing runs at New Kingfisher Lake in April 2009.

	Inch class													Total	CPUE	Std. Error
	3	4	5	6	7	8	9	10	11	12	13	4				
Largemouth bass	4	11	8	10	8	8	6	2	2	2	3	4	4	62.00	165.33	37.33

nw dinkpsd.d09

*Major fish kill 9/5/08

Table 70. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at New Kingfisher Lake during spring samples 1999-2009.

Year	Length group												Total	
	<8.0 in			8.0-11.9 in			12.0-14.9 in			>15.0 in			CPUE	Std. err.
2009	109.33	37.33	37.33	24.67	24.67	2.67	21.33	21.33	2.67	2.67	0.00	0.00	165.33	37.33
2008	282.67	37.33	37.33	240.00	240.00	33.31	56.00	56.00	9.24	9.24	0.00	0.00	578.67	71.75
2007	98.67	27.84	27.84	392.00	392.00	92.72	21.33	21.33	2.67	2.67	2.67	2.67	514.67	112.79
2006	189.33	14.11	14.11	333.33	333.33	46.26	10.67	10.67	2.67	2.67	0.00	0.00	533.33	62.88
2005	287.18	97.44	97.44	428.21	428.21	53.54	41.03	41.03	6.78	6.78	12.82	5.13	769.23	141.21
2004	161.54	45.07	45.07	243.59	243.59	45.58	12.82	12.82	6.78	6.78	2.56	2.56	420.51	92.45
2003	105.56	28.19	28.19	425.00	425.00	55.49	8.33	8.33	4.81	4.81	0.00	0.00	538.89	59.77
2002	116.28			258.14	258.14		4.65	4.65			0.00	0.00	379.07	
2001	89.74			364.10	364.10		20.51	20.51			2.56	2.56	476.91	
2000	137.78			493.33	493.33		24.44	24.44			6.67	6.67	662.22	
1999	n/d			315.56	315.56		17.78	17.78			2.22	2.22	335.56	

*Major fish kill 9/5/08

Table 71. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from New Kingfisher Lake during spring samples 2002-2009.

Age	Year								
	2002	2003	2004	2005	2006	2007	2008	2009	
1	116.28	57.69	94.87	248.72	149.33	96.00	250.67	77.33	
2	193.45	16.67	169.00	215.62	246.79	226.33	74.33	42.67	
3	60.51	3.42	66.90	175.66	74.55	67.67	68.00	5.33	
4	5.74	6.84	16.24	65.98	20.00	60.67	55.67	4.67	
5	0.00	5.13	1.71	11.97	2.67	39.00	51.67	8.33	
6	0.00	0.00	0.00	0.00	0.00	6.67	14.67	5.33	
7	0.00	0.00	0.00	0.00	0.00	7.67	5.00	0.33	

nwdkflag.d07, nwdkfpsd.d09

Table 72. Population assessment for largemouth bass based on spring electrofishing at New Kingfisher Lake from 2000-2009 (scoring based on statewide assessment).

Parameter	Year															
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009						
Mean length age 3 at capture	11.0	3	11.0	3	11.0	3	11.0	3	11.0	3	11.0	3	10.5	1	10.5	1
Spring CPUE age 1	135.56	4	89.74	4	116.28	4	100.00	4	94.87	4	248.72	4	96.00	4	250.67	4
Spring CPUE 12.0-14.9 in	24.44	2	20.51	2	4.65	1	8.33	1	12.82	1	41.03	3	21.33	2	56.00	4
Spring CPUE ≥15.0 in	6.67	2	2.56	1	0.00	0	0.00	0	2.56	1	12.82	2	2.67	1	0.00	0
Spring CPUE ≥20.0 in	4.44	4	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Instantaneous Mortality (z)							1.330		1.230				1.335		0.608	0.562
Annual Mortality (A)%							73.6		70.8				39.2		43.0	
Total score	15	10	8	8	8	12	8	8	8	8	8	8	8	8	8	8
Assessment rating	G	F	F	F	F	G	F	F	F	F	F	F	F	F	F	F

*Major fish kill 9/5/08

Table 73. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.37 hours of 7.5-minute diurnal electrofishing runs at New Kingfisher Lake in October 2009*.

Species	Inch class											Total	CPUE	Std. error		
	3	4	5	6	7	8	9	10	11	12	13				14	15
Largemouth bass	2	18	5	2	17	11	9	3	2			1	1	72	192.00	40.27

nw dnkimb.d08

*Major fish kill 9/5/08

Table 74. Length frequency and CPUE (fish/hr) for bluegill collected in 0.37 hours of electrofishing at New Kingfisher Lake in May 2009.

Species	Inch class							Total	CPUE	Std. error
	1	2	3	4	5	6	7			
Bluegill	2	71	67	41	19	23	5	228	608.00	53.27

nw dnkbg.d09

Table 75. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at New Kingfisher Lake during spring 1999-2009.

Year	Length group										Total	
	<3.0 in		3.0-5.9 in		6.0-7.9 in		≥8.0 in		≥10.0 in		CPUE	Std. err.
	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.		
2009	194.67	21.33	338.67	35.28	74.67	30.05	0.00		0.00		608.00	53.27
2008	42.67	5.33	242.67	65.54	37.33	14.85	0.00		0.00		322.67	85.21
2007	5.33	2.67	69.33	26.26	45.33	5.33	0.00		0.00		120.00	33.31
2006	16.00	13.47	104.00	33.78	14.00	2.00	0.00		0.00		134.00	43.98
2005	0.00		53.85	7.69	12.82	6.78	10.26	6.78	0.00		76.92	8.88
2004	0.00		15.38	8.88	23.08	11.75	0.00		0.00		38.46	4.44
2003	12.82	6.78	56.41	2.56	15.38	7.69	5.13	2.56	0.00		89.74	5.13
2002			9.30		62.79		6.98		0.00		79.07	0.00
2001			61.54		66.67		7.69		0.00		135.90	0.00
2000			31.11		66.67		11.11		0.00		108.99	0.00
1999			6.67		20.00		4.44		0.00		31.11	0.00

Table 76. Electrofishing catch rate (fish/hr) for each age of bluegill collected from New Kingfisher Lake during spring samples 2002-2009.

Age	Year							
	2002	2003	2004	2005	2006	2007	2008	2009
1	7.56	57.69	13.46	32.69	115.00	5.33	42.67	189.33
2	22.67	16.67	4.49	21.15	7.00	74.22	246.67	348.89
3	13.95	3.42	6.84	4.27	3.33	35.56	29.33	54.22
4	27.91	6.84	13.68	8.55	6.67	4.89	4.00	10.22
5	6.98	5.13	0.00	10.26	0.00	0.00	0.00	0.00

nwdnkgb.d09, nwdkfbag.d07

Table 77. Population assessment for bluegill based on spring electrofishing at New Kingfisher Lake from 2000-2009 (scoring based on statewide assessment).

Parameter	Year																			
	2000		2001		2002		2003		2004		2005		2006		2007		2008		2009	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age 2 at capture	5.7	4	5.7	4	5.7	4	5.7	4	5.7	4	5.7	4	5.7	4	4.3	2	4.3	2	4.3	2
Years to 6.0 in	2-2+	4	2-2+	4	2-2+	4	2-2+	4	2-2+	4	2-2+	4	2-2+	4	3-3+	3	3-3+	3	3-3+	3
CPUE \geq 6.0 in	77.78	4	64.44	3	69.77	3	21.62	1	23.08	1	23.08	1	14.00	1	45.33	2	37.33	2	74.67	3
CPUE \geq 8.0 in	11.11	3	6.67	2	6.98	2	5.40	2	0.00	0	10.26	3	0.00	0	0.00	0	0.00	0	0.00	0
Instantaneous Mortality (z)							0.865								1.587		0.574		2.14	
Annual Mortality (A)%							57.9								79.5		42.6		86.2	
Total score	15		13		13		11		9		12		9		7		7		8	
Assessment rating	E		G		G		G		F		G		F		F		F		F	

*2003 and 2007 age data

Table 78. Temperature and dissolved oxygen profile for New Kingfisher Lake in September 2009.

Depth (ft)	D.O (ml/L)	Temp. (°F)
Surface	6.8	80.4
1	6.6	80.2
2	5.4	77.2
3	5.0	77.2
4	4.9	77.2
5	2.8	76.6
6	2.2	76.1
7	1.9	75.9
8	1.9	75.9
9	1.2	75.7

Table 79. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.25 hours of 7.5-minute diurnal electrofishing runs at Old Kingfisher Lake in April 2009.

	Inch class														Total	CPUE	Std. Error
	4	5	6	7	8	9	10	11	12	13	14	15	16	17			
Largemouth bass	2	1	4	6	3	2			2	1	2	2	2	1	28.00	112.00	0.00

nw dokpsd.d09

Table 80. Length frequency and CPUE (fish/hr) for bluegill collected in 0.20 hours of electrofishing at Old Kingfisher Lake in May 2009.

Species	Inch class						Total	CPUE	Std. error
	2	3	4	5	6	7			
Bluegill	10	16	30	107	83	6	252	1272.70	0.00

nw dnkbg.d09

Table 81. Temperature and dissolved oxygen profile for Old Kingfisher Lake in September 2009.

Depth (ft)	D.O (ml/L)	Temp. (°F)
Surface	11.3	79.2
1	10.7	79.0
2	9.9	78.8
3	3.4	75.7
4	2.1	75.4
5	1.9	75.0
6	1.3	74.8
7	1.2	74.7
7.5	0.7	74.7

Table 82. Relative abundance and CPUE (fish/hr) of largemouth bass collected during 0.37 hours of 7.5-minute diurnal electrofishing runs at Washburn Lake in April 2009.

Species	Inch class																		Total	CPUE	Std. error
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19					
Largemouth bass	1	7	23	8	3	21	7							1	1	2	74	197.33	104.34		

nw dw lpsd.d09

Table 83. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Washburn Lake* during spring samples 2001-2009.

Year	Length group										Total	
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in		CPUE	Std. err.
	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.		
2009	104.00	60.04	82.67	39.82	0.00		10.67	5.33	0.00		197.33	104.34
2008	170.67	42.92	61.33	21.83	16.00	0.00	13.33	9.61	0.00		261.33	59.57
2007	133.33	35.28	80.00	4.62	16.00	4.62	21.33	9.61	0.00		250.67	30.75
2006	96.00	9.24	98.67	39.28	64.00	0.00	18.67	5.33	2.67	2.67	277.33	25.44
2005	43.59	11.18	146.15	16.01	28.21	5.13	2.56	2.56	2.56	2.56	220.51	25.25
2004	46.15	4.44	353.85	49.45	0.00		0.00		0.00		400.00	51.22
2003	123.08	33.53	438.46	49.45	0.00		0.00		0.00		561.54	52.36
2002	50.00		321.43		0.00		0.00		0.00		371.43	0.00
2001	260.00		8.00		0.00		0.00		0.00		268.00	0.00

*Washburn Lake renovated summer 1999 and restocked spring 2000

Table 84. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Washburn Lake during spring samples 2003-2009.

Age	Year							
	2003	2004	2005	2006	2007	2008	2009	
1	131.62	48.29	41.03	94.67	131.20	165.87	99.73	
2	380.96	218.38	53.38	36.73	81.98	67.73	84.27	
3	8.16	27.56	27.21	17.88	19.09	9.33	2.67	
4	40.79	105.77	65.56	42.73	8.00	5.33	2.67	
5	0.00	0.00	0.00	0.00	2.40	5.07	0.00	

nwdw/lpsd.d09, nwdw/lag.d07

Table 85. Population assessment for largemouth bass based on spring electrofishing at Washburn Lake from 2003-2009* (scoring based on statewide assessment).

Parameter	Year													
	2003		2004		2005		2006		2007		2008		2009	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age 3 at capture	11.2	3	11.2	3	11.2	3	11.2	3	11.2	4	13.1	4	13.1	4
Spring CPUE age 1	131.62	4	48.29	3	41.03	3	94.67	4	131.20	4	165.87	4	99.73	4
Spring CPUE 12.0-14.9 in	0.00	0	0.00	0	28.21	2	64.00	4	16.00	1	16.00	1	0.00	0
Spring CPUE ≥ 15.0 in	0.00	0	0.00	0	2.56	1	18.67	3	21.33	3	13.33	2	10.67	2
Spring CPUE ≥ 20.0 in	0.00	0	0.00	0	2.56	3	2.67	3	0.00	0	0.00	0	0.00	0
Instantaneous Mortality (z)							0.669		0.944		1.117			
Annual Mortality (A)%							48.8		61.1		67.3			

Total score	7	6	12	17	12	11	10
Assessment rating	P	P	G	E	G	F	F

*Washburn Lake renovated and restocked spring 2000

Table 86. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.37 hours of 7.5-minute diurnal electrofishing runs at Washburn Lake in October 2009.

Species	Inch class											Total	CPUE	Std. error
	3	4	5	6	7	8	9	10	11	13	17			
Largemouth bass	1	17	29	4	1	17	13	5	3	90	240.00	20.13		

nw dw llmb.d09

Table 87. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in fall electrofishing samples at Washburn Lake during October 2009.

Year class	Age 0			Age 1		
	Mean length	Std. error	CPUE	Mean length	Std. error	CPUE
2007	5.9	0.06	472.00	60.40	56.19	165.87
2008	6.2	0.08	170.67	42.92	42.92	99.73
2009	5.1	0.08	136.00	21.17	88.00	20.13

nwdwllmb.d09

Table 88. Length frequency and CPUE (fish/hr) for bluegill collected in 0.37 hours of electrofishing at Washburn Lake in May 2009.

Species	Inch class							Total	CPUE	Std. error
	1	2	3	4	5	6	7			
Bluegill	3	27	10	18	12	31	38	139	278.00	20.75

nwdwabg.d09

Table 89. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Washburn Lake during spring samples 2001-2009.

Year	Length group											Total	
	<3.0 in		3.0-5.9 in			6.0-7.9 in			>8.0 in		>10.0 in		CPUE
2009	60.00	15.14	80.00	19.04	138.00	10.00	0.00	0.00	0.00	0.00	0.00	278.00	20.75
2008	2.67	2.67	152.00	37.81	168.00	48.66	0.00	0.00	0.00	0.00	0.00	322.67	69.49
2007	58.67	14.11	245.33	37.05	40.00	12.22	0.00	0.00	0.00	0.00	0.00	344.00	54.45
2006	58.67	50.67	138.67	39.28	32.00	16.00	0.00	0.00	0.00	0.00	0.00	229.33	81.63
2005	161.54	31.87	155.77	18.94	9.62	3.68	0.00	0.00	0.00	0.00	0.00	326.92	39.29
2004	80.77	7.36	48.08	3.68	11.54	4.97	21.15	10.59	0.00	0.00	0.00	161.54	12.95
2003	7.69	3.14	71.15	12.71	113.46	39.89						192.31	39.85
2002			46.51		102.33							148.84	0.00
2001			28.00		64.00		4.00					96.00	0.00

*Washburn Lake renovated summer 1999 and restocked Spring 2000

Table 90. Mean back calculated lengths (in) at each annulus for bluegill collected at Washburn Lake in May 2009.

Year class	No.	Age					
		1	2	3	4	5	6
2008	17	2.5					
2007	29	2.3	4.7				
2006	6	2.7	5.3	6.6			
2005	10	2.8	4.8	6.2	7.1		
2004	3	3.0	6.0	6.7	7.1	7.4	
2003	1	2.2	4.9	6.7	7.1	7.4	7.8
Mean		2.5	4.9	6.4	7.1	7.4	7.8
No.		66	49	20	14	4	1
Smallest		1.2	3.5	5.4	6.6	7.3	7.8
Largest		4.4	6.7	7.4	7.6	7.6	7.8
Std error		0.1	0.1	0.1	0.1	0.1	
95% CI (+)		0.2	0.2	0.2	0.1	0.1	

nwdwblag.d09

Table 91. Age-frequency and CPUE (fish/hr) per inch class of bluegill electrofished at Washburn Lake in May 2009.

Age	Inch class							No.	CPUE	Std. error	Age (%)
	1	2	3	4	5	6	7				
1	3	27	6					36	72.50	15.86	25.9
2			4	18	11	7		40	79.43	18.02	28.8
3					1	7	10	17	34.62	2.25	12.2
4						17	16	33	66.11	5.08	23.7
5							10	10	19.00	1.91	7.2
6							3	3	6.33	0.64	2.1
Total	3	27	10	18	12	31	39	139			
(%)	2.1	19.4	7.2	12.9	8.6	22.3	27.3				

nwdwlbq.d09, nwdwblag.d09

Table 92. Electrofishing catch rate (fish/hr) for each age of bluegill collected from Washburn Lake during spring samples 2003-2009.

Age	Year						
	2003	2004	2005	2006	2007	2008	2009
1	0.00	0.00	0.00	141.87	163.20	25.07	72.50
2	100.34	16.35	71.57	71.47	176.80	253.6	79.43
3	72.73	8.65	5.36	16.00	4.00	14.42	34.62
4							66.11
5							19.00
6							6.33

nwdwabg.d09, nwdwbgag.d06

Table 93. Population assessment for bluegill based on spring electrofishing at Washburn Lake 2003-2009 (scoring based on statewide assessment).

Parameter	Year													
	2003		2004		2005		2006		2007		2008		2009	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age 2+ at capture	5.4	4	5.4	4	5.4	4	5.3	4	5.3	4	5.3	4	4.7	3
Years to 6.0 in	2-2+	4	2-2+	4	2-2+	4	2-2+	4	2-2+	4	2-2+	4	3-3+	3
CPUE \geq 6.0 in	118.00	4	32.69	2	9.62	1	32.00	2	40.00	2	168.00	4	138.00	4
CPUE \geq 8.0 in	0.00	0	22.00	4	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Instantaneous Mortality (z)									1.050		2.046		0.599	
Annual Mortality (A)%									64.99		87.08		45.1	
Total score		12		14		5		10		10		12		10
Assessment rating		G		E		P		G		G		G		G

Table 94. Length frequency of channel catfish collected during 3 nights of tandem (3 nets) hoop net sampling at Washburn Lake during October 2009.

Species	Inch class																	Total		
	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24	25
Channel catfish	1	21	31	58	44	54	33	36	14	7	8	9	10	5	4	6	1	4	1	347

nw clw lchn d09

Table 95. Mean length (in) at capture for each age of channel catfish collected from Washburn Lake in November 2009.

	Age					
	1+	2+	3+	4+	5+	6+
Mean length	10.3	13.5	17.2	18.0	21.7	24.1
No.	44	29	7	13	1	4
Smallest	7.9	8.5	16.2	14.9	21.7	21.9
Largest	13.0	17.0	18.1	20.8	21.7	25.9

Table 96. Fishery statistics derived from a daytime creel survey at Washburn Lake (26 acres) from 1 April through 31 October 2009.

<u>Fishing trips</u>		
No. of fishing trips (per acre)	957	(53.19)
<u>Fishing pressure</u>		
Total man-hours (S.E.) ^a	2,033	(112.92)
Man-hours/acre	112.92	
<u>Catch/harvest</u>		
No. of fish caught (S.E.)	3,269	(545.91)
No. of fish harvested (S.E.)	1,524	(321.50)
Lb of fish harvested	381	
<u>Harvest rates</u>		
Fish/hour	0.52	
Fish/acre	84.65	
Lb/acre	21.14	
<u>Catch rates</u>		
Fish/hour	1.61	
Fish/acre	181.61	
<u>Miscellaneous characteristics (%)</u>		
Male	79.90%	
Female	20.10%	
Resident	99.75%	
Non-resident	0.25%	
<u>Method (%)</u>		
Still fishing	80.92%	
Casting	16.54%	
Fly fishing	1.02%	
Trolling	1.53%	
<u>Mode (%)</u>		
Boat	31.3	
Bank	68.7	
Dock	0	

t < 0.5%

^aS.E. = standard error

Table 97. Fish harvest statistics derived from a creel survey at Washburn Lake (26 acres) from 1 April through 31 October 2009.

	Rock bass	Channel catfish	Green sunfish	Warmouth	Bluegill	Largemouth bass	White crappie	Black crappie	Black bass group	Catfish group	Panfish group	Crappie group	Anything
No. caught (per acre)	3.55 0.20	117.36 6.52	3.55 0.20	79.68 4.40	204.165 113.43	879.34 48.74	3.55 0.20	142.81 7.93	877.39 48.74	117.36 6.52	2,127.83 118.25	146.36 8.13	
No. harvested (per acre)		40.56 2.25		28.37 1.58	1324.57 73.59	13.66 0.76		115.46 6.47	13.66 0.76	40.56 2.25	1352.94 75.16	116.46 6.47	
% of total no. harvested		2.66		1.86	86.94	0.90		7.64	0.90	2.66	88.80	7.64	
Lb. harvested (per acre)		40.30 2.24		5.00 0.28	249.00 13.83	40.70 2.26		45.60 2.53	40.70 2.26	40.30 2.23	254.00 14.11	45.60 2.53	
% of total lb. harvested		10.59		1.31	64.42	10.70		11.99	10.70	10.59	66.74	11.99	
Mean length (in)		14.81		0.44	6.56	17.00		8.92					
Mean weight (lb)		1.08		0.16	0.16	3.03		0.36					
No. of fishing trips for that species									115.47	118.13	573.88	48.15	10165
% of all trips									12.06	12.35	59.95	5.03	10.62
Hours fished for that species (per acre)									245.26	251.05	1213.95	102.26	25.92
No. harvested fishing for that species									7.00	34.00	1330.00	100.00	
Lb. harvested fishing for that species									34.70	29.90	249.90	38.60	
No./hour harvested fishing for that species									0.02	0.16	1.16	0.52	
% success fishing for that species									2.08	9.43	30.74	44.44	2.5

Table 99. Monthly black bass angling success at Washburn Lake during 1 April - 31 Oct. 2009 creel survey period: data does not include bass <8.0 in 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/hour by bass anglers	
				bass anglers	total	bass anglers	total	bass anglers	total	bass anglers	total
Apr	185.00	0.00	8.00	16.00	8	0.50	0	0.00	0	0.00	0.00
May	373.00	7.00	44.00	93.00	250	2.08	7	0.06	7	0.06	0.06
Jun	31.00	0.00	27.00	58.00	14	0.27	0	0.00	0	0.00	0.00
Jul	51.00	0.00	8.00	18.00	12	0.57	0	0.00	0	0.00	0.00
Aug	137.00	7.00	10.00	22.00	32	1.38	0	0.00	0	0.00	0.00
Sep	97.00	0.00	18.00	39.00	89	1.26	0	0.00	0	0.00	0.00
Oct	5.00	0.00	0.00	0.00	0	0.00	0	0.00	0	0.00	0.00
Total	877.00	14.00	115.00	245.00	405	0.22	7	0.33	7	0.33	0.33
Mean											

Table 100. Black bass catch and harvest statistics derived from a creel survey at Washburn Lake from 1 April - 31 October 2009.

	Largemouth bass					
	Harvest			Catch and release		
	12.0-14.9 in	>15.0 in	>20.0 in	8.0-11.9 in	12.0-14.9 in	>15.0 in
Total no. of bass	6	0	7	841	19	0
% of black bass harvested by no.			100.00			
Total weight of fish (lb)			406.60			
% of bass harvested by weight			100.00			
Mean length			17.00			
Mean weight			3.03			
Rate (f/hr)			0.02			

Table 101. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.24 hours of diurnal electrofishing at Merlin Lake (Peabody WMA) in April 2009.

Species	Inch class										Total	CPUE	Std. error	
	8	9	10	11	12	13	14	15	16	17				
Largemouth bass	1	9	12	20	9						1	52	220.34	0.00

Table 102. Mean back calculated lengths (in) at each annulus for largemouth bass collected at Merlin Lake in April 2009.

Year	Class	Age				
		1	2	3	4	5
2007	13	5.8	9.8			
2006	22	5.6	9.7	11.6		
2005	1	6.4	9.5	11.0	12.0	
2004	2	5.6	9.1	10.1	11.3	12.2
Mean		5.7	9.7	11.4	11.5	12.2
No.		38	38	25	3	2
Smallest		3.9	8.8	10.0	11.1	11.9
Largest		7.5	11.3	13.0	12.0	12.4
Std error		0.2	0.1	0.2	0.3	0.3
95% CI (+)		0.3	0.2	0.3	0.6	0.5

nwdmetag.d09

Table 103. Length frequency and CPUE (fish/hr) of bluegill and redear sunfish collected during 0.26 hours of diurnal electrofishing runs at Merlin Lake (Peabody WMA) during May 2009.

Species	Inch class										Total	CPUE	Std. error
	2	3	4	5	6	7	8	9	10				
Bluegill	12	29	4	2	1	6	3				57	215.09	0.00
Redear sunfish			7	6	2	1	4	2	1		22	83.02	0.00

nwdmetag.d09

Table 104. Mean back calculated lengths (in) at each annulus for redear sunfish collected at Merlin Lake in May 2009.

Year class	No.	Age								
		1	2	3	4	5	6	7	8	
2007	10	2.1	4.9							
2006	5	2.1	4.0	6.9						
2004	3	2.4	5.6	7.6	8.5	9.3				
2003	1	1.9	3.4	6.1	7.4	8.1	8.5			
2002	1	1.9	3.3	5.7	7.1	7.6	9.0	9.5		
2001	1	2.5	5.1	6.3	7.6	8.6	9.1	9.6	10.1	
Mean		2.1	4.6	6.8	7.9	8.7	8.9	9.5	10.1	
No.		21	21	11	6	6	3	2	1	
Smallest		1.4	3.0	5.7	7.1	7.6	8.5	9.5	10.1	
Largest		3.4	6.0	8.4	9.0	9.7	9.1	9.6	10.1	
Std error		0.1	0.2	0.3	0.3	0.3	0.2	0.0		
95% CI (+)		0.2	0.4	0.5	0.6	0.6	0.4	0.1		

nwdmreag.d09

Table 105. Mean back calculated lengths (in) at each annulus for bluegill collected at Merlin Lake in May 2009.

Year class	No.	Age								
		1	2	3	4	5	6	7	8	
2008	7	2.7								
2007	17	1.7	3.7							
2006	3	1.6	3.9	5.8						
2004	2	1.7	3.5	6.0	6.9	7.8				
2003	2	1.5	3.2	5.6	6.8	7.4	8.0			
2001	4	1.8	3.2	4.6	5.9	6.9	7.2	7.6	8.0	
Mean		1.9	3.6	5.4	6.4	7.2	7.5	7.6	8.0	
No.		35	28	11	8	8	6	4	4	
Smallest		1.0	2.3	3.4	5.3	6.5	6.8	7.2	7.5	
Largest		2.9	5.3	7.2	6.9	7.8	8.0	8.0	8.5	
Std error		0.1	0.1	0.3	0.2	0.2	0.2	0.2	0.2	
95% CI (+)		0.2	0.3	0.7	0.4	0.4	0.4	0.4	0.4	

nwdmbgag.d09

Table 106. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.37 hours of 7.5-minute diurnal electrofishing runs at Audubon State Park Lake in April 2009.

	Inch class															Total	CPUE	Std. Error	
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18				
Largemouth bass	1	8	5	3	11	7	1	1		1				1	1	1	41.00	109.33	31.44

nw dapsd.d09

Table 107. Mean back calculated lengths (in) at each annulus for largemouth bass collected at Audubon State Park Lake in April 2009.

Year class	No.	Age				
		1	2	3	4	5
2008	16	5.9				
2007	30	5.9	8.4			
2006	13	5.2	8.3	9.7		
2005	1	6.2	8.8	10.9	11.7	
2004	2	6.6	8.6	9.9	10.6	11.0
Mean		5.8	8.4	9.8	11.0	11.0
No.		62	46	16	3	2
Smallest		2.9	6.2	8.2	9.6	10.0
Largest		7.1	10.2	11.2	11.7	12.0
Std error		0.1	0.1	0.2	0.7	1.0
95% CI (+)		0.2	0.3	0.5	1.4	2.0

nwdalbag.d09

Table 108. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.50 hours of 7.5-minute diurnal electrofishing runs at Audubon State Park Lake in October 2009.

Species	Inch class																			Total	CPUE	Std. error
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19					
Largemouth bass	3	5	11	2	3	4	4	4	7	1	1	1	1	1	2	1	1	1	47	94.00	15.10	

nw dapimb.d09

Table 109. Length frequency and CPUE (fish/hr) for bluegill collected in 0.50 hours of electrofishing at Audubon State Park Lake in May 2009.

Species	Inch class							Total	CPUE	Std. error
	3	4	5	6	7					
Bluegill	8	28	35	18	18	18	107	214.00	33.05	

nwdapbg.d09

Table 110. Mean back calculated lengths (in) at each annulus for bluegill collected at Audubon State Park Lake in April 2009.

Year	class	No.	Age						
			1	2	3	4	5	6	7
2008		3	3.4						
2007		13	2.2	4.2					
2006		5	1.9	3.8	5.2				
2005		1	1.6	3.6	4.5	5.6			
2004		2	1.9	3.8	5.4	6.3	7.1		
2003		18	1.5	3.2	4.6	5.5	6.1	6.7	
2002		1	1.6	3.1	5.2	6.1	6.3	6.6	7.0
Mean		1.9	3.6	4.8	5.6	6.2	6.7	7.0	
No.		43	40	27	22	21	19	1	
Smallest		1.2	2.3	3.6	4.8	5.3	5.6	7.0	
Largest		3.5	5.5	5.7	6.8	7.3	7.4	7.0	
Std error		0.1	0.1	0.1	0.1	0.1	0.1	0.1	
95% CI (+)		0.2	0.2	0.3	0.3	0.3	0.3	0.3	

nwdabgag.d09

Figure 1. Results of Carpenter Lake angler attitude survey conducted April 01-October 31, 2009.

CARPENTER LAKE ANGLER ATTITUDE SURVEY 2009
(N = 37)

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 Carpenter Lake (check all that apply)?

Bass	67.6%	Crappie	62.2%	Bluegill	56.8%	Redear Sunfish	24.3%	Channel Catfish
					54.1%	Other	0%	
 4. Which one species do you fish for most at Carpenter Lake (check only one)? N = 37

Bass	35.1%	Crappie	21.6%	Bluegill	35.1%	Redear Sunfish	0%	Channel Catfish	8.1%
Other	0%								
- Answer the following questions for each species you fish for - (see question 3)
- Bass Anglers**
5. In general, what level of satisfaction do you have with bass fishing at Carpenter Lake? N = 24

Very satisfied	4.2%	Somewhat satisfied	8.3%	Neutral	58.3%	Somewhat dissatisfied	25.0%	Very dissatisfied	4.2%
No opinion 0%									
 - 5a. If you responded with somewhat or very dissatisfied in question (5) - what is the single most important reason for your dissatisfaction? N = 7

Number of fish	42.9%	Size of fish	42.9%	Not happy with regulations	0%	Too many anglers	14.2%	Other	0%
Too many weeds 0%									
- Crappie Anglers**
6. In general, what level of satisfaction do you have with crappie fishing at Carpenter Lake? N = 23

Very satisfied	17.4%	Somewhat satisfied	52.2%	Neutral	21.7%	Somewhat dissatisfied	8.7%	Very dissatisfied	0%
No opinion 0%									
 - 6a. If you responded with somewhat or very dissatisfied in question (6) - what is the single most important reason for your dissatisfaction? N = 2

Number of fish	100%	Size of fish		Not happy with regulations		Too many anglers		Other	
Too many weeds									
- Bluegill Anglers**
7. In general, what level of satisfaction do you have with the bluegill fishing at Carpenter Lake? N = 21

Very satisfied	52.4%	Somewhat satisfied	14.3%	Neutral	28.6%	Somewhat dissatisfied	4.7%	Very dissatisfied	0%
No opinion 0%									
 - 7a. If you responded with somewhat or very dissatisfied in question (7) - what is the single most important reason for your dissatisfaction? N = 1

Number of fish	100%	Size of fish		Not happy with regulations		Too many anglers		Other	
Too many weeds									

Redear Sunfish Anglers

8. In general, what level of satisfaction do you have with the redear sunfish fishing at Carpenter Lake? N = 7

Very satisfied **28.5%** Somewhat satisfied **14.3%** Neutral **42.9%** Somewhat dissatisfied **14.3%**
Very dissatisfied **0%** No opinion **0%**

8a. If you responded with somewhat or very dissatisfied in question (8) -- what is the single most important reason for your dissatisfaction? N = 1

Number of fish **100%** Size of fish Not happy with regulations Too many anglers
Too many weeds Other _____

Channel Catfish Anglers

9. In general, what level of satisfaction do you have with the channel catfish fishing at Carpenter Lake? N = 16

Very satisfied **25.0%** Somewhat satisfied **25.0%** Neutral **43.8%** Somewhat dissatisfied **6.2%** Very dissatisfied **0%** No opinion **0%**

9a. If you responded with somewhat or very dissatisfied in question (9) -- what is the single most important reason for your dissatisfaction? N = 0

Number of fish Size of fish Not happy with regulations Too many anglers
Too many weeds Other _____

All Anglers

10. Would you support or oppose a reduction in the current statewide 30 fish daily crappie creel limit to 20 fish? N = 28

Support **39.3%** Oppose **25.0%** No opinion **35.7%**

11. How many times do you fish Carpenter Lake a year? N = 29

First time **6.9%** 1 to 4 **24.1%** 5 to 10 **31.0%** More than 10 **37.9%**

12. Are you satisfied with the current size and creel limits on all sport fish at Carpenter Lake? N = 29 Yes **93.1%**

No **6.9%**

If NO:

12a. If not, which species are you dissatisfied with and what size and creel limits would you prefer?

Bass Size (N = 1): 20" (100%)

Figure 2. Results of Washburn Lake angler attitude survey conducted April 01-October 31, 2009.

WASHBURN LAKE ANGLER ATTITUDE SURVEY 2009
(N = 35)

13. Have you been surveyed this year? Yes - stop survey No – continue
14. Name _____ and Phone number _____
(Optional)
15. Which species of fish do you fish for at Washburn Lake (check all that apply)?
Bass 51.4% Bluegill 71.4% Channel Catfish 42.9% Any 2.9% Crappie 14.3%
16. Which one species do you fish for most at Washburn Lake (check only one)? N = 35
Bass 31.4% Bluegill 51.4% Channel Catfish 11.4% Crappie 5.7%
- Answer the following questions for each species you fish for – (see question 3)

Bass Anglers

17. In general, what level of satisfaction do you have with bass fishing at Washburn Lake? N = 18
Very satisfied 16.7% Somewhat satisfied 27.8% Neutral 27.8% Somewhat dissatisfied 27.8%
Very dissatisfied 0% No opinion 0%
- 5a. If you responded with somewhat or very dissatisfied in question (5) -- what is the single most important reason for your dissatisfaction? N = 5
Number of fish 40.0% Size of fish 40.0% Not happy with regulations 20.0% Too many anglers 0% Too many weeds 0% Other 0%

Bluegill Anglers

18. In general, what level of satisfaction do you have with the bluegill fishing at Washburn Lake? N = 24
Very satisfied 37.5% Somewhat satisfied 41.7% Neutral 12.5% Somewhat dissatisfied 8.3% Very dissatisfied 0% No opinion 0%
- 6a. If you responded with somewhat or very dissatisfied in question (6) -- what is the single most important reason for your dissatisfaction? N = 2
Number of fish 0% Size of fish 50.0% Not happy with regulations 0% Too many anglers 0% Too many weeds 0% Other: No laws enforced 50.0%

Channel Catfish Anglers

19. In general, what level of satisfaction do you have with the channel catfish fishing at Washburn Lake? N = 15
Very satisfied 13.3% Somewhat satisfied 33.3% Neutral 26.7% Somewhat dissatisfied 0% Very dissatisfied 26.7% No opinion 0%
- 7a. If you responded with somewhat or very dissatisfied in question (7) -- what is the single most important reason for your dissatisfaction? N = 2
Number of fish 50.0% Size of fish 0% Not happy with regulations 0% Too many anglers 0% Too many weeds 0% Other: Limb lines 50.0%

All Anglers

20. Would you support or oppose a reduction in the current statewide 30 fish daily crappie creel limit to 20 fish? N = 30
Support 36.7% Oppose 33.3% No opinion 30.0%

21. How many times do you fish Washburn Lake a year? N = 31

First time 19.4% 1 to 4 16.1% 5 to 10 19.4% More than 10 45.2%

22. Are you satisfied with the current size and creel limits on all sport fish at Washburn Lake? N = 26 Yes

80.8% No 19.2%

If NO:

10a. If not, which species are you dissatisfied with and what size and creel limits would you prefer?

Bass size (N = 2): 12" (50.0%) 16" (50.0%)

Bass creel (N = 4): 3 (25.0%) 5 (25.0%) 6 (50.0%)

Bluegill creel (N = 1): 12 (100%)

Channel Catfish size (N = 2): 12" (50.0%) 16" (50.0%)

Channel Catfish creel (N = 2): 6 (50.0%) 8 (50.0%)

Crappie size (N = 1): 12" (100%)

Crappie creel (N = 1): 6 (100%)

SOUTHWESTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Lake sampling conditions are summarized in Table 1.

Barren River Lake (10,000 acres)

Black Bass

Black bass were collected by diurnal electrofishing in early May and results are shown in Tables 2-5. Total largemouth bass catch rate (82.33 f/h) was well below the 12 year average of 123.0 f/h. The most notable decrease was found in the <8.0 in and 12-14.9 in length groups (Table 3). Largemouth bass accounted for 89%, spotted bass accounted for 10 % (CPUE=9.67 f/h) and smallmouth bass accounted for 1% (CPUE =1.0 fish/hr) of the bass population sample.

Largemouth bass size structure indices (PSD=62 RSD₁₅=34) were similar to previous year averages (Table 4). The largemouth bass population assessment remains "Good", similar to previous years (Table 5). The spotted bass population continues to be low density (9.67 f/h), (PSD=36 RSD₁₄=9). The smallmouth population statistics are unknown due to the chronic small sample sizes.

Fall diurnal black bass sampling in early October (Tables 6-7) indicated a higher than average number (401.32 f/h) of young-of-the-year largemouth bass. The mean size for age-0 bass was 3.2 in; this is below the 8 year average of 3.8 in. Growth of age 0 bass was probably impacted by the large year class production. Age-0 largemouth catch rate of ≥ 5.0 in fish (36.83 f/h) was the third highest in the past 8 years. Small sample size of larger bass, likely due to early sample time, prohibited calculation of length-weight equations.

Crappie

Trap netting for crappie resulted in the collection of 636 total crappie (373 black crappie and 263 white crappie) in 59 net-nights (Tables 8-12). Most black crappie fell within the 6.0--7.0 in classes. Most white crappie fell within the 8.0-9.0 in classes. The crappie population remains dominated by black crappie (59 %), but not to the extremes that it has in years past. This is due to the good 2008 year class of white crappie that showed up. The assessment for black crappie was "Poor" and for white crappie it was "Fair". The combined crappie assessment was "Fair" as it has been for many years. The following length-weight equation for crappie should be used with caution due to the small sample sizes (n=323, black crappie; n=263, white crappie).

$$\text{Black Crappie } \text{Log}_{10}(\text{weight}) = -3.730 + 3.505 * \text{Log}_{10}(\text{Length})$$

$$\text{White Crappie } \text{Log}_{10}(\text{weight}) = -3.626 + 3.332 * \text{Log}_{10}(\text{Length})$$

White Bass / Hybrid Stripped Bass

Gill netting for white bass and hybrid striped bass was completed in November 2009. Good numbers of hybrids were collected; however, white bass population numbers continue to be very low. Sampling results can be found in the Lake Fisheries Research Section annual performance report.

Briggs Lake (18 acres)

Black Bass

Diurnal largemouth electrofishing samples were collected on April 22 (Tables 13-15). Largemouth catch rate (328.00 f/h) was just above the goal of 300.00 f/h in the Briggs strategic management plan (BRGSMP 2009). Although the PSD (23) value is low, these population parameters for largemouth bass are desired for accomplishing sunfish management goals set in the BRGSMP 2009.

Sunfish

The sunfish population was sampled by diurnal electrofishing on the May 11, 2009 (Tables 16-21). Bluegill CPUE for fish ≥ 6.0 in (36.80 f/h) was far below the BRGSMP goal of 100.00 f/h. However, the high CPUE of fish < 6.0 in (137.60 f/h) should remedy this by 2010. Catch rate of ≥ 8.0 in bluegills (19.20 f/h) was right on target. The assessment rating for bluegill remained "good" similar to last year.

Redear met all 2009 management plan objectives for the BRGSMP as CPUE ≥ 8.0 in was 10.50 f/h and CPUE of ≥ 10.0 in redeer was 1.80 f/h. The redeer population assessment jumped to an "excellent" rating from last years rating of "fair". The increase in CPUE of fish larger than 8.0 in was the main reason for the increase in the assessment rating.

Spurlington Lake (25 acres)

Black Bass

Results of nocturnal largemouth bass electrofishing are shown in Tables 22-24. The overall catch rate returned to normal levels (310.00 f/h) for the second year in a row. Catch rate for ≥ 15.0 in fish (58.00 f/h) was the highest seen in the past 8 years. The bass population remains diverse (PSD=58). Four of the five goals in the Spurlington strategic management plan (SPLSMP 2009) for largemouth bass were achieved. The only goal not met was CPUE of 12.0-4.9 in fish.

Sunfish

Results of bluegill and redeer diurnal sampling on May 12, 2009 are shown in Tables 25-29. The bluegill assessment remained "Good", similar to previous years. CPUE of bluegill ≥ 6.0 in (171.20 f/h) and CPUE of bluegill ≥ 8.0 in (14.4 f/h) met or exceeded measureable goals (CPUE data) in the 2009 sunfish management plan.

Establishment of a redeer population by stocking initiated in 2006 appears successful, as redeer CPUE was approximately 60.00 fish/hr and fish are reaching 8.0 inches in length.

Green River Lake (8,210 Acres)

Muskie

Unlike the previous three years, all muskellunge sampling sites were sampled as water conditions were favorable and similar to historical conditions (stained water and near winter pool) prior to 2003. Overall, muskie length group catch rates were similar to historic averages (Tables 30-31); however, 40.0-in plus CPUE was considerably lower than previous years. Difficulty of holding these larger fish with the electrofishing gear combined with low overall encounters (less room for error) can make catch rates of this size group more variable.

Black Bass

Nocturnal black bass sampling (Tables 32-35) was conducted on the upper and lower sites of each lake arm (Green River and Robinson Creek) on May 5 and 6, 2009. Overall largemouth CPUE (74.33 f/h) was bolstered by a higher

numbers of 15.0-in plus fish (best in 20 years) and persisting dominance of the strong 2004 year class. The Smith Ridge area (upper Robinson Creek) largemouth catch rate dipped to nearly half of previous years and remains the lowest bass CPUE area. Low catch rates of <8.0-in bass suggests the 2008 year class will be poor. All other areas were similar to the previous year.

Overall largemouth bass size structure is skewed to larger fish (PSD = 83; RSD = 64; Table 34) with the strong 2004 year class bolstering a higher than average PSD. Largemouth bass length at age-3 was 15.0 in (Table 35), the best ever noted at Green River Lake. The population assessment for largemouth bass remained “Good”, similar to most years (Table 37).

Spotted bass catch rates dipped slightly from last year’s all-time high catch rates; however, spotted bass population characteristics (size structure, growth rates (Table 34-35) and visible condition) are at all time highs. Historically, very few spotted bass exceeded 14.0 in; however, since alewife introduction in 2004, the spotted bass population has attained its best peaks in 20 years (E. Cummins, personnel communication).

Fall YOY sampling (Tables 38-39) yielded high numbers (66.83 f/h) of age-0 largemouth bass; however, low average size (mean length = 3.7 in) and moderate CPUE ≥ 5.0 in (11.50 f/h) suggests a modest to weak year class for 2009. Spotted bass followed similar trends as largemouth; high numbers, but small-sized fish. Supplementally stocked 5.0-in largemouth bass (16,000; 2 fish/acre) added in the fall of 2006 have yet to be detected.

Crappie

Results from trap netting for white crappie are presented in Tables 40-42. The moderate year classes of 2005, 2006 and 2008 appear to be carrying the fishery. Crappie growth in 2008 was the poorest on record for age-2+ (7.7 in) fish and unusually high number of 5.0-in fish suggests the poorer growth trend continues. Higher CPUE’s of age-0 and age-1 fish bumped up the crappie population assessment to a “Fair” rating. YOY CPUE (20.05 f/nn) suggest another moderate year class is possible; however, age-0 CPUE has been an inconsistent predictor of year class strength. The length-weight equation for white crappie is:

$$\text{Log}_{10}(\text{weight}) = -3.63059 + 3.29018 \times \text{Log}(\text{length})$$

Walleye/White bass

Results of the experimental gill net sampling for white bass and walleye are shown in Tables 43-46. The white bass population remained at rock bottom as no white bass have been collected since 2007. Walleye CPUE (6.38 f/nn) came up slightly from last year (5.07 f/nn) with a bump in numbers coming from age-0 fish. Walleye growth rate remains excellent with fish reaching 19.6 in by age-2+. The walleye population assessment regained an “Excellent” rating with an overall jump in catch rates.

The recent establishment of alewives and their effect on white bass and walleye population dynamics is unclear. Alewives were first noted in this system in 2004 gill net by-catch. The length-weight equation for walleye is:

$$\text{Log}_{10}(\text{weight}) = -3.77264 + 3.27260 \times \text{Log}_{10}(\text{length})$$

Green River Lake Creel (8,210 acres)

Creel survey: Results of a roving, daytime creel survey are presented in Tables 47-55. Anglers made an estimated 40,095 trips and fished for 169,561 hours with the average trip approximating 4.23 hours. Increases in total trips and man hours rebounded from the 2006 creel to levels closer to earlier creels. Overall catch and harvest rates respond similarly. Crappie continued to eclipse bass as the most sought after fish accounting for 33% of effort followed by bass (26%), catfish (9%), walleye (4%) anglers, and muskie (3%). Although muskie popularity dipped most notably from 2006 (8%), percent success fishing for muskie doubled from 2% in 2006 to 5% in 2009. Likewise, bass fishing success almost doubled from 15% in 2006 to 25% in 2009.

Crappie harvest rate (1.05 fish/hour) remained up from previous creels which averaged 0.75 crappie/hr. Angler hours (55,810) dipped slightly, but trips (13,197) were slightly higher than previous creels.

Muskie angler hours (5,198) continued a sharp downward spiral from previous years' values (11,671; 20,980). Muskie anglers averaged an incredible 9.5 hours to catch a keeper muskie, half of the time noted in the last creel (18.98 hours) and nearly 3 times less than the average of previous creels (27.4 hours). Muskie angler catch and release rate of keeper muskie (77.3%) continues the trend of unusually high catch and release rates that were first noted in 2006 (79.4%). Prior to 2006, the best keeper catch and release reported in creel surveys was 62.4% with the average catch and release rate being 47.1%.

Bass angler trips (10,544) increased slightly from 2006, but hours fished (39,937) dipped slightly (8%). Overall catch rate (0.53 fish/hr) increased slightly; however, keeper catch rate (0.16 fish/hr) remained similar to previous surveys.

Walleye angler trips (1,585) and hours (6,701) increased five-fold from the 2006 creel and are the highest documented since creation of the fishery in the late 1990's. However, walleye angler catch and harvest rates remained similar to the 2006 creel; possibly, a sign that more anglers are starting to discover or "get the hang of" walleye fishing at Green River Lake.

Angler attitude survey: Results of angler attitude survey are presented in Figure 1. Similar to the 2006 attitude survey, anglers identified crappie (52%) and bass (46%) as species they fished for most. Catfish (24%) supplanted muskie as the next most popular species. Angler satisfaction with bass and catfish fisheries was overwhelmingly good with 75% of responses falling in the "very satisfied to somewhat satisfied" categories. Crappie (61%), muskie (60%), and walleye (53%) fishermen were within either of the satisfied categories.

Thirty-two percent of catfish anglers used jugs as another method for catching catfish. Only 4% of catfish anglers identified themselves as noodlers/hand grabbers. Noodlers hand fished an average of 12 days annually with a range of 1-60 days. However, a loophole in our questionnaire was identified when anglers were asked about a 34.0-inch size limit on catfish. Anglers that didn't identify themselves as catfish anglers stated their concern or conflict with a 34.0-inch catfish size limit as potentially hampering their noodling efforts. Catfish anglers supported noodling (44% support, 37% no opinion) despite low number (4%) that noodled.

Response of all anglers to the crappie creel reduction to 20 fish per day was overwhelmingly in support (63% support, 24% no opinion). Support for one catfish per day greater than 34.0 in was similarly supported (63% support, 28% no opinion). Few anglers expressed dissatisfaction with current regulations. The only noteworthy areas were 13% of all anglers favored a higher bass size limit and 8% of all anglers favored a higher crappie size limit.

Angler use of the printed fish attractor map since 1998 has dipped sharply. Though angler awareness of the Green River Lake fish attractor map remained similar over time (45% in 1998 versus 38% in 2009), stated use of the map declined from 64% in 1998 to 15% in 2009. Not surprisingly, the most common reason given was use of GPS.

The majority of Kentucky anglers that fished Green River Lake (58.6%) traveled 30 miles or more, 41.4% traveled less than 30 miles. Seven different states were represented by out-of-state anglers with the majority coming from IN (42%), OH (38.6%) and TN (16%).

Shanty Hollow Lake (136 acres)

Black Bass

Nocturnal bass sampling results are shown in Tables 56-60. Overall CPUE of largemouth (261.71 f/h) was similar to previous years. Size structure index (PSD = 42) improved significantly from the previous year with full recruitment of the stronger 2004 and 2005 year classes to the 12.0-14.9 in length group. Recruitment of the 2008 year class (age-1 CPUE = 20.00 f/h) appears weak. Largemouth bass growth to age-3 improved to 11.9 in despite

the presence of the strong 2004 and 2005 year classes. The largemouth bass population assessment remained “Good”, similar to previous years.

Sunfish

Sunfish sampling results are shown in Tables 61-66. Bluegill CPUE (228.70 f/h) continued to slide from previous years values and the overall average. Declines in bluegill <3.0 in and those ≥ 6.0 in explain reduced CPUE. Bluegill size structure remains good (PSD = 42); however, the bluegill assessment fell to its first “Fair” rating. The redear population remained at a lower density (CPUE = 31.33 f/h) but with good size structure (PSD = 39).

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

Marion County Lake (25 acres)

Black Bass

Results of nocturnal largemouth bass electrofishing are shown in Tables 67-72. The catch rate of 620.00 f/h meets the largemouth bass goal in the Marion County Lake Strategic Management Plan (MCLSMP 2009) of maintaining a high density largemouth bass population (CPUE ≥ 385.00 f/h). The largemouth population is dominated by fish <12.0 in (PSD=5); however this fits the MCLSMP as this lake is managed for sunfish. The catch rate of ≥ 15.0 in fish has continued to climb as CPUE remained in double digits for the fourth consecutive year. Age-3 largemouth bass mean length at capture fell from 11.9 inches in 2004 to 10.7 inches in 2009. Decline in growth is possibly due to increased bass numbers and/or expansion of aquatic vegetation coverage reducing bass foraging efficiency. The common practice of catch and release or translocation of fish from other waterbodies may have had some influence on the increased number of bass ≥ 15.0 in.

Sunfish

Diurnal electrofishing results for bluegill and redear on May 12, 2009 are presented in Tables 73-78. The redear assessment remained “Excellent” despite declines in catch rates of larger redear. Similarly, catch rates of larger bluegill declined, but the bluegill assessment fell to “Fair”. Increased aquatic vegetation coverage coupled with resulting increased water clarity could explain reduced catchability of smaller sunfish and lower overall CPUE of diurnal electrofishing in clearer water.

West Fork Drakes (88 acres)

Black Bass

Bass sampling results are shown in Tables 79-81. The bass population appears low density (114.00 f/h), but with fair size structure (PSD 35). The lake is a shallow river-run system with good productivity and immense shallow cover or nursery areas. Bass age data has yet to be collected.

Sunfish

The sunfish population was sampled on May 14, 2009 and results can be found in Tables 82-91. Bluegill size group catch rates very similar between years and yielding “Fair” assessments both years. Bluegill achieved 6.0 inches in 3.4 years.

Redear size group catch rates between years differed markedly, but this is likely due to fingerling stockings in 2006 and 2007. Redear reached 8.0 inches in 7.5 years; however, the lack of fish older than age-3 (n=9) in age sample helps explain this poor showing in growth.

Table 1. Lake sampling conditions in the Southwestern Fisheries District in 2009.

Lake	Date	Species	Weather	Surface water temp.(F)	Conductivity (umhos)	Secchi (in.)	Comments
Barren River	4-May	Bass	Cloudy	63-66	170	60-78	4-ft above summer pool
	13-Oct	YOY bass	Overcast	66-71	200	46	2-ft below summer pool & stable
	27-Oct	Crappie	Clear	57-59		40	3-ft below summer pool & falling slowly 0.2-ft. per day
Green River	2-Nov	Morones	Calm				1-ft below summer pool & falling 0.3-ft. per day
	2-Feb	Muskie	Partly sunny	38	90	42	12.5-ft above w inter pool
	12-Feb	Muskie		43		18	3.5-ft above w inter pool
	13-Feb	Muskie		43	65	6	3-ft above w inter pool
	24-Feb	Muskie		43	80	16	0.5-ft above w inter pool
	25-Feb	Muskie	Sunny & calm	43	80	12	0.5-ft above w inter pool
	2-Mar	Muskie		44	90	12	3-ft above w inter pool
	5-May	Bass	Partly cloudy	64-66	120	30-56	3-ft above summer pool & almost full moon
	21-Sep	YOY bass			140	44-72	1.5 feet below summer pool & stable
	21-Oct	Crappie	Bluebird-calm	54-60		36	0.5-ft below w inter pool & steady
Briggs	11-Nov	Walleye		55-57			0.5-feet below w inter pool & steady
	22-Apr	Bass	Clear	61		40	
Marion Co.	11-May	Bluegill & redear	Partly cloudy	68	180	50	
	16-Sep	YOY bass	Cloudy	75			
	27-Apr	Bass	Clear	70	120	72	mid-size bass 10-13" thin
	12-May	Bluegill & redear	Sunny	70	115	58	
Spurlington	15-Sep	YOY bass		79	120	66	
	27-Apr	Bass	Clear	65	170	30-36	
Shanty Hollow	12-May	Bluegill	Sunny	65	135	18	Lake up 1-ft above normal
	15-Sep	YOY bass		74	190	36	
	28-Apr	Bass	Cloudy	68	110	48	
	13-May	Bluegill & redear	Clear & w indy	68	100	46	Lake above normal pool
W. Fork Drakes	14-Sep	YOY bass	Clear	77	120		
	14-May	Bass & sunfish	Partly Cloudy	64	210	25	Lake up 1-ft above normal pool

Table 2. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.0 hours (12-0.50-hour runs) of diurnal electrofishing at Barren River Lake on May 4th 2009.

Area	Species	Inch class																						Total	CPUE	Std err
		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22					
Peninsula	Smallmouth bass	3	4					1				1				2						4	2.67	2.67		
	Spotted bass					4	13	5	1	2	3	5	3										36	24.00	2.00	
	Largemouth bass	1	5	16	23	13	5	8	21	12	17	7	14	14	16	10	3	1					186	124.00	9.02	
Beaver Creek	Smallmouth bass																									
	Spotted bass						1	2	1														4	2.67	1.76	
	Largemouth bass	1	1	14	12	5	3	8	20	15	10	9	11	12	8	6	2	2		1			140	93.33	11.68	
Peter Creek	Smallmouth bass											1											1	0.67	0.67	
	Spotted bass	1	1				1	2	3	1	2	2											13	8.67	3.33	
	Largemouth bass			7	5	7	3	16	12	6	9	4	5	7	2	6	1						90	60.00	14.47	
Walnut Creek	Smallmouth bass																						1	0.67	0.67	
	Spotted bass								1	1			1										5	3.33	2.40	
	Largemouth bass			2	1	4	2	9	18	4	12	8	3	4	2	1	4	2	2				78	52.00	6.93	
TOTAL	Smallmouth bass							1		1	1	2				2						6	1.00	0.67		
	Spotted bass	1	2		4	15	10	6	3	5	7	4	1									58	9.67	2.79		
	Largemouth bass	2	6	39	41	29	13	41	71	37	48	28	33	37	28	23	10	5	2	1		494	82.33	9.80		

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Table 3. Spring diurnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Barren River Lake during April, May and early March since 1997.

Year	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in		Total	
	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
1997	6.67	1.40	31.11	5.23	48.40	6.44	49.30	6.48	3.33	0.67	135.60	11.61
1998	17.20	4.15	11.40	2.68	23.20	3.10	32.20	2.66	1.20	0.44	83.80	8.27
1999	10.67	2.40	31.33	5.62	41.67	6.90	36.33	4.66	2.33	0.64	120.80	11.16
2000	8.29	1.67	24.14	3.45	33.00	3.19	27.29	2.42	1.43	0.51	92.70	7.29
2001	11.81	1.64	42.29	4.02	49.33	6.34	61.90	4.10	1.14	0.40	165.30	9.60
2002	12.55	2.24	22.36	2.87	30.36	4.03	37.64	4.22	1.27	0.41	102.91	9.50
2003	21.69	3.42	22.46	3.47	20.46	2.90	39.54	4.71	0.31	0.21	104.15	10.58
2004	47.66	13.97	37.66	6.25	16.67	3.96	18.44	3.25	0.67	0.47	120.22	22.15
2005	17.67	2.93	66.00	7.73	31.50	4.65	36.83	3.36	2.00	0.68	152.00	8.62
2006	22.83	4.71	46.17	6.88	57.17	9.80	44.00	5.96	1.33	0.42	170.17	21.78
2007	12.67	3.09	44.17	10.94	37.67	5.00	37.17	5.84	1.00	0.58	131.67	17.03
2008	38.17	7.78	30.33	4.57	30.33	3.08	38.33	3.84	1.50	0.56	137.17	11.48
2009	14.67	4.07	25.67	2.37	18.83	2.32	23.17	3.90	1.33	0.57	82.33	9.80
Average	18.66		33.47		33.74		37.09		1.45		122.99	

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Table 4. PSD and RSD values obtained for each black bass species collected during 6 hours (12 runs, 0.50-hour) of spring diurnal electrofishing at each area of Barren River Lake in early May 2009. 95% confidence intervals are in parentheses.

Area	Species	No. \geq stock size	PSD (\pm 95% CI)	RSD ^a (\pm 95% CI)
Peninsula	Largemouth bass	141	67(8)	41(8)
	Spotted bass	36	36(16)	8(7)
	Smallmouth bass	4	75(49)	75(49)
Beaver Creek	Largemouth bass	112	68(9)	38(9)
	Spotted bass	4	*	*
	Smallmouth bass		*	*
Peter Creek	Largemouth bass	78	51(11)	27(10)
	Spotted bass	11	45(31)	*
	Smallmouth bass	1	*	*
Walnut Creek	Largemouth bass	75	56(11)	24(9)
	Spotted bass	4	*	*
	Smallmouth bass	1	*	*
Total	Largemouth bass	406	62(6)	34(5)
	Spotted bass	55	38(13)	9(8)
	Smallmouth bass	6	83(33)	67(41)

^a Largemouth bass = RSD_L; spotted bass and smallmouth bass = RSD_S.

* No fish of sufficient size were collected during sampling.

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Table 5. Population assessment of largemouth bass based on spring sampling at Barren River Lake from 2002-2009 (scoring based on statewide assessment).

Parameter	2002		2003		2004		2005		2006		2007		2008		2009	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age-3 at capture	14.1	4	14.1	4	14.1	4	14.1	4	14.1	4	14.1	4	14.40	4	14.40	4
Spring CPUE age-1	14.95	1	19.60	1	26.90	2	13.48	1	17.52	1	9.67	1	44.45	3	18.92	2
Spring CPUE 12.0-14.9 in	30.36	3	20.46	2	16.67	2	31.50	3	57.17	4	37.67	4	30.33	3	18.83	2
Spring CPUE ≥15.0 in	37.64	4	39.54	4	18.44	3	36.83	4	44.00	4	37.17	4	38.33	4	23.17	4
Spring CPUE ≥20.0 in	1.27	2	0.31	2	0.67	2	2.00	2	1.33	2	1.00	2	1.50	2	1.33	2
Instantaneous Mortality (z)																
Annual Mortality (A)%																
Total Score	14		13		13		14		15		15		16		14	
Assessment Rating	Good		Good		Good		Good		Good		Good		Good		Good	

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Table 6. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.0 hours (12- 0.50-hour runs) of diurnal electrofishing at Barren River Lake in October 2009.

Area	Species	Inch class																				Total	CPUE	Std err
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			
Peninsula	Smallmouth bass				2	2						1					1					6	4.00	3.06
	Spotted bass	64	12		2	2		1							2							83	55.33	30.05
	Largemouth bass	132	23	1	6	7	6	3	3	4	3	3	2	2	2	1	2					198	132.00	41.59
Beaver Creek	Smallmouth bass																							
	Spotted bass	1	4		1						2			1								9	6.00	2.00
	Largemouth bass	590	227	25	39	46	39	18	8	27	12	4	10	6	3	3	2					1109	739.33	137.53
Peter Creek	Smallmouth bass												1									1	0.67	0.67
	Spotted bass	54	86	7	1		2	4			2	5	1	1								163	108.67	55.29
	Largemouth bass	317	130	4	7	13	10	7	4	6	10	7	5	5	3	5		4	1	1		539	359.33	54.04
Walnut Creek	Smallmouth bass																							
	Spotted bass	19	35	6	2	14	7			2	2											87	58.00	26.41
	Largemouth bass	541	144	5	7	14	19	2	4	13	9	8	8	10	6	1	2					794	529.33	145.57
TOTAL	Smallmouth bass				2	2						2										7	1.17	0.83
	Spotted bass	138	137	13	6	16	9	4	1	2	6	5	1	2	2							342	57.00	18.21
	Largemouth bass	1580	574	35	59	80	74	30	19	50	34	22	25	23	13	11	4	4	1	1		2640	440.00	80.97

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

Year-class	Age 0 ^a		Age 0 ^a		Age 0 ≥5.0 in ^a		Age 1 ^b	
	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2002	4.0	0.05	171.67	25.76	34.17	4.06	26.90	3.71
2003	4.4	0.04	198.00	30.81	84.00	18.74	44.90	13.25
2004	3.7	0.04	108.44	22.20	20.78	3.85	11.20	2.51
2005	3.7	0.04	160.67	25.63	25.33	4.20	17.50	3.63
2006	3.4	0.02	299.67	87.22	21.83	5.62	18.00	4.78
2007	4.2	0.06	61.50	12.80	14.00	2.47	13.79	1.49
2008	3.8	0.03	307.53	46.86	59.67	10.53	18.92	4.39
2009	3.2	0.02	401.32	76.11	36.83	8.59		

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

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

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sw dbrlag.D02 - D09

sw dbrlyy.D02 - D09

Table 8. Length frequency and CPUE (fish/nh) of each inch class of white and black crappie collected by trap net (59 net-nights) at Barren River Lake from in late October 2009.

Location	Species	Inch class										Total	CPUE	Std. error	
		3	4	5	6	7	8	9	10	11	12				
Beaver Creek	White crappie			1		2	5	23	16				47	1.57	0.40
	Black crappie	6	2	55	70	55	6	3	1	1			199	6.63	1.15
Walnut Creek	White crappie				4	23	99	74	16				216	7.45	2.39
	Black crappie			25	61	61	5	12	7	2	1		174	6.00	1.68
Total	White crappie			1	4	25	104	97	32				263	4.46	1.24
	Black crappie	6	2	80	131	116	11	15	8	3	1		373	6.32	1.00

sw dbrltn.d09

Table 9. Proportional stock density (PSD) and relative stock density (RSD₁₀) of white and black crappie collected by trap nets (106 net-nights) at Barren River lake from late October 2008. Numbers in parentheses represent 95% confidence intervals.

Location	Species	Number ≥ 5.0 in	PSD	RSD ₁₀
Barren River Lake	White crappie	263	86(6)	12(4)
	Black crappie	365	10(4)	3(2)

sw dbrltn.D09

Table 10. Black crappie assessment from trap netting at Barren River Lake from 1985-2009 (scoring based on statewide assessment).

Year	Black crappie										Total score	Rating
	CPUE excluding age 0		CPUE age 1		CPUE age 0		CPUE >8.0 in		Mean length age 2 at capture			
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score		
1985	3.53	1	0.72	1	0.33	1	0.78	1	7.4	1	5	P
1986	10.72	2	6.94	3	3.83	2	2.80	1	8.7	2	10	F
1987	3.27	1	1.90	1	2.82	1	1.34	1	9.6	4	8	F
1988	6.18	2	5.68	2	0.10	1	0.44	1	9.3	3	9	F
1989	9.19	2	1.48	1	7.51	3	5.90	2	8.2	1	9	F
1990	29.12	4	26.11	4	0.10	1	1.92	1	8.8	2	12	F
1991	3.53	1	0.95	1	0.86	1	3.55	1	7.6	1	5	F
1992	9.20	2	3.49	2	0.07	1	4.24	2	7.7	1	8	F
1993	12.61	2	1.06	1	0.29	1	9.13	2	8.1	1	7	P
1994	0.74	1	0.10	1	0.82	1	0.70	1	8.8	2	6	P
1995	7.39	2	6.54	2	1.29	1	0.53	1	8.9	2	8	F
1996	9.03	2	0.79	1	0.48	1	4.16	2	7.8	1	7	P
1997	9.12	2	1.45	1	0.87	1	5.98	2	7.6	1	7	P
1998	1.71	1	0.12	1	1.79	1	1.56	1	8.2	1	5	P
1999	4.66	1	3.82	2	0.26	1	0.85	1	8.6	2	7	P
2000	1.81	1	0.18	1	0.22	1	0.65	1	7.8	1	5	P
2001	5.72	2	0.33	1	0.41	1	4.47	2	7.6	1	7	P
2002	4.58	1	1.02	1	3.09	2	3.34	1	8.7	2	7	P
2003	2.37	1	1.19	1	5.35	2	0.89	1	9.7	4	9	F
2004	6.90	2	4.36	2	0.65	1	2.20	1	9.2	3	9	F
2005*	6.40	2	2.30	1	2.00	1	4.40	2	9.1	3	9	F
2006*	2.70	1	1.40	1	0.60	1	1.30	1	8.9	3	7	P
2007	6.59	2	3.23	2	0.16	1	1.30	1	8.5	2	8	F
2008*	1.77	1	0.19	1	1.43	1	1.58	1	9.7	4	8	F
2009*	5.88	2	4.31	2	0.35	1	0.64	1	8.0	1	7	P

* Age assessment data extrapolated from previous age data

sw dbrltn.D85 - D09

Table 11. White crappie assessment from trap netting at Barren River Lake from 1985 - 2009 (scoring based on statewide assessment)

Year	White crappie											Total score	Rating
	CPUE excluding age 0		CPUE age 1		CPUE age 0		CPUE ≥ 8.0 in		Mean length age 2 at capture				
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score			
1985	30.98	4	24.40	4	0.42	1	2.20	1	9.4	3	13	G	
1986	13.56	3	3.61	2	1.91	1	8.87	2	9.0	2	10	F	
1987	3.99	1	1.26	1	0.41	1	2.48	1	10.8	4	8	F	
1988	3.07	1	2.49	1	0.24	1	2.48	1	11.1	4	8	F	
1989	4.15	1	1.69	1	3.25	2	2.56	1	11.0	4	9	F	
1990	22.83	4	20.80	4	0.50	1	13.38	2	10.8	4	15	G	
1991	30.98	4	0.52	1	0.98	1	8.86	2	9.8	4	12	F	
1992	6.82	2	5.09	2	0.07	1	4.04	2	11.5	4	11	F	
1993	5.77	2	0.59	1	0.04	1	5.22	2	10.0	4	10	F	
1994	0.66	1	0.11	1	0.65	1	0.44	1	10.6	4	8	F	
1995	7.95	2	7.69	3	0.64	1	5.47	2	11.5	4	12	F	
1996	6.34	2	0.80	1	1.40	1	5.59	2	9.7	4	10	F	
1997	6.71	2	5.12	2	1.04	1	5.16	2	10.2	4	11	F	
1998	1.22	1	0.68	1	2.03	1	0.93	1	10.9	4	8	F	
1999	6.48	2	5.91	2	0.54	1	2.93	1	10.9	4	10	F	
2000	2.50	1	0.32	1	0.03	1	2.38	1	9.3	3	7	P	
2001	1.58	1	0.51	1	0.21	1	1.34	1	10.5	4	8	F	
2002	1.41	1	0.29	1	1.16	1	0.80	1	10.7	4	8	F	
2003	1.37	1	1.02	1	0.43	1	1.05	1	11.5	4	8	F	
2004	1.55	1	0.88	1	0.16	1	1.29	1	11.1	4	8	F	
2005*	0.70	1	0.60	1	0.01	1	0.70	1	11.0	4	8	F	
2006*	0.30	1	0.20	1	0.00	0	0.20	1	10.6	4	7	P	
2007	0.37	1	0.32	1	0.80	1	0.29	1	11.2	4	8	F	
2008	0.03	1	0.01	1	0.18	1	0.03	1	10.8	4	8	F	
2009*	4.44	1	4.03	2	0.02	1	3.95	2	10.2	4	10	F	

* Age Assessment data extrapolated from previous age data
sw dbrltn.D85 - D09

Table 12. Population assessment for all crappie from Barren River trap net data collected from 2001-2009 (scoring based on statewide assessment).

Parameter	2006		2007		2008		2009	
	Value	Score	Value	Score	Value	Score	Value	Score
Population Density (CPUE age-1 and older)	2.90	1	6.96	2	1.80	1	10.32	2
Recruitment (CPUE age-1)	1.60	1	3.58	2	0.20	1	8.34	3
Recruitment (CPUE age-0)	0.60	1	0.96	1	1.61	1	0.37	1
Size Structure (CPUE \geq 8.0 in)	1.50	1	1.59	1	1.61	1	4.59	2
Grow th (Mean length age-2 at capture)	10.2	4	8.6	2	9.8	4	9.1	3
Instantaneous Mortality (Z)			-1.586		-1.39			
Annual Mortality (A)%			79.9		75.3			
Total Score:	8		8		8		11	
Assessment Rating:	Fair		Fair		Fair		Fair	

sw dbrftn.D06 - D09

Table 13. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 0.625 hours (5- 0.125 hour runs) of nocturnal electrofishing at Briggs Lake on 22 April 2009.

Species	Inch class																						Total	CPUE	Std err
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22						
Largemouth bass	5	20	31	12	3	35	37	30	16	6	6	2	1							1	205	328.00	16.78		

sw dbrgbb.D09

Table 14. Spring nocturnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Briggs Lake during late-April to early May 2000-2009.

Year	Length group												Total				
	<8.0 in			8.0-11.9 in			12.0-14.9 in			>15.0 in				>20.0 in			
	CPUE	Std. error		CPUE	Std. error		CPUE	Std. error		CPUE	Std. error		CPUE	Std. error		CPUE	Std. error
2000	27.94	8.10	8.0-11.9 in	92.63	19.12	12.0-14.9 in	64.71	12.01	>15.0 in	10.29	2.82	>20.0 in	NA			195.60	35.97
2001	120.59	21.57	8.0-11.9 in	73.53	10.87	12.0-14.9 in	41.18	9.30	>15.0 in	5.88	4.16	>20.0 in	1.47	1.47		241.00	24.96
2002	27.45	10.38	8.0-11.9 in	109.80	8.55	12.0-14.9 in	39.22	7.07	>15.0 in	21.57	5.19	>20.0 in	NA			202.00	17.48
2003	28.85	13.82	8.0-11.9 in	175.00	39.02	12.0-14.9 in	19.23	4.97	>15.0 in	26.92	4.97	>20.0 in	NA			260.00	51.07
2004	11.54	4.97	8.0-11.9 in	117.30	3.68	12.0-14.9 in	51.92	10.59	>15.0 in	7.69	3.14	>20.0 in	1.92	1.92		196.00	20.26
2005	46.00	6.83	8.0-11.9 in	194.00	21.26	12.0-14.9 in	28.00	5.16	>15.0 in	26.00	5.03	>20.0 in	6.00	3.83		294.00	27.40
2006	56.00	4.38	8.0-11.9 in	171.20	9.67	12.0-14.9 in	25.60	4.66	>15.0 in	11.20	5.43	>20.0 in	3.20	1.96		264.00	12.13
2007	38.00	6.83	8.0-11.9 in	412.00	32.41	12.0-14.9 in	18.00	2.00	>15.0 in	2.00	2.00	>20.0 in	NA			470.00	31.39
2008	154.00	16.12	8.0-11.9 in	286.00	19.70	12.0-14.9 in	36.00	6.93	>15.0 in	14.00	6.83	>20.0 in	8.00	5.66		490.00	30.88
2009	108.00	21.41	8.0-11.9 in	168.00	16.59	12.0-14.9 in	44.80	12.29	>15.0 in	6.40	2.99	>20.0 in	1.60	1.60		328.00	16.8

sw dbrgbb.D00 - D09

Table 15. PSD and RSD₁₅ values obtained for largemouth bass collected during 0.625 hours (5-0.125-hour runs) of spring nocturnal electrofishing at Briggs Lake on April 22, 2009. 95% confidence intervals are in parentheses.

Species	No. >8.0 in.	PSD (+ 95% CI)	RSD ₁₅ (+ 95% CI)
Largemouth bass	137	23(7)	3(3)

sw dbrgbb.D09

Table 16. Length frequency and CPUE (fish/hr) of bluegill and redear collected by diurnal electrofishing at Briggs Lake on 11 May 2009.

Species	Inch class											Total	CPUE	Std. error
	2	3	4	5	6	7	8	9	10	11				
Bluegill	12	38	33	15	8	3	11	1				121	193.60	21.53
Redear	1	1	4	14	20	8	2	1				51	81.60	25.10
Warmouth	1	4	2	4	17	3						31	49.60	13.00

sw dbrgbg.D09

Table 17. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Briggs Lake from early-mid May 2005-2009. Standard errors are in parentheses.

Year	Length group					Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	>8.0 in		
2005	14.00 (14.00)	80.00 (16.33)	84.00 (14.79)	18.00 (8.25)	196.00 (12.44)	
2006	4.00 (2.31)	86.00 (33.53)	100.00 (42.90)	52.00 (14.00)	242.00 (72.07)	
2007	8.00 (4.38)	83.20 (9.93)	84.80 (26.12)	25.60 (9.93)	201.60 (33.70)	
2008	230.40 (89.78)	84.80 (32.16)	56.00 (20.24)	12.80 (5.43)	384.00 (96.23)	
2009	19.20 (10.31)	137.60 (19.50)	17.60 (6.88)	19.20 (6.50)	193.60 (21.53)	

sw dbrgbg.D05 - D09

Table 18. Spring electrofishing CPUE (fish/hr) for each length group of redear sunfish collected at Briggs Lake during early-mid May 2005-2009. Standard errors are in parentheses.

Year	Length group					Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	>8.0 in	>10.0 in	
2005	0.00 (2.31)	14.00 (8.87)	2.00 (2.00)	4.00 (4.00)	0.00	20.00 (6.93)
2006	4.00 (2.31)	2.00 (2.00)	70.00 (8.25)	22.00 (6.00)	2.00 (2.00)	98.00 (10.52)
2007	0.00	8.00 (3.60)	62.40 (13.00)	12.80 (6.50)	1.60 (1.60)	83.20 (16.90)
2008	1.60 (1.60)	3.20 (1.96)	*	3.20 (1.96)	*	8.00 (3.58)
2009	1.60 (1.60)	8.00 (6.20)	54.40 (14.84)	17.60 (11.97)	4.80 (3.20)	81.60 (25.10)

* No fish of sufficient size were collected during sampling.
sw dbrgbg.D05 - D09

Table 19. Proportional stock density (PSD) and relative stock density (RSD_8) of bluegill and redear collected by diurnal electrofishing at Briggs lake on 11 May 2009. Numbers in parentheses represent 95% confidence intervals.

Species	N	PSD	RSD_8
Bluegill	109	21(8)	11(6)
Redear	49	63(14)	6(7)

sw dbrgbg.D09

Table 20. Bluegill population assessment for Briggs Lake 2006 - 2009 (scoring based on statewide assessment).

Parameter	Year							
	<u>2006</u>		<u>2007</u>		<u>2008</u>		<u>2009</u>	
	Value	Score	Value	Score	Value	Score	Value	Score
Growth								
Mean length age-2 at capture	5.4	4	5.1	4	4.1	3	4.1	3
Growth								
Years to 6.0 in	2.3	4	2.5	4	2.5	4	2.5	4
Size Structure								
CPUE _{≥6.0 in}	152.00	4	110.40	4	68.80	3	36.80	2
Size Structure								
CPUE _{≥8.0 in}	52.00	4	25.60	4	12.80	3	19.20	4
Total Score:		16		16		13		13
Assessment Rating:		Excellent		Excellent		Good		Good
Instantaneous Mortality (z)	ND		-0.5298		ND		ND	
Annual Mortality (A)%			41.1					

sw dbrgbg.D06 - D09

Table 21. Redear population assessment for Briggs Lake 2006 - 2009 (scoring based on statewide assessment).

Parameter	Year							
	2006		2007		2008		2009	
	Value	Score	Value	Score	Value	Score	Value	Score
Growth								
Mean length age-3 at capture	6.8	4	8.8	4	8.8	4	8.8	4
Growth								
Years to 8.0 in	3.0	4	2.5	4	2.5	4	2.5	4
Size Structure								
CPUE ≥ 8.0 in	22.00	4	12.80	3	3.20	1	17.60	4
Size Structure								
CPUE ≥ 10.0 in	2.00	2	1.60	2	0.00	1	4.80	3
Total Score:	14		13		10		15	
Assessment Rating:	Excellent		Good		Fair		Excellent	
Instantaneous Mortality (z)								
Annual Mortality (A)%								

swdbrgbg.D06 - D09

Table 22. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 0.50 hours (4- 0.125-hour runs) of spring nocturnal electrofishing at Spurlington Lake during 2009.

Species	Inch class																	Total	CPUE	Std err
	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22			
Largemouth bass	2	1	20	23	8	13	25	20	14	8	8	7	4	1			1	155	310.00	45.30

sw dsplbb.D09

Table 23. Spring nocturnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Spurlington Lake during early March / April since 2002.

Year	Length group										Total	
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in			
	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2002	21.60	3.90	145.10	14.10	174.50	22.10	35.30	3.40	2.94	2.94	384.00	32.80
2003	61.50	14.40	233.90	29.20	123.10	11.40	12.30	3.10	1.54	1.54	448.00	47.20
2004	28.90	6.60	200.00	40.60	109.60	10.60	19.20	5.00	1.92	1.92	372.00	39.80
2005	42.00	13.20	130.00	26.20	146.00	12.40	20.00	2.30	2.00	2.00	338.00	23.20
2006	30.40	11.70	168.00	26.90	137.60	22.70	28.80	7.40	4.80	3.20	364.80	19.70
2007	12.00	5.16	92.00	6.93	66.00	6.00	14.00	3.83	2.00	2.00	184.00	3.27
2008	46.00	20.75	150.00	26.00	164.00	15.49	32.00	7.30	2.00	2.00	392.00	46.65
2009	6.00	6.00	128.00	9.80	118.00	26.20	58.00	10.00	2.00	2.00	310.00	45.30

sw dsp1bb. D02 - D09

Table 24. PSD and RSD_{15} values obtained for largemouth bass collected during 0.50 hour (4- 0.125-hour runs) of spring nocturnal electrofishing at Spurlington Lake on 27 April 2009. 95% confidence intervals are in parentheses.

Species	No. >8.0 in	PSD (+ 95% CI)	RSD_{15} (+ 95% CI)
Largemouth bass	152	58(8)	19(6)

swdsp1bb. D09

Table 25. Length frequency and CPUE (fish/hr) of bluegill collected by diurnal electrofishing at Spurlington Lake on 12 May 2009.

Species	Inch class								Total	CPUE	Std. error
	1	2	3	4	5	6	7	8			
Bluegill	55	99	176	104	77	47	51	9	618	988.8	119.6
Redear		1	3		1		18	15	38	60.80	22.43
Warmouth		1	5	18	14	17	5		60	96.00	22.20

sw dsplbg.d09

Table 26. Diurnal spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Spurlington Lake from 2005-2009. Standard errors are in parentheses.

Year	Length group				Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	>8.0 in	
2005	66.00 (14.38)	216.00 (45.72)	50.00 (15.79)	16.00 (8.64)	348.00 (68.90)
2006	138.00 (47.71)	302.00 (54.69)	46.00 (8.87)	14.00 (2.00)	482.00 (100.18)
2007	496.00 (85.23)	606.00 (73.49)	50.00 (18.29)	4.00 (4.00)	1156.00 (137.39)
2008	198.00 (38.42)	550.00 (145.60)	120.00 (43.20)	14.00 (14.00)	882.00 (236.25)
2009	246.40 (37.64)	571.20 (82.78)	156.80 (30.21)	14.40 (7.76)	988.80 (119.60)

sw dsplbg.D05 - D09

Table 27. Spring electrofishing CPUE (fish/hr) for each length group of redear sunfish collected at Spurlington Lake during early-mid May 2009. Standard errors are in parentheses.

Year	Length group					Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	≥10.0 in	
2009	1.60 (1.60)	6.40 (2.99)	28.80 (12.55)	24.00 (11.03)	*	60.80 (22.43)

* No fish of sufficient size were collected during sampling

sw dsplbg.D09

Table 28. Proportional stock density (PSD) and relative stock density (RSD_8) of bluegill and redear sunfish collected by diurnal electrofishing at Spurlington Lake on 12 May 2009. Numbers in parentheses represent 95% confidence intervals.

Species	N	PSD	RSD_8
Bluegill	464	23(4)	2(1)
Redear	34	97(6)	*

* No fish of sufficient size were collected during sampling.

sw dsplbg.d09

Table 29. Bluegill population assessments from 2003 - 2009 at Spurlington Lake (scoring based on statewide assessment).

Parameter	Year													
	2003		2004		2005		2006		2007		2008		2009	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age-2 at capture	3.9	2	3.9	2	3.7	2	3.7	2	3.7	2	3.8	3	3.8	3
Years to 6.0 in	3	4	3	4	3	4	3	4	3	4	3.5	3	3.5	3
CPUE >6.0 in	58.70	3	70.00	3	66.00	3	60.00	2	54.00	2	134.00	4	171.20	3
CPUE >8.0 in	16.00	4	22.00	4	16.00	4	14.00	2	4.00	1	14.00	3	14.40	1
Instantaneous mortality (z)	ND		ND		ND		ND		ND		-1.091		ND	
Annual mortality (A)											66.4			

Total Score:	13	13	13	12	11	13	13
Assessment rating	Good	Good	Good	Good	Good	Good	Good

ND - no age data collected
 sw ds.plag.d08
 sw ds.plbg.D03 - D09

Table 30. Length frequency and CPUE (fish/hr) of muskellunge collected with diurnal electrofishing (16.5 hours; 66 runs; 0.25 hours each) during late-winter/early spring at Green River Lake in 2009.

	Inch class																								Total	CPUE	Std err						
	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
Muskellunge	2	22	25	54	47	6	3	2	6	2	7	9	11	9	4	2	6	1	3	1	1	1	1	1	1	1	1	1	1	1	224	13.58	1.21

sw dgrlmy.d09

Table 31. Muskellunge population assessment for Green River Lake diurnal late-winter/early spring electrofishing from 1990-2009 (scoring based on statewide assessment).

Year	CPUE age-1		CPUE >20.0 in		CPUE >30.0 in		CPUE >36.0 in		CPUE >40.0 in		Total assessment	Rating
	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment		
1990	12.68	4	7.04	3	2.11	2	1.17	3	0.00	0	12	G
1991	10.19	4	3.86	3	1.38	1	0.38	1	0.15	1	9	F
1992	2.25	2	6.13	3	1.71	2	0.65	2	0.09	1	10	F
1993	13.37	4	6.98	3	4.36	4	1.26	3	0.55	4	17	E
1994	4.11	3	8.94	3	3.9	3	2.25	4	0.93	4	17	E
1995	15.73	4	6.95	3	2.78	3	0.82	2	0.44	3	15	G
1996	5.16	3	16.01	4	3.54	3	0.84	2	0.24	2	14	G
1997	5.80	3	13.03	4	6.81	4	1.18	3	0.53	3	17	E
1998	9.24	4	9.01	3	5.05	4	1.94	4	0.47	3	18	E
1999	8.75	3	9.83	3	4.81	4	1.42	3	0.34	3	16	G
2000	2.57	2	7.64	3	4.18	4	2.03	4	0.78	3	17	E
2001	10.76	4	6.41	3	4.48	4	1.45	3	0.55	3	17	E
2002	5.83	3	10.63	4	4.46	4	2.86	4	0.91	4	19	E
2003	4.49	3	9.88	3	6.20	4	1.71	4	0.82	4	18	E
2004	6.52	3	8.26	3	5.16	4	1.81	4	0.19	1	18	E
2005	2.40	2	7.20	3	4.80	4	1.92	4	0.96	4	17	E
2006	4.74	3	5.48	3	4.30	4	2.22	4	0.74	4	18	E
2007	3.76	3	4.24	2	1.65	2	1.41	4	0.94	4	15	G
2008	0.91	1	6.36	3	3.36	3	1.27	3	0.36	3	13	G
2009	9.45	4	4.12	2	3.33	3	0.90	3	0.18	1	11	F

sw dgriny.d90 - d09

Table 32. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.0 hours (12 runs, each 0.50 hours) of nocturnal electrofishing at Green River Lake May 5-6, 2009.

Area	Species	Inch class												Total	CPUE	Std err							
		2	3	4	5	6	7	8	9	10	11	12	13				14	15	16	17	18	19	20
Green River Arm																							
Holmes Bend	Smallmouth bass			1					1					1								3	
	Spotted bass	4	6	5	1	18	2	10	7		1	2	1									57	
	Largemouth bass		2	11	5	4	5	9	15	11	9	3	6	15	11	15	8	5				134	
Ramp 1	Smallmouth bass						1	1														2	
	Spotted bass			5	5	4	11	9	3	1	3	4	5	4	4	1						59	
	Largemouth bass			1	1	3	1	2		7	8	7	19	16	23	27	17	10	6	1		150	
Robinson Creek Arm																							
Smith Ridge	Smallmouth bass																						
	Spotted bass	1	4	9		3	6	13	10	1		2	1		1							51	
	Largemouth bass		3	2	2	3	1	1	1	5	1		6	8	4	10	4	1				52	
Lone Valley	Smallmouth bass				2				1		1	2		1								7	
	Spotted bass	1	2	10	14	14	13	19	10	4	9	5	11	3	1	2						118	
	Largemouth bass			1	2	3		1	4	5	10	3	6	12	28	19	9	6	1			110	
TOTAL	Smallmouth bass			1	2	1	1	1	2		1	2		2								12	
	Spotted bass	1	5	12	29	20	39	32	51	30	6	13	13	18	7	6	3					285	
	Largemouth bass			5	15	10	13	7	13	20	28	28	13	37	51	66	71	38	21	7	2	1	446

sw dgrlbb.d09

Table 33. Spring diurnal electrofishing CPUE (fish/hr) of largemouth bass by length group collected at Green River Lake during early May since 1997.

Year	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		>20.0 in		Total	
	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
1997	3.67	1.04	22.33	2.46	23.33	2.82	23.17	2.10	1.17	0.46	72.50	5.18
1998	33.50	7.66	9.00	1.82	8.83	2.04	17.50	1.84	2.00	0.70	68.83	8.61
1999	21.38	3.76	53.54	7.18	19.38	4.00	14.31	1.66	2.77	0.77	108.62	12.51
2000	2.50	0.89	41.00	4.37	24.17	3.41	14.67	3.37	3.17	0.97	82.33	8.59
2001	10.17	2.50	26.67	2.99	32.17	6.45	12.50	1.50	1.67	0.41	81.50	7.77
2002	5.00	1.14	9.50	1.46	20.50	2.49	13.00	2.46	1.17	0.39	48.00	4.24
2003	5.83	1.38	12.33	2.07	5.83	1.78	18.17	2.96	1.83	0.67	42.17	4.12
2004	17.33	2.74	22.80	2.10	11.60	1.81	15.60	2.55	0.93	0.27	67.33	6.41
2005	67.83	7.98	30.67	2.78	11.67	1.86	16.83	2.52	1.50	0.66	127.00	12.53
2006	15.07	2.01	44.40	3.56	23.07	2.81	18.93	2.13	0.27	0.18	96.17	5.25
2007	3.83	1.03	20.50	2.51	33.67	5.78	22.17	3.61	0.50	0.26	80.17	10.33
2008	22.83	9.49	25.83	4.71	27.83	3.97	30.17	2.74	0.83	0.39	106.66	16.97
2009	7.17	1.78	11.33	3.38	13.00	2.70	42.83	7.94	1.67	0.77	74.33	12.29

sw dgrlbb.D97-D09

Table 34. PSD and RSD values for each black bass species collected during 6 hours (12 runs, each 0.50 hours) of nocturnal electrofishing at each area of Green River Lake on May 5-6, 2009. 95% confidence intervals are in parentheses.

Area	Species	No. >stock size	PSD (\pm 95% CI)	RSD* (\pm 95% CI)
Green River Arm				
Holmes Bend	Largemouth bass	112	64(9)	48(9)
	Spotted bass	41	10(9)	
Ramp 1	Largemouth bass	145	93(4)	70(8)
	Spotted bass	49	45(14)	29(13)
Robinson Creek Arm				
Smith Ridge	Largemouth bass	42	67(11)	41(11)
	Spotted bass	37	24(11)	5(6)
Lone Valley				
Total	Largemouth bass	104	90(6)	72(9)
	Spotted bass	91	38(10)	19(8)
Total	Largemouth bass	403	83(4)	64(5)
	Spotted bass	218	30(6)	16(5)

* Largemouth bass = RSD_{15} , spotted bass and smallmouth bass = RSD_{14} .
sw dgrlibb.d09

Table 35. Age frequency and CPUE (fish/hr) of largemouth bass collected during electrofishing at Green River Lake during May 2009.

Age	Inch class																				Total	Percent	CPUE	Std. error
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20							
1																					47	11	7.81	2.11
2																					83	19	13.83	3.40
3																					108	24	17.97	3.24
4																					97	22	16.18	2.94
5																					66	15	10.94	2.34
6																					34	8	5.64	1.12
7																					6	1	1.00	0.33
9																					1	0	0.23	0.14
11																					1	0	0.23	0.14
Total	5	15	10	13	8	13	20	28	28	13	37	51	66	71	38	21	7	823	100					
%	1	3	2	3	2	3	5	3	6	3	8	12	15	16	9	5	2	100						

Table 36. Age frequency and CPUE (fish/hr) of spotted bass collected during electrofishing at Green River Lake during May 2009.

Age	Inch class																	Total	Percent	CPUE	Std. error
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17					
1	1	5	12	29	5												52	18	8.67	1.53	
2					15	34	23	28	14	2	1						117	41	19.53	2.75	
3						5	9	23	11	4	7	5	3				67	24	11.08	1.63	
4									6	4	4	6	11	3			30	11	5.08	1.13	
5											2	3	3	1	6	2	14	5	2.42	0.67	
6														3	2	2	5	2	0.72	0.24	
Total	1	5	12	29	20	39	32	51	31	6	12	13	17	7	6	4	285	100			
%					7	14	11	18	11	2	4	5	8	2	3	1	100				

sw dgribb.d09; sw dgriag.d09

Table 37. Population assessment of largemouth bass based on nocturnal spring sampling at Green River Lake from 2002-2009 (scoring based on statewide assessment).

Parameter	2002		2003		2004		2005		2006		2007		2008		2009	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age-3 at capture	12.7	4	14.35	4	13.2	4	13.2	4	13.2	4	13.2	4	13.2	4	14.9	4
Spring CPUE age-1	5.00	1	7.30	1	13.80	1	65.30	4	14.30	1	3.83	1	22.00	2	7.17	1
Spring CPUE 12.0-14.9 in	20.50	2	5.83	1	11.60	1	11.67	1	23.07	2	33.67	3	27.83	2	13.00	1
Spring CPUE \geq 15.0 in	13.00	3	18.17	4	15.60	3	16.83	2	18.93	3	22.17	4	30.17	4	42.83	4
Spring CPUE \geq 20.0 in	1.27	2	1.83	3	0.93	2	1.50	2	0.27	1	0.50	2	0.83	2	1.67	3
Instantaneous Mortality (z)			-0.477												-0.610	
Annual Mortality (A)%			37.90												45.7	
Total Score	12	Good	13	Good	11	Good	13	Good	11	Fair	14	Good	14	Good	13	Good
Assessment Rating																

sw dgrlag.D03

sw dgrlbb.D02-D09

Table 38. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.0 hours (12 runs;each 0.50 hours) of diurnal electrofishing at Green River Lake on September 21 and 23, 2009.

Area	Species	Inch class																		Total	CPUE	Std err
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18				
Green River Arm	Smallmouth bass							1											1	0.67	0.67	
	Spotted bass		38	14	1	12	13	9	3	4	5	1		2					102	68.00	14.74	
	Largemouth bass	5	37	42	35	3	2	7	1	6	2		2					1	143	95.33	33.01	
Ramp 1	Smallmouth bass	6	9	1	1	1	1												20	13.30	2.91	
	Spotted bass	29	18	10	10	8	5	7	1			1							89	59.33	23.10	
	Largemouth bass	37	19	5	2	5	1	1	2		1								73	48.67	2.40	
Robinson Creek Arm	Smallmouth bass																		1	0.67	0.67	
	Spotted bass	1	22	16	4	6	21	15	8	5	3	1	1	1					105	70.00	25.79	
	Largemouth bass	5	86	23	20	2	6	5	4	1		3	1	3					159	106.00	2.00	
Lone Valley	Smallmouth bass	6	18	5	1		1												31	20.67	12.35	
	Spotted bass	67	56	3	6	12	9	9	3	1	1		1						168	112.00	11.14	
	Largemouth bass	56	15	2	2						1	2	1		1		1	1	82	54.67	17.68	
TOTAL	Smallmouth bass	12	27	7	2	1	2	1	1										53	6.33	1.87	
	Spotted bass	97	134	43	21	38	48	40	15	10	9	2	1	5	1				464	76.50	13.10	
	Largemouth bass	103	157	72	59	10	9	13	7	7	3	3	6	1	1	3	2	1	457	31.33	7.25	

swdgrfy.d09

Table 39. Largemouth bass mean length (in) at age-0 and catch rates at age 0 and age 1 collected at Green River Lake since 2002.

Year class	Age 0 ^A		Age 0 ^A		Age 0 >5.0 in ^A		Age 1 ^B	
	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2002	3.87	0.07	32.67	9.70	5.33	1.16	7.25	1.58
2003	3.88	0.08	32.83	9.69	5.50	1.23	11.87	2.09
2004	4.96	0.07	60.83	8.97	28.00	3.62	65.33	7.66
2005	5.17	0.09	31.67	7.44	16.83	4.33	14.33	2.36
2006	4.31	0.13	13.50	3.41	3.67	1.20	3.83	1.0
2007	4.18	0.11	21.83	5.31	5.83	2.18	22.83	9.49
2008	4.78	0.11	23.67	5.75	11.50	3.56	7.17	1.78
2009	3.74	0.05	66.83	9.82	11.50	3.85		

^A Data collected by fall (Sept/October) diurnal electrofishing. Mean lengths were determined by otolith taken from a subsample of LMB <9.0 inches and extrapolated to the entire catch of the fall sample.

^B Data collected during the following spring (April/May) nocturnal electrofishing.

sw dgrlbb.D02 - D09

sw dgrlag.D02 - D09

sw dgrlyy.D02 - D09

Table 40. Length frequency and CPUE (fish/mn) for each inch class of crappie collected by trap net (57 net-nights) at Green River Lake from late October 2009.

Species	Inch class												Total	CPUE	Std. error
	2	3	4	5	6	7	8	9	10	11	12	13			
White crappie	1	47	1	189	174	229	261	145	82	45	16	2	1197	20.95	4.17
Black crappie		1								1			2	0.04	0.02

sw dgrltn.d09

Table 41. Proportional stock density (PSD) and relative stock density (RSD_{10}) of white crappie collected by trap nets (57 net-nights) at Green River Lake from late October 2009. Numbers in parentheses represent 95% confidence intervals.

Species	N	PSD	RSD_{10}
White crappie	1143	48(3)	13(2)

sw dgrltn.D09

Table 42. White crappie assessment from trap net samples at Green River Lake from 1986 - 2009 (scoring based on statewide assessment).

Year	White crappie												Mortality Instantaneous (z)	Annual (A)	Assessment	Rating		
	CPUE excluding age 0			CPUE age 1			CPUE age 0			CPUE >8.0 in							Mean length age-2 at capture	
	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment					Value	Assessment
1986	16.87	3	3.23	2	1.23	1	3.99	2	7.9	1	-0.911053	59.8	9	F				
1987	15.43	3	4.06	2	19.16	4	5.16	3	8.1	1	-1.118361	67.3	13	G				
1988	15.87	3	8.87	3	18.62	4	4.52	2	8.0	1	-0.854265	57.4	13	G				
1989	26.30	4	20.24	4	1.29	1	6.38	3	9.6	4	-1.022316	64	16	G				
1990	12.61	2	5.87	2	0.42	1	7.57	3	9.2	3	-0.924447	60.3	11	F				
1991	8.68	2	2.93	2	6.88	2	6.15	3	9.3	3	-0.565581	43.2	12	F				
1992	28.34	4	24.48	4	1.84	1	8.54	3	10.0	4	-0.9219538	70.4	16	G				
1993	24.81	4	6.99	3	1.22	1	15.53	4	9.0	2	-0.949191	61.3	14	G				
1994	8.65	2	2.47	1	11.78	3	6.08	3	9.3	3	-0.767229	53.6	12	F				
1995	16.18	3	11.12	3	13.22	3	10.74	3	10.0	4	-1.055474	65.2	16	G				
1996	13.36	3	6.51	2	3.17	2	5.96	2	9.2	3	-0.895818	59.2	12	F				
1997	14.08	3	3.94	2	1.89	1	8.11	3	8.7	2	-1.121453	67.4	11	F				
1998	9.21	2	2.48	1	3.78	2	8.01	3	9.3	3	-0.850455	57.3	11	F				
1999	7.38	2	5.21	2	0.99	1	2.86	1	9.9	4	ND	ND	10	F				
2000	6.29	2	1.45	1	0.01	1	5.17	2	9.7	4	-0.824828	56.2	10	F				
2001	4.27	1	0.15	1	10.78	3	4.17	2	9.5	3	-1.09953	66.7	10	F				
2002	10.87	2	9.69	3	0.53	1	4.11	2	9.8	4	-0.759078	53.2	12	F				
2003	12.95	3	5.08	2	3.30	2	6.80	3	9.1	3	-1.075599	65.9	13	G				
2004	17.67	3	9.60	3	3.84	2	7.93	3	8.4	1	-1.53876	78.5	12	F				
2005*	13.82	3	3.00	2	1.70	1	8.00	3	8.4	1	ND	ND	10	F				
2006	16.39	3	10.21	3	1.42	0	6.46	3	9.7	4	-1.090892	66.4	13	G				
2007*	15.90	3	10.45	3	4.39	2	6.66	3	9.1	3	ND	ND	14	G				
2008	9.00	2	0.70	1	0.86	1	4.67	2	7.8	1	-0.728739	51.7	7	P				
2009	20.05	3	4.12	2	0.89	1	9.67	3	7.9	1	ND	ND	10	F				

* Age assessment data extrapolated from previous years age data

sw dglin.D86 - D09

sw dgrlag.d86-08

Table 43. Length frequency and CPUE (fish/n) for white bass and walleye collected by experimental gillnets (16 net-nights) during November 11-12 at Green River Lake, KY 2009.

Species	Inch class																Total	CPUE	Std. error					
	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23				24	25			
White bass																				0				
Walleye	3	13	17	4	1	1	13	6	8	5	6	7	4	6	2	3	1	2	102	6.38	0.95			

sw dgrlgn.d09

Table 44. Age frequency and CPUE (fish/n) of walleye collected from experimental gillnets during mid-November at Green River Lake, 2009.

Age	Inch class																Total	Percent	CPUE	Std. error						
	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23					24	25				
0	3	13	17	4																	37	36.0	2.31	0.38		
1					1	1	13	6	8	5	2											36	35.0	2.25	0.35	
2										4	2	1	2									9	9.0	0.59	0.16	
3										4	4	3	4	1								12	11.0	0.72	0.25	
4										1					3	1	1	1				6	6.0	0.38	0.13	
5																		1				1	1.0	0.06	0.04	
6																				1		1	1.0	0.06	0.04	
Total	3	13	17	4	1	1	13	6	8	5	6	7	4	6	2	3	1	2	102	100	6.38	0.95				
%	3	13	17	4	1	1	13	6	8	5	6	7	4	6	2	3	1	2	100							

sw dgrlgn.D09, sw dgrlag.D09

Table 45. Relative weight (Wr) for each length group of walleye collected by gill nets (16 net-nights) at Green River Lake from November 11-12, 2009.

	Length group		
	10.0-14.9 in	15.0-19.9 in	>20.0 in
Wr	94	98	97
N	36	32	17

sw dgrfign.D09

Table 46. Walleye population assessment from experimental gillnetting at Green River Lake 1996-2008 (scoring based on statewide assessment).

Year	Value	Assessment	Mean length age-2+ at capture			Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Instantaneous mortality (z)	Annual mortality (A)	Assessment	Rating
			CPUE*	CPUE ≥20.0 in	CPUE age 1												
1996	1.81	1	18.5	4	0.12	1	1.44	2	NA				NA		8	F	
1997	0.75	1	17.3	3	0.19	1	0.44	1	NA				NA		6	F	
1998	0.50	1	17.6	3	0.06	1	0.29	1	NA				NA		6	F	
1999	3.20	2	17.3	3	0.13	1	1.67	2	NA				NA		8	F	
2000	5.04	3	18.1	4	0.17	1	4.07	4	-0.684				49.6		12	G	
2001	5.75	3	17.8	3	0.00	1	5.03	4	NA				NA		11	G	
2002	2.57	2	17.8	3	0.39	1	0.74	1	-0.778				54.1		7	F	
2003	2.12	2	18.3	4	0.50	2	1.62	2	NA				NA		10	G	
2004	1.13	1	16.4	2	0.00	1	0.75	1	NA				NA		5	P	
2005	0.63	1	17.8	3	0.13	1	0.50	1	NA				NA		6	F	
2006	2.29	2	17.9	3	0.14	1	1.64	2	-0.489				38.7		8	F	
2007	6.75	4	18.6	4	0.75	2	3.88	4	-0.689				49.8		14	E	
2008	3.67	2	19.6	4	0.93	2	1.07	2	-0.357				30.0		10	G	
2009	6.38	4	19.6	4	1.13	3	2.31	3	-0.657				48.2		14	E	

* minus age-0 fish

NA - catch data not amenable to mortality estimates

sw dgrfign.d96-09

sw dgrlag.d96-09

Table 47. Fish harvest statistics derived from a creel survey at Green River Lake from 1 April through 31 October, 2009.

	Number	Std. error
<u>Fishing trips</u>		
Number of fishing trips	40,095	
Average trip length (hours)	4.23	
<u>Fishing pressure</u>		
Total man-hours	169,561	3,938
<u>Catch/harvest</u>		
Number of fish caught	335,631	28,735
Number of fish harvested	98,210	8,874
Pounds of fish harvested	63,590	
<u>Harvest rates</u>		
Fish/hour	0.60	
<u>Catch rates</u>		
Fish/hour	2.06	
<u>Miscellaneous characteristics (%)</u>		
Male	86.4	
Female	13.6	
Resident	94.2	
Non-resident	5.8	
<u>Method (%)</u>		
Still fishing	50.5	
Casting	34.2	
Jugging	2.1	
Trolling	13.2	
<u>Mode (%)</u>		
Boat	85.1	
Bank	13.2	
Dock	1.7	

Table 48. Fish harvest statistics derived from a creel survey at Green River Lake from 1 April to 31 October 2009.

	Muskellunge	Channel catfish	Flathead catfish	White bass	Bluegill	Smallmouth bass	Spotted bass	Largemouth bass	White crappie	Walleye	Drum	
No. caught	1,360	11,574	372	126	58,951	1390	11,629	16,414	220,254	1863	1404	
No. Harvested	182	9,322	347	32	16,542	536	3230	5,103	60,387	732	418	
% total harvest	0.2	9.5	0.4	0.03	16.8	0.5	3.3	5.2	61.5	0.7	0.4	
Lb harvested	2119	12903.7	2358.2	34.1	1647	1020.4	2673.4	9777.3	28673.7	1304.4	599.3	
% of total lb harvestec	3.3	20.3	3.7	0.05	2.6	1.6	4.2	15.4	45.1	2.1	0.9	
Mean length (in)	36.7	16.2	24	14	5.1	14.8	12.5	15.1	10.1	18.4	15.6	
Mean weight (lb)	12.56	1.37	5.61	1.1	0.1	1.56	0.84	1.81	0.47	2.1	1.68	
	Muskie	Catfish group		W. bass	Panfish group		Black bass group		Crappie group		Walleye	Anything
No. of fishing trips for that species	1,229	3,698		877	4,160		10,543		13,197		1626	1,626
% of all trips	3.1	9.2		3.1	10.4		26.3		32.9		4.1	13.6
Hours fishing for that species	5,198	15,639		4,517	17,592		44,588		55,810		6,877	23,042
No. harvested fishing for that species	124	7,390		0	13,433		8,018		59,209		622	
Lb harvested fishing for that species	1,279.1	1,223.9			1,403.9		12,508.8		28,137.5		1,094.0	
No./hour harvested for that species	0.02	0.47			1.10		0.16		1.05		0.07	
% success fishing for that species	4.9	43.6			26.7		24.9		59.3		18.2	15.9

Table 50. Monthly black bass angling success at Green River Lake during the 2009 daytime creel survey period (April 1 - October 31).

Month	Total number of black bass caught	Total number of black bass harvested	Number of black bass fishing trips		Hours fished by black bass anglers		number caught by bass anglers		number harvested by bass anglers		number harvested/ hour by bass anglers
			bass fishing trips	black bass anglers	black bass anglers	bass anglers	bass anglers	bass anglers			
April	4,442	1,923	2,479	4,127	3,448	0.30	1,691	999	0.15		
May	4,101	1,262	1,311	9,458	3,154	0.49	999	999	0.15		
June	7,519	2,236	1,980	11,053	6,585	0.72	2,088	2,088	0.23		
July	5,648	1,483	1,957	4,533	4,891	0.47	1,388	1,388	0.13		
August	1,994	603	1,054	3,460	1,811	0.48	577	577	0.15		
September	2,613	709	674	2,365	2,421	0.76	620	620	0.19		
October	3,117	654	1,089	4,941	2,860	0.54	655	655	0.12		
Total	29,434	8,870	10,544	39,937	25,170	0.53	8,018	8,018	0.16		

Table 51. Monthly crappie angling success at Green River Lake during the 2009 daytime creel survey period (April 1 - October 31)

Month	Total number of crappie		Number of crappie fishing trips	Hours fished by crappie anglers		Number caught by crappie anglers		Number caught/hour by crappie anglers		Number harvested by crappie anglers		Number harvested/hour by crappie anglers
	caught	harvested		crappie anglers	crappie anglers	crappie anglers	crappie anglers	by crappie anglers	by crappie anglers	by crappie anglers	by crappie anglers	
April	51,215	16,442	3,458	14,623	50,187	3.27	15,945	1.04				
May	33,461	10,304	2,336	9,881	33,120	3.72	10,120	1.14				
June	29,755	5,725	1,547	6,546	29,657	3.89	5,651	0.74				
July	19,721	3,786	1,229	5,196	18,048	2.9	3,471	0.56				
August	29,518	9,052	1,347	5,696	28,993	4.85	8,973	1.5				
September	39,038	11,014	1,742	7,366	38,934	5.06	10,985	1.43				
October	17,547	4,064	1,537	6,501	17,512	2.98	4,064	0.69				
Total	220,254	60,387	13,197	55,810	216,451	3.88	59,209	1.05				

Table 52. Monthly catfish angling success at Green River Lake during the 2009 daytime creel survey period (April 1 - October 31).

Month	Total number of catfish		Number of catfish fishing trips	Hours fished by catfish anglers		Number caught by catfish anglers		Number caught/hour by catfish anglers		Number harvested by catfish anglers		Number harvested/hour by catfish anglers
	caught	harvested		catfish anglers	catfish anglers	catfish anglers	catfish anglers	by catfish anglers	by catfish anglers	by catfish anglers	by catfish anglers	
April	1,591	1,591	187	793	1,558	4.27	1,558	4.27				
May	1,393	1,262	633	2,677	1,026	0.35	947	0.33				
June	2,826	2,334	1,131	4,784	2,286	0.41	1,966	0.35				
July	2,272	1,199	986	4,170	1,199	0.38	852	0.27				
August	2,230	1,758	440	1,861	1,338	0.43	1,154	0.37				
September	1,048	974	249	1,052	517	0.89	517	0.89				
October	585	551	71	301	396	1.08	396	1.08				
Total	11,946	9,670	3,698	15,639	8,320	0.52	7,390	0.47				

Table 53. Monthly walleye angling success at Green River Lake during the 2009 daytime creel survey period (April 1 - October 31).

Month	Total number of walleye caught		Number of walleye fishing trips	Hours fished by walleye anglers		Number caught by walleye anglers		Number harvested by walleye anglers		Number harvested/hour by walleye anglers
	of walleye caught	walleye harvested		walleye anglers	walleye anglers	walleye anglers	walleye anglers	by walleye anglers	by walleye anglers	
April	0	0	0	0	0	0	0	0	0	0
May	79	26	196	829	53	0.06	0	0	0	0
June	344	221	208	881	271	0.31	197	197	0.22	0.22
July	1,136	347	607	2,566	1,105	0.43	316	316	0.12	0.12
August	184	79	481	2,030	131	0.06	79	79	0.04	0.04
September	103	59	93	395	74	0.19	30	30	0.08	0.08
October	17	0	0	0	0	0	0	0	0	0
Total	1,863	732	1,585	6,701	1,634	0.24	622	622	0.09	0.09

Table 54. Monthly muskie angling success at Green River Lake during the 2009 daytime creel survey period April 1 - October 31).

Month	Total number of muskie caught		Number of muskie fishing trips	Hours fished by muskie anglers		Number caught by muskie anglers		Number harvested by muskie anglers		Number harvested/hour by muskie anglers
	of muskie caught	muskie harvested		muskie anglers	muskie anglers	muskie anglers	muskie anglers	by muskie anglers	by muskie anglers	
April	398	99	354	1,498	99	0.07	99	99	0.07	0.07
May	79	26	121	510	26	0.05	0	0	0	0
June	197	25	208	881	74	0.08	25	25	0.03	0.03
July	379	32	197	834	121	0.15	0	0	0	0
August	52	0	93	395	52	0.13	0	0	0	0
September	15	0	52	219	0	0	0	0	0	0
October	241	0	204	861	103	0.12	0	0	0	0
Total	1,360	182	1,229	5,198	475	0.09	124	124	0.02	0.02

Table 55. Black bass catch and harvest statistics for all anglers derived from 2009 (April 1 - October 31) a daytime creel survey at Green River Lake (8,210 acres) for each species.

	Largemouth bass				Spotted bass				Smallmouth bass									
	Harvest		Catch and release		Harvest		Catch and release		Harvest		Catch and release							
	12.0-14.9 in	>15.0 in	Total	12.0-14.9 in	>15.0 in	Total	12.0-14.9 in	>15.0 in	Total	12.0-14.9 in	>15.0 in	Total						
Total number of bass	2130	2973	5,103	2915	1787	4702	2230	94	3230	931	111	1042	214	322	536	236	104	340
% of black bass harvested by number			57.5						36.4									6.0
Total weight of fish (lb)			9,777	4635	2839	7474			2673	363	44	407			1020	345	154	499
% of bass harvested by weight			72.6						19.8						7.6			14.8
Mean length (in)			15.1						12.5						15.6			14.8
Mean weight (lb)			1.81						0.84						1.56			1.56
Rate (fish/hour)			0.029						0.021						0.003			0.003

Table 56. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass collected during 1.75 hours (8 runs; each 0.25 hours) of nocturnal electrofishing at Shanty Hollow Lake on 28 April 2009.

Species	Inch class																						Total	CPUE	Std err
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22						
Largemouth bass	6	17	12	2	30	80	59	77	85	61	8	6	4	1	3	2	2	3	458	261.71	11.38				

sw dshlbb.D09

Table 57. Spring nocturnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Shanty Hollow Lake during mid-late April, 2001-2007.

Year	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in		Total CPUE	Std. error
2001	17.14	3.35	49.14	7.34	45.14	8.63	21.71	3.58	1.71	0.81	133.14	6.52
2002	20.00	4.09	52.00	7.95	69.71	6.16	16.00	2.62	1.14	0.74	157.71	11.07
2003	17.71	3.99	125.14	12.49	76.57	6.73	32.00	5.01	8.00	1.95	251.43	18.02
2004	19.43	3.64	133.71	9.67	36.57	4.97	24.00	2.76	3.43	0.57	213.71	16.99
2005	76.67	10.75	174.00	18.15	44.67	3.78	16.00	3.58	1.33	1.33	311.33	27.95
2006	86.00	15.76	214.67	11.44	30.00	3.06	11.33	3.78	5.33	1.98	342.00	26.66
2007	8.00	2.39	124.50	16.77	13.00	3.09	8.50	1.40	4.00	1.07	154.00	20.95
2008	30.00	6.89	204.50	13.45	57.50	4.72	5.50	1.50	1.00	0.65	297.50	12.28
2009	21.14	3.97	140.57	8.70	88.00	5.66	12.00	3.90	2.86	1.68	261.71	11.38

swdshlbb.D00 - D09

Table 58. PSD and RSD₁₅ values from spring nocturnal electrofishing (1.75 hours; 7 runs; 0.25 hours each) for largemouth bass at Shanty Hollow Lake on April 28, 2009. 95% confidence intervals are in parentheses.

Species	No. >8.0 in	FSD (+ 95% CI)	RSD ₁₅ (+ 95% CI)
Largemouth bass	421	42(3)	5(2)

swdshlbb.D09

Table 59. Age frequency and CPUE (fish/hr) of largemouth bass collected during electrofishing at Shanty Hollow Lake during April 2009.

Age	Inch class																			Total	Percent	CPUE	Std. error
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19							
1	6	17	12																35	8	20.00	4.00	
2				2	30	68	44												144	32	82.25	8.51	
3					6	6	15	39	46	10	2	1							118	26	67.59	3.14	
4						6		19	23	25	1	1							75	17	42.72	2.45	
5								19	15	15	6	2	3						61	13	34.58	1.59	
6										5	1	1	1	1					8	2	4.67	0.50	
7																		1	0	0.43	0.13		
8										5		2		1	2			10	2	5.48	0.83		
9																2		2	0	1.14	0.74		
Total	6	17	12	2	30	80	59	77	84	60	8	8	4	4	1	3	2	453	100				
%	1	4	3	0	7	18	13	17	19	13	2	1	1	1	0	1	0	100					

sw dgribb.d09; sw dgriag.d09

Table 60. Population assessment of largemouth bass based on nocturnal spring sampling at Shanty Hollow Lake from 2002-2009 (scoring based on statewide criteria).

Parameter	Year															
	2002		2003		2004		2005		2006		2007		2008		2009	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age-3 at capture	11.1	3	11.1	3	11.1	3	11.1	3	11.1	3	11.1	3	11.1	3	11.1	3
Spring CPUE age-1	20.00	2	17.71	2	19.43	2	76.67	4	86.00	4	8.00	1	25.00	2	20.00	2
Spring CPUE 12.0-14.9 in	69.71	4	76.57	4	36.57	3	44.67	3	30.00	2	13.00	1	57.50	4	88.00	4
Spring CPUE >15.0 in	16.00	2	32.00	4	24.00	3	16.00	2	11.33	2	8.50	2	5.50	2	12.00	2
Spring CPUE >20.0 in	1.14	2	8.00	4	3.43	3	1.33	2	5.33	4	4.00	4	1.00	2	2.86	3
Instantaneous Mortality (z)	ND		ND		-0.346		ND		ND		ND		ND		-0.6817	
Annual Mortality (A)%					29.3										49.4	

Total Score	13	17	14	14	15	11	13	15
Assessment Rating	Good	Good	Good	Good	Good	Fair	Good	Good

ND = no age data collected
 sw dshlag.d02
 sw dshlbb.D02-D09

Table 61. Length frequency and CPUE (fish/hr) of each inch class of bluegill and redear collected by diurnal electrofishing (1.5 hours; 12 runs; 450 seconds each) at Shanty Hollow Lake on 13 May 2009.

Species	Inch class									Total	CPUE	Std. error
	1	2	3	4	5	6	7	8	9			
Bluegill	4	20	91	137	48	29	14			343	228.70	51.17
Redear	5	4	2	18	3	6	8	1		47	31.33	9.21

sw dshlbg.D09

Table 62. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Shanty Hollow Lake from 2001 -2009. Standard errors are in parentheses.

Year	Length group				Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	>8.0 in	
2001	99.89 (28.18)	224.68 (57.47)	239.39 (67.81)	4.41 (3.53)	573.30 (153.34)
2002	78.00 (15.16)	391.33 (55.17)	121.33 (14.99)	10.67 (2.84)	601.33 (67.13)
2003	43.33 (10.35)	346.67 (34.58)	106.00 (17.00)	5.33 (2.84)	501.33 (47.55)
2004	85.71 (26.67)	285.16 (52.96)	157.14 (27.58)		590.77 (100.08)
2005	76.31 (16.52)	194.46 (23.22)	124.31 (15.34)	1.23 (0.83)	396.31 (43.33)
2006	134.00 (45.28)	78.67 (8.91)	98.67 (13.87)	12.67 (4.67)	324.00 (50.15)
2007	197.09 (32.99)	321.45 (36.23)	94.55 (18.21)	0.73 (0.73)	613.82 (64.23)
2008	115.08 (23.94)	142.77 (11.52)	108.92 (18.44)	0.00	366.77 (31.45)
2009	16.00 (8.06)	184.00 (41.72)	28.67 (8.03)	0.00	228.70 (51.17)

swdshbg D01 - D09

Table 63. Spring electrofishing CPUE (fish/hr) for each length group of redear sunfish collected at Shanty Hollow Lake from 2001 - 2009. Standard errors are in parentheses.

Year	Length group					Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	>8.0 in	>10.0 in	
2001	0	0.84 (0.84)	13.76 (5.31)	42.12 (8.69)	0	60 (8.29)
2002	0	3.33 (1.19)	6.67 (2.16)	6.67 (3.09)	0	16.67 (5.07)
2003	0	2.67 (1.14)	1.33 (0.90)	10.67 (6.02)	0	14.67 (5.89)
2004	1.23 (0.83)	8 (2.56)	8 (2.22)	9.85 (3.16)	0	27.08 (4.84)
2005	1.23 (1.23)	3.69 (1.46)	9.23 (2.69)	3.69 (1.46)	0	17.85 (3.75)
2006	0.00	8.00 (3.27)	6.00 (2.23)	8.67 (2.86)	0	22.67 (5.64)
2007	1.45 (0.98)	9.45 (2.82)	34.18 (6.39)	2.91 (1.22)	0	48.00 (7.32)
2008	1.23 (0.83)	3.08 (1.93)	9.23 (2.98)	11.69 (6.18)	0	25.23 (9.19)
2009	3.33 (2.08)	16.00 (3.55)	6.00 (3.95)	6.00 (3.70)	0	31.33 (9.21)

sw dshlbg.D01 - D09

Table 64. Proportional stock density (PSD) and relative stock density (RSD_8) of bluegill and redear collected by diurnal electrofishing at Shanty Hollow Lake on 13 May 2009. Numbers in parentheses represent 95% confidence intervals

Species	N	PSD	RSD_8
Bluegill	421	42(3)	0
Redear	38	39(16)	3(5)

sw dshlbg.D09

Table 65. Bluegill population assessments from 2002 - 2009 at Shanty Hollow Lake (scoring based on statewide assessment).

Parameter	Year															
	2002		2003		2004		2005		2006		2007		2008		2009	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age-2 at capture	4.8	3	4.8	3	4.8	3	4.8	3	4.8	3	4.8	3	3.7	4	3.7	2
Years to 6.0 in	2.63	4	2.63	4	2.63	4	2.63	4	2.63	4	2.63	4	2.7	4	2.7	4
CPUE >6.0 in	132	4	111.33	4	157.14	4	125.54	4	111.34	4	95.27	4	108.9	4	28.67	2
CPUE >8.0 in	10.67	3	5.33	2	0	1	1.23	2	12.67	3	0.73	2	0	1	0	1
Instantaneous mortality (z)	1.014			ND		ND		ND		ND		ND		0.753		ND
Annual mortality (A)	63.8													52.9		
Total Score:	14		13		12		13		14		13		13		9	
Assessment rating	Excellent		Good		Good		Good		Excellent		Good		Good		Fair	

ND - no age data collected
 sw dshlag.d02 & 08
 sw dshlibg.D02 - D09

Table 66. Redear population assessments from 2002 - 2009 at Shanty Hollow Lake (scoring based on statewide assessment).

Parameter	Year															
	2002	2003	2004	2005	2006	2007	2008	2009								
	Value	Score	Value	Score	Value	Score	Value	Score	Value							
Mean length age-3 at capture	7.2	4	7.2	4	7.2	4	7.2	4	7.8	4	7.8	4				
Years to 8.0 in	3.92	4	3.92	4	3.92	4	3.92	4	3.66	4	3.66	4				
CPUE \geq 8.0 in	6.67	2	10.67	3	9.85	2	3.69	1	8.67	2	2.91	1	11.69	3	6.00	2
CPUE \geq 10.0 in	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
Instantaneous mortality (z)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Annual mortality (A)																

Total Score:	11	12	11	10	11	10	12	11
Assessment rating	Good	Good	Good	Fair	Good	Fair	Good	Good

ND - no age data collected or data applicable.
 sw ds hlag.d02 & 08
 sw ds hlbq.D02 - D09

Table 67. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 1.0 hour (8 runs; each 0.125 hours) of nocturnal electrofishing at Marion Co. Lake during 2009.

Species	Inch class																					Total	CPUE	Std err
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21					
Largemouth bass	1	16	36	16	56	199	113	91	69	8	3	1	1	2	1	3	2	2	620	620.00	56.02			

sw dirrc1bb.d09

Table 68. Spring nocturnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Marion Co. Lake during early March / April since 1999.

Year	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in		Total	
	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
1999	106.70	29.30	46.20	15.00	39.50	10.60	1.70	1.10	0.00		194.10	42.00
2000	88.20	14.90	177.50	22.40	6.90	3.20	9.80	2.00	0.00		282.40	25.40
2001	170.60	17.60	173.50	15.90	1.00	1.00	1.00	2.90	1.00	1.00	384.00	31.30
2002	104.90	23.90	152.90	13.20	15.70	3.60	3.90	1.20	1.00	1.00	277.50	39.40
2003	42.90	10.60	226.40	18.10	40.70	7.30	7.70	3.40	3.43	2.38	317.60	13.30
2004	110.30	16.90	197.40	25.80	62.80	9.80	7.70	3.40	5.33	2.67	378.20	36.60
2005	101.70	17.70	123.40	13.40	133.70	20.20	9.10	2.70	1.14	1.14	368.00	44.80
2006	112.00	20.80	170.30	30.60	59.40	5.50	38.90	4.07	0.00		380.60	53.83
2007	221.00	23.90	371.00	32.18	28.00	6.93	12.00	3.02	1.00	1.00	632.00	47.69
2008	209.14	28.50	385.14	30.41	16.00	3.90	16.00	3.49	3.43	1.62	626.29	49.98
2009	125.00	19.30	472.00	42.95	12.00	3.38	11.00	3.68	4.00	2.14	620.00	56.02

sw dmc1bb D99 - D09

Table 69. PSD and RSD₁₅ values obtained for largemouth bass collected during 1 hour (8- 0.125 hour runs) of spring nocturnal electrofishing at Marion Co. Lake on 27 April 2009. 95% confidence intervals are in parentheses.

Species	No. >8.0 in	PSD (\pm 95% CI)	RSD ₁₅ (\pm 95% CI)
Largemouth bass	495	5(2)	2(1)

sw dmc1bb D09

Table 70. Mean back-calculated length (in) at each annulus of largemouth bass collected by diurnal electrofishing at Marion County Lake on 27 April 2009, including the range in length at each age and the 95% confidence interval.

Year class	N	Age					
		1	2	3	4	5	6
2008	7	6.2					
2007	39	5.8	8.5				
2006	14	5.3	9.0	11.0			
2005	15	4.6	8.5	10.5	12.0		
2004	5	6.7	10.9	13.0	14.7	16.1	
2003	1	5.4	10.7	13.4	15.0	16.7	18.8
Mean		5.6	8.8	11.1	12.8	16.2	18.8
Smallest		2.4	5.5	8.1	10.2	12.7	18.8
Largest		8.2	13.0	15.2	17.4	19.0	18.8
Std. Error		0.1	0.1	0.2	0.4	0.9	18.8
Low 95% CI		5.3	8.5	10.7	12.0	14.4	
High 95% CI		5.8	9.1	11.6	13.6	18	

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

sw dmclbb.d09,sw dmclag.d09

Table 71. Age frequency and CPUE (fish/hr) of largemouth bass collected during diurnal electrofishing at Marion County Lake 19 May 2008.

Age	Inch class																			Total	Percent	CPUE	Std. error
	6	7	8	9	10	11	12	13	14	15	16	17	18	19									
1	11																			11	2%	11.20	2.99
2	5	56	199	103	30	5														398	71%	398.17	35.42
3				10	51	32	2													95	17%	94.67	10.13
4					10	32	5	3												50	9%	49.69	4.92
5									1		1	2							7	1%	7.00	3.20	
6													1						1		1.00	1.00	
Total	16	56	199	113	91	69	8	3	1	2			1	3					562		100%		
%	3	10	35	20	16	12	1	1															

Table 72. Population assessment of largemouth bass based on nocturnal spring sampling at Marion County Lake from 2002-2009 (scoring based on statewide assessment).

Parameter	Year															
	2002		2003		2004		2005		2006		2007		2008		2009	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age-3 at capture	11.9	4	11.9	3	11.9	4	11.9	4	11.9	4	11.9	4	11.9	4	10.7	2
Spring CPUE age-1	102.00	4	32.00	2	117.33	4	101.71	4	19.43	2	7.00	1	201.14	4	55.00	3
Spring CPUE 12.0-14.9 in	20.00	2	42.29	3	65.33	4	133.71	4	59.43	4	28.00	2	16.00	1	12.00	1
Spring CPUE \geq 15.0 in	3.00	1	8.00	2	8.00	2	9.14	2	38.86	4	12.00	2	16.00	2	11.00	2
Spring CPUE \geq 20.0 in	0.00	1	3.43	3	5.33	4	1.14	1	0.00	1	1.00	1	3.43	3	4.00	4
Instantaneous Mortality (z)	ND		ND		-0.9360		ND		ND		ND		ND		-1.4581	
Annual Mortality (A)%					60.8										76.7	
Total Score		12		13		18		15		15		10		14		12
Assessment Rating		Good		Good		Excellent		Good		Good		Fair		Good		Good

ND = no age data collected
 sw dmcilag.d04
 sw dmcilbb.D02-D08

Table 73. Length frequency and CPUE (fish/hr) of each inch class of bluegill and redear collected by diurnal electrofishing (0.875 hrs., 7 runs, 450 seconds each) at Marion Co. Lake on 12 May 2009.

Species	Inch class										Total CPUE	Std. error	
	1	2	3	4	5	6	7	8	9	10			
Bluegill	8	34	36	45	15	29	22	1			190	217.14	35.41
Redear		2	15	29	17	13	7	6	2	91	104.00	14.81	

sw dmcilbg.D09

Table 74. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Marion Co. Lake. Standard errors are in parentheses.

Year	Length group				Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	>8.0 in	
2002	57.14 (30.26)	152.00 (40.49)	78.86 (6.40)	16.00 (3.49)	304.00 (67.16)
2003	164.00 (33.86)	212.00 (34.05)	118.67 (23.86)	5.33 (3.96)	500.00 (60.43)
2004	303.00 (58.99)	255.00 (38.68)	35.00 (10.02)	1.00 (1.00)	594.00 (85.91)
2005	102.00 (18.56)	210.00 (31.88)	63.00 (16.66)	3.00 (2.10)	378.00 (53.08)
2006	77.33 (15.13)	501.33 (25.52)	25.33 (7.57)	4.00 (2.73)	608.00 (34.07)
2007	73.00 (22.75)	291.00 (39.54)	39.00 (7.47)	3.00 (1.46)	406.00 (50.05)
2008	60.00 (31.57)	73.00 (13.56)	130.00 (14.64)	11.00 (3.98)	274.00 (45.12)
2009	48.00 (22.15)	109.71 (20.93)	58.29 (10.58)	1.14 (1.14)	217.14 (35.41)

sw dmcibg.D02 - D09

Table 75. Spring electrofishing CPUE (fish/hr) for each length group of redear sunfish collected at Marion Co. Lake. Standard errors are in parentheses.

Year	Length group					Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	>8.0 in	≥10.0 in	
2002	1.14 (1.14)	51.43 (11.29)	11.43 (4.22)	57.14 (13.00)	0.00	121.14 (19.16)
2003	5.33 (2.67)	46.67 (9.33)	9.33 (4.81)	28.00 (10.68)	2.67 (2.67)	89.33 (15.38)
2004	2.00 (2.00)	40.00 (15.12)	18.00 (7.05)	7.00 (3.84)	1.00 (1.00)	67.00 (16.28)
2005	0.00	34.00 (5.81)	30.00 (9.77)	25.00 (7.32)	3.00 (1.46)	89.00 (16.45)
2006	0.00	17.33 (6.67)	17.33 (6.98)	24.00 (6.20)	2.67 (1.69)	58.67 (12.84)
2007	0.00	21.00 (6.22)	7.00 (2.36)	11.00 (6.58)	1.00 (1.00)	39.00 (11.85)
2008	1.00 (1.00)	37.00 (15.63)	9.00 (3.18)	28.00 (9.07)	6.00 (3.30)	75.00 (16.12)
2009	0.00	52.57 (10.16)	34.29 (6.92)	17.14 (5.36)	2.29 (2.29)	104.00 (14.81)

sw dmclbg.D02 - D08

Table 76. Proportional stock density (PSD) and relative stock density (RSD_g) of bluegill and redear collected by diurnal electrofishing at Marion Co. Lake on 12 May 2009. Numbers in parentheses represent 95% confidence intervals

Species	N	PSD	RSD_g
Bluegill	148	35(8)	1(1)
Redear	89	31(10)	9(6)

sw dmclbg.D09

Table 77. Bluegill population assessments from 2002 - 2009 at Marion County Lake (scoring based on statewide assessment).

Parameter	Year											
	2002	2003	2004	2005	2006	2007	2008	2009	Value	Score		
Mean length age-2 at capture	4.2	2	4.2	2	4.2	2	4.0	2	4.0	2	4.0	2
Years to 6.0 in	3.7	3	3.7	3	3.7	3	4.41	2	4.41	2	4.41	2
CPUE >6.0 in	94.86	3	36.00	2	67.00	3	29.33	2	42.00	2	141	4
CPUE ≥8.0 in	16.00	4	5.33	2	3.00	1	4.00	2	3.00	1	11	3
Instantaneous mortality (z)	-0.674								-1.03			
Annual mortality (A)	49								64.2			
Total Score:	12	11	8	9	9	7	11	8				
Assessment rating	Good	Good	Fair	Fair	Fair	Fair	Good	Fair	Good	Good	Fair	Fair

ND - no age data collected
 sw dmclag.d02 & 08
 sw dmclibg.D02 - D09

Table 78. Redear population assessments from 2002 - 2009 at Marion County Lake (scoring based on statewide assessment).

Parameter	Year															
	2002		2003		2004		2005		2006		2007		2008		2009	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age-3 at capture	ND	4	ND	4	ND	4	ND	4	ND	4	ND	4	ND	4	ND	4
Years to 8.0 in	3.71	4	3.71	4	3.71	4	3.71	4	3.71	4	3.87	4	3.87	4	3.87	4
CPUE \geq 8.0 in	57.14	4	30.67	4	8.00	2	28.00	4	26.67	4	12.00	3	34	4	19.43	4
CPUE $>$ 10.0 in	0.00	1	2.67	3	1.00	1	3.00	3	2.67	3	1.00	1	6.00	4	2.29	2
Instantaneous mortality (z)	ND		ND		ND		ND		ND		ND		ND		ND	
Annual mortality (A)																
Total Score:		13		15		11		15		15		12		16		14
Assessment rating		Good		Excellent		Good		Excellent		Excellent		Good		Excellent		Excellent

ND - no age data collected or data not applicable.
 sw dmcilag.q02 & 08
 sw dmcibg.D02 - D09

Table 79. Largemouth bass relative abundance and CPUE (fish/hr) collected during 0.5 hours (4 runs; each 0.25 hours) of diurnal electrofishing at West Fork Drakes Reservoir May 14, 2009.

Species	Inch class																						Total	CPUE	Std err
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	22						
Largemouth bass	1	13	18	4	6	13	18	10	6	9	4	3	2	4	2				1	114	228.00	11.49			

sw dw fdbb.d09

Table 80. Spring diurnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at West Fork Drakes Reservoir during mid-April 2007 and mid-May 2009.

Year	CPUE	Length group			CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	Total
		<8.0 in	8.0-11.9 in	12.0-14.9 in									
2007	26.95	15.29	31.94	5.72	29.94	5.78	5.99	2.68	2.00	1.26	95.00	23.72	
2009	42.00	11.02	47.00	5.74	16.00	2.31	9.00	2.52	1.00	1.00	114.00	11.49	

sw dw fdbb.D07&09

Table 81. PSD and RSD₁₅ values for largemouth bass collected during 0.5 hour (4 runs; each 0.125 hours) of spring diurnal electrofishing at West Fork Drakes Reservoir on 14 April 2009. 95% confidence intervals are in parentheses.

Species	No. >8.0 in	PSD (+95% CI)	RSD ₁₅ (+95% CI)
Largemouth bass	72	35(11)	13(8)

sw dw fdbb.D09

Table 82. Length frequency and CPUE (fish/hr) of each inch class of bluegill and redear collected by diurnal electrofishing at West Fork Drakes Reservoir on 14 May 2009 .

Species	Inch class								Total CPUE	Std. error
	1	2	3	4	5	6	7	8		
Bluegill	2	17	56	73	66	68	22	304	608.00	115.47
Redear	1	1	10	45	56	43	4	160	320.00	80.47

sw dw fdbg.D08

Table 83. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at West Fork Drakes Reservoir in 2007 and 2009. Standard errors are in parentheses.

Year	Length group				Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	>8.0 in	
2007	10.00 (7.57)	392.00 (68.35)	156.00 (24.98)	0.00	558.00 (88.29)
2009	38.00 (13.61)	390.00 (68.69)	180.00 (51.69)	0.00	608.00 (115.47)

sw dw fdbg.D07 & D09

Table 84. Spring electrofishing CPUE (fish/hr) for each length group of redear collected at West Fork Drakes Reservoir in 2007 and 2009. Standard errors are in parentheses.

Year	Length group				Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	>8.0 in	
2007	0.00	38.00 (22.24)	32.00 (12.65)	18.00 (9.25)	88.00 (36.51)
2009	2.00 (2.00)	112.00 (50.28)	198.00 (32.88)	8.00 (4.62)	320.00 (80.47)

sw dw fdbg.D07 & D09

Table 85. Proportional stock density (PSD) and relative stock density (RSD_g) of bluegill and redear collected by diurnal electrofishing at West Fork Drakes Reservoir on 14 May 2009. Numbers in parentheses represent 95% confidence intervals

Species	N	PSD	RSD _g
Bluegill	385	32(5)	0
Redear	158	30(5)	0

sw dw fdbg.D09

Table 86. Mean back-calculated length (in) at each annulus of bluegill collected by diurnal electrofishing at West Fork Drakes on 14 May 2009, including the range in length at each age and the 95% confidence interval.

Year class	N	Age				
		1	2	3	4	5
2008	13	2.4				
2007	23	2.4	4.0			
2006	13	2.8	4.5	5.5		
2005	16	2.5	5.1	6.1	6.8	
2004	2	1.9	4.3	5.5	6.7	7.4
Mean		2.5	4.5	5.8	6.8	7.4
Smallest		1.1	2.5	4.1	5.7	7.0
Largest		4.3	6.2	7.1	7.9	7.7
Std. Error		0.1	0.1	0.1	0.1	0.4
Low 95% CI		2.3	4.2	5.6	6.5	6.7
High 95% CI		2.6	4.7	6.0	7.1	8

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

sw dw fdbg.d09 sw dw fdag d09

Table 87. Mean back-calculated length (in) at each annulus of redeal collected by diurnal electrofishing at West Fork Drakes on 14 May 2009, including the range in length at each age and the 95% confidence interval.

Year class	N	Age								
		1	2	3	4	5	6	7	8	
2008	3	2.7								
2007	28	3.7	5.7							
2006	11	3.7	5.7	6.5						
2005	3	2.5	4.9	6.2	7.5					
2004	2	3.4	5.2	6.3	7.4	8.0				
2003	1	2.9	4.7	5.9	6.4	7.3	7.9			
2001	2	2.6	4.0	5.3	6.0	6.5	7.2	7.7	8.4	
Mean		3.5	5.5	6.3	7.0	7.3	7.4	7.7	8.4	
Smallest		1.9	3.5	5.1	6.0	6.5	7.1	7.5	8.2	
Largest		5.5	7.1	7.5	7.8	8.2	7.9	8.0	8.5	
Std. Error		0.1	0.1	0.1	0.3	0.3	0.2	0.3	0.2	
Low 95% CI		3.3	5.3	6.0	6.5	6.6	6.9	7.2	8.1	
High 95% CI		3.8	5.8	6.6	7.5	7.9	7.9	8.3	8.6	

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

sw dw fdbg.d09 sw dw fdag.d09

Table 88. Age frequency and CPUE (fish/hr) of bluegill collected during diurnal electrofishing at West Fork Drakes on 14 May 2009.

Age	Inch class							Total	Percent	CPUE	Std. error
	1	2	3	4	5	6	7				
1	2	15	4					22	7.0	43.52	14.80
2		2	52	58	11			123	40.0	245.28	48.90
3				15	50	15		79	26.0	158.42	31.03
4					6	53	18	76	25.0	151.98	41.93
5							4	4	1.0	8.80	3.84
Total	2	17	56	73	66	68	22	304	100.0		
%	1	6	18	24	22	22	7				

sw dw fdbg.D09 sw dw fdag.D09

Table 89. Age frequency and CPUE (fish/hr) of redear collected during diurnal electrofishing at West Fork Drakes on 14 May 2009.

Age	Inch class								Total	Percent	CPUE	Std. error
	2	3	4	5	6	7	8					
1	1	1							2	1.0	4.00	2.31
2			10	38	34	9			90	56.0	179.40	48.58
3				8	22	13			43	27.0	85.60	16.71
4						13			13	8.0	25.80	7.09
5						4	1		6	4.0	11.27	3.23
6						4			4	3.0	8.60	2.36
8								3	3	2.0	5.33	3.08
Total	1	1	10	45	56	43	4	160	100.0			
%	1	1	6	28	35	27	3					

sw dw fdbg.D09 sw dw fdag.D09

Table 90. Bluegill population assessments from 2007 & 2009 at West Fork Drakes Reservoir (scoring based on statewide assessment).

Parameter	Year			
	2007		2009	
	Value	Score	Value	Score
Mean length age-2 at capture	4.15	2	4.15	2
Years to 6.0 in	3.42	3	3.42	3
CPUE _{>6.0 in}	156	4	180.00	4
CPUE _{>8.0 in}	0.00	1	0.00	1
Instantaneous mortality (z)	ND		-1.032	
Annual mortality (A)			64.4	
Total Score:		10		10
Assessment rating		Fair		Fair

ND - no age data collected
 sw dw fdag.d09
 sw dw fdbg.D07& D09

Table 91. Redear population assessments from 2007 and 2009 at West Fork Drakes Reservoir (scoring based on statewide assessment).

Parameter	Year			
	2007		2009	
	Value	Score	Value	Score
Mean length age-3 at capture	6.59	4	6.59	4
Years to 8.0 in	5	2	5	2
CPUE \geq 8.0 in	18	4	8.00	2
CPUE \geq 10.0 in	0.00	1	0.00	1
Instantaneous mortality (z)	ND			-0.642
Annual mortality (A)	ND			47.4
Total Score:		11		9
Assessment rating		Good		Fair

ND - no age data collected or data not applicable.

sw dw fdag.d09

sw dw fdbg.D07 & D09

Figure 1. GREEN RIVER LAKE ANGLER ATTITUDE SURVEY 2009 (n= 814)

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

Name & ZIP code: < 30 miles (39.1%) > 30 miles (60.9%) out of state (n=44; 5.4%)

Which species of fish do you fish for at Green River Lake (check all that apply)?

Crappie 52% Bass 46% Channel Catfish 24% Walleye 10% Bluegill 10% Muskie 9% White Bass 6%

Which one species do you fish for most at Green River Lake (check only one)?

Bass 35% Crappie 39% White Bass 1% Channel Catfish 11% Muskie 3% Bluegill 6%

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

Bass Anglers (n=364)

In general, what level of satisfaction do you have with bass fishing at Green River Lake?

Very satisfied 41% Somewhat satisfied 34% Neutral 14% Somewhat dissatisfied 6% Very dissatisfied 3% No opinion 3%

5a. If you responded with somewhat or very dissatisfied in question (5) (n=34) – what is the single most important reason for your dissatisfaction?

Number of fish 62% Size of fish 35% Not happy with regulations 3% Too many panfish 3%

Crappie Anglers (n=412)

In general, what level of satisfaction do you have with the crappie fishing at Green River Lake?

Very satisfied 22% Somewhat satisfied 41% Neutral 12% Somewhat dissatisfied 20% Very dissatisfied 3% No opinion 3%

6a. If you responded with somewhat or very dissatisfied in question (6) (n=105) – what is the single most important reason for your dissatisfaction?

Number of fish 30% Size of fish 69% Too many anglers 1% High water 1%

Muskie Anglers (n=71)

In general, what level of satisfaction do you have with the crappie fishing at Green River Lake?

Very satisfied 34% Somewhat satisfied 27% Neutral 27% Somewhat dissatisfied 9% Very dissatisfied 0% No opinion 4%

7a. If you responded with somewhat or very dissatisfied in question (7) (n=6) – what is the single most important reason for your dissatisfaction?

Number of fish 100%

Catfish Anglers (include noddlers/hand grabbers) (n=189)

In general, what level of satisfaction do you have with the catfish fishing at Green River Lake?

Very satisfied 54% Somewhat satisfied 21% Neutral 17% Somewhat dissatisfied 4% Very dissatisfied 0% No opinion 4%

8a. If you responded with somewhat or very dissatisfied in question (8) (n=8)– what is the single most important reason for your dissatisfaction?

Number of fish 88% Size of fish 12%

What other methods do use for fishing for catfish at Green River Lake? Jugging 81% Trotline 10% Hand grabbing/noodling 9%

9a. If yes, how many days per year for each method? 1=4% 2=12% 3=3% 4=8% 5=14% 6=5% 7=7% 10=18% 12=1% 14=4% 15=4% 18=1%

20=3% 21=3% 25=3% 30=7% 45=1% 60=3%

Do you support or oppose the use of this method (hand grabbing) of fishing for catfish at Green River Lake?

Support 44% Oppose 19% No opinion 37%

Figure 1 cont.

Walleye Anglers (n=66)

In general, what level of satisfaction do you have with the walleye fishing at Green River Lake?

Very satisfied 17% Somewhat satisfied 36% Neutral 27% Somewhat dissatisfied 9% Very dissatisfied 3% No opinion 8%

11a. If you responded with somewhat or very dissatisfied in question (11) (n=7)– what is the single most important reason for your dissatisfaction?

Number of fish 100%

White Bass Anglers (n=42)

In general, what level of satisfaction do you have with the white bass fishing at Green River Lake?

Very satisfied 5% Somewhat satisfied 2% Neutral 19% Somewhat dissatisfied 12% Very dissatisfied 50% No opinion 12%

12a. If you responded with somewhat or very dissatisfied in question (12) (n=22) – what is the single most important reason for your dissatisfaction?

Number of fish 95% Size of fish 5%

All Anglers (n=799)

13. Would you support or oppose a reduction in the current statewide 30 fish daily crappie creel limit to 20 fish?

Support 63% Oppose 14% No opinion 24%

14. Are you satisfied with the current size and creel limits on all sport fish at Green River Lake? Yes - 75% No – 25%

If NO: (n=194)

14a. If not, which species are you dissatisfied with and what size and creel limits would you prefer?

Size

Bass (n=105)	15-inch (87%)
Crappie (n=76)	10-inch (68%)
Muskie (n=15)	≥ 36-inch (80%)

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

Support 63% Oppose 9% No opinion 28%

16. Are you aware that KDFWR prints a fish attractor map for Green River Lake? Yes – 38% No – 62% if yes go to 15a.

16a. Do ever you use this map? Yes - 15% No – 85%

CENTRAL FISHERIES DISTRICT
Project 1: Lake and Tailwater Fishery Surveys
FINDINGS

Lake sampling conditions for 2009 are summarized in Table 1.

Taylorville Lake (3,050 acres)

Spring diurnal electrofishing was completed in April 2009 to monitor the black bass population. Three sections (Big Beech Creek, Ashes/Jacks Creek, and Van Buren areas) of Taylorville Lake were sampled for 7.5 hours (2.5 hours per section). Length distribution and CPUE for largemouth bass are presented in Tables 2 and 3. Numbers of bass collected in 2009 were lower than numbers collected in past years. Catch rate of 8.0–11.9 in largemouth bass (32.93 f/h) was a little higher than last year (30.10 f/h), but lower than the 15-year average (38.50 f/h). Catch rate for bass 12.0–14.9 in (22.27 f/h) declined from last years catch rate (33.60 f/h) and was lower than the 15-year average (29.49 f/h). Catch rate for bass ≥ 15.0 in was 13.60 f/h, which was lower than last year's catch rate (22.50 f/h) and the 15-year average (16.83 f/h) for these harvestable-size fish. Big Beech Creek and Little Beech Creek continue to be the areas with the highest catch rate for largemouth bass. The PSD for largemouth bass declined to 52 from 58 in 2007 and 65 in 2008 (Table 4). The RSD_{15} value also decreased from 26 in 2008 to 20 in 2009. Largemouth bass age frequency (Table 5) continue to show high numbers of age 2 and 3 bass (mostly 11.0–14.0 in), with a distinct decline beginning at age 6 (≥ 14.0 in). Very few bass were present beyond age 6. The largemouth bass population assessment score, based on spring electrofishing data, continues to decrease from 12 (“Good”) in 2008 to 11 (“Fair”) in 2009 (Table 7). Length frequency, relative weight (W_r), and age 0 and age 1 year class strength of largemouth bass based on September electrofishing are presented in Tables 8–10. Average body weights for largemouth bass were acceptable, with bass ≥ 15.0 in. having the highest weight ratio (Table 9). The year class strength model indicated better than average recruitment for young-of-the-year largemouth bass in 2009. Therefore, fingerling largemouth bass were not stocked into Taylorville Lake in 2009. Catch rates of age 0 largemouth bass significantly increased from 2008, with one of the highest catch rates of age-0 largemouth bass recorded. Largemouth bass fingerlings have been stocked annually since 2000 at rates ranging from 5 f/a to 10 f/a, and from 1985 to 1992 at various rates. The need for stocking and the numbers stocked in reservoirs are based (since 2004) on results of the age 0 year class strength sampled in early September and the predicted age 1 year class strength the following spring.

Trap netting efforts for crappie (Table 11) resulted in the collection of only 9 white crappie and 32 black crappie. Crappie were sampled with trapnets during 48 net-nights. PSD and RSD_{10} values are shown in Table 12. Age and growth determinations were completed using otoliths (Tables 13, 15–16). Age studies indicate white crappie reach 9.0 in between age 1 and 2, whereas, black crappie, on average reached 9.0 in between age 2 and 3 in 2009. The crappie population assessment scores (Table 14 & 17) were 8 (“Fair”) for both white and black crappie, which was identical to 2008 assessment scores. The cause for the continued decrease in crappie population catch rates in recent years is not entirely known. The crappie population is very cyclic at Taylorville Lake with peaks occurring every 7 to 9 years. The latest peak appears to have been in 2004. In an effort to help recruitment on the lake, 30,710 (10 f/a) white crappie (2.7 in) were stocked in Taylorville Lake in the fall of 2009. Relative weights of crappie from Taylorville Lake are shown in Table 10.

Fall gill netting for hybrid striped bass and white bass was conducted in October 2009 (Tables 19–27). A total of 112 hybrid striped bass were collected compared to 63 in 2008. Hybrid striped bass were captured in 8 net-nights (4 nets for 2 nights) for a CPUE of 14.00 (± 5.13) f/nn. The hybrid striped bass population has exhibited notable fluctuations since 1990. The density of hybrid striped bass in Taylorville Lake appears to be negatively related to the amount of tailwater discharge (due to rainfall) and fishing pressure. It is theorized that above-normal discharge leads to escapement of hybrid striped bass but has little effect on the white bass density in the lake. Annual stocking rates for hybrid striped bass have been about 20 f/a (1.4 to 2.0 in) for the last 12 years. Age and growth studies were completed for hybrid striped bass using otoliths (Tables 20 & 21). Additionally, hybrid striped bass were differentiated from white bass due to being marked with oxytetracycline (OTC) at the fish hatchery. Studies indicate hybrid striped bass reach harvestable size (15.0 in) between age 2 and 3, typical growth at

Taylorville Lake. The relative weight (W_r) index for hybrid striped bass shows below average body weight, especially for hybrid striped bass ≥ 15.0 inches. The population assessment for hybrid striped bass was rated at "Fair", the same as 2008. A total of 70,058 (23 f/a) hybrid striped bass (1.5 in) were stocked in Taylorville Lake in 2009.

Data for white bass collected during fall 2009 gillnetting studies are presented in Tables 19 and 24-27. White bass comprised about 34% of the *Morones* sampled, compared to 69% in 2008 and 39% in 2007. No white bass older than age 3+ were collected and only one exceeded 12.0 in. Of those collected, 83% were age 0+, and 16% were age 1+ (Table 25). Relative weight values revealed acceptable body weights, with good weights for small fish and decreasing body condition for larger older fish (Table 26). The white bass population assessment gave a rating of "Poor" (Table 27).

See the Black Bass Investigation (F-40) Annual Performance Report for channel catfish and blue catfish sampling data. A total of 23,497 (7.7 f/a) blue catfish (8-14 in) were stocked in Taylorville Lake in 2009.

A roving daytime angler creel survey was conducted at Taylorville Lake from April through October. The last creel survey conducted at this lake was in 2006. Table 28 provides descriptive statistical parameters of the lake fishery. The number of fishing trips in 2009 (25,895) dropped slightly from 2006 (28,253). Accordingly, fishing pressure (man-hours) and number of fish catch also slightly declined. While numbers and pounds of fish harvested increased, the catch rates (fish/hr) and (fish/acre) remained relatively the same. Other parameters such as gender, residency, method and mode remained about the essentially the same from 2006, except jugging has become a very popular method for fishing for blue catfish at Taylorville Lake.

Numbers of largemouth bass caught in 2009 increased by over 20,000 from numbers seen in 2006 (Table 29), while numbers of largemouth bass harvested decreased by 40%. Mean length of largemouth bass harvested decreased from 16.4 inches in 2006 to 15.8 inches in 2009 (Tables 29 and 31). The number of fishing trips for black bass in 2009 was 9,032, almost identical to 9,352 trips in 2006. Black bass continue to be the most sought-after group fished for in Taylorville Lake. Catch rate of bass by bass fishermen increased from 0.53 f/hr in 2006, to 1.19 f/hr in 2009. Bass angler success rate (9.4%) was essentially the same as 2006. Largemouth bass continue to dominate the black bass population with only incidental catches of smallmouth bass and spotted bass. Black bass catch, harvest and monthly angling success are shown in Tables 31 and 32.

Numbers of crappie caught decreased from 52,425 fish caught in 2006 to 16,747 in 2009. Additionally, the number of crappie harvested declined from 23,829 fish in 2006 to 15,084 in 2009. Mean length of crappie harvested was 10.2 inches, slightly larger than three years ago. Crappie are the second most sought-after group fished for in Taylorville Lake. The number of fishing trips for crappie declined from 6,980 in 2006 to 5,479 in 2009. Harvest rate by crappie anglers declined from 0.61 f/hr to 0.56 f/hr. Percent success of crappie anglers increased from 43% in 2006 to 55% in 2009. White crappie represented 47% of the crappie caught (58% in 2006) and 45% of the crappie harvested (62% in 2006). Crappie catch, harvest and monthly angling success are shown in Tables 33 and 34.

The third most sought-after group was the catfish with 3,906 trips by catfish anglers compared to 2,721 trips in 2006. Catfish numbers caught increased from those seen in 2006. Blue catfish contributed 47% of the catfish caught, compared to 14% in 2006. Pounds of catfish harvested increased from 11,437 lbs in 2006 to 27,699 lbs in 2009. Pounds of blue catfish harvested by catfish anglers increased from 679 lbs in 2003, 3,178 lbs in 2006, to 19,182 in 2009. Mean length of channel catfish harvested by catfish anglers was 13.3 inches (13.6 in 2006) while that of blue catfish was 16.9 inches (16.9 inches in 2006). Harvest rate by catfish anglers increased from 0.51 f/hr to 0.82 f/hr over the same period. Success rate for catfish anglers increased from 50% in 2006 to 80% in 2009. Catfish catch, harvest and monthly angling success are shown in Tables 35 and 36.

The *Morone* group (hybrid striped bass and white bass) was the fourth most sought-after group at Taylorville Lake in 2009, as it was in 2006. In March 2006, new statewide regulations on *Morone* creel and size limits were imposed which included Taylorville Lake. The regulation changed from "10 fish per day, only 5 of which could be 15 inches or greater" (since 2002), to "15 fish per day, only 5 of which can be 15 inches or greater". The number of hybrid striped bass (HSB) caught decreased from 8,086 fish (1,667 harvested) in 2006 to 5,667 (2,090 harvested) in 2009. However, the number of white bass (WB) caught significantly increased with 4,024 caught in 2006 (305 harvested) and 17,808 caught in 2009 (4,982 harvested). Pounds of HSB harvested in 2009

totaled 2,491 lbs (0.82 lbs/a), whereas in 2006 it was 1,760 lbs (0.58 lb/a). Pounds of WB harvested in 2009 totaled 1,960 lbs (0.64 lbs/a) while in 2006 it was 205 lbs (0.07 lbs/a). Mean length of HSB harvested in 2009 was 13.4 inches while in 2006 it was 13.3. Mean length of WB harvested in 2009 was 9.1 inches, with 12.1 inches being the average in 2006. The number of trips for *Morones* increased slightly from 1,426 trips in 2006 to 1,532 trips in 2009. Hours spent fishing for these fish also slightly increased from 7,181 hrs (2.35 hrs/a) in 2006 to 7,881 hrs (2.58 hrs/a) in 2009. Harvest rate for *Morone* fishermen increased from 0.15 f/hr in 2006 to 0.65 f/hr in 2009. Success rate for these anglers increased from 16.1% in 2006 to 47% in 2009. *Morone* catch, harvest and monthly angling success are shown in Tables 37 and 38.

Panfish, primarily bluegill, were a close second to largemouth bass (most-caught species) as far as total numbers caught in 2009 at 38,043 fish caught during the 2009 season. Panfish were the most caught species in the 2006 creel survey (5,755 fish). Pounds harvested in 2009 was only slightly less than that seen in 2006—going from 3,332 lbs (1.09 lbs/a) in 2006 to 3,171 lbs (1.04 lbs/a) in 2009. The average length of bluegill harvested was 5.6 inches, identical to the average size caught in 2006. Trips for panfish increased from 921 trips in 2006 to 1,510 trips in 2009. The harvest rate for panfish was 2.6 f/hr (2.6 f/hr in 2006). The percentage of successful panfish anglers was 78% while in 2006 it was 61%. Length distribution and numbers of species caught and harvested are shown in Table 30.

An angler attitude survey was conducted at Taylorsville Lake during the creel survey. Surveys were completed in the field by the creel clerk. A total of 278 surveys were completed by anglers (175 surveys in 2006). The attitude survey reflected the sharp decrease in anglers seeking hybrid striped bass and white bass, and the increase in preference for catfish. The majority of bass fishermen and crappie fishermen expressed an increase in satisfaction for their species of preference from the 2006 survey. Satisfaction for the hybrid striped bass and white bass fisheries significantly declined for these species. Blue catfish anglers exhibited the highest level of satisfaction with 80% being either “very” or “somewhat” satisfied, whereas, channel catfish anglers express their dissatisfaction with the channel catfish fishery.

Herrington Lake (2,410 acres)

Diurnal electrofishing studies were completed in April 2009 to monitor the black bass population. Upper, middle, and lower sections were sampled for a total of 7.5 hours (2.5 hrs. per section). Species composition, relative abundance, and CPUE of black bass collected in the spring are presented in Table 39. Largemouth bass dominated the black bass fishery, with spotted bass comprising 20% of the bass sampled. No smallmouth bass were collected in 2009. The catch rate of <8.0 in largemouth bass (5.25 f/h) was dramatically lower than last year (31.33 f/h) and the 15-year average (29.81 f/h) catch rates. Additionally, numbers of bass 8.0-11.9 in (9.38 f/h) greatly decreased from last year (39.73 f/h) and the 15-year average (40.49 f/h). Numbers of 12.0-14.9 in (15.25 f/h) and ≥ 15.0 in (10.75 f/h) largemouth bass decreased significantly from last year and the 15-year averages (28.43 f/h and 19.99 f/h), respectively (Table 40). The PSD for largemouth bass was 73 compared to 56 in 2008 and 35 in 2007. The RSD_{15} was 30 compared to 24 in 2008 and 16 in 2007 (Table 41). Age frequency and CPUE is presented in Tables 42 and 43. Largemouth bass show fast growth at Herrington Lake. Bass reach harvestable size (12.0 in) between age 2 and 3, one year faster than the state average. They reached 15.0 in, on average between ages 3 and 4. The population assessment based on spring electrofishing data indicated a “Fair” population (Table 44). The decrease from “Good” to “Fair” in the assessment was caused by poor sampling condition that existed during spring sampling. Fall electrofishing evaluated largemouth bass relative weight index and index of year class strength (Tables 45-47). Average body weights for largemouth bass were acceptable, with bass ≥ 15.0 in continuing to have the highest weight ratio. Year class strength at age 0 and age 1 are shown in Table 47. CPUE of age 0 bass increased from last year, while their mean length slightly declined. Indices indicated bass did not need to be stocked.

Diurnal electrofishing studies were completed in March 2009 to monitor the crappie population (Table 48). Upper, middle, and lower lake sections were sampled for a total of 4.0 hours. This year, a total of 99 crappie were collected, compared to 108 in 2008, 81 in 2007, 84 in 2006, and 367 in 2005. Catch was dominated by white crappie in the middle and upper sections, while black crappie dominated the lower section of the lake. PSD values are shown in Table 49. Age and growth studies of white crappie indicated they reach 9.0 in by age 2, and 11.0 in by age 4 (Table 50). Age frequency of white crappie continued to show an excellent year class was produced in 2006 (Table 51). A population assessment was developed for spring electrofishing of white and black crappie at Herrington Lake. The population assessment for white crappie indicates a “Good” population for 2009 (Table 52). Age and growth studies also showed that black crappie reached 9.0 in by age 2 and 11.0 in by age 3 (Table 53). Age 2 and 3

fish dominated the black crappie sample (Table 54) indicating good spawns in 2006 and 2007. The population assessment for black crappie indicates a "Fair" population for 2009 (Table 55).

Gill netting for hybrid striped bass and white bass was completed in October 2009. During the 16 net-night sampling period, 72 hybrid striped bass and 83 white bass were collected (Table 56). Otoliths were taken from both species for age and growth determinations. Results of these studies indicate excellent growth rates (Tables 57-58 and 60-61). Hybrid striped bass reach 15.0 in between age 1 and 2 (Table 57), as they have historically. Of the hybrid striped bass sampled, 84% were age 1+ or younger (Table 58). The population assessment for hybrid striped bass indicates a "Fair" population, down from a "Good" assessment last year (Table 59). White bass age and growth determinations show they reach 9.0 in by age 1 and 12.0 in by age 2 (Table 60). Like hybrid striped bass, 83% of white bass were age 1+ or younger (Table 61). The white bass population assessment indicated a "Fair" population, also down from a "Good" assessment rating from last year (Table 62). Herrington Lake was stocked with 51,056 (20 f/a; 1.7-2.0 inch) hybrid striped bass in June 2009.

Guist Creek Lake (317 acres)

Spring electrofishing studies were completed for length frequency, CPUE, age frequency and population assessment for largemouth bass in April 2009 (Table 63). Total largemouth bass catch rate (of all sizes) continued to decrease from the last several years (Table 64). The PSD for largemouth bass was 70 compared to 85 in 2008 and 63 in 2007 (Table 65). The RSD₁₅ was 46 compared to 54 in 2008 and 36 in 2007. Age and growth studies showed that largemouth bass reached 12.0 in between age 3 and 4, and 15.0 in between 4 and 5 years (Table 66). Age frequency indicated 85% of the largemouth bass were age 6 or younger (Tables 67 and 68). Over 55% of the bass collected were ≥ 13.0 in, whereas 29% were ≥ 16.0 in, and 13% were ≥ 18.0 in. The population assessment gave a rating of "Good", the same as the last four years (Table 69). Fall sampling was conducted for relative weight and index for year class strength at age 0 and age 1 (Tables 70-72). Relative weights indicated excellent body condition for bass, particularly larger fish. Mean length of age 0 fish increased from last year, however, their catch rate significantly decreased from 2008. Fingerlings (4.1 in) largemouth bass were stocked in September at a rate of 15 f/a, totaling 4,785 fish.

Gill netting was completed in November for hybrid striped bass (Table 73). Four nets were fished for two nights (8 net-nights) in similar sites as in past years. A total of 26 hybrid striped bass were captured compared to 7 in 2008. Age and growth studies were completed using otoliths. Calculations indicate hybrid striped bass continued to reach 15.0 in by age 2, and 20.0 in between age 3 and 4 (Table 74). Age frequency of hybrid striped bass collected is presented in Table 75. Relative weights of these fish indicated they were below average in weight for their size (Table 76). The population assessment indicated a rating of "Fair", an improvement from a "Poor" rating in 2008 (Table 77). Guist Creek Lake was stocked with 19,148 (60 f/a; 16.0 in) hybrid striped bass in June 2009.

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

Beaver Lake (158 acres)

The sport fish population continues to improve following gizzard shad removal in 1998. Beaver Lake was sampled for largemouth bass in April 2009 (Tables 78 and 79). The CPUE for all sizes was 249.00 f/h compared to 317.50 f/h in 2008 and 259.50 f/h in 2007. Catch rates for bass <8.0 in decreased from last year. Numbers of bass between 8.0 and 11.9 in and ≥ 15.0 in decreased from last year, while bass 12.0-14.9 in increased from last year. Thick aquatic vegetation continues to hamper sampling in the spring (Table 1). The PSD and RSD₁₅ for largemouth bass respectively were 38 and 1, compared to 25 and 3 in 2008 and 62 and 3 in 2007 (Table 80). Most bass collected (75%) were between age 3 and 5 (Table 81). Spring electrofishing catch rates by age from 2000 through 2009 are shown in Table 82. The population assessment score indicated a "Fair" bass population (Table 83), compared to "Good" in 2008. Fall electrofishing results for relative weight and the index of largemouth bass year class strength are presented in Tables 84-86. The relative weight index reflected below-average weights for all three length groups, possibly due to crowding and dense aquatic vegetation. Mean length of age 0 bass increased, as well as the catch rate of age 0 bass in 2009 (Table 86). Year class indices indicated bass did not need to be stocked. Finally, no shad were observed at Beaver Lake in 2009.

Bluegill and redear sunfish were sampled in May 2009 for CPUE, PSD, age and growth, and age frequency (Tables 87–99). Length frequency results showed many bluegill remain in the 5.0–7.0 in range, with most redear sunfish between 7.0 and 8.0 in (Table 87). The PSD for bluegill was 41 compared to 37 in 2008 and 62 in 2007. The RSD_8 was 2 compared to 3 in 2008 and 2007. Redear sunfish PSD and RSD_9 , respectively were 61 and 4 (Table 88). CPUE for bluegill ≥ 8.0 in was 1.60 f/h, lower than last year, while the catch rate for 6.0–7.9 in bluegill was slightly higher than last year. No bluegill 10.0 in or larger were captured. Age and growth studies indicated bluegill reached 6.0 in by age 3 and 8.0 in between age 8 and 9 (Table 90). Age frequency of bluegill is shown in Table 91. The population assessment for bluegill indicated a “Fair” population rating, the same as in 2008 (Table 93). The high density of bluegill may be attributed to thick aquatic vascular plant growth. Catch rate of redear sunfish ≥ 8.0 in was 29.60 f/h compared to 90.40 f/h in 2008 (Table 94). Overall, catch rates for all sizes were lower than last year, except for the slight increase in 3.0–5.9 in catch rates. Age and growth studies continue to show redear sunfish reaching 6.0 in between age 2 and 3, and 8.0 in between age 4 and 5 (Table 95). No fish ≥ 10.0 in were collected. Age frequency (Table 96) indicates a good number of redear sunfish up to age 5 in the fishery. Redear sunfish numbers have increased since the shad and grass carp removal as a result of increased aquatic vegetation. The population assessment indicated a “Good” redear sunfish fishery (Table 98). Relative weight data for bluegill and redear sunfish is shown in Table 99, with both species continuing to show average weights for all length groups. For additional information on Beaver Lake panfish, consult the Lake Fisheries Research Investigation (F-40) Annual Performance Report.

Aquatic vegetation was prevalent in shallow areas of the lake during spring and early summer. Two applications of an aquatic herbicide (Reward, diquat dibromide) were made to submerged aquatic vascular plants around the fishing pier and embayments to maintain fishing and boating access on May 12 and 20. No liquid fertilizer applications have been made since 2001.

Boltz Lake (92 acres)

Spring electrofishing for largemouth bass length frequency, CPUE, PSD, age frequency and population assessment was done in April 2009 (Tables 100–105). Results indicate a slight increase in bass numbers from last year (Table 101). Most bass (69%) were age 4 or younger (≤ 15.0 in, Table 103), same as last year. The population assessment indicated a “Good” bass population, an improvement for last year’s “Fair” rating (Table 105). Electrofishing for largemouth bass relative weight and YOY data was conducted in September (Tables 106–108). Relative weights indicated average condition for bass. Fall sampling indicated a decrease in numbers of age 0 bass, but the numbers of age 0 ≥ 5.0 in bass were higher than 2008. Fingerlings (4.7 in) largemouth bass were stocked in September at a rate of 15 f/a, totaling 1,415 fish (right pectoral clip). Currently, Boltz Lake does not contain a population of gizzard shad.

Spring electrofishing for bluegill was conducted in May 2009 (Tables 109–115). Catch rates for all sizes of bluegill, except 6.0–7.9 in, decreased (Table 111). Age and growth data indicated bluegill reached 6.0 in between age 3 and age 4. The majority (85%) of bluegill collected were age 1 through age 3. The population assessment for bluegill indicated a “Fair” population present, same as last year (Table 115).

A total of 144 common carp were removed from Boltz Lake during June. The average weight of removed common carp was 7.57 lbs. Therefore, it was estimated that 1,100 lbs of common carp were removed from Boltz Lake in 2009.

Boltz Lake has been a blue catfish study lake (Black Bass Research Project) since 1998. Boltz Lake was stocked with 1,883 (20 f/a; 7–16 inch; adipose clip) blue catfish in September 2009.

Bullock Pen Lake (134 acres)

Bullock Pen Lake was electrofished in April 2009 for largemouth bass length frequency, CPUE, age frequency and population assessment (Tables 116–121). Overall, catch rate (147.50 f/h) was lower than last year’s value (194.50 f/h), however it was higher than the 15 year average (135.47 f/h) (Table 117). The PSD for largemouth bass was 68 and RSD_{15} was 38 in 2009 (Table 118). Numbers and year class strength are widely distributed and numerous through age 13 (Table 119), with most (62%) being age 5 or younger. The population assessment for largemouth bass indicated a “Good” population present, the same as last year (Table 121). Electrofishing was conducted in September to determine the relative weights and YOY year class strength for largemouth bass (Tables 122–124). Relative weights indicated excellent body condition for bass, particularly larger

fish (Table 123). CPUE for Age 0 and Age 0 \geq 5.0 in decreased from last year (Table 124). Due to this decline, fingerling (4.1 in) largemouth bass were stocked in September at a rate of 15 f/a, totaling 2,041 fish (right pectoral clip). Bullock Pen Lake has hosted a population of gizzard shad for decades.

Bullock Pen Lake has been a blue catfish study lake (Black Bass Research Project, F-40) since 1998. Bullock Pen Lake was stocked with 2,655 (20 f/a; 7-16 inch; adipose clip) blue catfish in September 2009.

Corinth Lake (96 acres)

Corinth Lake was electrofished in April 2009 to collect largemouth bass length frequency, CPUE, PSD, age frequency and population assessment information (Tables 125–130). The catch rate for largemouth bass decreased from last year for all length groups of largemouth bass (Table 126). The PSD for largemouth bass was 35, identical to 2008 (Table 127). The RSD_{15} increased from 13 in 2008 to 22 in 2009. Age frequency and CPUE are shown in Table 128 and indicate 81% of the bass collected were age 4 or younger. The population assessment for largemouth bass was rated “Good”, compared to “Excellent” in 2008 (Table 130). Fall electrofishing for largemouth bass was conducted to determine year class strength and relative weight (Tables 131–133). Relative weights of largemouth bass are still below average (Table 132). Largemouth bass mean length at age 0 and catch rates of all age 0 sizes decreased from last year (Table 133). Due to this decline, fingerling (4.0 in) largemouth bass were stocked in September at a rate of 15 f/a, totaling 1,467 fish (right pectoral clip) as part of the largemouth bass stocking initiative. This data may reflect the effect of the presence and increasing numbers of gizzard shad.

Electrofishing for bluegill and redear sunfish was completed in May 2009 to obtain length frequency, CPUE, age and growth, age frequency and population assessment data (Tables 134–145). Most bluegill were 4.0-6.0 in (Table 134). The bluegill PSD was 52 compared to 37 in 2008 (Table 135). Collection of larger bluegill (6.0 to 7.9 in) showed another year of increase (Table 136). Age and growth studies showed that bluegill reach 6.0 in between age 3 and 4 (Table 137). The population assessment indicated a “Fair” population, identical to the last two years (Table 140). Redear sunfish numbers and quality increased in 2009, with most fish between 7.0 and 8.0 in. Redear sunfish PSD was 85 compared to 48 in 2008. Catch rate for redear sunfish \geq 8.0 in increased from 27.60 f/h in 2008 to 38.00 f/h in 2009 (Table 141). One \geq 10.0 in redear sunfish was collected for the first time in two years. Age and growth studies show redear sunfish reaching 8.0 in between age 3 and 4 (Table 142). The population assessment for redear sunfish continued to be rated “Good” (Table 145). Relative weights for bluegill and redear sunfish were collected in the fall (Table 146). Relative weights indicated average body condition for bluegill and redear sunfish, except that body condition of 6.0-7.9 in bluegill was poor.

Elmer Davis Lake (149 acres)

Elmer Davis Lake was sampled for largemouth bass in April 2009. Length frequency, CPUE, PSD, age and growth, age frequency and population assessment data were collected (Tables 147-152). Catch rates of largemouth bass increased for all sizes, except for $<$ 8.0 in largemouth bass (Table 148). Numbers of bass in the protected slot (12.0-15.0 in) and bass \geq 15.0 in doubled or nearly doubled from last year (Table 148). The PSD for largemouth bass was 35 compared to 24 in 2008 (Table 149). The RSD_{15} was 9 compared to 6 in 2008. Age frequency and CPUE (Table 150) indicated 78% of the bass collected were age 5 or younger. Population assessment data indicated a “Good” population, the same as last year (Table 152). Fall electrofishing for relative weights and year class strength of largemouth bass was done in September 2009 (Tables 153-155). Relative weights continue to indicate below average body condition (Table 154) as would be expected in a bass-crowded population. Studies indicate an increase in the numbers of age 0 bass in the fall of 2009 (Table 155).

Electrofishing for length frequency, CPUE, age and growth, age frequency and population assessment was conducted for bluegill and redear sunfish in May 2009 (Tables 156–167). Bluegill catch rates decreased for all sizes (Tables 158). The PSD value for bluegill was 38, compared to 33 in 2008 (Table 157). The RSD_8 decreased to 1, compared to 3 in 2008. Age and growth studies on bluegill showed that they reach 6.0 in between age 2 and 3 (Table 159). Most bluegill (77%) were age 3 and less (Table 160). The population assessment for bluegill was found to be “Fair”, a decrease from “Good” in 2008 (Table 162). CPUE for all redear sunfish length groups decreased from 2008 (Table 163). The PSD for redear sunfish was 42 compared to 49 last year. The RSD_9 was 8 compared to 12 in 2008 (Table 157). Age and growth studies indicated good growth rates with redear sunfish reaching 6.0 in between age 1 and 2, 8.0 in between age 3 and 4, and 10.0 in between age 6 and 7 (Table 164). The redear sunfish population assessment indicated a “Good” population, compared to “Excellent” in 2008 (Table 167). Relative weight results for bluegill indicated improved body condition, while the index for redear sunfish indicated excellent body condition

(Table 168). This year's sampling of bluegill and redear sunfish may have been hindered by excessive growth of aquatic vegetation (mainly *Potamogeton crispus*) at Elmer Davis Lake. Gizzard shad removal efforts were done in 1994 and 1997 with success. However, a source for gizzard shad invasions can be attributed to the city of Owenton's water supply reservoir, Lower Thomas Lake, located in the drainage of Elmer Davis Lake. Gizzard shad have again become established due to overflow from Lower Thomas Lake during spring high water events. For additional information on Elmer Davis Lake panfish, consult the Lake Fisheries Research Investigation (F-40) Annual Performance Report.

A daytime roving creel survey was conducted at Elmer Davis Lake in 2009. The last creel survey was completed in 1991. In 2009, fishing trips totaled 3,862 (Table 169), which was a third of the trips in 1991 (10,621 trips). Overall, catch and harvest rates were higher in 2009 than rates seen in 1991. Largemouth bass harvest was two-thirds less than in 1991 (Table 170). Crappie harvest increased from 1,053 (7.74 f/a) in 1991 to 3,081 (22.62 f/a) in 2009, likewise, panfish harvest increased from 9,866 (72.54 f/a) in 1991 to 13,321 (97.95 f/a) in 2009. However, catfish harvest significantly decreased in 2009, 8,061 (59.27 f/a) in 1991 to 1,018 (7.48 f/a) in 2009. Length distribution of harvested and released fish is shown in Table 171. Black bass harvest, release, and monthly angling success are shown in Tables 172 and 173. Crappie harvest, release and monthly angling success are shown in Tables 174 and 175. Channel catfish harvest, release and monthly angling success are presented in Tables 176 and 177. Panfish catfish harvest, release and monthly angling success are presented in Tables 178 and 179. An angler attitude survey was conducted and was based on 546 surveys. According to this survey, bluegill were sought after the most (66.5%), and the majority of angler's time was spent fishing for them (42.7%). Overall, most anglers were satisfied with bass, crappie, catfish, and panfish fishing on Elmer Davis Lake in 2009.

Kincaid Lake

Spring electrofishing studies were conducted in April 2009 for PSD, length frequency, age frequency and CPUE for largemouth bass (Tables 180–186). Catch rate of all sizes remained about the same as past years. Total catch rate slightly decreased from 268.50 f/h in 2008 to 265.00 f/h in 2009 (Table 181). The largemouth bass PSD and RSD₁₅, respectively, were 71 (63 in 2008) and 43 (44 in 2008) in 2009 (Table 182). Age and growth studies showed largemouth bass reached 12.0 in between age 3 and 4, and 15.0 in between 5 and 6 years (Table 183). Age frequency studies indicate good numbers of all age classes (through age 10) (Table 184). The population assessment indicated a "Good" bass population, the same as the past ten years (Table 186). Fall electrofishing for relative weight and index of year class strength at age 0 was done in October (Tables 187-189). Relative weight of all largemouth bass length groups was about average (Table 188). Catch rates of age 0 largemouth bass increased slightly from 2008 (Table 189).

Channel catfish were sampled in October using tandem hoop nets at Kincaid Lake in 2009. Length frequency results for channel catfish showed a good size distribution between 7.0-25.0 inches (Table 190). The largest channel catfish sampled was 25.5 in (Table 190). The PSD and RSD₂₄ for channel catfish were 36 and 3, respectively (Table 191). Age and growth studies showed channel catfish reached 12.0 in between age 3 and 4, and 15.0 in between 5 and 6 years (Table 192). Relative weights indicated above average condition for channel catfish (Table 194).

McNeely Lake

McNeely Lake was electrofished for largemouth bass population analysis in April 2009. Data for length frequency, CPUE, PSD, age frequency and population assessment were collected (Tables 195–200). Overall, catch rates for all sizes of largemouth bass decreased in 2009 (Table 196). Largemouth bass PSD was 35, lower than last year, and the RSD₁₅ slightly increased from 10 last year to 11 in 2009 (Table 197). Age frequency studies indicated good numbers of age 1 through age 3 bass, ranging from 3.0-13.0 in (Table 198). The population assessment continued to be "Good" in 2009 (Table 200). Electrofishing for largemouth bass in September 2009 was completed to collect relative weight and the index of year class strength at age 0 (Table 201-203). All values decreased from last year. Relative weights continue to indicate below-average body condition for largemouth bass, probably a reflection of dense aquatic vegetation growth (*Potamogeton crispus*) in spring and early summer (Table 202).

Bluegill and redear sunfish were sampled in May 2009 for length frequency, CPUE, age and growth, age frequency and population assessment (Tables 204–213). Catch rates for bluegill ≥ 6.0 in increased from 2008 (Table 206). The bluegill PSD was 60 compared to 53 in 2008 (Table 205). RSD₈ was 0.2 in 2009, compared to 0 in 2008. The majority (80%) of bluegill collected were age 1 to age 3. The population assessment for bluegill continues to be "Good" (Table 209). Catch rates for redear sunfish declined slightly from 2008 to 2009 (Table 210). The PSD for

redeer sunfish was 66 compared to 64 last year, and the RSD₀ increased to 23 from 9 (Table 205). The redear sunfish fishery was rated "Excellent", the same as in 2008 (Table 213). Relative weight data for bluegill and redear sunfish were collected in the fall (Table 214). Good body condition was exhibited by redear sunfish. However, bluegill exhibited below average body condition during the fall of 2009.

Williamstown Lake

Williamstown Lake was electrofished for largemouth bass population analysis in April 2009. Data for length frequency, CPUE, PSD, age frequency and population assessment were collected (Tables 215-219). Overall, catch rates for all sizes of largemouth bass decreased from 2008, except for fish <8.0 and ≥15.0 in which slightly increased (Table 216). Largemouth bass PSD and RSD₁₅ was 55 and 24, respectively (Table 217). Age frequency studies indicated the population is dominated by age 1 through age 3 bass (81%), ranging from 2.0-14.0 in (Table 218). The population assessment was "Fair" in 2009, the same as 2008 (Table 219). Electrofishing for largemouth bass in October 2009 was done to collect relative weight and the index of year class strength at age 0 (Table 220-222). The relative weights indicated average body condition for largemouth bass (Table 221). Year class strength indices significantly decreased from last year (Table 222).

Sympson Lake

Relative abundance and CPUE of largemouth bass collected in the spring are shown in Table 223. All sizes of largemouth bass were represented with good numbers of bass above the 15.0-in size limit. Largemouth bass up to 23.0 in were collected. Catch rate of largemouth bass declined from 148.00 f/h in 2008 to 113.50 f/h in 2009.

Lake Jericho

Largemouth bass were sampled for relative abundance and CPUE in April 2009 (Table 224). Good numbers of bass of all sizes were collected. However, catch rates of largemouth bass decreased from 117.30 f/h in 2008 to 78.00 f/h in 2009.

Doe Run Lake

Length frequency, relative abundance and CPUE of fish collected by electrofishing at Doe Run Lake (Kenton Co.) in April 2009 are shown in Table 225. A successful gizzard shad removal was conducted in January 2006. Fall electrofishing for length frequency and CPUE of largemouth bass and bluegill was completed (Table 226).

Jacobson Park Lake

Length frequency and CPUE of largemouth bass collected in April 2009 at Jacobson Park Lake are presented in Table 227. Largemouth bass were present in fair numbers. Advanced fingerling largemouth bass were stocked annually (20 f/a-30 f/a) between 1995 and 2004. Stocking of bass may need to be done on an annual basis to maintain the fishery. Gizzard shad is the primary forage fish for bass in this the only public fishing lake in Lexington.

Leary Lake

Species composition, length frequency, and CPUE of fishes collected from Leary Lake in May 2009 are presented in Table 228. This Lloyd WMA lake (3a) receives heavy fishing pressure. Studies show largemouth bass from 8.0 to 14.0 inches in fair numbers. These results are similar to last year's results. Bluegill up to 7.0 in were collected.

Willisburg Lake

Relative abundance and CPUE of largemouth bass collected in the spring are shown in Table 229. All sizes of largemouth bass were represented with good numbers of bass above the 12.0-in size limit. Largemouth bass up to 20.0 in were collected. Catch rate of largemouth bass increased from 92.00 f/h in 2008 to 131.00 f/h in 2009. Fall electrofishing for length frequency and CPUE of largemouth bass was completed (Table 230).

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

Water body	Species	Date	Time (zmn)	Gear	Weather	Water temp. F.	Water level	Secchi (in)	Conditions	Pertinent sampling comments
Herrington	Creepie	3/31 4/1	1000 1000	shock		55 56			good	
Jacobson	LMB	4/14	1100	shock		56	normal	28	good	good sample; lake a little turbid
Beaver	LMB	4/20	1200	shock	cloudy / cool	58	normal	42	good	good sample
Corinth	LMB	4/28	2030	shock	Clear, calm	67	normal	36	good	fair sample due to aquatic vegetation growth
Taylorville	Creepie	4/22	1000	shock	sunny	57	above normal	24	good	good sample
Doe Run	LMB	4/23	1000	shock	Sunny	60	normal	30	good	good sample
Jericho	LMB	4/24	1000	shock	Sunny / windy	60	normal	20	good	good sample
Bullock Pen	LMB	4/27	2000	shock	Clear	66	normal	30	good	good sample
Guist Creek	LMB	4/27	1000	shock	Sunny, windy	64	normal	24	good	good sample
Kincaid	LMB	4/27	2000	shock	clear	68	normal	28	good	good sample
Boltz	LMB	4/28	2000	shock	clear	67	normal	72	good	good sample
Elmer Davis	LMS	4/29	1130	shock	partly sunny	66	normal	48	good	good sample
Syntson	LMB	5/1	1030	shock	mostly cloudy	69	above normal	24	good	good sample; timber flooded
McNeely	LMB	5/4	1000	shock	cloudy	67	normal	72	good	good sample
Williamstown	LMB	5/4	1100	shock	cloudy	65	normal	42	good	good sample
Herrington	LMB	5/5	1000	shock	cloudy	65 L 66 M	very high	168	fair	Poor sample
Taylorville	LMB	5/20 5/8	1000 1000	shock	partly cloudy cloudy	67 B 67 A 67 V 68	normal	25 B 26 V 114	good	Lake was very high; difficult to effectively sample fish in shallow water due to high water conditions good sample; Van Buren was a little muddy
Leary	LMB/BG	5/13 5/11	1000 1000	shock	cloudy Cloudy	73	normal	48	good	good sample
Willisburg	LMB	5/15	1000	shock	Partly Cloudy	73	normal	48	good	good sample
Boltz	BG	5/15	1030	shock	Sunny	67	normal	72	good	good sample
McNeely	BG/RESF	5/21	1000	shock	Sunny	76	normal	68	good	good sample
Corinth	BG/RESF	5/22	1000	shock	Clear/sunny	76	normal	68	good	good sample
Beaver	BG/RESF	5/26	1000	shock	partly cloudy, breezy	76	normal	138	good	fair sample; @ 2 wks after weed control
Elmer Davis	BG/RESF	5/27	1000	shock	partly cloudy	77	normal	138	good	fair sample; areas of extensive vegetation
Herrington	LMB	9/14 9/15 10/10	1000 1010 1030	shock	Sunny / breezy	78 L 77 U 77 B	735.5	66 L 36 U 35 B	good	good samples 9/14 - lower section; 9/15 - mid section; 9/16 - upper section
Taylorville	LMB	9/17 9/21 9/22 1000	1000 1100 1000	shock	Mostly Sunny Sunny	77 B 77 A	546.01 546.75 546.61	54 A 54 B	good	V = Van Buren Area; B = Big Beech and A = Ashes Creeks
Guist Creek	LMB	9/23	1000	shock	Cloudy / periods of rain	75	above normal	18	good	good sample
Boltz	LMB/BG/RESF	9/23	1100	shock	cloudy	74	normal	36	good	good sample;
Beaver	LMB/BG/RESF	9/25	1000	shock	cloudy	75	normal	48	good	good sample
Elmer Davis	LMB/BG/RESF	9/28	1000	shock	Sunny / windy cool	69	normal	24	good	good sample

Table 1 (cont).

Water body	Species	Date	Time (24hr)	Gear	Weather	Water temp. F.	Water level	Secchi (in)	Conditions	Pertinent sampling comments
Corinth	LMB/BG/RESF	9/28	1030	shock	sunny	71	normal	36	good	good sample; lake level down 1 ft.
McNeely	LMB/BG/RESF	9/29	1030	shock	sunny to cloudy cool	68	full overflowin ^g	32	good	good sample
Bullock Pen	LMB	9/29	1100	shock	Cloudy / cool	65	above normal	2	good	good sample
Willisburg	LMB	9/30	1000	shock	sunny to cloudy	70	normal		good	good sample
Williamstown	LMB	10/1	1000	shock	sunny, cool	68	normal	30	good	good sample
Kincaid	LMB	10/1	1030	shock			normal		good	good sample
Dot Run	LMB/BG	10/08	1100	shock	cloudy / rain	65	full overflowin ^g	24	good	good sample
Herrington	Morones	10/13 10/14 10/15	1030 1000 1000	gillnet	rain / cold rain / cold cloudy		738.3 737.6 737.5	100	good	good sample
Taylorville	Morones/ Crappie	10/20 10/21 10/22 10/23	1000 1000 1000 1000	gillnet trammel	mostly sunny sunny sunny	60	547.57 547.21 547.25 547.34	20	good	good sample
Guist Creek	Morones	10/27 10/28	1000 1000	gillnet	sunny cloudy		normal		good	good sample; lake level was low due to drought conditions
Kincaid	Channel catfish	10/29	1100	hoop net	mostly sunny	50's	normal	6	good	good sample

Table 2. Length distribution and CPUE (fish/hr) of largemouth bass collected in 7.5 hours of 30-minute electrofishing runs for black bass in Taylorsville Lake in April 2009; 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	21				
Van Buren																						
Largemouth bass Ashes Creek	1	16	8	11	6	4	15	52	11	22	17	17	8	8	3	1						
Largemouth bass Big Beech Creek		3	13	21	3	6	22	22	19	11	19	19	16	14	6	2	1					
Largemouth bass Total	5	14	13	5	5	5	15	54	22	23	19	20	18	15	7	3						
Largemouth bass Dataset = cfdpstv1.d09	1	24	35	45	14	15	52	128	52	56	55	56	42	37	16	5	1	1	1	635		
																				84.67 (16.19)		
																				84.67 (6.90)		

Table 3. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Taylorsville Lake from 1984-2009; numbers in parentheses are standard errors.

Year	Length group					Total
	<8.0 in	8.0-11.9 in	12.0-14.9 in	>15.0 in	>20.0 in	
1984	50.40 (1.80)	88.00 (6.00)	6.00 (2.20)	0.00 (0.00)	0.00 (0.00)	144.40 (5.60)
1985	0.80 (0.60)	43.80 (5.40)	74.80 (9.20)	3.40 (1.00)	0.00 (0.00)	122.20 (14.40)
1986	1.80 (0.20)	11.20 (1.40)	21.00 (1.80)	24.40 (3.00)	0.00 (0.00)	59.00 (5.40)
1987	3.60 (0.60)	5.40 (0.60)	9.20 (1.00)	29.20 (2.60)	0.30 (0.10)	48.00 (3.80)
1988	3.20 (0.80)	8.40 (1.20)	6.00 (1.00)	19.60 (3.00)	0.15 (0.11)	37.20 (4.80)
1989	58.60 (15.60)	33.40 (5.80)	22.20 (3.40)	13.80 (3.00)	0.00 (0.00)	128.20 (24.00)
1990	57.00 (8.40)	54.20 (6.80)	22.80 (2.60)	21.80 (3.40)	0.52 (0.16)	154.40 (15.00)
1991	26.00 (2.80)	37.20 (2.80)	22.80 (2.10)	11.80 (1.40)	0.07 (0.07)	98.60 (5.20)
1992	58.50 (5.50)	42.60 (2.50)	36.90 (2.90)	17.60 (1.60)	0.07 (0.07)	155.60 (7.30)
1993	21.00 (3.60)	53.20 (4.80)	36.40 (13.80)	14.80 (1.90)	0.08 (0.08)	128.30 (8.60)
1994	25.10 (3.00)	39.90 (3.60)	40.70 (5.10)	15.00 (1.50)	0.09 (0.09)	122.30 (9.80)
1995	28.20 (3.50)	69.60 (3.90)	20.30 (1.30)	11.60 (1.40)	0.00 (0.00)	129.60 (6.80)
1996	16.20 (2.40)	41.00 (3.90)	49.80 (3.20)	16.00 (3.20)	0.10 (0.10)	122.60 (9.80)
1997	33.20 (6.30)	43.40 (4.00)	46.40 (1.80)	15.20 (1.80)	0.09 (0.09)	138.30 (7.70)
1998	20.00 (3.00)	26.40 (2.70)	30.50 (2.60)	21.70 (2.60)	0.40 (0.22)	98.70 (7.20)
1999	19.10 (2.80)	38.70 (3.20)	20.90 (3.00)	22.70 (2.60)	0.40 (0.29)	101.30 (7.10)
2000	17.70 (3.30)	33.10 (3.90)	16.10 (2.60)	10.50 (1.50)	0.53 (0.24)	77.50 (6.10)
2001	32.40 (4.10)	44.10 (3.70)	27.60 (3.60)	15.50 (2.70)	0.27 (0.18)	119.60 (8.30)
2002	33.70 (4.40)	22.30 (2.20)	12.80 (2.20)	9.60 (1.80)	0.53 (0.24)	78.40 (7.00)
2003	19.50 (2.90)	58.50 (4.80)	24.90 (2.20)	15.20 (2.10)	0.80 (0.43)	118.10 (9.20)
2004	14.10 (2.50)	26.70 (2.70)	42.90 (3.40)	13.20 (1.60)	0.27 (0.27)	95.90 (5.20)
2005	35.50 (5.90)	35.70 (4.90)	40.30 (4.30)	34.30 (3.40)	0.53 (0.41)	145.70 (12.70)
2006	20.30 (4.00)	39.60 (3.70)	20.30 (3.70)	16.50 (2.70)	0.27 (0.18)	96.70 (11.00)
2007	13.50 (2.50)	35.50 (4.10)	33.70 (3.60)	14.40 (2.40)	0.27 (0.18)	97.10 (9.10)
2008	13.90 (2.90)	30.10 (2.80)	33.60 (3.10)	22.50 (3.20)	0.00 (0.00)	100.13 (8.90)
2009	15.87 (3.48)	32.93 (3.57)	22.27 (2.53)	13.60 (2.05)	0.13 (0.13)	84.67 (6.90)

Dataset = cfdpstvl.d09 - .d84

Table 4. PSD and RSD₁₅ values obtained for largemouth bass from spring electrofishing samples in each area of Taylorsville Lake in 2009; confidence intervals are in parentheses.

Area	Species	No. >8.0 in		PSD	RSD ₁₅
		Largemouth bass	Total		
Big Beech	Largemouth bass	201	52 (± 7)	21 (± 6)	
Ashes Creek	Largemouth bass	157	56 (± 8)	25 (± 7)	
Van Buren	Largemouth bass	158	48 (± 8)	13 (± 5)	
Total	Largemouth bass	516	52 (± 4)	20 (± 3)	

Dataset = cfdpstvl.d09

Table 5. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 7.5 hours of electrofishing at Taylorsville Lake during April 2009. Fish were collected in 30-minute runs.

Age	Inch class																			Total	%	CPUE	STD ERR	
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	21						
1	1	24	35	45	5															110	17	14.62	3.12	
2					9	15	52	85	23	6										191	30	25.47	2.84	
3								43	29	44	43	23	13							194	31	25.84	2.39	
4										6	12	14	17							49	8	6.57	0.68	
5												5	8	37	16	3				69	11	9.25	1.32	
6													14	4					1	19	3	2.56	0.27	
7																	2			2	0	0.22	0.12	
8																				0	0	0.00	0.00	
9																				1	1	0	0.13	0.13
Total	1	24	35	45	14	15	52	128	52	56	55	56	42	37	16	5	1	1	1	635	100	84.67	6.90	
%	0	4	6	7	2	2	8	20	8	9	9	9	7	6	3	1	0	0	0	100				

Dataset = cfdagtvf.d06 and cfdpstv.f.d09

Table 6 Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from Taylorsville Lake from 1999-2009.

Age	Year										
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	17.80	14.10	20.50	34.80	21.20	14.90	38.30	17.50	10.30	12.18	14.62
2	27.40	12.40	26.70	16.70	46.10	19.80	27.80	36.70	27.70	25.05	25.47
3	14.30	17.70	24.80	13.10	26.30	33.40	27.30	21.30	37.20	33.02	25.84
4	17.80	10.80	12.50	6.20	12.60	16.60	29.00	6.70	8.40	11.22	6.57
5	6.70	7.70	16.60	3.60	5.90	6.10	13.00	10.60	9.50	13.31	9.25
6	6.50	6.90	9.70	1.40	2.90	3.50	4.30	3.30	3.30	4.86	2.56
7	6.80	4.50	4.80	0.70	0.70	0.80	1.90	0.40	0.40	0.49	0.22
8	1.00	1.50	1.70	0.40	0.50	0.60	1.00	0.00	0.00		
9	2.30	0.90	1.50	1.60	1.30	1.30	3.10	0.10	0.30		0.13
10	0.60	0.20	0.30								
11		0.50	0.20								
12		0.30	0.30								

Table 7. Population assessment for largemouth bass collected during spring electrofishing at Taylorsville Lake from 2000-2009 (scoring based on statewide assessments).

Year		Mean length age-3 at capture	Spring CPUE of age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥ 15.0 in	Spring CPUE ≥ 20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2009	Value	12.9	14.60	22.30	13.60	0.13	0.809	55.5	11	Fair
	Score	4	1	2	3	1				
2008	Value	12.9	12.20	33.60	22.50	0.00	0.710	50.9	12	Good
	Score	4	1	3	4	0				
2007	Value	12.9	10.30	33.70	14.40	0.27	0.800	55.1	13	Good
	Score	4	1	3	3	2				
2006	Value	12.9	17.50	20.30	16.50	0.27	0.824	56.1	12	Good
	Score	4	1	2	3	2				
2005	Value	12.6	38.30	40.30	34.30	0.53	0.496	39.1	17	Excellent
	Score	4	3	4	4	2				
2004	Value	12.6	14.90	42.90	13.20	0.27	0.586	44.3	14	Good
	Score	4	1	4	3	2				
2003	Value	12.6	21.20	24.90	15.20	0.80	0.641	47.3	13	Good
	Score	4	2	2	3	2				
2002	Value	12.6	34.80	12.80	9.60	0.53	0.495	39.0	11	Fair
	Score	4	2	1	2	2				
2001	Value	10.8	20.50	27.60	15.50	0.27	0.539	41.7	11	Fair
	Score	4	2	3	3	2				
2000	Value	10.1	14.10	16.10	10.50	0.53	0.455	36.6	8	Fair
	Score	4	1	2	2	2				

Table 8. Length distribution and CPUE (fish/hr) of largemouth bass collected in 4.5 hours of 15-minute electrofishing runs for black bass in Taylorsville Lake in September 2009; numbers in parentheses are standard errors.

Species	Inch class																			CPUE
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	
Van Buren																				
Largemouth bass		46	60	47	28	7	7	14	8	8	4	4	5	3		1		1	243	162.00 (41.48)
Ashes Creek																				
Largemouth bass	3	24	39	27	27	2	1	5	7	8	10	8	4		1				166	110.67 (12.89)
Big Beech Creek																				
Largemouth bass	1	28	26	16	23	4	8	8	4	8	17	7	12	3	3	2			170	113.33 (4.70)
Total																				
Largemouth bass	4	98	125	90	78	13	16	27	19	24	31	19	21	6	3	4	0	1	579	128.67 (14.83)

Dataset = cfdwrtvl.d09

Table 9. Numbers of fish and the relative weight (Wr) for each length group of largemouth bass collected at Taylorsville Lake on 17, 21, and 22 September 2009. Standard errors are in parentheses.

Species	Area	Length group						Total	
		8.0-11.9 in		12.0-14.9 in		≥15.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Van Buren	37	88 (1)	13	103 (2)	5	105 (4)	55	93 (1)
	Ashes	21	92 (2)	21	93 (2)	1	89 (0)	43	92 (2)
	Big Beech	28	86 (2)	36	90 (1)	8	95 (2)	72	89 (1)
	Total	86	88 (1)	70	93 (1)	14	98 (2)	170	91 (1)

Dataset = cfdwrtv1.d09

Table 10. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Taylorsville Lake.

Year class	Area	Age 0			Age 0 ≥5.0 in			Age 1		
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE
2001	Total	4.6	1.3	63.60	11.70	13.30	1.00	34.80	4.30	
2002	Total	5.3	0.1	29.10	4.80	18.70	3.50	21.20	2.80	
2003	Total	5.4	0.1	32.20	5.40	19.10	3.40	14.90	2.50	
2004	Total	4.4	0.1	50.00	6.20	15.10	3.60	38.30	6.20	
2005	Total	4.9	0.1	31.80	4.20	15.30	2.50	17.50	3.80	
2006	Total	4.9	0.1	54.70	4.90	25.80	2.90	10.30	2.00	
2007	Total	4.4	0.1	22.40	3.20	6.70	1.80	12.18	2.61	
2008	Total	5.5	0.1	20.89	3.91	16.67	3.46	14.62	3.12	
2009	Total	4.9	0.1	90.22	14.46	39.78	6.48			

Dataset = cfdwrtv1.d09

Table 11. Length distribution and CPUE (fish/hn) of each species of crappie collected at Taylorsville Lake in 48 net-nights during October 2009.

Species	Inch class										Total	CPUE	Std. error
	2	3	4	5	6	7	8	9	10				
White crappie	2										9	0.19	0.08
Black crappie	1	8	12			5	5	1	1	32	0.67	0.17	

Dataset = cfdntv1.d09

Table 12. PSD and RSD₁₀ values calculated for crappie collected at Taylorsville Lake in 48 net-nights during October 2009.

Species	No. ≥5.0 in	PSD	RSD ₁₀
White crappie	7	14 (± 28)	14 (± 28)
Black crappie	11	55 (± 31)	0 (± 0)

Dataset = cfdntv1.d09

Table 13. Age frequency and CPUE (fish/nn) per inch class of white crappie trap netted for 48 net-nights at Taylorsville Lake in 2009.

Age	Inch class										Total	%	CPUE	STD ERR
	2	3	4	5	6	7	8	9	10					
0+	2			6							8	89	0.17	0.07
1+									1		1	11	0.02	0.02
Total	2			6					1		7	100	0.19	0.08
(%)	22			67					11		100			

Dataset = cfdntnvl.d09 and cfdagtv1.d09

CPUE of ≥ 8.0 in white crappie = 0.02 ± 0.02 fish/nn; ≥ 10.0 in = 0.02 ± 0.02 fish/nn

Table 14. Population assessment for white crappie collected during fall trapnetting at Taylorsville Lake from 2000-2009 (scoring based on statewide assessment).

Year		CPUE age-1 and older	Mean length age-2 at capture	Spring CPUE ≥ 8.0 inches	CPUE age-1+	CPUE age-0+	Total Score	Assessment Rating
2009	Value	0.02	9.6*	0.02	0.02	0.17	8	Fair
	Score	1	4	1	1	1		
2008	Value	0.08	9.6*	0.08	0.08	0.06	8	Fair
	Score	1	4	1	1	1		
2007	Value	0.25	9.6*	0.25	0.00	0.04	8	Fair
	Score	1	4	1	1	1		
2006	Value	0.91	9.6	0.90	0.00	0.04	8	Fair
	Score	1	4	1	1	1		
2005	Value	3.19	9.6	1.54	2.65	0.00	8	Fair
	Score	1	4	1	1	1		
2004	Value	1.65	10.3	0.96	1.43	1.40	8	Fair
	Score	1	4	1	1	1		
2003	Value	1.81	10.1*	1.73	1.68	0.48	8	Fair
	Score	1	4	1	1	1		
2002	Value	1.59	10.1	1.53	0.60	0.73	8	Fair
	Score	1	4	1	1	1		
2001	Value	4.52	9.4	4.25	2.55	0.10	8	Fair
	Score	1	3	2	1	1		
2000	Value	6.50	8.6	6.25	0.46	0.54	9	Fair
	Score	2	2	3	1	1		

Table 15. Mean back calculated lengths (in.) at each annulus for otoliths from black crappie trap netted at Taylorsville Lake in 2009.

Year class	No.	Age		
		1	2	3
2008	11	4.1		
2006	1	3.7	6.1	8.4
Mean	12	4.1	6.1	8.4
Smallest		3.7	6.1	8.4
Largest		4.7	6.1	8.4
Std Error		0.1		
95% ConLo		3.9		
95% ConHi		4.3		

Intercept value = 0.00

Dataset = cfdagtv1.d09

Table 16. Age frequency and CPUE (fish/nn) per inch class of black crappie trap netted for 48 net-nights at Taylorsville Lake in 2009.

Age	Inch class								Total	% CPUE	STD ERR	
	2	3	4	5	6	7	8	9				
0+	1	8	12						21	66	0.44	0.16
1+						5	5		10	31	0.21	0.07
2+									0	0	0.00	0.00
3+								1	1	3	0.02	0.02
Total	1	8	12	0	0	5	5	1	46	100	0.67	0.17
%	3	25	38	0	0	16	16	3	100			

Dataset = cfdntvl.d09 and cfdagtl.d09

CPUE of ≥ 8.0 in black crappie = 0.13 ± 0.06 fish/nn; ≥ 10.0 in = 0.00 ± 0.00 fish/nn

Table 17. Population assessment for black crappie collected during fall trapnetting at Taylorsville Lake from 2000-2009 (scoring based on statewide assessment).

Year		CPUE age-1 and older	Mean length age-2 at capture	Spring CPUE > 8.0 in	CPUE age-1+	CPUE age-0+	Total score	Assessment rating
2009	Value	0.23	9.8*	0.13	0.21	0.42	8	Fair
	Score	1	4	1	1	1		
2008	Value	0.56	9.8	0.54	0.16	0.42	8	Fair
	Score	1	4	1	1	1		
2007	Value	1.73	9.2	0.96	1.42	0.02	7	Poor
	Score	1	3	1	1	1		
2006	Value	3.33	9.5	3.29	0.13	0.48	8	Fair
	Score	1	3	2	1	1		
2005	Value	5.79	9.0	4.48	1.33	0.04	8	Fair
	Score	2	2	2	1	1		
2004	Value	12.04	9.3	1.17	11.73	1.17	11	Fair
	Score	3	3	1	3	1		
2003	Value	1.31	10.3	1.06	0.97	1.25	8	Fair
	Score	1	4	1	1	1		
2002	Value	2.24	10.2	1.63	1.75	0.14	8	Fair
	Score	1	4	1	1	1		
2001	Value	1.79	10.1	1.48	1.51	0.13	8	Fair
	Score	1	4	1	1	1		
2000	Value	0.79	9.6	0.73	0.45	0.15	8	Fair
	Score	1	4	1	1	1		

Table 18. Number of fish and the relative weight (Wr) for each length group of crappie at Taylorsville Lake in October 2009.

Species	Area	Length group						Total	
		5.0-7.9 in		8.0-9.9 in		≥ 10.0 in		No.	Wr
		No.	Wr	No.	Wr	No.	Wr		
White crappie	Total	6	93 (5)			1	88	7	92 (4)
Black crappie	Total	4	86 (2)	6	99 (5)			10	94 (4)

Dataset = cfdntvl.d09

Table 19. Length distribution and CPUE (fish/nn) of white bass and hybrid striped bass collected during 8 net-nights of gill netting in Taylorsville Lake in October 2009; numbers in parentheses are standard errors.

Species	Inch class														Total	CPUE	
	6	7	8	9	10	11	12	13	14	15	16	22	24				
White bass	9	36	3		8	1		1								58	7.25 (1.60)
Hybrid striped bass		8	9	4	3	33	40	5	3	2	2	1	2			112	14.00 (5.13)

Dataset = cfdgntvl.d09

Table 20. Mean back calculated lengths (in.) at each annulus for otoliths from hybrid striped bass gill netted at Taylorsville Lake in 2009.

Year class	No.	Age				
		1	2	3	4	5
2008	80	7.0				
2007	5	6.8	12.1			
2005	2	8.8	16.2	20.1	22.4	
2004	1	8.9	16.9	20.0	22.0	23.3
Mean	88	7.1	13.7	20.1	22.3	23.3
Smallest		4.7	8.8	18.7	20.9	23.3
Largest		10.9	16.9	21.5	23.9	23.3
Std Error		0.1	1.0	0.8	0.9	
95% ConLo		6.8	11.7	18.5	20.5	
95% ConHi		7.3	15.7	21.7	24.0	

Intercept Value = 0.00
Dataset = cfdagtvl.d09

Table 21. Age frequency and CPUE (fish/m) per inch class of hybrid striped bass gill netted for 8 net-nights at Taylorsville Lake in 2009.

Age	Inch class																								Total	% CPUE	STD ERR			
	7	8	9	4	3	33	40	5	2	1	2	2	18	19	20	21	22	23	24											
0+																									21	19	2.63	1.03		
1+																									83	74	10.38	4.29		
2+																									5	4	0.63	0.28		
3+																									0	0	0.00	0.00		
4+																									1	1	2	2	0.25	0.13
5+																									1	1	1	1	0.13	0.08
Total	8	9	4	3	33	40	5	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	112	100	14.00	5.13		
%	7	8	4	3	29	36	4	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	100				

Dataset = cfdagtvl.d09 and cfdgntvl.d09

Table 22. Number of fish and the relative weight (Wr) for each length group of hybrid striped bass collected at Taylorsville Lake in October 2009.

Species	Area	Length group						Total	
		8.0-11.9 in		12.0-14.9 in		≥15.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Hybrid striped bass	Total	49	86 (1)	48	83 (1)	7	84 (4)	104	84 (1)

Dataset = cfdgntvl.d09

Table 23. Population assessment for hybrid striped bass collected during fall gill netting at Taylorsville Lake from 2000-2009 (scoring based on statewide assessments).

Year		CPUE (excluding age 0)	Mean length age-2+ at capture	CPUE ≥15.0 in	CPUE age 1+	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2009	Value	11.40	15.7	0.90	10.40	1.104	66.9	9	Fair
	Score	3	1	1	4				
2008	Value	0.60	17.1	0.40	0.20	0.370	30.9%	6	Fair
	Score	1	3	1	1				
2007	Value	16.80	16.2	10.80	6.00	0.798	55.0%	12	Good
	Score	3	2	4	3				
2006	Value	8.50	16.8	0.80	8.00	1.262	71.7%	8	Fair
	Score	2	2	1	3				
2005	Value	1.10	15.2	0.40	0.60	0.437	35.4%	4	Poor
	Score	1	1	1	1				
2004	Value	4.60	16.0	1.00	3.60	0.964	61.9%	6	Fair
	Score	1	2	1	2				
2003	Value	9.40	16.6	6.60	2.60	1.522	78.2%	9	Fair
	Score	2	2	3	2				
2002	Value	22.80	15.8	10.10	12.40	0.658	48.2%	13	Good
	Score	4	1	4	4				
2001	Value	13.30	16.0	2.00	11.10	1.437	76.2%	10	Good
	Score	3	2	1	4				
2000	Value	9.90	15.9	5.90	3.10	1.263	71.1%	8	Fair
	Score	2	1	3	2				

Table 24. Mean back calculated lengths (in.) at each annulus for otoliths from white bass gill netted at Taylorsville Lake in 2009.

Year class	No.	Age		
		1	2	3
2008	9	7.9		
2006	1	8.1	11.6	12.7
Mean	10	7.9	11.6	12.7
Smallest		6.7	11.6	12.7
Largest		8.9	11.6	12.7
Std Error		0.2		
95% ConLo		7.5		
95% ConHi		8.4		

Intercept Value = 0.00

Dataset = cfdagtl.d09

Table 25. Age frequency and CPUE (fish/nn) per inch class of white bass gill netted for 8 net-nights at Taylorsville Lake in 2009.

Age	Inch class								Total	%	CPUE	STD ERR
	6	7	8	9	10	11	12	13				
0+	9	36	3						48	83	6.00	1.20
1+					8	1			9	16	1.13	0.58
2+									0	0	0.00	0.00
3+								1	1	2	0.13	0.13
Total	9	36	3	0	8	1	0	1	58	100	7.25	1.60
%	16	62	5	0	14	2	0	2	100			

Dataset = cfdagtl.d09 and cfdgntvl.d09

Table 26. Number of fish and the relative weight (Wr) for each length group of white bass collected at Taylorsville Lake in October 2009.

Species	Area	Length group						Total	
		6.0–8.9 in		9.0–11.9 in		≥12.0 in		No.	Wr
		No.	Wr	No.	Wr	No.	Wr		
White bass	Total	48	95 (1)	9	87 (2)	1	81 (1)	58	94 (1)

Dataset = cfdgntvl.d09

Table 27. Population assessment for white bass collected during fall gill netting at Taylorsville Lake from 2000-2009 (scoring based on statewide assessments).

Year		CPUE (excluding age 0)	Mean length age-2+ at capture	CPUE ≥12.0 in	CPUE age 1+	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2009	Value	1.30	NS	0.10	1.10	1.030	64.3	3	Poor
	Score	1	0	1	1				
2008	Value	2.00	12.1	0.30	1.60	1.157	68.6	6	Fair
	Score	1	3	1	1				
2007	Value	6.40	11.7	0.80	4.60	1.102	66.8	7	Fair
	Score	2	2	1	2				
2006	Value	4.30	11.7	0.80	3.00	1.040	64.6	6	Fair
	Score	1	2	1	2				
2005	Value	5.00	11.6	1.20	1.80	1.054	65.2	6	Fair
	Score	2	2	1	1				
2004	Value	8.60	11.4	0.10	7.30	2.030	86.9	8	Fair
	Score	2	2	1	3				
2003	Value	6.90	11.7	2.00	3.50	0.944	61.1	7	Fair
	Score	2	2	1	2				
2002	Value	5.90	11.8	1.30	2.60	1.113	67.1	7	Fair
	Score	2	2	1	2				
2001	Value	23.50	12.1	6.80	14.90	0.971	62.1	14	Excellent
	Score	4	3	3	4				
2000	Value	20.80	12.2	8.10	7.40	0.766	53.5	13	Good
	Score	4	3	3	3				

Table 28. Fishery statistics derived from a daytime creel survey at Taylorsville Lake (3,050 acres) during 06 April through 31 October 2009.

	2009		2006		2003	
	(4/6 to 10/31)		(3/14 to 10/31)		(3/3 to 10/30)	
Fishing Trips						
No. of fishing trips (per acre)	25,895	(8.49)	28,253	(9.26)	50,855	(16.67)
Fishing Pressure						
Total man-hours (S.E.) ^a	133,217	(2,989.73)	142,230	(4,752.80)	234,388	(5,735.36)
Man-hours/acre	43.68		46.63		76.85	
Catch / Harvest						
No. of fish caught (S.E.)	162,089	(12,795.27)	173,169	(17,585.83)	254,797	(20,533.15)
No. of fish harvested (S.E.)	76,075	(6,611.33)	68,836	(8,970.38)	81,352	(8,007.52)
Lb of fish harvested	49,876		36,031		37,541	
Harvest Rates						
Fish/hour	0.56		0.48		0.33	
Lb/hour	0.61		0.50		0.44	
Fish/acre	24.94		22.57		26.67	
Lb/acre	16.35		11.81		12.31	
Catch Rates						
Fish/hour	1.19		1.20		1.09	
Fish/acre	53.14		56.78		83.54	
Miscellaneous Characteristics						
Male	87.49		89.65		89.59	
Female	12.51		10.35		10.41	
Resident	98.86		99.51		98.57	
Non-resident	1.14		0.49		1.43	
Method (%)						
Still fishing	49.66		58.07		51.36	
Casting	36.92		41.39		43.87	
Fly	0.26		0.05		0.02	
Trolling	3.45		0.49		4.75	
Jugging	9.71					
Mode (%)						
Boat	85.12		87.00		95.14	
Bank	13.84		12.95		14.86	
Dock	1.04		0.05		0.00	

^a S.E. = Standard Error

Table 29. Fish harvest derived from a creel survey on Taylorsville Lake (3050 acres) from 6 April to 31 October 2009.

	Black bass group	Largemouth bass	Crappie group	White crappie	Black crappie	Catfish group	Channel catfish	Blue catfish	Panfish group	Bluegill	Green sunfish	Warmouth
No. caught (per acre)	55,516.81 (18.20)	55,516.81 (18.20)	16,747.13 (5.49)	7,460.58 (2.45)	9,286.55 (3.04)	25,857.35 (8.48)	13,703.85 (4.49)	12,153.85 (3.98)	38,043.11 (12.47)	35,895.35 (11.77)	2,121.00 (0.70)	26.76 (0.01)
No. harvested (per acre)	1,636.38 (0.54)	1,636.38 (0.54)	15,084.23 (4.95)	7,094.82 (2.33)	7,989.42 (2.62)	23,972.19 (7.86)	12,026.02 (3.94)	11,946.17 (3.92)	27,236.88 (8.93)	26,908.89 (8.82)	301.23 (0.10)	26.76 (0.01)
% of total no. harvested	2.15	2.15	19.83	9.33	10.50	31.51	15.81	15.70	35.80	35.37	0.40	0.04
Lb harvested (per acre)	3,358.0 (1.10)	3,358.0 (1.10)	8,773.8 (2.88)	4,042.3 (1.33)	4,731.5 (1.55)	27,698.5 (9.08)	8,516.1 (2.79)	19,182.4 (6.29)	3,171.4 (1.04)	3,130.1 (1.03)	37.3 (0.01)	4.0 (0.01)
% of total lb harvested	6.73	6.73	17.59	8.10	9.49	55.53	17.07	38.46	6.36	6.28	0.07	0.01
Mean length (in)		15.8		10.2	10.2		13.3	16.9		5.6	5.8	6.0
Mean weight (lb)		2.02		0.49	0.57		0.76	1.66		0.11	0.13	0.15
No. of fishing trips for that species	9,031.51		5,479.46			3,905.51			1,509.70			
% of all trips	34.88		21.16			15.08			5.83			
Hours fished for that species (per acre)	46,462.12 (15.23)		28,188.77 (9.24)			20,091.69 (6.59)			7,766.58 (2.55)			
No. harvested fishing for that species	1,636		14,667			18,306			15,298			
Lb harvested fishing for that species	3,357.2		8,535.7			24,001.4			1,751.9			
No./hour harvested fishing for that species	0.034		0.502			0.082			1.870			
% success fishing for that species	8.08		54.94			80.41			78.38			

Table 29 (cont). Fish harvest derived from a creel survey on Taylorsville Lake (3050 acres) from 6 April to 31 October 2009.

	Morone group	Hybrid striped bass	White bass	Carp	Drum	Anything
No. caught (per acre)	23,475.19 (7.70)	5,667.07 (1.86)	17,808.12 (5.84)	1,477.18 (0.48)	972.52 (0.32)	
No. harvested (per acre)	7,072.48 (2.32)	2,089.99 (0.69)	4,982.49 (1.63)	671.51 (0.22)	401.34 (0.13)	
% of total no. harvested	9.30	2.75	6.55	0.88	0.53	
Lb harvested (per acre)	4,450.7 (1.46)	2,490.8 (0.82)	1,959.9 (0.64)	1,747.8 (0.57)	675.9 (0.22)	
% of total lb harvested	8.95	4.99	3.93	3.50	1.36	
Mean length (in)		13.4	9.1	17.6	16.1	
Mean weight (lb)		1.24	0.37	2.60	1.76	
No. of fishing trips for that species	1,531.89					4,437.24
% of all trips	5.92					17.14
Hours fished for that species (per acre)	7,880.70 (2.58)					22,827.11 (7.48)
No. harvested fishing for that species	6,381					
Lb harvested fishing for that species	4,112.4					
No./hour harvested fishing for that species	0.647					
% success fishing for that species	47.27					51.96

Table 30. Length distribution (Length of released fish are estimated) for each species of fish harvested at Taylorsville Lake from 6 April -- 31 October 2009.

	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	37						
Largemouth bass																																					
Harvested													650	650	313		23																				
Released						7,464		248	26,227	158	10,757	1,060	5,638	881	755	441	189		42		21																
White crappie																																					
Harvested																																					
Released																																					
Black crappie																																					
Harvested																																					
Released																																					
Bluegill																																					
Harvested																																					
Released																																					
Warmouth																																					
Harvested																																					
Green sunfish																																					
Harvested																																					
Released																																					
Hybrid striped bass																																					
Harvested																																					
Released																																					
White bass																																					
Harvested																																					
Released																																					
Channel catfish																																					
Harvested																																					
Released																																					
Blue catfish																																					
Harvested																																					
Released																																					
Drum																																					
Harvested																																					
Released																																					
Carp																																					
Harvested																																					
Released																																					

Table 31. Black bass catch and harvest statistics derived from a creel survey at Taylorsville Lake (3,050 acres) for black bass caught and released by all anglers from 6 April to 31 October 2009.

	Harvest	Largemouth bass Catch and Release		Total
		12.0 – 14.9 in.	≥15.0 in.	
Total no of bass	1636	17,455	2,329	55,517
% of black bass harvested by no.	100.0			
Total weight of fish (lbs)	3358	10,316	4,995	38,821
% of black bass harvest by weight	100.0			
Mean length	15.8			
Mean weight	2.02			
Rate (fish/h)	0.011			

Table 32. Monthly black bass angling success at Taylorsville Lake during the 2009 creel survey.

Month	Total no. of black bass caught by all 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	
	anglers	black bass	trips	black bass	by black bass anglers	black bass anglers	black bass anglers	black bass anglers	black bass anglers	black bass anglers	black bass anglers	black bass anglers
April	1,900	638.42	27	1,526	3,284.34	0.53	27	0.01				
May	5,756	1,108.36	220	5,587	5,701.87	1.03	220	0.04				
June	15,042	1,660.41	788	14,853	8,541.87	1.93	788	0.10				
July	7,556	1,181.44	21	7,221	6,077.84	1.19	217	t				
August	7,950	1,381.95	106	7,760	7,109.39	1.11	106	0.02				
September	11,762	1,748.82	315	11,703	8,996.69	1.30	315	0.04				
October	5,550	1,312.12	159	5,367	6,750.12	0.88	159	0.03				
Total	55,517	9,031.51	1,636	54,017	46,462.12	1.19	1,636					
Mean												

t = < 0.01

Table 33. Crappie catch and harvest statistics derived from a creel survey at Taylorsville Lake (3,050 acres) for crappie caught and released by all anglers from 6 April to 31 October 2009.

	White crappie		Black crappie	
	Harvest	Catch and Release <9.0 in. ≥9.0 in.	Harvest	Catch and Release <9.0 in. ≥9.0 in.
Total no of crappie	7,095	254 112	7,989	1,274 23
% of crappie harvested by no.	47.0		53.0	
Total weight of fish (lbs)	4,042	35 43	4,732	238 12
% of crappie harvest by weight	46.1		53.9	
Mean length	10.2		10.2	
Mean weight	0.49		0.57	
Rate (fish/h)	0.05		0.06	
		Total 7,461		Total 9,287

Table 34. Monthly crappie angling success at Taylorsville Lake during the 2009 creel survey.

Month	Total no. of crappie caught by all anglers		No. of fishing trips for crappie	Hours fished by crappie anglers	Crappie caught/hr by crappie anglers		Crappie harvested by anglers
	Crappie caught by all anglers	Total no. of crappie harvested by all anglers			Crappie caught/hr by crappie anglers	Crappie harvested by crappie anglers	
April	5,780	5,646	1,784	9,179.31	5,647	0.59	5,566
May	4,266	4,012	1,085	5,580.83	4,233	0.71	3,979
June	441	410	164	844.80	126	0.23	126
July	399	399	145	744.23	399	0.54	399
August	1,332	1,057	345	1,777.35	1,332	0.66	1,057
September	1,754	1,399	603	3,104.49	1,734	0.51	1,379
October	2,775	2,161	1,352	6,956.76	2,775	0.37	2,161
Total	16,747	15,084	5,479	28,188.77	16,246		14,667
Mean						0.56	0.56

Table 35. Catfish catch and harvest statistics derived from a creel survey at Taylorsville Lake (3,050 acres) for catfish caught and released by all anglers from 6 April to 31 October 2009.

	Channel catfish			Blue catfish		
	Catch and Release			Catch and Release		
	Harvest	12.0-14.9 in. \geq 15.0 in.	Total	Harvest	12.0-14.9 in. \geq 15.0 in.	Total
Total no of catfish	12,026	395	13,704	11,946	0	12,154
% of catfish harvested by no.	50.2%			49.8%		
Total weight of fish (lbs)	8,516	133	9,082	19,182	0	19,235
% of catfish harvest by weight	30.7%			69.3%		
Mean length	13.3			16.9		
Mean weight	0.76			1.66		
Rate (fish/h)	0.091			0.090		

Table 36. Monthly catfish angling success at Taylorsville Lake during the 2009 creel survey.

Month	Total no. of catfish		Hours fished		Cattfish caught/hr by		Cattfish harvested/hr by	
	by all anglers	harvested by all anglers	No. of fishing trips for catfish	by catfish anglers	caught/hr by catfish anglers	harvested by catfish anglers	harvested/hr by catfish anglers	
April	1,418	1,418	246	1,263.21	1,418	1,418	1.00	1.00
May	6,078	5,705	828	4,261.40	4,520	4,351	0.96	0.93
June	5,834	5,834	803	4,130.13	4,225	4,225	0.95	0.95
July	6,276	5,373	735	3,783.15	4,660	3,946	1.22	1.03
August	3,256	3,066	576	2,962.24	2,622	2,516	0.68	0.65
September	2,108	1,734	369	1,900.71	1,359	1,123	0.64	0.53
October	887	842	348	1,790.85	727	727	0.37	0.37
Total	25,857	23,972	3,906	20,091.69	19,531	18,306	0.88	0.82
Mean								

Table 37. Temperate bass (*Morones*) catch and harvest statistics derived from a creel survey at Taylorsville Lake (3,050 acres) that were caught and released by all anglers from 6 April to 31 October 2009.

	Hybrid striped bass		White bass			
	Harvest	Catch and Release 12.0 – 14.9 in. ≥15.0 in.	Total	Harvest	Catch and Release 12.0 – 14.9 in. ≥15.0 in.	Total
Total no of <i>Morones</i>	2,090	1,148	353	4,982	245	17,808
% of <i>Morones</i> harvested by no.	30.0%			70.0%		
Total weight of fish (lbs)	2,491	964	265	1,960	56	4,873
% of <i>Morones</i> harvest by weight	56.0%			44.0%		
Mean length	13.4			9.1		
Mean weight	1.24			0.37		
Rate (fish/h)	0.015			0.030		

Table 38. Monthly *Morone* angling success at Taylorsville Lake during the 2009 creel survey.

Month	Total no. of <i>Morones</i> caught by all anglers		Total no. of <i>Morones</i> harvested by all anglers		No. of fishing trips for <i>Morones</i>		Hours fished by <i>Morones</i> anglers		Morones caught by Morone anglers		Morones caught/hr by Morone anglers		Morones harvested by Morone anglers	
	anglers	348	anglers	0	Morones	65	anglers	336.86	Morones	294	anglers	0.73	Morones	0
April	348	0	0	0	65	336.86	294	0.73	0	0	0.73	0	0	0
May	406	169	169	169	35	180.06	119	0.70	85	85	0.70	85	0.50	0.50
June	9,492	3,690	3,690	3,690	438	2,252.80	7,915	2.74	3,311	3,311	2.74	3,311	1.15	1.15
July	8,354	1,910	1,910	1,910	350	1,798.54	7,430	3.34	1,784	1,784	3.34	1,784	0.80	0.80
August	2,495	867	867	867	320	1,645.69	2,093	1.22	803	803	1.22	803	0.47	0.47
September	1,084	118	118	118	123	633.57	1,044	2.04	79	79	2.04	79	0.15	0.15
October	1,296	318	318	318	201	1,033.18	1,138	0.85	319	319	0.85	319	0.24	0.24
Total	23,475	7,072	7,072	7,072	1,532	7,880.70	20,033	2.13	6,381	6,381	2.13	6,381	0.65	0.65
Mean														

TAYLORSVILLE LAKE ANGLER ATTITUDE SURVEY 2009
(based on 278 surveys)

23. Have you been surveyed this year? Yes - stop survey No – continue
24. Name _____ and Phone number _____ (Optional)

25. Which species of fish do you fish for at Taylorsville Lake (**check all that apply**)?
Bass 26.3% Crappie 57.6% Bluegill 37.1% White Bass 9.4% Hybrid Striped Bass 9.4% Channel Catfish 20.1%
Blue Catfish 19.8% Anything 1.1%

26. Which one species do you fish for most at Taylorsville Lake (**check only one**)?
Bass 21.8% Crappie 55.4% Bluegill 18.3% White Bass 0.5% Hybrid Striped Bass 2.1% Channel Catfish 6.2%
Blue Catfish 4.1% Anything 1.6%

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

Bass Anglers (79 responses)

27. In general, what level of satisfaction do you have with bass fishing at Taylorsville Lake?
Very satisfied 6.3% Somewhat satisfied 64.6% Neutral 11.4% Somewhat dissatisfied 7.6% Very dissatisfied 1.3%
No opinion 8.9%

- 5a. If you responded with somewhat or very dissatisfied in question (5) – what is the single most important reason for your dissatisfaction?
Size of fish 85.7% Too many anglers 14.3%

Crappie Anglers (165 responses)

28. In general, what level of satisfaction do you have with the crappie fishing at Taylorsville Lake?
Very satisfied 8.5% Somewhat satisfied 67.3% Neutral 19.4% Somewhat dissatisfied 4.2% Very dissatisfied 0.0%
No opinion 0.6%

- 6a. If you responded with somewhat or very dissatisfied in question (10) – what is the single most important reason for your dissatisfaction?
Size of fish 100.0%

Bluegill Anglers (103 responses)

29. In general, what level of satisfaction do you have with the bluegill fishing at Taylorsville Lake?
Very satisfied 16.5% Somewhat satisfied 67.0% Neutral 8.7% Somewhat dissatisfied 7.8% Very dissatisfied 0.0%
No opinion 0.0%

- 7a. If you responded with somewhat or very dissatisfied in question (10) – what is the single most important reason for your dissatisfaction?
Size of fish 100.0%

White Bass Anglers (28 responses)

30. In general, what level of satisfaction do you have with the white bass fishing at Taylorsville Lake?
Very satisfied 0.0% Somewhat satisfied 28.6% Neutral 21.4% Somewhat dissatisfied 46.4% Very dissatisfied 0.0%
No opinion 3.6%

- 8a. If you responded with somewhat or very dissatisfied in question (12) – what is the single most important reason for your dissatisfaction?

Number of fish 61.5% Size of fish 38.5%

Hybrid Striped Bass Anglers (28 responses)

31. In general, what level of satisfaction do you have with the hybrid striped bass fishing at Taylorsville Lake?
Very satisfied 0.0% Somewhat satisfied 17.9% Neutral 14.3% Somewhat dissatisfied 46.4% Very dissatisfied 14.3%
No opinion 7.1%

9a. If you responded with somewhat or very dissatisfied in question (12) – what is the single most important reason for your dissatisfaction?

Number of fish 72.7% Size of fish 27.3%

Channel Catfish Anglers (61 responses)

32. In general, what level of satisfaction do you have with the channel catfish fishing at Taylorsville Lake?

Very satisfied 6.6% Somewhat satisfied 29.5% Neutral 16.4% Somewhat dissatisfied 37.7% Very dissatisfied 9.8%

10a. If you responded with somewhat or very dissatisfied in question (6) – what is the single most important reason for your dissatisfaction?

Number of fish 72.4% Size of fish 27.6%

Blue Catfish Anglers (59 responses)

33. In general, what level of satisfaction do you have with the blue catfish fishing at Taylorsville Lake?

Very satisfied 32.2% Somewhat satisfied 47.5% Neutral 6.8% Somewhat dissatisfied 6.8% Very dissatisfied 5.1%
No opinion 1.7%

10a. If you responded with somewhat or very dissatisfied in question (6) – what is the single most important reason for your dissatisfaction?

Number of fish 14.3% Size of fish 71.4% Not Happy with regulations 14.3%

All Anglers

34. Would you support or oppose a reduction in the current statewide 30 fish daily crappie creel limit to 20 fish?
Support 95.3% Oppose 0.4% No opinion 4.3%

35. Would you support or oppose the department putting restrictions on the number and/or sizes of blue catfish you could harvest in order to increase the amount of larger blue catfish in the lake?
Support 84.8% Oppose 0.0% No opinion 15.2%

36. Are you satisfied with the current size and creel limits on all sport fish at Taylorsville Lake? Yes 77.5% No 22.5%

Table 39. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected in 7.5 hours of 15-minute electrofishing runs in Herrington Lake, April 2009; numbers in parentheses 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				
Upper																							
Largemouth bass			3	3	3	2	1	7	10	7	9	6	3	2	2	2	3	2		63			
Spotted bass						1														1			
Middle																							
Largemouth bass	1	6	10	7	4	4	4	7	24	30	26	11	10	3	9	5	7		164				
Spotted bass	1	1	2	3	3	9	3	6	6	1									26				
Lower																							
Largemouth bass	1	3	1	4	4	4	3	2	7	9	12	12	14	11	12	2		1	98				
Spotted bass	2	1	4	9	9	7	8	6	3	2	1								52				
Total																							
Largemouth bass	2	12	14	14	14	10	8	16	41	46	47	29	27	16	23	7	10	2	1	325			
Spotted bass	2	2	5	11	12	8	17	9	9	3	1									79			

Dataset = cfdpsher.d09

Table 40. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Herrington Lake from 1994-2009; numbers in parentheses are standard errors.

Year	Length group					Total
	<8.0 in	8.0-11.9 in	12.0-14.9 in	>15.0 in	>20.0 in	
1994	4.90 (0.90)	30.10 (4.40)	21.50 (2.60)	17.90 (1.80)	2.13 (0.50)	74.40 (5.40)
1995	8.80 (2.30)	20.00 (4.40)	25.60 (4.00)	20.40 (1.40)	3.20 (0.73)	74.80 (9.60)
1996	9.50 (2.40)	24.40 (3.90)	20.30 (2.80)	26.50 (2.60)	3.07 (0.68)	80.90 (6.70)
1997	15.60 (2.30)	19.90 (3.40)	27.30 (2.60)	22.00 (1.70)	2.93 (0.60)	84.80 (6.10)
1998	37.20 (3.80)	45.30 (4.10)	30.90 (2.50)	21.30 (2.20)	1.87 (0.57)	134.80 (7.20)
1999	43.20 (5.20)	69.10 (6.70)	40.40 (3.90)	21.60 (2.40)	1.07 (0.33)	174.30 (14.20)
2000	15.60 (3.90)	53.50 (6.60)	26.90 (2.20)	12.20 (1.40)	0.27 (0.19)	108.30 (10.80)
2001	37.10 (6.70)	40.10 (6.30)	34.10 (4.50)	12.50 (1.50)	0.53 (0.25)	123.90 (15.30)
2002	19.50 (2.60)	32.10 (4.70)	25.50 (3.50)	24.00 (2.20)	1.60 (0.53)	101.10 (9.70)
2003	20.80 (4.40)	23.90 (2.40)	30.10 (2.80)	17.90 (1.70)	1.20 (0.44)	92.70 (4.20)
2004	29.60 (5.50)	64.80 (12.20)	38.70 (5.70)	29.70 (3.40)	1.47 (0.41)	162.80 (23.90)
2005	70.90 (9.70)	59.60 (7.10)	23.50 (3.00)	22.30 (3.40)	0.80 (0.35)	176.30 (15.40)
2006	24.70 (4.80)	36.70 (4.80)	38.40 (3.80)	19.30 (1.80)	0.40 (0.22)	119.10 (9.20)
2007	78.10 (10.40)	68.80 (7.30)	20.00 (2.50)	17.30 (2.30)	0.53 (0.32)	184.30 (17.10)
2008	31.33 (2.90)	39.73 (4.57)	29.47 (3.00)	22.13 (3.05)	1.47 (0.45)	122.67 (8.61)
2009	5.25 (1.20)	9.38 (1.14)	15.25 (2.20)	10.75 (1.43)	0.38 (0.21)	40.63 (4.40)

Dataset = cfdpsher.d09 - .d94

Table 41. PSD and RSD₁₅ values obtained for largemouth bass from spring electrofishing samples in each area of Herrington Lake in 2009; confidence intervals are in parentheses.

Area	Species	No. >8.0 in	PSD	RSD ₁₅
Lower	Largemouth bass	89	82 (± 8)	45 (± 10)
Middle	Largemouth bass	140	72 (± 7)	24 (± 7)
Upper	Largemouth bass	54	63 (± 13)	22 (± 11)
Total	Largemouth bass	283	73 (± 5)	30 (± 5)

Dataset = cfdpsher.d09

Table 42. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 7.5 hours of electrofishing at Herrington Lake during April 2009. Fish were collected in 15-minute runs.

Age	Inch class																	Total	%	CPUE	STD ERR	
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20					21
1	2	12	14	12	8	2													50	15	6.20	1.22
2				2	3	6	16	41	33	8									109	33	13.59	1.80
3									13	20	16	2							50	16	6.31	0.86
4										20	10	20	8						58	18	7.19	0.92
5														17					17	5	2.16	0.53
6												2			5	3			9	3	1.18	0.27
7											3	2	8	6	2	3			24	7	3.01	0.40
8																	2		2	1	0.25	0.17
9																5			5	2	0.63	0.24
10																			0	0	0.00	0.00
11																			0	0	0.00	0.00
12																		1	1	0	0.13	0.13
Total	2	12	14	14	10	8	16	41	46	47	29	27	16	23	7	10	2	1	325	100	40.63	4.40
%	1	4	4	4	3	2	5	13	14	14	9	8	5	7	2	3	1	0	100			

Dataset = cfdagher.d07 and cfdpsher.d09

Table 43. Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from Herrington Lake from 1999-2009.

Age	Year										
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	17.80	13.10	28.20	16.70	20.90	33.50	72.10	25.10	96.50	34.57	6.20
2	27.40	24.90	41.40	27.90	28.00	65.20	60.70	43.20	57.70	48.34	13.59
3	14.30	24.20	15.10	11.90	26.90	37.00	23.80	31.40	8.40	11.48	6.31
4	17.80	28.40	17.40	13.30	6.00	10.00	6.40	6.40	10.80	12.89	7.19
5	6.70	9.10	9.80	12.50	4.10	7.10	5.80	6.00	2.30	4.10	2.16
6	6.50	4.30	4.40	6.20	2.90	4.70	3.40	2.80	2.00	2.38	1.18
7	6.80	1.20	2.60	5.40	1.60	2.40	1.90	2.10	5.70	6.44	3.01
8	1.00	1.70	2.30	3.20	0.50	0.40	0.20	0.40	0.40	1.20	0.25
9	2.30	1.30	1.60	1.80	0.50	0.80	0.80	1.00	0.40	1.00	0.63
10	0.60	0.10	1.00	2.20	0.30	0.30	0.20	0.30	0.00	0.00	0.00
11					0.90	1.33	0.80	0.30	0.00	0.00	0.00
12									0.10	0.27	0.13

Table 44. Population assessment for largemouth bass collected during spring electrofishing at Herrington Lake from 2000-2009 (scoring based on statewide assessments).

Year		Mean length age-3 at capture	Spring CPUE of age-1	Spring CPUE 12.0-14.9 in	Spring CPUE >15.0 in	Spring CPUE >20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2009	Value	13.7*	6.20	15.25	10.75	0.38	0.467	37.3%	11	Fair
	Score	4	1	2	2	2				
2008	Value	13.7*	34.60	29.50	22.10	1.50	0.533	41.3%	15	Good
	Score	4	2	3	4	2				
2007	Value	13.7	96.50	20.00	17.30	0.50	0.485	38.4%	15	Good
	Score	4	4	2	3	2				
2006	Value	13.7*	25.10	38.40	19.30	0.40	0.525	40.9%	15	Good
	Score	4	2	4	3	2				
2005	Value	13.7*	72.10	23.50	22.30	0.80	0.567	43.3%	16	Good
	Score	4	4	2	4	2				
2004	Value	13.7*	33.50	38.70	29.70	1.50	0.514	40.2%	16	Good
	Score	4	2	4	4	2				
2003	Value	13.7	20.90	30.10	17.90	1.20	0.498	39.2%	14	Good
	Score	4	2	3	3	2				
2002	Value	11.7*	16.70	25.50	17.90	2.10	0.321	27.5%	13	Good
	Score	3	1	3	3	3				
2001	Value	11.7	28.20	34.10	20.40	3.20	0.455	36.6%	16	Good
	Score	3	2	3	4	4				
2000	Value	11.0	13.10	26.90	27.10	3.10	0.620	46.2%	13	Good
	Score	1	1	3	4	4				

Table 45. Length distribution and CPUE (fish/hr) of black bass collected in 4.5 hours of 15-minute electrofishing runs for black bass in Herrington Lake in September 2009; 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			
Lower																				
Largemouth bass	108	23	2	12	7	2	2	9	3	3	4	2	1	4	1			183		
Spotted bass	1		2	1			1	1	3	2								11		
Middle																				
Largemouth bass	32	26	7	39	56	22	6	9	9	6	6	17	5			1	241			
Spotted bass	3	2		1		2			3	2	1						14			
Upper																				
Largemouth bass	12	25	11	29	41	40	6	6	8	13	7	15	5	1	1		220			
Spotted bass											2	1	1				4			
Total																				
Largemouth bass	152	74	20	80	104	64	14	24	20	22	17	34	11	5	2	0	1	644		
Spotted bass	9	4	6	7	8	4	14	12	2	5	3						29	143.11(22.80)		
																			6.44 (1.56)	

Dataset = cfdwrher.d09

Table 46. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Herrington Lake on 11 and 15 September 2009. Standard errors are in parentheses.

Species	Area	Length group						Total	
		8.0-11.9 in		12.0-14.9 in		≥15.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Lower	17	91 (2)	7	89 (4)	5	94 (5)	29	91 (2)
	Middle	30	90 (2)	28	92 (1)	1	103 (-)	59	91 (1)
	Upper	32	92 (2)	27	93 (1)	2	94 (8)	61	93 (1)
	Total	79	91 (1)	62	92 (1)	8	95 (4)	149	92 (1)

Dataset = cf4wrhr.009

Table 47. 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 ≥5.0 in			Age 1		
		Mean length	Std. error	CPUe	Std. error	CPUe	Std. error	CPUe	Std. error	
2001	Total	4.5	0.1	18.30	2.90	5.90	0.90	16.70	2.20	
2002	Total	4.6	0.2	9.80	2.00	4.90	1.20	20.90	4.30	
2003	Total	4.6	0.1	51.10	6.00	27.30	5.30	33.50	6.00	
2004	Total	4.9	0.1	15.60	3.00	9.00	2.10	72.10	9.50	
2005	Total	5.3	0.1	24.20	5.10	16.90	4.50	25.10	4.90	
2006	Total	4.8	0.1	40.90	5.80	20.40	4.30	96.50	11.60	
2007	Total	5.1	0.1	8.00	2.50	5.30	1.90	34.57	3.00	
2008	Total	5.1	0.1	25.78	4.94	13.78	3.69	6.20	1.22	
2009	Total	4.7	0.1	109.78	16.16	55.11	15.45			

Table 48. Species composition, relative abundance, and CPUE (fish/hr) of crappie collected in 4.0 hours of 15-minute electrofishing runs in Herrington Lake, March 2009; numbers in parentheses are standard errors.

Location/Species	Inch class										Total	CPUE	
	7	8	9	10	11	12	13						
Upper													
White crappie		8	6	10	7	1	2						22.67 (7.28)
Black crappie													0.00 (0.00)
Middle													
White crappie		5	8	7	5	2	1						18.67 (6.42)
Black crappie	1	2	5	3	4	4							12.67 (8.29)
Lower													
White crappie			3		2	1							6.00 (6.00)
Black crappie		1	4		4	1	2						12.00 (4.32)
Total													
White crappie		13	17	17	14	4	3						17.00 (4.06)
Black crappie	1	3	9	3	8	5	2						7.75 (3.45)

Dataset = cfdpsher.d09

Table 49. PSD and RSD₁₀ values calculated for crappie collected at Herrington Lake in electrofished during March 2009.

Species	No. ≥ 5.0 in	PSD	RSD ₁₀
White crappie	68	100	56 (± 12)
Black crappie	31	97 (± 6)	58 (± 18)

Dataset = cfdpsher.d09

Table 50. Mean back calculated lengths (in.) at each annulus for otoliths from white crappie electrofished at Herrington Lake in 2009.

Year class	No.	Age					
		1	2	3	4	5	6
2007	14	4.0	9.1				
2006	15	4.2	9.3	10.9			
2005	1	3.6	9.2	11.7	12.4		
2003	3	4.1	8.1	9.9	11.0	12.0	12.7
Mean	33	4.1	9.1	10.8	11.4	12.0	12.7
Smallest		3.0	7.7	9.8	10.5	11.6	12.2
Largest		7.4	10.9	12.2	12.4	12.4	13.4
Std Error		0.2	0.1	0.2	0.4	0.2	0.4
95% ConLo		3.8	8.8	10.5	10.6	11.5	11.9
95% ConHi		4.4	9.3	11.1	12.1	12.5	13.4

Intercept value = 0.00

Dataset = cfdagher.d09

Table 51. Age frequency and CPUE (fish/hr) per inch class of white crappie electrofished at Herrington Lake in 2009.

Age	Inch class													STD	
	8	9	10	11	12	13	Total	%	CPUE	ERR					
2	13	15	2				30	44	7.56	1.82					
3		2	15	14	1		32	47	7.94	2.27					
4					1		1	1	0.25	0.11					
5							0	0	0.00	0.00					
6					2	3	5	7	1.25	0.40					
Total	13	17	17	14	4	3	68	100	17.00	4.06					
(%)	19	25	25	21	6	4	100								

Dataset = cfdpsher.d09 and cfdagher.d09

CPUE of ≥ 8.0 in crappie = 17.00 ± 4.06 fish/hr; ≥ 10.0 in = 9.50 ± 2.58 fish/hr

Table 52. Population assessment for white crappie collected during spring electrofishing at Herrington Lake from 2003-2009 (scoring based on lake-specific assessment).

Year		Total CPUE	Mean length age-2 at capture	Spring CPUE ≥ 8.0 in	Spring CPUE ≥ 10.0 in	CPUE age-2	Total score	Assessment rating
2009	Value	17.00	9.1	17.00	9.50	7.60		
	Score	2	4	2	4	2	14	Good
2008	Value	15.80	9.3	15.60	5.30	12.50		
	Score	2	4	2	2	2	12	Good
2007	Value	6.90	9.2	6.20	3.10	3.80		
	Score	1	4	1	1	1	8	Fair
2006	Value	11.60	8.9	11.30	10.20	0.70		
	Score	2	3	2	4	1	12	Good
2005	Value	34.20	8.9	29.60	7.80	28.40		
	Score	4	3	4	3	4	18	Excellent
2004	Value	27.60	8.4	21.10	5.80	23.10		
	Score	3	1	3	2	3	12	Good
2003	Value	10.20	8.7	7.70	5.00	4.00		
	Score	1	2	1	2	1	7	Poor

Table 53. Mean back calculated lengths (in.) at each annulus for otoliths from black crappie electrofished at Herrington Lake in 2009.

Year class	No.	Age					
		1	2	3	4	5	6
2008	1	8.3					
2007	14	4.1	9.0				
2006	11	4.6	9.8	11.7			
2005	2	4.2	9.9	11.8	12.7		
2003	1	4.9	9.1	11.6	12.7	13.3	13.7
Mean	29	4.5	9.4	11.7	12.7	13.3	13.7
Smallest		3.2	7.4	10.8	12.3	13.3	13.7
Largest		8.3	10.6	12.3	13.1	13.3	13.7
Std Error		0.2	0.1	0.1	0.2		
95% ConLo		4.2	9.1	11.4	12.3		
95% ConHi		4.8	9.7	11.9	13.2		

Intercept value = 0.00
Dataset = cfdagher.d09

Table 54. Age frequency and CPUE (fish/hr) per inch class of black crappie collected during 4.0 hours of electrofishing at Herrington Lake in 2009.

Age	Inch class							Total	% CPUE	STD ERR	
	7	8	9	10	11	12	13				
1		1						1	2	0.15	0.08
2	1	2	9					12	40	3.10	1.77
3				3	8	4		15	48	3.69	1.58
4						1	1	2	7	0.56	0.30
5								0	0	0.00	0.00
6							1	1	3	0.25	0.25
Total	1	3	9	3	8	5	2	31	100	7.75	3.45
%	3	10	29	10	26	16	6	100			

Dataset = cfdpsher.d09 and cfdagher.d09

CPUE of ≥ 8.0 in crappie = 7.50 ± 3.24 fish/hr; ≥ 10.0 in = 4.50 ± 1.75 fish/hr

Table 55. Population assessment for black crappie collected during spring electrofishing at Herrington Lake from 2003-2009 (scoring based on lake assessment).

Year		Total CPUE	Mean length age-2 at capture	Spring CPUE ≥ 8.0 in	Spring CPUE ≥ 10.0 in	CPUE age-2	Total score	Assessment rating
2009	Value	7.80	9.1	7.50	4.50	3.10	8	Fair
	Score	1	3	1	2	1		
2008	Value	8.20	9.5	8.20	4.00	5.00	9	Fair
	Score	1	4	1	2	1		
2007	Value	11.10	9.4	10.20	4.40	8.70	12	Excellent
	Score	2	4	2	2	2		
2006	Value	7.10	9.2	6.70	5.80	1.00	8	Fair
	Score	1	3	1	2	1		
2005	Value	47.30	8.9	39.30	13.80	45.00	19	Excellent
	Score	4	3	4	4	4		
2004	Value	6.70	9.0	6.10	5.20	1.30	8	Fair
	Score	1	1	1	2	1		
2003	Value	3.00	8.0	2.20	1.70	1.00	5	Poor
	Score	1	1	1	1	1		

Table 56. Length distribution and CPUE (fish/m) of white bass and hybrid striped bass collected during 16 net-nights of gill netting in Herrington Lake in October 2009; numbers in parentheses are standard errors.

Species	Inch class																Total	CPUE
	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
White bass	10	9	2	3	17	28	9	4	1								83	4.61 (1.75)
Hybrid striped bass	8	5	6	5					8	22	7	7	1	1	2	1	72	4.00 (1.01)

Dataset = cfdghner.d09

Table 57. Mean back calculated lengths (in.) at each annulus for otoliths from hybrid striped bass gill netted at Herrington Lake in 2009.

Year class	No.	Age		
		1	2	3
2008	37	12.0		
2007	6	12.8	17.3	
2006	4	12.7	17.7	19.9
Mean	47	12.1	17.4	19.9
Smallest		10.0	16.7	18.5
Largest		14.1	18.4	21.2
Std Error		0.1	0.2	0.5
95% ConLo		11.9	17.1	18.8
95% ConHi		12.4	17.8	20.9

Intercept Value = 0.00
Dataset = cfdagher.d09

Table 58. Age frequency and CPUE (fish/ftn) per inch class of hybrid striped bass gill netted for 16 net-nights at Herrington Lake in 2009.

Age	Inch class																Total	% CPUE	STD ERR	
	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				
0+	8	5	6	5	0	0	0	0	0	0	0	0	0	0	0	0	24	33	1.33	0.40
1+							8	22	7								37	51	2.06	0.64
2+												6					6	8	0.33	0.14
3+												1	1	2	1		5	7	0.28	0.11
Total	8	5	6	5	0	0	0	8	22	7	0	7	1	2	1	72	100	4.00	1.01	
%	11	7	8	7	0	0	0	11	31	10	0	10	1	3	1	100				

Dataset = cfdagher.d09 and cfdghner.d09

Table 59. Population assessment for hybrid striped bass collected during fall gill netting at Herrington Lake from 2000-2009 (scoring based on statewide assessments).

Year	Value	Score	CPUE (excluding age-2+ at age 0)	Mean length age-2+ at capture	CPUE >15.0 in 1+	CPUE age 1+	Instantaneous mortality (Z)	Annual mortality (AM)	Total score	Assessment rating
2009	2.70	1	19.3	4	2.70	2.10	1.109	66.3	8	Fair
2008	6.00	2	20.2	4	6.00	3.60	0.912	59.8	11	Good
2007	6.20	2	20.6	4	4.90	5.30	1.122	67.4	11	Good
2006	1.30	1	21.4	4	1.30	4.00	0.633	46.9	8	Fair
2005	0.40	1	19.5	4	0.40	0.30	NA	NA	7	Fair
2004	4.60	1	20.8	4	2.20	0.10	NA	NA	7	Fair
2003	2.50	1	19.8	4	2.90	1.10	0.601	45.2	8	Fair
2002	3.10	1	20.8	4	7.00	3.60	0.770	53.7	11	Good
2001	8.20	2	20.1	4	4.70	0.80	NA	NA	8	Fair
2000	4.70	1	18.9	4	8.90	5.50	1.282	72.3	12	Good

Table 60. Mean back calculated lengths (in.) at each annulus for otoliths from white bass gill netted at Herrington Lake in 2009.

Year class	No.	Age				
		1	2	3	4	5
2008	47	9.0				
2007	7	9.3	11.9			
2006	4	8.7	11.9	13.5		
2005	2	9.4	12.3	13.7	14.5	
2004	1	10.1	12.9	14.2	15.1	15.5
Mean	61	9.0	12.0	13.6	14.7	15.5
Smallest		6.1	10.6	13.3	14.4	15.5
Largest		10.8	12.9	14.2	15.1	15.5
Std Error		0.1	0.2	0.1	0.2	
95% ConLo		8.8	11.7	13.4	14.3	
95% ConHi		9.3	12.4	13.9	15.2	

Intercept Value = 0.00

Dataset = cfdagher.d09

Table 61. Age frequency and CPUE (fish/nn) per inch class of white bass gill netted for 16 net-nights at Herrington Lake in 2009.

Age	Inch class									Total	%	CPUE	STD ERR
	7	8	9	10	11	12	13	14	15				
0+	10	9	2							21	25	1.17	0.38
1+				3	17	26	2			48	58	2.67	1.19
2+						2	5			7	8	0.39	0.20
3+							2	2		4	5	0.22	0.12
4+								2		2	2	0.11	0.06
5+									1	1	1	0.06	0.06
Total	10	9	2	3	17	28	9	4	1	83	100	4.61	1.75
%	12	11	2	4	20	34	11	5	1	100			

Dataset = cfdagher.d09 and cfdgnher.d09

Table 62. Population assessment for white bass collected during fall gill netting at Herrington Lake from 2000-2009 (scoring based on statewide assessments).

Year		CPUE (excluding age 0)	Mean length age-2+ at capture	CPUE ≥12.0 in	CPUE age 1+	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2009	Value	3.40	13.1	2.30	2.70	0.900	59.3	8	Fair
	Score	1	4	1	2				
2008	Value	6.70	13.3	5.80	2.10	0.717	51.2	10	Good
	Score	2	4	3	1				
2007	Value	5.60	13.6	3.80	2.90	0.722	51.4	10	Good
	Score	2	4	2	2				
2006	Value	1.90	13.9	1.30	0.20	*	*	7	Fair
	Score	1	4	1	1				
2005	Value	2.10	13.5	2.00	0.60	0.371	31.0	7	Fair
	Score	1	4	1	1				
2004	Value	10.10	13.9	6.70	9.20	0.726	51.6	13	Good
	Score	3	4	3	3				
2003	Value	2.50	14.1	1.90	0.60	0.381	31.7	7	Fair
	Score	1	4	1	1				
2002	Value	2.90	14.1	2.40	2.00	0.841	56.9	7	Fair
	Score	1	4	1	1				
2001	Value	1.90	14.0	1.80	1.10	0.418	34.2	7	Fair
	Score	1	4	1	1				
2000	Value	3.50	13.9	2.80	2.00	0.741	52.4	8	Fair
	Score	1	4	2	1				

Table 63. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected in 3.0 hours of 15-minute electrofishing runs in Guist Creek Lake, April 2009; 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	22			
Largemouth bass	2	4	10	3	1	16	15	11	24	20	17	12	29	28	27	17	17	5	10	2	1	271	90.33 (11.33)	

Dataset = cfdpsgcl.d09

Table 64. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Guist Creek Lake from 1992-2009 numbers in parentheses are standard errors.

Year	Length group					Total
	<8.0 in	8.0-11.9 in	12.0-14.9 in	>15.0 in	>20.0 in	
1992	12.00 (2.10)	16.80 (2.70)	38.40 (5.20)	41.20 (4.70)	3.20 (1.00)	108.40 (7.20)
1993	22.70 (2.60)	25.50 (2.70)	23.80 (2.70)	51.60 (5.00)	5.47 (1.07)	123.60 (9.10)
1994	19.20 (2.70)	29.80 (3.70)	19.60 (2.60)	40.20 (3.90)	2.00 (0.54)	108.80 (8.60)
1995	18.20 (3.00)	40.60 (3.80)	23.20 (2.40)	47.20 (5.50)	5.00 (1.33)	129.20 (9.20)
1996	32.60 (5.50)	28.80 (3.60)	44.80 (2.80)	58.20 (5.20)	5.80 (1.10)	164.40 (10.60)
1997	NS					
1998	20.30 (3.10)	45.30 (4.90)	18.70 (3.50)	72.70 (12.30)	5.00 (1.31)	157.00 (14.50)
1999	53.50 (6.90)	56.80 (10.20)	41.70 (6.30)	51.30 (3.40)	7.95 (1.30)	203.30 (19.40)
2000	26.70 (6.10)	19.30 (2.40)	23.00 (2.90)	41.30 (5.40)	3.00 (1.00)	110.30 (7.60)
2001	39.00 (5.30)	42.00 (3.60)	17.30 (2.70)	46.30 (5.20)	1.67 (0.59)	144.70 (10.10)
2002	43.30 (9.90)	32.30 (7.70)	23.30 (3.10)	41.30 (7.80)	2.00 (1.35)	134.30 (18.60)
2003	27.70 (6.70)	96.70 (9.90)	31.00 (4.60)	49.70 (4.00)	2.67 (0.90)	205.00 (19.70)
2004	30.70 (6.00)	62.70 (6.50)	58.00 (7.00)	54.30 (5.90)	3.67 (1.04)	205.70 (17.00)
2005	84.30 (12.20)	67.00 (6.30)	63.00 (5.60)	70.30 (7.50)	4.67 (1.38)	284.70 (25.60)
2006	30.00 (6.60)	69.30 (8.20)	30.30 (3.30)	68.70 (6.40)	3.33 (1.46)	198.30 (19.00)
2007	23.30 (3.00)	59.30 (6.30)	42.00 (4.30)	58.00 (5.50)	3.67 (1.15)	182.70 (11.60)
2008	24.00 (3.62)	19.67 (2.28)	41.33 (5.56)	73.00 (10.31)	4.67 (1.46)	158.00 (12.89)
2009	12.00 (2.65)	23.33 (4.69)	19.33 (3.65)	35.67 (5.96)	4.33 (1.04)	90.33 (11.33)

Dataset = cf0psgcl.d09 -- d92

Table 65. PSD and RSD₁₅ values obtained for largemouth bass from spring electrofishing samples in Guist Creek Lake in 2009; confidence intervals are in parentheses.

Species	No. ≥ 8.0 in	PSD	RSD ₁₅
Largemouth bass	235	70 (± 6)	46 (± 6)

Dataset = cf0psgcl.d09

Table 66. Mean back calculated lengths (in.) at each annulus for otoliths from largemouth bass collected from Guist Creek Lake in 2009.

Year	No.	Age													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
2008	16	4.2													
2007	21	4.7	8.1												
2006	31	5.2	8.4	11.0											
2005	19	6.1	10.0	12.5	14.1										
2004	8	5.3	8.9	11.9	14.1	15.3									
2003	9	5.5	9.1	11.2	13.3	15.3	16.4								
2002	1	7.0	9.7	11.7	13.3	14.5	15.6	16.1							
2001	2	6.5	11.1	13.5	15.8	16.8	17.6	18.5	18.9						
2000	4	6.6	9.2	12.2	14.4	15.7	16.4	17.1	17.6	18.0					
1999	3	6.7	11.2	14.6	16.9	18.6	19.4	19.9	20.3	20.8	21.2				
1998	1	5.8	10.1	13.0	15.5	16.9	17.9	18.2	18.6	19.0	19.4	19.6			
1995	1	4.6	8.9	12.5	14.7	15.9	17.3	17.6	17.9	18.2	18.4	18.7	19.0	19.3	19.6
Mean	116	5.3	8.9	11.8	14.2	15.8	17.0	18.1	18.7	19.1	20.3	19.2	19.0	19.3	19.6
Smallest		2.8	6.8	8.8	11.7	13.3	13.9	16.1	16.8	17.3	18.4	18.7	19.0	19.3	19.6
Largest		7.1	12.0	15.2	17.2	19.4	20.4	21.2	21.5	22.0	22.3	19.6	19.0	19.3	19.6
Std Error		0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.7	0.4			
95% ConLo		5.1	8.7	11.5	13.9	15.3	16.3	17.2	17.9	18.1	19.0	18.3			
95% ConHi		5.5	9.2	12.1	14.6	16.4	17.7	18.9	19.5	20.1	21.6	20.0			

Intercept value = 0.00
Dataset = cfdaggcl.d09

Table 67. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 3.0 hours of electrofishing at Guist Creek Lake during April 2009. Fish were collected in 15-minute runs.

Age	Inch class																						Total	%	CPUE	ERR
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22					
1	2	4	10	3	1																		20	7	6.67	2.38
2					16	13	5																34	13	11.35	2.29
3						2	6	24	20	12	1	4											69	26	23.05	4.18
4									5	9	17	8	4										43	16	14.17	2.32
5										1	4	16	8										29	11	9.59	1.56
6											1	4	4	12	6	7							33	12	11.03	2.18
7														4									4	1	1.29	0.38
8																	3	1					5	2	1.55	0.48
9																11	7	1					19	7	6.46	1.42
10																			10	2	1		13	4	4.33	1.04
11																				1			1	0	0.42	0.15
12																							0	0	0.00	0.00
13																							0	0	0.00	0.00
14																						1	0	0.42	0.15	
Total	2	4	10	3	1	16	15	11	24	20	17	12	29	28	27	17	17	5	10	2	1	271	100	90.33	11.33	
%	1	1	4	1	0	6	6	4	9	7	6	4	11	10	10	6	6	2	4	1	0	100				

Dataset = cfdaggcl.d09 and cfdpsgcl.d09

Table 68. Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from Guist Creek Lake from 2000-2009.

Age	Year									
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	16.80	25.70	23.80	16.30	22.10	21.40	15.20	15.50	8.13	6.67
2	19.80	32.90	30.10	58.30	33.80	106.50	49.30	35.20	23.36	11.35
3	4.50	7.50	6.30	18.30	9.90	36.70	36.60	39.50	18.16	23.05
4	11.40	11.20	12.00	29.90	32.10	54.50	34.80	35.10	39.87	14.17
5	17.10	20.30	19.70	33.70	47.30	32.90	22.30	23.00	27.41	9.59
6	13.80	15.40	11.60	16.90	21.60	11.30	17.50	11.70	13.15	11.03
7	6.10	10.30	8.90	10.60	10.80	7.30	9.10	8.70	9.25	1.29
8	10.00	8.30	8.60	8.80	10.60	0.00	0.00	0.00	0.00	1.55
9	4.70	6.40	7.30	6.90	9.10	9.30	10.30	10.80	13.00	6.46
10	2.20	3.70	3.40	4.60	4.10	2.70	2.30	2.70	3.33	4.33
11	3.90	1.80	1.60	2.00	2.70	0.00	0.00	0.00	0.00	0.42
12		0.60	1.10	1.60	1.70	2.00	1.00	1.00	0.67	0.00
13										0.00
14										0.42

Table 69. Population assessment for largemouth bass collected during spring electrofishing at Guist Creek Lake from 2000-2009 (scoring based on statewide assessments).

Year		Mean length age-3 at capture	Spring CPUE of age-1	Spring CPUE 12.0-14.9 in	Spring CPUE >15.0 in	Spring CPUE >20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2009	Value	11.0	6.70	19.30	35.70	4.30	0.341	28.9	13	Good
	Score	3	1	1	4	4				
2008	Value	11.5*	8.10	41.30	73.00	4.70	0.402	33.1	16	Good
	Score	4	1	3	4	4				
2007	Value	11.5*	15.50	42.00	58.00	3.70	0.438	35.5	15	Good
	Score	4	1	3	4	3				
2006	Value	11.5*	15.20	30.30	68.70	3.30	0.458	36.8	14	Good
	Score	4	1	2	4	3				
2005	Value	11.5	21.40	63.00	70.30	4.70	0.510	40.0	18	Excellent
	Score	4	2	4	4	4				
2004	Value	10.2*	22.10	58.00	54.30	3.70	0.278	24.3	15	Good
	Score	2	2	4	4	3				
2003	Value	10.2*	16.30	31.00	49.70	2.70	0.325	27.7	13	Good
	Score	2	2	2	4	3				
2002	Value	10.2*	23.80	23.30	41.30	2.00	0.259	22.8	13	Good
	Score	2	2	2	4	3				
2001	Value	10.2	25.70	17.30	46.30	1.70	0.289	25.1	11	Fair
	Score	2	2	1	4	2				
2000	Value	10.0	16.80	23.00	41.30	3.00	0.161	14.9	10	Good
	Score	1	2	2	4	3				

Table 70. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Guist Creek Lake in September 2009; 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	23				
Largemouth bass	2	50	24	3	11	10	5	3	5	5	9	6	2	2	6	3	7	5	4	1	1	164	109.33 (12.80)		

Dataset = cfdwrgcl.d08

Table 71. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Guist Creek Lake on 23 September 2009. Standard errors are in parentheses.

Species	Area	Length group			Total				
		8.0-11.9 in	12.0-14.9 in	≥15.0 in					
		No.	Wr	No.	Wr	No.	Wr		
Largemouth bass	Total	18	88(1)	17	91(2)	29	100(2)	64	94(1)

Dataset = cfdwrgcl.d09

Table 72. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Guist Creek Lake.

Year class	Area	Age 0		Age 0 ≥5.0 in		Age 1			
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error		
2000	Total	3.6	0.1	19.50	4.00	0.00	0.50	25.70	5.30
2001	Total	3.9	0.1	65.30	14.00	1.00	0.50	23.80	6.70
2002	Total	4.7	0.1	47.30	7.60	19.30	2.80	16.30	3.30
2003	Total	4.0	0.1	30.70	8.20	6.00	2.00	22.10	4.80
2004	Total	4.0	0.1	40.70	6.00	0.70	0.70	21.40	4.20
2005	Total	4.5	0.1	24.50	4.40	5.00	2.00	15.20	4.50
2006	Total	3.9	0.1	50.70	8.50	10.00	4.20	15.50	2.20
2007	Total	3.8	0.2	12.70	4.20	2.70	1.70	8.13	1.99
2008	Total	3.2	0.1	139.33	23.58	0.67	0.67	6.67	2.38
2009	Total	3.7	0.1	51.33	9.77	0.67	0.67		

Table 73. Length distribution and CPUE (fish/mn) of hybrid striped bass collected during 8 net-nights of gill netting in Guist Creek Lake in November 2009: numbers in parentheses are standard errors.

Species	Inch class								Total	CPUE						
	8	9	10	11	18	20	21	22			23	24	25	27	28	
Hybrid striped bass	6	2	1	1	3	1	2	2	2	1	2	2	1	1	26	3.25 (0.75)

Dataset = cfdgngcl.d09

Table 74. Mean back calculated lengths (in.) at each annulus for otoliths from hybrid striped bass gill netted at Guist Creek Lake in 2009.

Year class	No.	Age														
		1	2	3	4	5	6	7	8							
2008	10	5.7														
2007	3	7.1	15.2													
2006	4	8.5	13.7	18.3												
2005	3	9.1	15.5	19.8	22.3											
2004	3	8.1	14.0	18.5	21.9	23.6										
2003	2	11.1	17.6	21.6	23.4	25.0	25.7									
2001	1	9.0	17.2	22.5	25.3	26.2	27.1	27.6								
Mean	26	7.5	15.1	19.5	22.7	24.5	26.2	27.6	28.2							
Smallest		5.0	10.5	15.7	19.6	21.7	24.9	27.6	28.2							
Largest		11.7	18.7	22.5	25.3	26.2	27.1	27.6	28.2							
Std Error		0.4	0.5	0.6	0.6	0.8	0.6									
95% ConLo		6.7	14.0	18.4	21.5	23.0	24.9									
95% ConHi		8.3	16.1	20.7	24.0	26.0	27.4									

Intercept Value = 0.00

Dataset = cfdaggcl.d09

Table 75. Age frequency and CPUE (fish/mn) per inch class of hybrid striped bass gill netted for 8 net-nights at Guist Creek Lake in 2009.

Age	Inch class																Total	% CPUE	STD ERR
	8	9	10	11	18	20	21	22	23	24	25	27	28						
1+	6	2	1	1												10	38	1.25	0.73
2+					3											3	12	0.38	0.18
3+						1	2	1								4	15	0.50	0.16
4+									1	1						3	12	0.38	0.13
5+										1	1					3	12	0.38	0.16
6+											1	1				2	8	0.25	0.13
7+																0	0	0.00	0.00
8+													1			1	4	0.13	0.13
Total	6	2	1	1	3	1	2	2	2	1	2	2	1	2	2	26	100	3.25	0.75
%	23	8	4	4	12	4	8	8	8	4	8	8	4	8	8	100			

Dataset = cfdaggcl.d09 and cfdngcl.d09

Table 76. Number of fish and the relative weight (Wr) for each length group of hybrid striped bass collected at Guist Creek Lake in November 2009.

Species	Area	Length group						Total	
		8.0-11.9 in		12.0-14.9 in		≥15.0 in			
		No.	Wr	No.	Wr	No.	Wr		
Hybrid striped bass	Total	10	69 (2)	0	0	16	92 (2)	26	83 (3)

Dataset = cfdngcl.d09

Table 77. Population assessment for hybrid striped bass collected during fall gill netting at Guist Creek Lake from 2000-2009 (scoring based on statewide assessments).

Year	Value	CPUE (excluding age 0)	Mean length age-2+ at capture	CPUE ≥15.0 in	CPUE age 1+	Total score	Assessment rating			
								Score	1	2
2009	2.00	18.5	4	2.00	1.30	7	Fair			
2008	0.90	16.8	3	0.80	0.10	5	Poor			
2007	6.80	18.4	4	8.30	0.50	10	Good			
2006	3.40	17.1	3	3.10	0.30	7	Fair			
2005	3.30	14.9	1	2.90	0.30	5	Poor			
2004	3.60	17.4	3	2.50	0.90	7	Fair			
2003	3.50	18.0	4	3.30	0.30	8	Fair			
2002	4.30	17.2	3	3.50	0.80	7	Fair			
2001	2.30	17.1	3	1.50	0.80	6	Fair			
2000	15.60	17.2	3	9.00	6.40	12	Good			

Table 78. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.0 hours of 15-minute electrofishing runs in Beaver Lake, April 2009; numbers in parentheses are standard errors.

Species	Inch class																				Total	CPUE
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20				
Largemouth bass	3	4	2	3	17	54	68	64	107	106	48	15	2	3	1	0	0	1	498	249.00 (45.32)		

Dataset = cfdpsbvr.d09

Table 79. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Beaver Lake from 1992-2009; numbers in parentheses are standard errors.

Year	Length group							Total
	<8.0 in	8.0-11.9 in	12.0-14.9 in	>15.0 in	>20.0 in			
1992	7.10 (2.10)	105.30 (8.60)	4.90 (1.10)	19.10 (4.80)	9.33 (3.27)	138.40 (5.60)		
1993	22.50 (3.90)	59.50 (5.30)	76.00 (7.90)	13.00 (4.30)	8.50 (2.77)	171.00 (12.20)		
1994	22.50 (2.80)	5.50 (2.50)	41.50 (3.30)	28.50 (4.50)	6.50 (2.82)	98.50 (6.90)		
1995	73.00 (8.40)	37.50 (5.90)	10.00 (3.80)	34.00 (7.00)	6.00 (2.27)	154.50 (9.90)		
1996	81.00 (11.60)	47.00 (6.30)	8.00 (2.00)	37.50 (2.90)	3.00 (0.65)	173.50 (17.80)		
1997	84.50 (12.20)	99.50 (16.70)	8.50 (2.10)	42.50 (9.60)	6.00 (3.21)	235.00 (34.10)		
1998	36.00 (4.20)	206.50 (17.60)	14.50 (4.80)	30.50 (6.60)	5.50 (1.68)	287.50 (22.80)		
1999	42.00 (11.00)	71.50 (7.30)	17.00 (2.60)	22.00 (3.50)	7.50 (1.59)	152.50 (18.10)		
2000	56.00 (7.70)	26.50 (5.60)	28.50 (2.20)	24.50 (2.90)	3.00 (1.25)	137.00 (9.80)		
2001	142.50 (8.60)	66.50 (8.60)	25.50 (1.50)	39.00 (6.10)	4.00 (1.51)	273.50 (17.10)		
2002	55.50 (10.80)	97.00 (13.60)	16.00 (2.10)	32.00 (4.90)	2.50 (1.05)	200.50 (26.80)		
2003	142.50 (9.10)	131.50 (12.90)	20.00 (3.00)	18.00 (2.40)	2.00 (0.76)	312.00 (20.40)		
2004	154.50 (5.50)	198.00 (15.10)	48.00 (7.50)	17.00 (3.70)	2.00 (0.76)	417.50 (20.30)		
2005	68.50 (11.40)	298.00 (22.70)	42.00 (7.70)	15.00 (3.50)	4.50 (1.40)	423.50 (21.60)		
2006	115.00 (11.30)	217.50 (36.50)	40.00 (3.70)	10.00 (2.30)	2.50 (1.05)	382.50 (34.90)		
2007	30.50 (4.80)	176.50 (31.10)	42.50 (9.60)	10.00 (2.70)	3.00 (1.00)	259.50 (40.40)		
2008	44.50 (6.61)	203.50 (22.40)	61.00 (5.99)	8.50 (1.76)	2.00 (0.76)	317.50 (29.37)		
2009	14.50 (2.82)	146.50 (28.53)	84.50 (15.57)	3.50 (2.06)	0.50 (0.50)	249.00 (45.32)		

Dataset = cfdpsbvr.d09 - .d92

Table 80. PSD and RSD₁₅ values obtained for largemouth bass from spring electrofishing samples in Beaver Lake in 2009; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD ₁₅
Largemouth bass	469	38 (± 4)	1 (± 1)

Dataset = cfdpsbvr.d09

Table 81. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 2.00 hours of electrofishing at Beaver Lake during April 2009. Fish were collected in 15-minute runs.

Age	inch class															Total	% CPUE	STD ERR				
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17				18	19	20	
1	3	4	2															9	2	4.50	1.40	
2				3	17	47	10												78	16	38.86	9.38
3						7	26	26	18	27									103	21	51.42	10.81
4							26	32	71	27	2								158	32	79.03	13.96
5							5	6	9	40	36	10	1		1				108	22	54.05	9.51
6									9	12	3	3							28	6	13.83	2.61
7										13									13	3	6.63	1.38
8																	1	1	0	0.70	0.51	
Total	3	4	2	3	17	54	68	64	107	106	48	15	2	3	1	0	0	1	498	100	249.00	45.32
%	1	1	0	1	3	11	14	13	21	21	10	3	0	1	0	0	0	0	100			

Dataset = cfdagbvr.d07 and cfdpsbvr.d09

Table 82. Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from Beaver Lake from 1999-2009.

Age	Year									
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	33.10	47.80	35.40	133.20	97.60	38.70	108.30	2.00	23.50	4.50
2	36.80	149.00	96.80	68.80	160.90	160.70	74.60	58.40	29.25	38.86
3	7.50	14.40	19.90	29.80	44.80	68.30	58.30	55.20	69.07	51.42
4	29.40	14.30	11.50	64.40	97.00	141.20	131.90	90.60	124.61	79.03
5	13.30	15.30	9.50	5.60	5.60	4.10	2.50	33.90	48.01	54.05
6	6.20	15.60	9.40	0.00	0.00	0.00	0.00	9.30	13.08	13.83
7	1.90	4.80	4.60	3.50	4.60	3.00	2.30	5.10	7.08	6.63
8	1.30	2.60	2.50	5.30	5.00	3.00	2.10	3.60	2.07	0.70
9	1.20	5.70	7.10	0.50	0.00	0.00	0.00	1.00	0.33	0.00
10	0.30	1.40	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	1.40	0.50	0.80	0.50	2.00	4.50	2.50	0.00	0.50	0.00
12	0.70	2.20	1.20	0.50	0.00	0.00	0.00	0.00	0.00	0.00

Table 83 Population assessment for largemouth bass collected during spring electrofishing at Beaver Lake from 2000-2009 (scoring based on statewide assessments).

Year		Mean length age-3 at capture	Spring CPUE of age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE >20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2009	Value	10.3*	4.50	84.50	3.50	0.50	0.676	49.2	9	Fair
	Score	2	1	4	1	1				
2008	Value	10.3*	23.50	61.00	8.50	2.00	0.598	45.0	13	Good
	Score									
2007	Value	10.3	2.00	42.50	10.00	3.00	0.622	46.3	11	Fair
	Score									
2006	Value	10.7*	108.30	40.00	10.00	2.50	0.683	49.5	14	Good
	Score									
2005	Value	10.7*	38.70	42.00	15.00	4.50	0.725	51.6	13	Good
	Score									
2004	Value	10.7*	97.60	48.00	17.00	2.00	0.694	50.0	15	Good
	Score									
2003	Value	10.7	133.20	20.00	18.00	2.00	0.540	41.7	14	Good
	Score									
2002	Value	11.7*	35.40	16.00	32.00	2.50	0.401	33.0	14	Good
	Score									
2001	Value	11.7	47.80	25.50	39.00	4.00	0.416	34.0	17	Excellent
	Score									
2000	Value	10.7*	31.50	30.00	24.50	3.00	*	*	12	Good
	Score									

Table 84. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Beaver Lake in September 2009; numbers in parentheses are standard errors.

Species	Inch class													Total	CPUE
	3	4	5	6	7	8	9	10	11	12	13	14	15		
Largemouth bass	11	73	68	17	1	6	15	53	64	30	17	4	1	360	240.00 (24.79)

Dataset = cfdwrivr.d09

Table 85. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Beaver Lake on 25 September 2009. Standard errors are in parentheses.

Species	Area	Length group						Total	
		8.0–11.9 in		12.0–14.9 in		≥15.0 in		No.	Wr
		No.	Wr	No.	Wr	No.	Wr		
Largemouth bass	Total	70	86 (1)	46	82 (1)	1	77 (-)	117	84 (1)

Dataset = cfdwrivr.d09

Table 86. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Beaver Lake.

Year class	Area	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2000	Total	3.7	0.1	127.30	32.90	6.70	2.20	47.80	5.70
2001	Total	4.6	0.1	139.30	28.10	40.70	13.90	35.40	8.90
2002	Total	4.4	0.1	104.00	7.50	19.30	4.60	133.20	9.30
2003	Total	3.7	0.1	117.30	22.00	0.00		97.60	5.00
2004	Total	3.7	0.1	86.70	17.10	3.30	1.60	38.70	10.70
2005	Total	4.0	0.03	199.30	26.30	18.70	4.10	108.30	10.20
2006	Total	4.3	0.1	8.00	2.70	0.00		2.00	1.10
2007	Total	4.6	0.1	175.30	31.20	46.70	4.60	23.50	4.37
2008	Total	3.4	0.1	21.33	11.94	0.00		4.50	1.40
2009	Total	5.0	0.1	112.67	21.89	56.67	10.65		

Table 87. Species composition, relative abundance, and CPUE (fish/hr) of bluegill and redear sunfish collected in 2.50 hours of 7.5-minute electrofishing runs in Beaver Lake, May 2009; numbers in parentheses are standard errors.

Species	Inch class									Total	CPUE
	1	2	3	4	5	6	7	8	9		
Bluegill	1	42	61	38	52	50	51	4		299	119.60 (15.26)
Redear sunfish		2	4	15	40	22	45	67	7	202	80.80 (11.47)

Dataset = cfdpsivr.d09

Table 88. PSD and RSD values calculated for sunfish collected during 2.50 hours of electrofishing at Beaver Lake during May 2008. Fish were collected in 7.5-minute runs.

Species	No. ≥stock size	PSD	RSD ^a
Bluegill	256	41 (± 6)	2 (± 2)
Redear sunfish	196	61 (± 7)	4 (± 3)

^aBluegill = RSD₈; Redear = RSD₉

Dataset = cfdpsivr.d09

Table 89. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from Beaver Lake from 1992-2009; numbers in parentheses are standard errors.

Year	Length group				Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	
1992	1.30 (0.90)	54.20 (10.20)	80.90 (15.10)	0.00	136.40 (24.00)
1993	2.50 (1.10)	47.00 (6.20)	79.50 (10.00)	0.00	129.00 (12.60)
1994	2.50 (1.10)	130.00 (21.00)	20.00 (4.00)	0.00	152.50 (24.20)
1995	2.00 (1.10)	174.00 (18.40)	16.50 (4.70)	0.00	192.50 (17.30)
1996	0.50 (0.50)	184.50 (27.30)	65.50 (11.50)	0.00	250.50 (34.50)
1997	2.50 (1.10)	58.00 (12.60)	86.50 (14.40)	0.50 (0.50)	147.50 (27.40)
1998	0.50 (0.50)	28.00 (4.30)	88.00 (15.00)	0.50 (0.50)	117.00 (19.00)
1999	14.00 (4.50)	13.00 (5.50)	10.50 (3.00)	0.00	37.50 (8.30)
2000	50.00 (12.70)	322.00 (23.10)	32.00 (13.60)	7.50 (3.80)	411.50 (41.20)
2001	19.00 (5.10)	211.50 (16.00)	122.00 (15.20)	0.00	352.50 (20.20)
2002	5.60 (1.70)	175.20 (22.90)	152.80 (27.70)	0.00	333.60 (44.70)
2003	33.60 (6.40)	141.60 (17.50)	128.80 (21.90)	0.00	304.00 (30.10)
2004	36.00 (16.00)	118.40 (32.40)	143.20 (29.30)	0.00	297.60 (56.40)
2005	21.60 (4.50)	109.60 (14.60)	97.60 (19.30)	4.00 (2.20)	232.80 (19.70)
2006	20.10 (4.90)	60.90 (8.60)	55.70 (13.50)	8.30 (2.90)	145.10 (24.70)
2007	12.00 (2.60)	34.40 (4.60)	53.60 (9.50)	2.40 (1.70)	102.40 (10.40)
2008	69.60 (11.14)	112.40 (13.25)	38.00 (6.25)	4.00 (1.36)	224.00 (24.60)
2009	17.20 (5.10)	60.40 (9.99)	40.40 (5.88)	1.60 (0.94)	119.60 (15.26)

Dataset = cfdpsbvr.d09 - .d92

Table 90. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from Beaver Lake in 2009.

Year class	No.	Age								
		1	2	3	4	5	6	7	8	9
2008	14	2.6								
2007	32	2.7	4.8							
2006	9	2.1	4.4	6.3						
2005	5	2.5	4.5	6.4	7.4					
2004	4	2.1	3.7	5.3	6.6	7.5				
2003	2	2.5	4.5	5.6	6.6	7.1	7.5			
2002	1	3.6	4.6	6.6	7.3	7.7	6.9	8.2		
2000	1	2.6	4.0	5.2	5.7	6.1	8.0	7.4	7.9	8.3
Mean	73	2.6	4.6	6.0	6.9	7.2	7.5	7.8	7.9	8.3
Smallest		1.4	2.9	4.4	5.7	6.1	6.9	7.4	7.9	8.3
Largest		4.1	6.9	7.1	7.8	7.8	8.0	8.2	7.9	8.3
Std Error		0.1	0.1	0.1	0.2	0.2	0.3	0.4		
95% ConLo		2.4	4.3	5.7	6.5	6.8	6.8	7.0		
95% ConHi		2.7	4.8	6.4	7.3	7.7	8.1	8.6		

Intercept value = 0.00

Dataset = cfdagbvr.d09

Table 91. Age frequency and CPUE (fish/hr) per inch class of bluegill collected during 2.50 hours of electrofishing at Beaver Lake during May 2009. Fish were collected in 7.5-minute runs.

Age	Inch class								Total	% CPUE	STD ERR	
	1	2	3	4	5	6	7	8				
1	1	42	20						63	21	25.33	6.89
2			41	38	41	20			140	47	55.81	7.40
3					11	20	10		41	14	16.54	2.17
4						5	20		25	8	10.16	1.66
5							20		20	7	8.16	1.51
6						5		1	6	2	2.53	0.46
7								1	1	0	0.53	0.31
8									0	0	0.00	0.00
9								1	1	0	0.53	0.31
Total	1	42	61	38	52	50	51	4	560	100	119.60	15.26
%	0	14	20	13	17	17	17	1	100			

Dataset = cfdagbvr.d09 and cfdpsbvr.d09

Table 92. Electrofishing catch rate (fish/hr) of each age of bluegill collected from Beaver Lake from 2000-2009.

Age	Year									
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	62.00	44.80	10.20	31.10	31.70	13.60	6.90	10.70	63.80	25.33
2	243.20	167.70	70.40	100.10	102.20	63.20	45.10	22.40	103.29	55.81
3	52.10	140.00	201.70	26.40	17.90	62.00	33.80	29.30	18.53	16.54
4	43.50		49.50	119.60	50.60	37.80	36.20	27.50	11.44	10.16
5	3.20		1.80	26.80	79.90	32.30	11.90	3.70	10.45	8.16
6					15.30	15.80	0.90	7.40	7.79	2.53
7							10.30	0.30	3.09	0.53
8								1.10	1.95	0.00
9									3.66	0.53

Table 93. Population assessment for bluegill collected during spring electrofishing at Beaver Lake from 2001-2009 (scoring based on statewide assessments).

Year		Mean length age-2+ at capture	Years to 6.0 in	CPUE ≥6.0 in	CPUE ≥8.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating																																																																																																																			
2009	Value	4.8	3-3+	42.00	1.60	0.723	51.5	9	Fair																																																																																																																			
	Score	3	3	2	1					2008	Value	4.2	3-3+	42.00	4.00	0.497	39.2	8	Fair	Score	2	3	2	1	2007	Value	3.7	3-3+	56.00	2.40	0.666	48.6	9	Fair	Score	2	3	3	1	2006	Value	3.4	3-3+	64.10	8.30	*	*	9	Fair	Score	1	3	3	2	2005	Value	4.0	3-3+	101.60	4.00	0.340	28.8	10	Fair	Score	2	3	4	1	2004	Value	3.9	3-3+	143.20	0.00	*	*	9	Fair	Score	2	3	4	0	2003	Value	3.9	3-3+	128.80	0.00	*	*	9	Fair	Score	2	3	4	0	2002	Value	3.9	2-2+	152.80	0.00	*	*	10	Fair	Score	2	4	4	0	2001	Value	4.5	2-2+	122.00	0.00	*	*	11	Good
2008	Value	4.2	3-3+	42.00	4.00	0.497	39.2	8	Fair																																																																																																																			
	Score	2	3	2	1					2007	Value	3.7	3-3+	56.00	2.40	0.666	48.6	9	Fair	Score	2	3	3	1	2006	Value	3.4	3-3+	64.10	8.30	*	*	9	Fair	Score	1	3	3	2	2005	Value	4.0	3-3+	101.60	4.00	0.340	28.8	10	Fair	Score	2	3	4	1	2004	Value	3.9	3-3+	143.20	0.00	*	*	9	Fair	Score	2	3	4	0	2003	Value	3.9	3-3+	128.80	0.00	*	*	9	Fair	Score	2	3	4	0	2002	Value	3.9	2-2+	152.80	0.00	*	*	10	Fair	Score	2	4	4	0	2001	Value	4.5	2-2+	122.00	0.00	*	*	11	Good	Score	3	4	4	0										
2007	Value	3.7	3-3+	56.00	2.40	0.666	48.6	9	Fair																																																																																																																			
	Score	2	3	3	1					2006	Value	3.4	3-3+	64.10	8.30	*	*	9	Fair	Score	1	3	3	2	2005	Value	4.0	3-3+	101.60	4.00	0.340	28.8	10	Fair	Score	2	3	4	1	2004	Value	3.9	3-3+	143.20	0.00	*	*	9	Fair	Score	2	3	4	0	2003	Value	3.9	3-3+	128.80	0.00	*	*	9	Fair	Score	2	3	4	0	2002	Value	3.9	2-2+	152.80	0.00	*	*	10	Fair	Score	2	4	4	0	2001	Value	4.5	2-2+	122.00	0.00	*	*	11	Good	Score	3	4	4	0																									
2006	Value	3.4	3-3+	64.10	8.30	*	*	9	Fair																																																																																																																			
	Score	1	3	3	2					2005	Value	4.0	3-3+	101.60	4.00	0.340	28.8	10	Fair	Score	2	3	4	1	2004	Value	3.9	3-3+	143.20	0.00	*	*	9	Fair	Score	2	3	4	0	2003	Value	3.9	3-3+	128.80	0.00	*	*	9	Fair	Score	2	3	4	0	2002	Value	3.9	2-2+	152.80	0.00	*	*	10	Fair	Score	2	4	4	0	2001	Value	4.5	2-2+	122.00	0.00	*	*	11	Good	Score	3	4	4	0																																								
2005	Value	4.0	3-3+	101.60	4.00	0.340	28.8	10	Fair																																																																																																																			
	Score	2	3	4	1					2004	Value	3.9	3-3+	143.20	0.00	*	*	9	Fair	Score	2	3	4	0	2003	Value	3.9	3-3+	128.80	0.00	*	*	9	Fair	Score	2	3	4	0	2002	Value	3.9	2-2+	152.80	0.00	*	*	10	Fair	Score	2	4	4	0	2001	Value	4.5	2-2+	122.00	0.00	*	*	11	Good	Score	3	4	4	0																																																							
2004	Value	3.9	3-3+	143.20	0.00	*	*	9	Fair																																																																																																																			
	Score	2	3	4	0					2003	Value	3.9	3-3+	128.80	0.00	*	*	9	Fair	Score	2	3	4	0	2002	Value	3.9	2-2+	152.80	0.00	*	*	10	Fair	Score	2	4	4	0	2001	Value	4.5	2-2+	122.00	0.00	*	*	11	Good	Score	3	4	4	0																																																																						
2003	Value	3.9	3-3+	128.80	0.00	*	*	9	Fair																																																																																																																			
	Score	2	3	4	0					2002	Value	3.9	2-2+	152.80	0.00	*	*	10	Fair	Score	2	4	4	0	2001	Value	4.5	2-2+	122.00	0.00	*	*	11	Good	Score	3	4	4	0																																																																																					
2002	Value	3.9	2-2+	152.80	0.00	*	*	10	Fair																																																																																																																			
	Score	2	4	4	0					2001	Value	4.5	2-2+	122.00	0.00	*	*	11	Good	Score	3	4	4	0																																																																																																				
2001	Value	4.5	2-2+	122.00	0.00	*	*	11	Good																																																																																																																			
	Score	3	4	4	0																																																																																																																							

Table 94. Electrofishing CPUE (fish/hr) for each length group of redear sunfish collected from Beaver Lake from 1992-2009; numbers in parentheses are standard errors.

Year	Length group					Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	≥10.0 in	
1992	0.40 (0.40)	10.20 (2.80)	90.20 (12.90)	1.80 (1.00)	0.40 (0.40)	102.70 (13.20)
1993	0.00	2.00 (1.50)	57.00 (10.70)	5.00 (2.00)	0.00	64.00 (12.20)
1994	0.00	6.50 (1.80)	8.00 (2.60)	2.50 (1.30)	0.00	17.00 (4.10)
1995	0.00	2.00 (1.10)	12.50 (3.60)	7.00 (2.70)	0.00	21.50 (5.20)
1996	0.00	6.00 (2.00)	5.50 (2.50)	8.00 (2.60)	0.00	19.50 (5.10)
1997	0.00	13.00 (1.80)	9.00 (2.10)	8.00 (1.70)	0.00	30.00 (1.50)
1998	0.00	3.50 (1.20)	9.00 (2.00)	9.50 (4.60)	0.00	22.00 (5.70)
1999	0.00	0.00	0.50 (0.50)	7.50 (1.80)	2.00 (1.10)	8.00 (2.00)
2000	1.00 (0.70)	5.50 (2.00)	3.50 (1.80)	6.00 (2.00)	1.50 (1.10)	16.00 (3.70)
2001	0.50 (0.50)	34.50 (6.90)	30.00 (6.80)	8.50 (2.90)	0.50 (0.50)	73.50 (10.50)
2002	0.00	49.60 (11.10)	77.60 (18.10)	7.20 (3.90)	0.80 (0.80)	134.40 (27.80)
2003	0.80 (0.80)	21.60 (6.10)	87.20 (15.00)	7.20 (3.30)	0.00	116.80 (20.00)
2004	0.00	38.40 (9.00)	44.00 (8.70)	26.40 (7.40)	0.00	108.80 (17.10)
2005	1.60 (1.10)	46.40 (7.00)	80.80 (12.40)	62.40 (10.80)	0.00	191.20 (22.60)
2006	0.40 (0.40)	46.10 (6.20)	82.20 (6.20)	35.70 (5.70)	0.00	164.40 (13.80)
2007	0.00	25.20 (6.10)	74.00 (13.50)	32.40 (6.60)	0.00	125.30 (23.20)
2008	10.00 (2.71)	15.20 (2.46)	58.40 (12.15)	90.40 (16.50)	0.00	174.00 (26.78)
2009	0.80 (0.55)	23.60 (4.77)	26.80 (4.76)	29.60 (5.75)	0.00	80.80 (11.47)

Dataset = cfdpsbvr.d09 -- .d92

Table 95. Mean back calculated lengths (in.) at each annulus for otoliths from redear sunfish collected from Beaver Lake in 2009.

Year	No.	Age						
		1	2	3	4	5	6	7
2008	2	3.3						
2007	23	2.8	5.0					
2006	12	2.5	4.8	6.7				
2005	5	2.6	4.1	6.5	7.5			
2004	10	2.8	4.6	6.4	7.7	8.4		
2003	5	2.8	4.9	6.5	7.6	8.2	8.9	
2002	3	3.4	4.9	7.0	7.9	8.3	8.8	9.4
Mean	60	2.8	4.8	6.6	7.6	8.3	8.9	9.4
Smallest		2.0	3.6	5.5	6.8	7.5	8.2	9.2
Largest		4.6	7.0	7.9	8.9	9.7	9.6	9.5
Std Error		0.0	0.1	0.1	0.1	0.1	0.2	0.1
95% ConLo		2.6	4.6	6.4	7.4	8.1	8.5	9.2
95% ConHi		2.9	5.0	6.7	7.8	8.6	9.2	9.5

Intercept value = 0.00

Dataset = cfdagbvr.d09

Table 96. Age frequency and CPUE (fish/hr) per inch class of redear sunfish collected during 2.50 hours of electrofishing at Beaver Lake during May 2009. Fish were collected in 7.5-minute runs.

Age	Inch class								Total	%	CPUE	STD ERR
	2	3	4	5	6	7	8	9				
1	2		2						4	2	1.47	0.62
2		4	13	40	4	4			66	33	26.33	4.78
3					18	16			34	17	13.59	2.35
4						20			20	10	8.18	1.71
5						4	49	1	54	27	21.59	4.31
6							18	2	21	10	8.24	1.58
7								4	4	4	1.40	0.53
Total	2	4	15	40	22	45	67	7	435	202	80.80	11.74
%	1	2	7	20	11	22	33	3	100			

Dataset = cfdagbvr.d09 and cfdpsbvr.d09

Table 97. Electrofishing catch rate (fish/hr) of each age of redear sunfish collected from Beaver Lake from 2000-2009.

Age	Year									
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	2.00	11.40	0.30	2.40	8.80	0.00	0.40	16.30	11.54	1.47
2	3.70	48.60	37.90	18.30	28.50	23.60	27.30	44.20	11.86	26.33
3	2.80	4.50	61.70	37.80	14.00	97.10	41.10	48.40	23.18	13.59
4	5.20	4.50	30.80	58.30	57.50	9.90	71.80	21.80	21.68	8.18
5	0.70	4.00	2.90			54.10	0.00	0.70	37.44	21.59
6	1.80		0.80			5.00	14.00	0.20	61.45	8.24
7							9.90		1.75	1.40
8									5.09	

Table 98. Population assessment for redear sunfish collected during spring electrofishing at Beaver Lake from 2001-2009 (scoring based on statewide assessments).

Year		Mean length age-3+ at capture	Years to 8.0 in	CPUE ≥8.0 in	CPUE ≥10.0 in	Total score	Assessment rating
2009	Value	6.7	4-4+	29.60	0.00		
	Score	4	3	4	0	11	Good
2008	Value	6.3	4-4+	90.40	0.00		
	Score	3	3	4	0	10	Fair
2007	Value	6.3	4-4+	32.40	0.00		
	Score	3	3	4	0	10	Fair
2006	Value	5.7	4-4+	35.70	0.00		
	Score	2	3	4	0	9	Fair
2005	Value	6.4	4-4+	62.40	0.00		
	Score	3	3	4	0	10	Fair
2004	Value	6.6*	4-4+*	26.40	0.00		
	Score	4	3	4	0	11	Good
2003	Value	6.6	4-4+	7.20	0.00		
	Score	4	3	2	0	9	Fair
2002	Value	6.4*	3-3+*	7.20	0.80		
	Score	3	4	2	1	10	Fair
2001	Value	6.4	3-3+	8.50	0.50		
	Score	3	4	2	1	10	Fair

Table 99. Number of fish and the relative weight (Wr) for each length group of bluegill and redear sunfish collected at Beaver Lake on 25 September and 19 October, 2009. Standard errors are in parentheses.

Species	Length group									
	No.	Wr	No.	Wr	No.	Wr	No.	Wr	No.	Wr
Bluegill	3.0-5.9 in		6.0-7.9 in		≥8.0 in				Total	
	74	95 (3)	12	87 (2)					86	94 (2)
Redear sunfish	1.0-3.9 in		4.0-6.9 in		7.0-9.0 in		≥9.0 in		Total	
	1	67	107	93 (1)	44	96 (1)	2	103 (6)	154	94 (1)

Dataset = cfdwrbrvr.d09

Table 100. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.0 hours of 15-minute electrofishing runs in Boltz Lake, April 2009; numbers in parentheses are standard errors.

Species	Inch class																	Total	CPUE		
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			21	22
Largemouth bass	2	2	3	13	25	11	19	24	16	20	8	15	7	11	12	6	4	4	4	202	101.00 (8.10)

Dataset = cfdpsbol.d09

Table 101. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Boltz Lake from 1991-2009; numbers in parentheses are standard errors.

Year	Length group					Total
	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	
1991		43.60 (4.90)	10.80 (2.00)	6.50 (1.20)	0.00 (0.00)	60.80 (6.60)
1993	25.20 (6.40)	70.00 (4.80)	12.00 (2.30)	7.30 (2.20)	0.67 (0.67)	114.80 (8.90)
1994	48.40 (9.50)	45.00 (5.70)	32.40 (6.50)	3.60 (1.40)	1.00 (0.65)	129.60 (9.60)
1995	155.20 (10.80)	50.00 (3.30)	31.50 (3.90)	6.00 (1.70)	1.50 (1.05)	242.40 (10.40)
1997	34.80 (8.60)	183.60 (29.40)	36.80 (4.60)	14.40 (2.20)	1.78 (0.97)	268.80 (38.60)
1998	43.20 (6.00)	172.00 (18.80)	22.40 (3.30)	9.60 (2.20)	2.50 (0.73)	247.20 (24.80)
1999	87.20 (16.60)	369.60 (42.40)	90.40 (16.00)	12.80 (6.80)	4.80 (2.33)	560.00 (31.20)
2000	92.00 (30.40)	148.00 (7.70)	226.40 (18.40)	8.80 (2.90)	0.80 (0.80)	475.20 (16.80)
2001	24.00 (5.20)	212.80 (15.80)	133.60 (13.00)	9.60 (3.50)	0.00 (0.00)	380.00 (26.30)
2002	5.60 (2.70)	101.60 (20.10)	67.20 (11.40)	45.60 (9.20)	0.80 (0.80)	220.00 (27.30)
2003	10.70 (2.90)	39.30 (10.40)	61.30 (12.90)	40.00 (5.00)	0.00 (0.00)	151.30 (25.10)
2004	64.00 (12.90)	38.50 (4.90)	19.50 (4.40)	25.50 (5.90)	2.00 (0.76)	147.50 (22.90)
2005	69.00 (10.10)	39.50 (4.00)	21.00 (2.40)	20.00 (6.20)	0.00 (0.00)	149.50 (8.40)
2006	11.50 (1.40)	48.00 (4.70)	17.00 (3.70)	18.00 (2.90)	1.00 (0.65)	94.50 (9.90)
2007	28.50 (3.80)	37.00 (2.40)	17.00 (3.90)	20.00 (3.90)	1.00 (0.65)	102.50 (11.80)
2008	19.00 (2.24)	43.50 (7.27)	18.50 (2.13)	17.50 (3.02)	4.00 (1.51)	98.50 (7.09)
2009	10.00 (2.51)	39.50 (3.16)	22.00 (3.93)	29.50 (5.12)	4.00 (1.51)	101.00 (8.10)

Dataset = cfdbpsbol.d09 - .d91

Table 102. PSD and RSD₁₅ values obtained for largemouth bass from spring electrofishing samples in Boltz Lake in 2009; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD ₁₅
Largemouth bass	180	57 (±7)	32 (±7)

Dataset = cfdbpsbol.d08

Table 103. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 2.00 hours of electrofishing at Boltz Lake during April 2009. Fish were collected in 15-minute runs.

Age	Inch class											Total	% CPUE	STD ERR							
	4	5	6	7	8	9	10	11	12	13	14				15	16	17	18	19	20	21
1	2	2	3															7	3	3.50	1.59
2				13	25	5	4											47	23	23.40	4.10
3						6	15	21										42	21	20.89	2.81
4									3	14	15	3	10					45	22	22.67	2.89
5											2							2	1	0.80	0.21
6								2	2	2	2	11						17	9	8.61	1.94
7									5	2	5	2	2					14	7	6.97	1.01
8												2	2	6				8	4	4.17	0.77
9														6	3			9	4	4.50	0.73
10															3	4		7	3	3.50	1.18
11																4		4	2	2.00	1.07
Total	2	2	3	13	25	11	19	24	16	20	8	15	7	11	12	6	4	202	100	101.00	8.10
%	1	1	1	6	12	5	9	12	8	10	4	7	3	5	6	3	2	100			

Dataset = cfdbpsbol.d06 and cfdbpsbol.d09

Table 104. Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from Boltz Lake from 1999-2009.

Age	Year										
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	77.70	55.00	0.80	0.80	0.00	51.00	15.50	7.00	20.50	4.00	3.50
2	86.10	52.60	29.60	11.20	16.10	27.40	68.80	28.70	30.20	41.39	23.40
3	212.20	50.80	115.30	101.80	23.80	16.30	17.40	22.90	13.60	16.11	20.89
4	92.20	115.00	81.60	27.20	47.00	21.10	19.50	14.30	17.30	16.42	22.67
5	47.80	132.00	42.30	18.80	16.50	5.60	6.10	1.20	0.40	1.00	0.80
6	30.20	62.20	55.30	18.10	15.40	7.80	6.30	6.30	6.80	6.62	8.61
7	3.50	5.20	41.90	23.00	20.90	10.20	9.20	5.00	5.30	4.13	6.97
8	3.40	1.60	10.10	12.00	8.20	4.30	4.70	3.50	4.30	1.33	4.17
9	3.50	0.80	3.20	7.00	2.60	2.80	1.30	3.50	2.80	2.00	4.50
10	2.70				0.80	1.00	0.80	1.50	0.50	4.00	3.50
11	1.10							0.50	1.00	1.50	2.00

Table 105. Population assessment for largemouth bass collected during spring electrofishing at Boltz Lake from 2000-2009 (scoring based on statewide assessments).

Year		Mean length age-3 at capture	Spring CPUE of age-1	Spring CPUE 12.0-14.9 in	Spring CPUE >15.0 in	Spring CPUE >20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2009	Value	10.3*	3.50	22.00	29.50	4.00	0.235	21.0		
	Score	2	1	2	3	4			12	Good
2008	Value	10.3*	4.00	18.50	17.50	4.00	0.336	28.6		
	Score	2	1	1	3	4			11	Fair
2007	Value	10.3*	20.50	17.00	20.00	1.00	0.340	28.8		
	Score	2	2	1	3	2			10	Fair
2006	Value	10.3	7.00	17.00	18.00	1.00	0.358	30.1		
	Score	2	1	1	3	2			9	Fair
2005	Value	10.6*	15.50	21.00	20.00	0.00	0.447	36.1		
	Score	2	1	2	3	0			8	Fair
2004	Value	10.6*	51.00	19.50	25.50	2.00	0.348	29.4		
	Score	2	3	1	3	3			12	Good
2003	Value	10.6	0.00	61.30	40.00	0.00	0.377	31.4		
	Score	2	0	4	4	0			10	Fair
2002	Value	10.7	0.80	67.20	45.60	0.80	0.334	28.4		
	Score	2	1	4	4	3			12	Good
2001	Value	9.0	0.80	133.60	9.60	0.00	0.349	29.5		
	Score	1	1	4	2	0			8	Fair
2000	Value	10.4	55.00	226.40	8.80	0.80	0.550	42.3		
	Score	2	3	4	2	1			12	Good

Table 106. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Boltz Lake in September 2009; 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
Largemouth bass	12	19	14	19	33	9	10	13	5	6	10	3	4	3	4	1	165	110.00 (13.42)

Dataset = cfdwrbol.d09

Table 107. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Boltz Lake on 23 September 2009. Standard errors are in parentheses.

Species	Area	Length group						Total	
		8.0–11.9 in		12.0–14.9 in		≥15.0 in		No.	Wr
		No.	Wr	No.	Wr	No.	Wr		
Largemouth bass	Total	36	89 (1)	19	89 (2)	12	97 (2)	67	91 (1)

Dataset = cfdwrbol.d09

Table 108. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Boltz Lake.

Year Class	No. of fish	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
1997	145	4.2	(0.04)	96.70	(11.30)	6.70	(1.70)	25.90	(4.40)
1998	147	5.0	(0.05)	98.00	(12.00)	48.00	(5.80)	77.70	(31.00)
1999	170	5.2	(0.07)	113.30	(16.20)	68.70	(13.00)	55.00	(24.70)
2000	19	3.0	(0.27)	12.70	(6.70)	1.30	(1.30)	0.80	(0.80)
2001	46	3.2	(0.09)	30.70	(6.90)	0.70	(0.70)	0.80	(0.80)
2002	50	3.7	(0.10)	28.60	(7.40)	1.70	(1.20)	0.00	(0.00)
2003*	27	3.7	(0.15)	18.00	(4.50)	1.30	(0.80)	7.00	(2.20)
2004*	80	4.1	(0.07)	53.30	(7.10)	6.70	(2.70)	15.00	(3.40)
2005*	34	3.9	(0.11)	22.70	(5.00)	1.30	(0.80)	4.00	(1.10)
2006	90	4.6	(0.06)	60.00	(7.50)	18.70	(3.70)	20.50	(3.60)
2007	17	4.2	(0.21)	11.30	(2.60)	2.00	(0.90)	4.00	(3.58)
2008	108	3.6	(0.07)	72.00	(11.91)	5.33	(1.69)	3.50	(1.59)
2009	51	4.6	(0.13)	34.00	(8.87)	13.33	(1.98)		

*Only include wild largemouth bass CPUE for age-1 year class, stocked largemouth bass were marked by fin clip and removed from dataset.

Table 109. Species composition, relative abundance, and CPUE (fish/hr) of bluegill collected in 1.25 hour of 7.5-minute electrofishing runs in Boltz Lake, May 2009; numbers in parentheses are standard errors.

Species	Inch class						Total	CPUE
	2	3	4	5	6	7		
Bluegill	7	51	123	33	54	2	270	216.00 (34.48)

Dataset = cfdpsbol.d09

Table 110. PSD and RSD₈ values calculated for bluegill collected during 1.00 hour of electrofishing at Boltz Lake during May 2009. Fish were collected in 7.5-minute runs.

Species	No. ≥ 3.0 in	PSD	RSD ₈
Bluegill	263	21 (± 5)	0 (± 0)

Dataset = cfdpsbol.d09

Table 111. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from Boltz Lake from 1992-2009; numbers in parentheses are standard errors.

Year	Length group				Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥ 8.0 in	
1991	0.50 (0.50)	60.80 (8.50)	10.80 (2.10)		72.40 (9.60)
1993	15.20 (7.40)	57.20 (15.80)	10.00 (5.20)		82.80 (24.00)
1994	26.00 (7.30)	131.60 (17.60)	30.50 (5.10)	0.50 (0.50)	188.40 (25.60)
1995	50.00 (9.80)	232.50 (31.70)	57.60 (12.80)	1.50 (0.70)	347.60 (46.00)
1997	91.50 (16.90)	43.00 (7.50)	39.20 (7.00)	5.40 (2.00)	179.20 (19.90)
1998	886.90 (210.80)	94.60 (13.80)	53.10 (7.70)	13.10 (2.30)	1047.70 (216.90)
1999	144.60 (30.70)	140.00 (51.50)	35.40 (6.90)	6.90 (3.10)	326.20 (62.30)
2000	1799.20 (73.50)	393.80 (19.40)	10.80 (3.20)	0.80 (0.80)	2204.60 (63.80)
2001	167.80 (51.50)	257.70 (40.00)	11.50 (3.80)	0.80 (0.80)	437.70 (60.00)
2002	174.60 (26.80)	396.20 (45.60)	16.90 (3.60)		587.70 (62.40)
2003	156.90 (49.40)	373.10 (26.30)	51.50 (16.50)		581.50 (47.70)
2004	313.30 (29.90)	261.10 (27.20)	31.80 (12.00)		606.20 (58.80)
2005	131.50 (16.00)	205.40 (34.30)	15.40 (5.40)		352.30 (35.80)
2006	229.00 (42.00)	367.00 (41.60)	39.00 (12.00)		635.00 (63.50)
2007	208.80 (29.90)	135.20 (23.10)	30.40 (8.20)		374.40 (44.30)
2008	202.40 (28.50)	263.20 (33.72)	41.60 (5.82)		507.20 (54.21)
2009	5.60 (1.71)	165.60 (29.36)	44.80 (12.58)		216.00 (34.48)

Dataset = cfdpsbol.d09

Table 112. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from Boltz Lake in 2009.

Year	No.	Age					
		1	2	3	4	5	6
2008	5	2.6					
2007	24	2.4	4.2				
2006	5	2.6	4.5	6.1			
2005	8	2.8	4.6	5.7	6.5		
2004	1	2.9	4.9	5.6	6.0	6.5	
2003	1	2.0	3.3	5.3	6.0	6.4	6.6
Mean	44	2.5	4.3	5.8	6.4	6.4	6.6
Smallest		1.7	3.3	5.1	5.8	6.4	6.6
Largest		3.4	5.3	6.7	7.1	6.5	6.6
Std Error		0.1	0.1	0.1	0.2	0.1	
95% ConLo		2.4	4.1	5.6	6.1	6.3	
95% ConHi		2.7	4.5	6.0	6.7	6.6	

Intercept value = 0.00

Dataset = cfdagbvr.d09

Table 113. Age frequency and CPUE (fish/hr) per inch class of bluegill collected during 1.25 hours of electrofishing at Boltz Lake during May 2009. Fish were collected in 7.5-minute runs.

Age	Inch class						Total	%	CPUE	STD ERR
	2	3	4	5	6	7				
1	7						7	3	5.60	1.71
2		51	123	20			194	72	155.04	26.66
3				7	22		28	10	22.56	5.70
4				7	22	2	30	11	24.16	6.01
5					5		5	2	4.32	1.22
6					5		5	2	4.32	1.22
Total	7	51	123	33	54	2	270	100	216.00	34.48
%	3	19	46	12	20	1	100			

Dataset = cfdagbol.d09 and cfdpsbol.d09

Table 114. Electrofishing catch rate (fish/hr) of each age of bluegill collected from Boltz Lake from 2000-2009.

Age	Year									
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	62.00	44.80	10.20	31.10	31.70	13.60	537.00	267.00	240.58	5.60
2	243.20	167.70	70.40	100.10	102.20	63.20	41.80	66.70	200.75	155.04
3	52.10	140.00	201.70	26.40	17.90	62.00	16.10	34.20	49.36	22.56
4	43.50		49.50	119.60	50.60	37.80	32.40		4.88	24.16
5	3.20		1.80	26.80	79.90	32.30	6.70		7.55	4.32
6					15.30	15.80	1.00		4.08	4.32

Table 115. Population assessment for bluegill collected during spring electrofishing at Boltz Lake from 2000-2009 (scoring based on statewide assessments).

Year		Mean length age-2+ at capture	Years to 6.0 in	CPUE ≥6.0 in	CPUE ≥8.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2009	Value	4.2	3-3+	44.80	0.00	0.904	59.5		
	Score	2	3	2	0			7	Fair
2008	Value	4.0	3-3+	41.60	0.00	1.095	66.6		
	Score	2	3	2	0			7	Fair
2007	Value	4.8	2-2+	30.40	0.00	NA	NA		
	Score	3	4	2	0			9	Fair
2006	Value	4.7	3-3+	39.00	0.00	0.830	56.4		
	Score	3	3	2	0			8	Fair
2005	Value	4.3	4-4+	16.00	0.00	1.097	66.6		
	Score	2	2	1	0			5	Poor
2004	Value	4.1	4-4+	44.00	0.00	1.012	63.7		
	Score	2	2	2	0			6	Poor
2003	Value	4.1	3-3+	53.60	0.00	0.379	31.5		
	Score	2	3	3	0			8	Fair
2002	Value	3.5	3-3+	17.60	0.00	1.640	80.6		
	Score	2	3	1	0			6	Poor
2001	Value	3.8	3-3+	12.80	0.80	1.794	83.4		
	Score	2	3	1	1			7	Fair
2000	Value	4.8	2-2+	10.90	0.70	1.593	79.7		
	Score	3	4	1	1			9	Fair

Table 116. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.0 hours of 15-minute electrofishing runs in Bullock Pen Lake, April 2009; numbers in parentheses are standard errors.

Location/Species	Inch class																		Total	CPUE
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
Largemouth bass	2	2	7	26	24	13	28	27	34	24	24	21	23	13	12	14	0	1	295	147.50 (13.82)

Dataset = cfdpsbpl.d09

Table 117. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Bullock Pen Lake from 1991-2009; numbers in parentheses are standard errors.

Year	Length group					Total
	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	
1991		36.60	22.80	16.40	1.71 (0.69)	75.20
1994	10.00 (2.30)	17.50 (2.80)	37.60 (3.60)	40.00 (9.90)	2.50 (1.05)	104.00 (12.40)
1995	7.00 (1.60)	36.40 (4.70)	33.20 (4.40)	40.80 (5.60)		117.60 (9.90)
1996	10.50 (2.50)	26.50 (4.60)	26.00 (6.00)	30.50 (6.10)		93.60 (11.60)
1997	18.00 (3.50)	71.60 (8.70)	34.40 (3.30)	34.40 (6.10)	2.00 (0.89)	158.40 (17.30)
1998	18.00 (4.40)	43.60 (4.80)	39.60 (9.20)	33.20 (7.20)	3.50 (1.59)	139.20 (19.20)
1999	14.00 (3.60)	40.40 (4.00)	35.20 (4.00)	38.40 (12.00)	0.50 (0.50)	128.00 (14.00)
2000	14.50 (4.80)	35.50 (5.00)	21.00 (3.10)	42.40 (9.80)	0.50 (0.50)	113.50 (6.50)
2001	9.00 (3.20)	33.50 (4.30)	38.50 (7.20)	66.00 (15.20)	2.50 (1.05)	147.20 (16.40)
2002	6.50 (1.70)	29.50 (3.00)	41.50 (7.20)	54.50 (10.40)	1.50 (0.73)	132.00 (16.50)
2003	9.00 (2.50)	19.50 (2.30)	32.50 (4.10)	56.50 (8.80)	0.50 (0.50)	117.50 (9.80)
2004	6.50 (1.30)	31.50 (3.70)	45.00 (8.50)	57.50 (11.40)	2.50 (1.50)	140.50 (13.40)
2005	9.50 (1.30)	17.00 (2.60)	38.00 (5.80)	63.00 (13.70)	3.50 (1.40)	127.50 (15.50)
2006	13.50 (4.30)	35.50 (6.00)	25.50 (3.90)	62.50 (8.40)	1.00 (0.65)	137.00 (8.70)
2007	17.50 (3.50)	44.50 (6.70)	32.00 (2.80)	44.00 (8.10)	0.50 (0.50)	138.00 (6.10)
2008	9.50 (2.92)	47.50 (5.78)	75.00 (5.74)	62.50 (9.32)	1.50 (1.05)	194.50 (11.68)
2009	5.50 (1.99)	45.50 (7.44)	42.50 (5.01)	54.00 (5.35)	7.50 (1.18)	147.50 (13.82)

Dataset = cfdpsbpl.d09

Table 118. PSD and RSD₁₅ values obtained for largemouth bass from spring electrofishing samples in Bullock Pen Lake in 2009; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD ₁₅
Largemouth bass	284	68 (± 5)	38 (± 6)

Dataset = cfdpsbpl.d09

Table 119. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 2.00 hours of electrofishing at Bullock Pen Lake during April 2009. Fish were collected in 15-minute runs.

Age	Inch class																	Total	% CPUE	STD ERR			
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21				22		
1	2																			2	1	0.80	0.52
2		2	6	20	11															39	13	19.72	4.44
3			1	7	9	10	17	6												49	17	24.59	3.78
4					4	3	6	12	19	11	6									60	20	29.87	3.03
5							6	3	11	5	6									31	11	15.63	1.49
6								3	4	5	3	11								26	9	12.81	1.58
7								3			3			4	8					18	6	9.17	0.79
8										3		11		4						18	6	8.75	1.57
9											6		8	4	4					22	7	11.00	1.44
10														8		7				15	5	7.33	0.77
11																				0	0	0.00	0.00
12																7	1			8	3	4.00	0.65
13													8							8	3	3.83	0.77
Total	2	2	7	26	24	13	28	27	34	24	24	21	23	13	12	14	0	1		295	100	147.50	13.82
%	1	1	2	9	8	4	9	9	12	8	8	7	8	4	4	5	0	0		100			

Dataset = cfdagbpl.d06 and cfdpsbpl.d09

Table 120. Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from Bullock Pen Lake from 1997-2009.

Age	Year										
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	4.00	6.80	0.00	0.50	1.80	0.00	1.30	2.50	3.40	2.10	0.80
2	18.60	13.00	17.70	11.40	14.60	17.10	9.00	23.10	23.30	13.46	19.72
3	26.80	15.40	19.60	32.90	13.80	24.80	19.70	19.10	28.60	33.21	24.59
4	29.60	12.50	19.30	14.30	18.40	23.80	20.30	20.50	24.70	47.95	29.87
5	22.70	13.70	20.50	35.50	21.10	23.50	21.10	10.10	12.10	25.59	15.63
6	5.40	11.10	18.90	13.60	16.40	16.20	15.90	13.20	12.30	17.63	12.81
7	6.20	9.90	25.80	11.30	15.90	15.30	15.60	11.20	8.50	15.58	9.17
8	11.30	14.50	12.30	6.60	5.80	6.20	7.10	11.30	9.70	10.94	8.75
9	2.40	9.00	10.20	2.70	5.20	6.00	7.20	14.50	9.30	15.88	11.00
10	0.60	6.50	2.60	1.40	1.20	2.00	3.00	5.60	3.10	5.83	7.33
11		0.80			2.80	3.80	4.30	0.00	0.00	0.00	0.00
12				0.70	0.60	2.00	3.00	0.30	0.30	1.00	4.00
13								5.30	2.80	5.33	3.83

Table 121. Population assessment for largemouth bass collected during spring electrofishing at Bullock Pen Lake from 2000-2009 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE of age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥ 15.0 in	Spring CPUE ≥ 20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2009	Value	10.2*	0.80	42.50	54.00	7.50	0.223	20.0		
	Score	2	1	3	4	4			14	Good
2008	Value	10.2*	2.10	75.00	62.50	1.50	0.269	23.6		
	Score	2	1	4	4	2			13	Good
2007	Value	10.2*	3.40	32.00	44.00	0.50	0.294	25.4		
	Score	2	1	2	4	1			10	Fair
2006	Value	10.2	2.50	25.50	62.50	1.00	0.238	21.2		
	Score	2	1	2	4	2			11	Fair
2005	Value	10.7*	1.30	38.00	63.00	3.50	0.183	16.7		
	Score	2	1	3	4	3			13	Good
2004	Value	10.7*	0.00	45.00	57.50	2.50	0.265	23.3		
	Score	2	0	3	4	3			12	Good
2003	Value	10.7	1.80	32.50	56.50	0.50	0.323	27.6		
	Score	2	1	2	4	1			10	Fair
2002	Value	10.9	0.50	41.50	54.50	1.50	0.375	31.2		
	Score	3	1	3	4	2			13	Good
2001	Value	10.0	0.00	38.50	66.00	2.50	0.174	16.0		
	Score	1	0	3	4	3			11	Fair
2000	Value	9.3	6.80	21.00	42.40	0.50	0.186	17.0		
	Score	1	1	2	4	1			9	Fair

Table 122. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Bulllock Pen Lake in September 2009; 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	2	3	1	7	9	10	4	2	14	13	11	6	15	5	7	9	2	1	2	123	82.00 (10.87)	

Dataset = cfdwrbpl.d09

Table 123. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Bullock Pen Lake on 29 September 2009. Standard errors are in parentheses.

Species	Area	Length group						Total	
		8.0-11.9 in		12.0-14.9 in		≥15.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Total	33	88 (1)	32	96 (1)	26	103 (2)	91	95 (1)

Dataset = c6fwrtp1.d09

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 Bullock Pen Lake.

Year class	Area	Age 0			Age 0 ≥5.0 in			Age 1		
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE
1997	Total	3.6	(0.1)	34.00	(11.90)	0.70	(0.70)	3.00	(1.70)	
1998	Total	3.5	(0.1)	28.00	(8.40)	1.30	(1.30)	4.00	(0.90)	
1999	Total	3.7	(0.1)	30.00	(6.10)	2.00	(1.40)	6.80	(2.60)	
2000	Total	3.8	(0.3)	6.30	(1.50)	0.00		0.00		
2001	Total	3.6	(0.2)	12.00	(2.70)	1.30	(0.80)	0.50	(0.50)	
2002	Total	3.1	(0.1)	17.30	(4.60)	0.00		1.80	(0.70)	
2003	Total	3.3	(0.1)	22.00	(8.10)	0.00		0.00		
2004	Total	4.1	(0.2)	16.00	(3.70)	4.00	(1.50)			
2005	Total	3.5	(0.1)	28.00	(8.10)	2.00	(0.90)	2.50	(1.30)	
2006	Total	4.2	(0.2)	4.00	(1.50)	0.00		3.40	(1.10)	
2007	Total	4.1	(0.2)	6.70	(2.00)	0.70	(0.70)	2.10	(1.13)	
2008	Total	4.1	(0.2)	20.67	(5.60)	5.33	(1.69)	0.80	(0.52)	
2009	Total	4.5	(0.4)	8.67	(2.40)	4.67	(1.91)			

*Largemouth bass were stocked, and were not able to be distinguished from the wild age-1 largemouth bass

Table 125. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.0 hours of 15-minute electrofishing runs in Corinth Lake, April 2009; 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	1	9	24	3	23	59	61	27	18	10	12	13	9	4	7	12	11	9	3	315	157.50 (23.41)		

Dataset = cfdpscor.d09

Table 126. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Corinth Lake from 1992-2009; numbers in parentheses are standard errors.

Year	Length group							Total
	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in			
1992	31.00 (9.30)	22.50 (5.30)	5.00 (2.60)	0.00 (0.00)	0.00 (0.00)	58.50 (9.80)		
1993	34.00 (8.20)	111.30 (11.50)	7.30 (2.40)	2.00 (1.40)	0.00 (0.00)	154.70 (13.50)		
1996	53.50 (10.10)	174.50 (16.70)	14.50 (2.00)	4.50 (1.60)	0.00 (0.00)	247.00 (18.10)		
1998	15.50 (3.20)	111.50 (9.80)	19.00 (3.00)	4.00 (1.70)	0.50 (0.50)	150.00 (14.40)		
1999	137.00 (14.20)	56.50 (5.20)	24.50 (4.30)	3.50 (1.20)	1.00 (0.65)	221.50 (16.40)		
2000	312.80 (47.00)	136.00 (18.20)	22.40 (6.50)	4.80 (2.30)	1.60 (0.98)	476.00 (63.70)		
2001	127.20 (16.60)	231.20 (8.00)	20.80 (5.10)	9.60 (3.20)	0.00 (0.00)	388.80 (13.50)		
2002	40.70 (8.10)	153.30 (21.70)	13.30 (2.90)	16.70 (2.80)	1.33 (1.33)	224.00 (28.70)		
2003	58.00 (13.60)	146.00 (16.40)	23.30 (3.80)	6.00 (2.00)	0.67 (0.67)	233.30 (28.20)		
2004	23.00 (4.80)	77.50 (5.00)	40.00 (4.30)	5.00 (1.50)	1.00 (1.00)	145.50 (8.00)		
2005	45.50 (3.90)	115.00 (9.30)	72.00 (10.00)	20.50 (3.00)	2.50 (1.30)	253.00 (16.00)		
2006	15.00 (2.70)	74.50 (6.80)	29.00 (1.30)	34.50 (4.70)	1.50 (0.73)	153.00 (8.80)		
2007	88.50 (14.80)	106.00 (7.00)	21.50 (3.40)	22.50 (3.50)	5.50 (2.38)	238.50 (17.60)		
2008	52.00 (9.74)	199.00 (16.97)	69.50 (4.84)	37.50 (3.85)	7.50 (1.92)	358.00 (25.15)		
2009	30.00 (8.04)	82.50 (11.24)	17.50 (4.47)	27.50 (4.37)	6.00 (2.14)	157.50 (23.41)		

Dataset = cfdpscor.d09

Table 127. PSD and RSD₉₅ values obtained for largemouth bass from spring electrofishing samples in Corinth Lake in 2009; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD ₉₅
Largemouth bass	255	35 (±6)	22 (±5)

Dataset = cfdpscor.d09

Table 128. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 2.00 hours of electrofishing at Corinth Lake during April 2009. Fish were collected in 15-minute runs.

Age	Inch class																			STD		
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	%	CPUE	ERR
1	9	24	3																44	14	21.83	5.36
2				15	59	61	3												138	44	69.17	10.86
3							9	9											18	6	9.00	1.88
4							15	9	8	11	9	1							53	17	26.37	5.60
5									1		4	9	3	2					19	6	9.56	2.26
6									1						6				7	2	3.63	0.82
7															3	6			9	3	4.25	0.73
8										1				5	3		9		18	6	8.93	1.44
9																			0	0	0.00	0.00
10																6	3	9	3	4.25	1.83	
Total	9	24	3	23	59	61	27	18	10	12	13	9	4	7	12	11	9	3	314	100	157.50	23.41
%	3	8	1	7	19	19	9	6	3	4	4	3	1	2	4	4	3	1	100			

Dataset = cfdagcor.d07 and cfdpscor.d09

Table 129. Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from Corinth Lake from 2000-2009.

Age	Year									
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	293.20	63.40	35.30	54.30	21.10	32.40	11.10	86.70	47.67	21.83
2	57.00	134.20	26.30	68.00	37.10	71.30	41.10	68.50	150.78	69.17
3	62.50	119.10	114.10	53.80	25.30	34.60	25.10	17.30	23.83	9.00
4	34.00	34.00	24.30	49.30	54.80	88.60	40.60	39.70	85.14	26.37
5	19.00	25.50	2.40	3.30	4.30	14.60	17.50	11.00	20.57	9.58
6	3.90	8.20	6.40	1.90	1.50	6.10	9.70	2.40	7.25	3.63
7	2.40	2.70	2.20	0.70	0.30	1.30	2.90	1.40	4.25	4.25
8	0.80	1.60	2.90	0.80	0.30	1.30	2.60	8.80	12.52	8.93
9	3.20			1.30	1.00	2.80	2.40			
10								2.30	6.00	4.25
11										
12										

Table 130. Population assessment for largemouth bass collected during spring electrofishing at Corinth Lake from 2000-2009 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE of age-1	Spring CPUE 12.0-14.9 in	Spring CPUE >15.0 in	Spring CPUE >20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2009	Value	11.1*	21.80	17.50	27.50	6.00	0.390	32.2	13	Good
	Score	3	2	1	3	4				
2008	Value	11.1*	47.70	69.50	37.50	7.50	0.519	40.5	18	Excellent
	Score	3	3	4	4	4				
2007	Value	11.1	86.70	21.50	22.50	5.50	0.498	39.3	16	Good
	Score	3	4	2	3	4				
2006	Value	10.1*	7.50	29.00	34.50	1.50	0.454	36.5	11	Fair
	Score	2	1	2	4	2				
2005	Value	10.1*	20.00	72.00	20.50	2.50	0.756	53.1	14	Good
	Score	2	2	4	3	3				
2004	Value	10.1*	17.50	40.00	5.00	1.00	0.871	58.1	10	Fair
	Score	2	2	3	1	2				
2003	Value	10.1*	51.30	23.30	6.00	0.70	0.77	54.0	9	Fair
	Score	2	3	2	1	1				
2002	Value	10.1	34.70	13.30	16.70	1.30	0.688	49.7	9	Fair
	Score	2	2	1	2	2				
2001	Value	8.7	63.40	20.80	9.60	0.00	0.805	55.3	9	Fair
	Score	1	3	2	2	1				
2000	Value	9.1	293.20	22.40	4.80	1.60	0.566	43.2	11	Fair
	Score	1	4	2	2	2				

Table 131. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Corinth Lake on 28 September 2009; numbers in parentheses are standard errors.

Species	inch class																Total	CPUE	
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19			20
Largemouth bass	23	3	15	58	39	27	14	12	5	1	1	2	0	0	2	2	2	206	137.33 (13.45)

Dataset = cfdwrcor.d09

Table 132. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Corinth Lake on 28 September 2009. Standard errors are in parentheses.

Species	Area	Length group						Total	
		8.0–11.9 in		12.0–14.9 in		≥15.0 in		No.	Wr
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Total	79	79 (1)	7	82 (2)	8	96 (3)	94	81 (1)

Dataset = cfdwrcor.d09

Table 133. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Corinth Lake.

Year class	Area	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
1999	Total	4.3	0.1	74.00	12.30	8.00	2.90	293.20	46.00
2000	Total	4.3	0.1	35.30	7.40	3.30	1.90	63.40	10.90
2001	Total	4.6	0.1	112.70	15.60	32.00	6.80	35.30	7.40
2002	Total	4.6	0.1	163.30	13.70	42.00	4.50	54.30	13.40
2003	Total	4.1	0.1	73.70	9.20	4.60	1.80	21.10	5.10
2004	Total	4.0	0.1	74.00	6.20	2.70	1.30	32.40	4.20
2005	Total	4.4	0.1	41.30	2.70	4.70	1.20	11.10	2.70
2006	Total	4.9	0.1	176.50	15.20	78.00	9.940	86.70	14.30
2007	Total	5.1	0.04	152.70	31.20	89.30	28.80	47.67	9.06
2008	Total	5.1	0.1	112.67	14.95	66.00	12.89	21.83	5.36
2009	Total	4.5	0.1	17.33	2.46	2.00	1.37		

Table 134. Species composition, relative abundance, and CPUE (fish/hr) of bluegill and redear sunfish collected in 2.50 hours of 7.5-minute electrofishing runs in Corinth Lake, May 2009; numbers in parentheses are standard errors.

Species	Inch class									Total	CPUE
	2	3	4	5	6	7	8	9	10		
Bluegill	23	86	124	169	324	93				819	327.60 (30.64)
Redear sunfish			1	5	34	129	72	22	1	264	105.60 (14.10)

Dataset = cfdpscor.d09

Table 135. PSD and RSD values calculated for sunfish collected during 2.50 hours of electrofishing at Corinth Lake during May 2009. Fish were collected in 7.5-minute runs.

Species	No. \geq stock size	PSD	RSD ^a
Bluegill	796	52 (\pm 3)	0 (\pm 0)
Redear sunfish	264	85 (\pm 4)	9 (\pm 3)

^aBluegill = RSD₈; Redear = RSD₉
Dataset = cfdpscor.d09

Table 136. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from Corinth Lake from 1992-2009; numbers in parentheses are standard errors.

Year	Length group				Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	>8.0 in	
1992	3.00 (1.70)	36.00 (24.90)	49.00 (8.50)	10.00 (5.50)	98.00 (30.40)
1993	2.70 (1.30)	42.00 (13.10)	54.00 (10.90)	20.70 (5.20)	119.30 (26.20)
1996	6.00 (3.90)	75.00 (12.00)	54.50 (14.50)	1.50 (0.70)	137.00 (25.90)
1998	2.00 (1.10)	80.00 (19.40)	50.50 (10.30)	3.00 (1.00)	135.50 (23.70)
1999	42.00 (17.10)	113.00 (16.50)	32.50 (7.20)	17.00 (5.80)	204.50 (26.60)
2000	8.80 (2.50)	270.40 (20.10)	100.80 (12.00)	20.80 (3.60)	400.80 (25.90)
2001	7.20 (4.00)	185.60 (18.00)	140.00 (14.80)	5.60 (2.10)	338.40 (23.50)
2002	2.40 (1.20)	140.00 (16.70)	56.80 (12.10)	0.00	199.20 (26.60)
2003	14.20 (6.20)	164.40 (14.10)	91.60 (10.70)	0.90 (0.90)	271.10 (23.30)
2004	17.60 (4.90)	174.40 (15.90)	61.60 (10.90)	0.00	253.60 (22.70)
2005	12.00 (4.20)	262.40 (32.70)	82.40 (22.20)	0.00	356.80 (47.80)
2006	40.40 (6.00)	211.20 (17.90)	32.80 (6.40)	0.00	284.40 (14.70)
2007	13.20 (2.60)	148.80 (12.10)	98.00 (10.20)	0.00	260.00 (17.90)
2008	4.80 (1.22)	180.40 (13.65)	105.20 (12.41)	0.40 (0.40)	290.80 (18.82)
2009	9.20 (4.03)	151.60 (15.26)	166.80 (19.43)	0.00	327.60 (30.64)

Dataset = cfdpscor.d09

Table 137. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from Corinth Lake in 2009.

Year	No.	Age					
		1	2	3	4	5	6
2008	16	3.3					
2007	15	2.7	4.8				
2006	10	2.5	4.6	5.8			
2005	14	2.7	4.7	6.1	6.9		
2004	1	2.4	4.2	5.4	6.4	7.2	
2003	1	2.4	4.4	5.7	6.1	6.9	7.5
Mean	57	2.8	4.4	5.9	6.8	7.1	7.5
Smallest		1.8	3.1	5.1	6.1	6.9	7.5
Largest		4.3	5.7	6.6	7.4	7.2	7.5
Std Error		0.1	0.1	0.1	0.1	0.1	
95% ConLo		2.7	4.2	5.8	6.6	6.8	
95% ConHi		3.0	4.5	6.1	7.0	7.3	

Intercept value = 0.00

Dataset = cfdagcor.d09

Table 138. Age frequency and CPUE (fish/hr) per inch class of bluegill collected during 2.50 hours of electrofishing at Corinth Lake during May 2009. Fish were collected in 7.5-minute runs.

Age	Inch class						Total	%	CPUE	STD
	2	3	4	5	6	7				ERR
1	23	86	10				119	14	47.42	9.94
2			114	56			171	21	68.32	6.91
3				113	108		221	27	88.27	8.96
4					216	70	286	35	114.30	13.41
5						12	12	1	4.65	0.83
6						12	12	1	4.65	0.83
Total	23	86	124	169	324	93	819	100	327.60	30.64
%	3	11	15	21	40	11	100			

Dataset = cfdagcor.d09 and cfdpscor.d09

Table 139. Electrofishing catch rate (fish/hr) of each age of bluegill collected from Corinth Lake from 2000-2009.

Age	Year									
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	32.00	11.50	2.40	14.20	23.30	12.00	47.70	29.50	8.12	47.42
2	295.50	167.50	108.40	153.80	142.00	200.80	168.30	123.60	149.70	68.32
3	37.90	140.90	71.80	47.80	33.60	98.30	27.20	22.40	45.38	88.27
4	2.20	1.50	16.60	22.10	20.60	34.20	40.40	74.30	24.16	114.30
5	13.30	3.90		33.20	34.20	11.50	0.70	10.20	39.44	4.65
6	2.20								24.00	4.65
7	2.20									

Table 140. Population assessment for bluegill collected during spring electrofishing at Corinth Lake from 2000-2009 (scoring based on statewide assessments).

Year		Mean length age-2+ at capture	Years to 6.0 in	CPUE ≥6.0 in	CPUE ≥8.0 in	Total score	Assessment rating
2009	Value	4.8	3-3+	166.80	0.00	10	Fair
	Score	3	3	4	0		
2008	Value	4.3	3-3+	105.60	0.40	10	Fair
	Score	3	3	4	1		
2007	Value	4.6	3-3+	98.00	0.00	10	Fair
	Score	3	3	4	0		
2006	Value	4.1	3-3+	32.80	0.00	7	Fair
	Score	3	3	2	0		
2005	Value	4.0	3-3+	82.40	0.00	9	Fair
	Score	3	3	4	0		
2004	Value	4.1	2-2+	61.60	0.00	9	Fair
	Score	2	4	3	0		
2003	Value	4.3	2-2+	92.40	0.90	11	Good
	Score	2	4	4	1		
2002	Value	4.2	2-2+	56.80	0.00	9	Fair
	Score	2	4	3	0		
2001	Value	4.3	2-2+	145.60	5.60	12	Good
	Score	2	4	4	2		
2000	Value	5.3	2-2+	121.60	20.80	16	Excellent
	Score	2	4	4	4		

Table 141. Electrofishing CPUE (fish/hr) for each length group of redear sunfish collected from Corinth Lake from 1992-2009; numbers in parentheses are standard errors.

Year	Length group					Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	>=8.0 in	>=10.0 in	
1992	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
1993	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	2.00 (2.00)	1.30 (1.30)	2.00 (2.00)
1996	0.50 (0.50)	7.00 (2.80)	5.50 (2.70)	10.50 (3.50)	4.00 (1.70)	23.50 (3.90)
1998	0.00 (0.00)	4.00 (0.80)	0.50 (0.50)	19.00 (4.30)	15.50 (3.30)	23.50 (4.00)
1999	0.00 (0.00)	3.70 (1.60)	2.70 (1.10)	5.30 (1.50)	3.20 (1.10)	21.50 (3.50)
2000	0.00 (0.00)	14.40 (4.10)	33.60 (15.80)	52.80 (6.60)	16.80 (4.20)	100.80 (21.90)
2001	1.60 (1.10)	20.80 (5.00)	54.40 (9.20)	72.80 (10.00)	44.00 (8.70)	149.60 (15.60)
2002	0.00 (0.00)	4.00 (1.80)	6.40 (2.00)	82.40 (15.40)	52.00 (8.70)	92.80 (15.90)
2003	0.90 (0.90)	11.60 (3.60)	11.60 (2.40)	28.40 (5.20)	24.90 (5.60)	52.40 (6.10)
2004	0.80 (0.80)	13.60 (1.70)	17.60 (5.20)	19.20 (5.20)	14.40 (3.30)	51.20 (6.80)
2005	0.00 (0.00)	38.40 (4.40)	28.80 (6.40)	31.20 (11.10)	3.20 (1.80)	98.40 (17.30)
2006	0.00 (0.00)	19.60 (3.90)	54.00 (6.60)	7.60 (1.50)	0.40 (0.40)	81.20 (7.20)
2007	0.00 (0.00)	5.20 (1.30)	37.60 (7.10)	21.20 (5.50)	0.00 (0.00)	64.00 (11.70)
2008	0.00 (0.00)	10.40 (2.18)	33.60 (4.48)	27.60 (5.01)	0.00 (0.00)	71.60 (7.90)
2009	0.00 (0.00)	2.40 (1.02)	65.20 (7.60)	38.00 (7.47)	0.40 (0.40)	105.60 (14.10)

Dataset = cfdpscor.d09

Table 142. Mean back calculated lengths (in.) at each annulus for otoliths from redear sunfish collected from Corinth Lake in 2009.

Year	No.	Age						
		1	2	3	4	5	6	7
2007	13	3.4	6.1					
2006	19	3.2	6.1	7.7				
2005	1	3.6	6.7	8.2	8.9			
2004	6	3.5	6.2	7.5	8.5	9.2		
2003	8	3.1	6.0	7.1	7.9	8.6	9.2	
2002	1	2.8	5.4	6.5	7.2	7.7	8.4	9.0
Mean	48	3.3	6.1	7.5	8.1	8.8	9.1	9.0
Smallest		2.0	4.6	6.4	7.1	7.7	8.3	9.0
Largest		4.8	7.0	8.4	9.1	9.7	10.1	9.0
Std Error		0.1	0.1	0.1	0.1	0.2	0.2	
95% ConLo		3.1	6.0	7.3	7.9	8.5	8.7	
95% ConHi		3.4	6.3	7.7	8.4	9.1	9.5	

Intercept value = 0.00

Dataset = cfdagcor.d09

Table 143. Age frequency and CPUE (fish/hr) per inch class of redear sunfish collected during 2.50 hours of electrofishing at Corinth Lake during May 2009. Fish were collected in 7.5-minute runs.

Age	Inch class							Total	CPUE		STD ERR
	4	5	6	7	8	9	10		%		
2	1	5	31					37	14	14.64	2.70
3			3	129	39			172	65	68.67	9.27
4					7			7	2	2.62	0.49
5					7	11		18	7	7.02	1.77
6					20	9	1	29	11	11.77	2.35
7						2		2	1	0.88	0.28
Total	1	5	34	129	72	22	1	264	100	105.60	14.10
%	0	2	13	49	27	8	0	100			

Dataset = cfdagcor.d09 and cfdpscor.d09

Table 144. Electrofishing catch rate (fish/hr) of each age of redear sunfish collected from Corinth Lake from 2002-2009.

Age	Year								
	2002	2003	2004	2005	2006	2007	2008	2009	
1	0.8	2.2	2.8	5.2	1.2	5.20	39.14	14.64	
2	7.2	10.0	14.3	41.9	17.7	10.31	7.42	68.67	
3	50.7	26.5	25.1	40.8	51.1	17.41	7.74	2.62	
4	32.3	12.1	7.7	7.3	10.8	27.70	15.13	7.02	
5				3.2		3.37	2.17	11.77	
6								0.88	
7									
8									
9									
10	1.8	0.7	0.5						

Table 145. Population assessment for redear sunfish collected during spring electrofishing at Corinth Lake from 2001-2009 (scoring based on statewide assessments).

Year		Mean length age-3+ at capture	Years to 8.0 in	CPUE ≥8.0 in	CPUE ≥10.0 in	Total score	Assessment rating
2009	Value	7.7	3-3+	38.00	0.40		
	Score	4	4	4	1	13	Good
2008	Value	8.0	3-3+	27.60	0.00		
	Score	4	4	4	0	12	Good
2007	Value	7.6	3-3+	21.20	0.00		
	Score	4	4	4	0	12	Good
2006	Value	7.3	3-3+*	7.60	0.40		
	Score	4	4	2	1	11	Good
2005	Value	7.6	3-3+	31.20	3.20		
	Score	4	4	4	2	14	Excellent
2004	Value	9.1*	2-2+	19.20	14.40		
	Score	4	4	4	4	16	Excellent
2003	Value	9.1*	2-2+	28.40	24.90		
	Score	4	4	4	4	16	Excellent
2002	Value	9.1	2-2+	82.40	52.00		
	Score	4	4	4	4	16	Excellent

Table 146. Number of fish and the relative weight (Wr) for each length group of bluegill and redear sunfish collected at Corinth Lake on 28 September and 6 October 2009. Standard errors are in parentheses.

Species	Length group						No.	Wr
	No.	Wr	No.	Wr	No.	Wr		
Bluegill	3.0–5.9 in		6.0–7.9 in		≥8.0 in		83	86 (2)
	54	91 (2)	29	77(2)				
Redear sunfish	4.0–6.9 in		7.0–8.9 in		≥9.0 in		95	90 (1)
	42	91 (2)	43	89 (1)	10	89 (2)		

Dataset = cfdwrcor.d09

Table 147. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected in 2.0 hours of 15-minute electrofishing runs in Elmer Davis Lake, April 2009; 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	22				
Largemouth bass	3	19	9	6	35	82	56	116	131	73	46	33	13	13	9	5	3	6	3	4	665	332.50 (30.20)		

Dataset = cfdpselm.d09

Table 148. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Elmer Davis Lake from 1996-2009; numbers in parentheses are standard errors.

Year	Length group						Total
	<8.0 in	8.0-11.9 in	12.0-14.9 in	>15.0 in	>20.0 in		
1996	102.00 (15.30)	163.50 (19.50)	37.00 (6.20)	9.50 (3.40)	4.50 (1.40)	312.00 (32.70)	
1997	113.50 (20.10)	252.00 (27.20)	39.00 (5.60)	19.00 (3.70)	5.50 (1.84)	423.50 (43.90)	
1998	52.50 (9.50)	93.30 (6.80)	16.80 (2.30)	7.50 (1.70)	3.20 (1.05)	170.10 (15.10)	
1999	253.50 (32.92)	47.00 (8.34)	36.00 (6.93)	17.50 (5.45)	2.50 (1.05)	354.00 (45.36)	
2000	134.50 (14.70)	136.50 (11.00)	31.50 (6.00)	29.00 (4.40)	2.00 (1.31)	331.50 (21.30)	
2001	121.00 (17.00)	220.00 (21.20)	18.50 (2.40)	21.00 (4.10)	0.50 (0.50)	380.50 (24.90)	
2002	99.00 (16.30)	124.00 (12.30)	4.00 (1.30)	10.00 (2.70)	0.50 (0.50)	237.00 (26.20)	
2003	96.00 (10.20)	189.50 (16.50)	14.50 (3.90)	15.00 (2.70)	3.50 (1.59)	315.00 (25.10)	
2004	107.50 (10.00)	123.50 (10.00)	22.00 (3.50)	15.00 (1.70)	3.50 (1.59)	268.00 (17.40)	
2005	93.00 (10.60)	197.00 (11.20)	60.00 (10.40)	15.00 (2.40)	3.50 (1.18)	365.00 (27.20)	
2006	74.50 (11.50)	123.50 (12.20)	40.50 (7.90)	6.50 (1.80)	1.00 (0.65)	245.00 (15.40)	
2007	32.50 (5.80)	137.00 (16.40)	41.50 (10.30)	8.00 (2.80)	1.00 (0.65)	219.00 (28.90)	
2008	149.00 (17.85)	188.00 (20.72)	45.00 (5.64)	14.50 (4.00)	2.00 (1.31)	396.50 (35.19)	
2009	36.00 (6.00)	192.50 (18.98)	76.00 (9.04)	28.00 (3.78)	6.50 (2.26)	332.50 (30.20)	

Dataset = cfdpselm.d09

Table 149. PSD and RSD₁₅ values obtained for largemouth bass from spring electrofishing samples in Elmer Davis Lake in 2009; confidence intervals are in parentheses.

Species	No. >=8.0 in	PSD	RSD ₁₅
Largemouth bass	593	35 (±4)	9 (±2)

Dataset = cfdpselm.d09

Table 150. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 2.00 hours of electrofishing at Elmer Davis Lake during April 2009. Fish were collected in 15-minute runs.

Age	Inch class																			Total	% CPUE	ERR	STD	
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21					22
1	3	19	9	6	35	55	9	12												37	6	18.50	3.70	
2					27	47	70	26													111	17	55.30	6.75
3									79	21											170	26	84.90	8.75
4											12	26	21	15	8	9					99	15	49.73	6.73
5																					91	14	45.62	5.09
6																					33	5	16.72	2.02
7																					97	15	48.52	5.67
8																					10	2	5.21	0.60
9																					3	0	0.00	0.00
10																					3	0	1.50	0.73
11																					6	4	3.00	1.96
Total	3	19	9	6	35	82	56	116	131	73	46	33	13	13	9	5	3	6	3	4	665	100	332.50	30.20
%	0	3	1	1	5	12	8	17	20	11	7	5	2	2	1	1	0	1	0	1	100			

Dataset = cfdagelm.d08 and cfdpselm.d09

Table 151. Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from Elmer Davis Lake from 2000-2009.

Age	Year									
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	73.80	52.80	80.60	57.50	94.40	78.10	68.10	26.90	127.50	18.50
2	123.70	151.20	45.00	96.10	66.10	93.10	31.10	59.10	60.92	55.30
3	80.30	103.30	67.70	85.40	47.90	72.90	61.10	51.10	95.08	84.90
4	12.40	42.50	30.90	52.40	10.30	16.00	11.80	11.30	31.64	49.73
5	14.50	10.70	3.80	8.60	22.60	50.20	39.00	35.90	29.77	45.62
6	17.60	4.20	1.50	1.40	14.40	43.50	29.20	28.80	13.00	16.72
7	4.30	4.30	1.40	1.30	5.30	5.30	2.50	3.20	31.52	48.52
8	2.00	5.10	2.20	1.80	2.40	2.10	0.80	1.50	3.07	5.21
9	0.50	2.50	1.40	1.80	1.00	1.00	0.50	1.00	0.00	0.00
10	1.50	3.00	1.90	4.80	1.20	0.30	0.30	0.30	2.00	1.50
11	1.00	0.50	0.90	0.60	2.50	2.50	0.50		2.00	3.00
12				3.00						
13				0.50						
14		0.50								

Table 152. Population assessment for largemouth bass collected during spring electrofishing at Elmer Davis Lake from 2000-2009 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE of age-1	Spring CPUE 12.0-14.9 in	Spring CPUE >15.0 in	Spring CPUE >20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2009	Value	9.8*	18.50	76.00	28.00	6.50	0.432	35.1	14	Good
	Score	1	2	4	3	4				
2008	Value	9.8	127.50	45.00	14.50	2.00	0.489	38.6	13	Good
	Score	1	4	3	2	3				
2007	Value	10.5*	26.90	41.50	8.00	1.00	0.624	46.4	11	Fair
	Score	2	2	3	2	2				
2006	Value	10.5*	68.10	40.50	6.50	1.00	0.607	45.5	12	Good
	Score	2	3	3	2	2				
2005	Value	10.5*	78.10	60.00	15.00	3.50	0.570	43.4	15	Good
	Score	2	4	4	2	3				
2004	Value	10.5	94.40	22.00	15.00	3.50	0.481	38.2	13	Good
	Score	2	4	2	2	3				
2003	Value	10.3*	57.50	14.50	15.00	3.50	0.512	40.1	11	Fair
	Score	2	3	1	2	3				
2002	Value	10.3*	80.60	4.00	10.00	0.50	0.541	41.8	10	Fair
	Score	2	4	1	2	1				
2001	Value	10.3	52.80	18.50	21.00	0.50	0.516	40.3	9	Fair
	Score	2	2	1	3	1				
2000	Value	10.7	73.80	31.50	29.00	2.00	0.618	46.1	13	Good
	Score	2	3	2	3	3				

Table 153. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Elmer Davis Lake in September 2009: 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	20	22
Largemouth bass	1	68	63	29	2	18	33	27	58	41	20	14	15	6	6	2	1	1	1	406	270.67 (22.09)

Dataset = cfdwreim.d09

Table 154. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Elmer Davis Lake on 28 September 2009. Standard errors are in parentheses.

Species	Area	Length group						Total	
		8.0–11.9 in		12.0–14.9 in		≥15.0 in		No.	Wr
		No.	Wr	No.	Wr	No.	Wr		
Largemouth bass	Total	103	85 (1)	49	88 (1)	17	91 (2)	169	86 (1)

Dataset = cfdwreim.d09

Table 155. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Elmer Davis Lake.

Year class	Area	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2000	Total	3.8	(0.1)	269.60	(33.20)	14.40	(2.00)	52.80	(9.70)
2001	Total	4.5	(0.1)	210.70	(25.00)	47.30	(3.00)	80.60	(13.30)
2002	Total	4.3	(0.1)	67.30	(10.00)	13.30	(3.20)	57.50	(7.90)
2003	Total	4.2	(0.1)	179.00	(32.00)	27.00	(10.00)	94.40	(9.90)
2004	Total	4.3	(0.03)	180.00	(38.50)	24.70	(4.30)	78.10	(9.90)
2005	Total	4.4	(0.04)	190.00	(29.60)	33.30	(5.30)	68.10	(10.20)
2006	Total	3.7	(0.04)	166.00	(17.40)	8.00	(2.50)	26.90	(6.10)
2007	Total	4.3	(0.05)	114.00	(24.60)	17.30	(5.40)	127.50	(16.40)
2008	Total	3.9	(0.1)	73.33	(9.61)	0.67	(0.67)	18.50	(3.70)
2009	Total	4.2	(0.1)	108.00	(14.24)	20.00	(4.95)		

Table 156. Species composition, relative abundance, and CPUE (fish/hr) of bluegill and redear sunfish collected in 3.75 hours of 7.5-minute electrofishing runs in Elmer Davis Lake, May 2009; numbers in parentheses are standard errors.

Species	Inch class											Total	CPUE
	1	2	3	4	5	6	7	8	9	10	11		
Bluegill	5	28	75	74	69	50	77	4				382	101.87 (7.30)
Redear sunfish		3	1	1	19	46	24	15	2	6	1	118	31.47 (4.29)

Dataset = cfdpselm.d09

Table 157. PSD and RSD values calculated for sunfish collected during 3.75 hours of electrofishing at Elmer Davis Lake during May 2009. Fish were collected in 7.5-minute runs.

Species	No. \geq stock size	PSD	RSD ^a
Bluegill	349	38 (\pm 5)	1 (\pm 1)
Redear sunfish	114	42 (\pm 9)	8 (\pm 5)

^aBluegill = RSD₈; Redear = RSD₉
Dataset = cfdpselm.d09

Table 158. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from Elmer Davis Lake from 1994-2009; numbers in parentheses are standard errors.

Year	Length group				Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	>8.0 in	
1994	1.00 (0.70)	12.00 (3.00)	29.00 (5.70)	1.50 (1.10)	43.50 (6.00)
1995	NS				
1996	42.00 (7.90)	75.00 (9.70)	55.00 (11.20)	20.00 (5.40)	192.00 (22.50)
1997	0.50 (0.50)	79.50 (12.50)	59.00 (16.30)	5.50 (2.10)	144.50 (28.60)
1998	2.70 (1.10)	17.10 (4.50)	7.70 (1.60)	2.90 (1.10)	30.40 (5.80)
1999	579.50 (74.50)	502.00 (65.40)	23.00 (7.60)	5.00 (3.40)	1,109.50 (130.90)
2000	NS				
2001	1.50 (0.80)	109.50 (28.00)	157.00 (23.50)	0.50 (0.50)	268.50 (49.60)
2002	33.60 (11.80)	78.40 (19.30)	272.80 (55.30)	0.80 (0.80)	385.60 (78.20)
2003	17.60 (4.70)	89.60 (12.90)	151.20 (30.10)	2.40 (1.70)	260.80 (37.10)
2004	40.00 (8.70)	100.80 (13.70)	119.20 (29.80)	8.80 (3.90)	268.80 (44.70)
2005	38.40 (11.40)	92.80 (16.10)	59.20 (9.80)	8.80 (3.00)	199.20 (23.90)
2006	162.40 (35.90)	115.20 (20.10)	42.40 (8.50)	16.00 (4.50)	336.00 (43.80)
2007	7.60 (1.80)	81.20 (7.40)	42.80 (9.70)	9.20 (2.40)	140.80 (14.90)
2008	34.40 (5.66)	133.20 (24.68)	58.80 (9.31)	6.80 (2.34)	233.20 (32.99)
2009	8.80 (1.81)	58.13 (6.52)	33.87 (3.71)	1.07 (0.50)	101.87 (7.30)

Dataset = cfdpselm.d09

Table 159. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from Elmer Davis Lake in 2009.

Year	No.	Age			
		1	2	3	4
2008	10	2.5			
2007	26	2.4	4.4		
2006	11	2.1	4.2	6.2	
2005	13	2.5	4.3	6.1	7.4
Mean	60	2.4	4.3	6.1	7.4
Smallest		1.5	2.9	5.3	6.6
Largest		4.0	5.7	7.3	8.2
Std Error		0.1	0.1	0.1	0.1
95% ConLo		2.2	4.1	5.9	7.1
95% ConHi		2.5	4.5	6.4	7.6

Intercept value = 0.00

Dataset = cfdagelm.d09

Table 160. Age frequency and CPUE (fish/hr) per inch class of bluegill collected during 3.75 hours of electrofishing at Elmer Davis Lake during May 2009. Fish were collected in 7.5-minute runs.

Age	Inch class								Total	% CPUE	STD ERR	
	1	2	3	4	5	6	7	8				
1	5	24	15						44	12	11.73	1.84
2		4	60	74	39				177	46	47.31	5.55
3					30	30	13		72	19	19.31	1.71
4						20	64	4	88	23	23.51	2.59
Total	5	28	75	74	69	50	77	4	382	100	101.87	7.30
%	1	7	20	19	18	13	20	1	100			

Dataset = cfdagelm.d09 and cfdpselm.d09

Table 161. Electrofishing catch rate (fish/hr) of each age of bluegill collected from Elmer Davis Lake from 2001-2008.

Age	Year									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	
1	2.60	35.80	21.20	43.10	21.20	237.80	2.50	61.91	11.73	
2	45.40	69.40	75.90	95.00	97.20	41.60	82.10	76.36	47.31	
3	212.90	20.00	34.60	45.40	47.40	26.90	24.40	69.15	19.31	
4	7.60	246.30	21.30	29.60	12.20	19.80	18.30	16.98	23.51	
5		14.20	107.80	7.80	6.00	9.90	8.00	3.16		
6				46.80	5.00		3.50	1.75		
7				1.10	3.90		2.00	0.00		
8								2.33		
9								0.58		
10								0.58		

Table 162. Population assessment for bluegill collected during spring electrofishing at Elmer Davis Lake from 2001-2009 (scoring based on statewide assessments).

Year		Mean length age-2+ at capture	Years to 6.0 in	CPUE ≥ 6.0 in	CPUE ≥ 8.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
	Score	2	4	2	1				
2008	Value	4.1	2-2+	65.60	6.80	0.748	52.7	11	Good
	Score	2	4	3	2				
2007	Value	4.1	2-2+	52.00	9.20	0.718	51.2	12	Good
	Score	2	4	3	3				
2006	Value	5.1	2-2+	58.40	16.00	0.464	37.1	15	Excellent
	Score	4	4	3	4				
2005	Value	4.2	2-2+	68.00	8.80	0.729	51.7	12	Good
	Score	2	4	3	3				
2004	Value	4.3	2-2+	128.00	8.80	*	*	13	Good
	Score	2	4	4	3				
2003	Value	4.5	2-2+	153.60	2.40	*	*	13	Good
	Score	3	4	4	2				
2002	Value	4.5	2-2+	273.60	0.80	*	*	13	Good
	Score	3	4	4	2				
2001	Value	4.2	2-2+	157.50	0.50	*	*	12	Good
	Score	2	4	4	2				

Table 163. Electrofishing CPUE (fish/hr) for each length group of redear sunfish collected from Elmer Davis Lake from 1994-2009; numbers in parentheses are standard errors.

Year	Length group					Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	≥10.0 in	
1994	0.00	0.50 (0.50)	0.50 (0.50)	2.50 (2.00)	1.50 (1.50)	3.50 (1.90)
1995			NS			
1996		7.50 (1.60)	23.50 (3.30)	4.00 (1.10)	1.00 (0.70)	35.00 (4.60)
1997	0.00	1.00 (1.00)	0.50 (0.50)	13.00 (3.80)	0.50 (0.50)	14.50 (4.60)
1998	0.00	0.30 (0.30)	0.00	0.00	0.00	0.30 (0.30)
1999	0.00	19.00 (4.40)	13.00 (2.20)	20.50 (5.30)	0.00	52.50 (7.50)
2000			NS			
2001	0.00	3.50 (2.10)	21.00 (5.10)	3.50 (1.60)	1.00 (0.70)	28.00 (4.80)
2002	0.80 (0.80)	4.00 (1.80)	8.80 (4.70)	15.20 (4.20)	0.80 (0.80)	28.80 (6.10)
2003	1.60 (1.10)	7.20 (5.50)	31.20 (7.40)	19.20 (6.20)	0.80 (0.80)	59.20 (13.50)
2004	4.00 (2.70)	8.00 (3.40)	66.40 (18.40)	24.80 (9.70)	3.20 (2.40)	103.20 (29.10)
2005	0.00	11.20 (2.40)	54.40 (16.70)	63.20 (18.60)	4.80 (1.80)	128.80 (26.90)
2006	0.00	12.80 (4.00)	4.80 (1.80)	30.40 (6.50)	4.00 (1.30)	51.20 (10.00)
2007	0.40 (0.40)	1.60 (0.70)	18.00 (3.50)	15.60 (3.40)	2.00 (1.10)	35.60 (5.60)
2008	1.20 (0.66)	13.20 (2.74)	40.80 (9.16)	17.60 (5.27)	2.80 (1.45)	72.80 (14.68)
2009	0.80 (0.59)	5.60 (1.28)	18.67 (3.24)	6.40 (1.82)	1.87 (0.74)	31.47 (4.29)

Dataset = cfdpseim.d09

Table 164. Mean back calculated lengths (in.) at each annulus for otoliths from redear sunfish collected from Elmer Davis Lake in 2009.

Year	No.	Age						
		1	2	3	4	5	6	7
2008	5	2.9						
2007	22	3.3	6.2					
2006	11	3.0	6.1	8.0				
2005	1	3.0	6.3	7.8	8.6			
2003	1	2.3	5.0	7.3	8.5	9.3	10.0	
2002	3	3.0	5.8	7.4	8.3	9.1	9.8	10.4
Mean	73	3.1	6.1	7.9	8.4	9.1	9.9	10.4
Smallest		2.2	4.7	6.8	8.0	9.0	9.6	10.2
Largest		4.6	7.5	8.7	8.7	9.3	10.0	10.5
Std Error		0.1	0.1	0.1	0.1	0.1	0.1	0.1
95% ConLo		2.9	5.9	7.6	8.2	9.0	9.7	10.2
95% ConHi		3.3	6.3	8.1	8.6	9.3	10.0	10.6

Intercept value = 0.00

Dataset = cfdagelm.d09

Table 165. Age frequency and CPUE (fish/hr) per inch class of redear sunfish collected during 3.75 hours of electrofishing at Elmer Davis Lake during May 2009. Fish were collected in 7.5-minute runs.

Age	Inch class										Total	%	CPUE	STD
	2	3	4	5	6	7	8	9	10	11				ERR
1	3	1									4	3	1.07	0.63
2			1	19	46	11					77	65	20.44	2.98
3						13	13	2			28	24	7.52	1.77
4							2				2	2	0.57	0.24
5											0	0	0.00	0.00
6									2	1	3	2	0.67	0.31
7									5		5	4	1.20	0.53
Total	3	1	1	19	46	24	15	2	6	1	118	100	31.47	4.29
%	3	1	1	16	39	20	13	2	5	1	100			

Dataset = cfdagelm.d09 and cfdpselm.d09

Table 166. Electrofishing catch rate (fish/hr) of each age of redear sunfish collected from Elmer Davis Lake from 2001-2009.

Age	Year									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	
1	0.00	35.80	7.20	7.20	0.00	16.00	0.40	6.80	1.07	
2	0.50	69.40	34.40	78.80	61.30	4.80	20.20	45.12	20.44	
3	13.50	20.00	4.10	8.70	53.60	23.40	6.70	17.52	7.52	
4	7.90	246.30	13.50	8.50	10.10	7.00	6.70	1.03	0.57	
5	5.60	14.20			1.00		1.70	1.40	0.00	
6	0.50				2.80			0.93	0.67	
7									1.20	

Table 167. Population assessment for redear sunfish collected during spring electrofishing at Elmer Davis Lake from 2001-2009 (scoring based on statewide assessments).

Year		Mean length age-3+ at capture	Years to 8.0 in	CPUE ≥8.0 in	CPUE ≥10.0 in	Total score	Assessment rating
							Assessment rating
2009	Value	8.0	3-3+	6.40	1.90	12	Good
	Score	4	4	2	2		
2008	Value	8.8	2-2+	17.60	2.80	15	Excellent
	Score	4	4	4	3		
2007	Value	8.6	2-2+	15.60	2.00	14	Excellent
	Score	4	4	4	2		
2006	Value	8.8	2-2+	30.40	4.00	15	Excellent
	Score	4	4	4	3		
2005	Value	8.7	2-2+	63.20	4.80	15	Excellent
	Score	4	4	4	3		
2004	Value	9.0*	2-2+*	24.80	3.20	15	Excellent
	Score	4	4	4	3		
2003	Value	9.0	2-2+	19.20	0.80	14	Excellent
	Score	4	4	4	2		
2002	Value	6.5*	4-4+*	15.20	0.80	13	Good
	Score	4	3	4	2		
2001	Value	6.5	4-4+	3.50	1.00	10	Fair
	Score	4	3	1	2		

Table 168. Number of fish and the relative weight (Wr) for each length group of bluegill and redear sunfish collected at Elmer Davis Lake on 28 September 2009. Standard errors are in parentheses.

Species	Length group						No.	Wr
	No.	Wr	No.	Wr	No.	Wr		
Bluegill	3.0–5.9 in		6.0–7.9 in		≥8.0 in		125	95 (2)
	74	97 (3)	51	92 (1)	3	80 (3)		
Redear sunfish	4.0–6.9 in		7.0–8.9 in		≥9.0 in		56	97 (2)
	39	94 (3)	13	105 (2)	3	107 (5)		

Dataset = cfdwreilm.d09

Table 169. Fishery statistics derived from a daytime creel survey at Elmer Davis Lake (149 acres) during 09 April through 30 October 2009.

	<u>2009</u>		<u>1991</u>	
Fishing Trips				
No. of fishing trips (per acre)	3,862	(28.4)	10,621	(71.3)
Fishing Pressure				
Total man-hours (S.E.) ^a	19,544	(556)	45,264	(3,943)
Man-hours/acre	143.70		303.78	
Catch / Harvest				
No. of fish caught (S.E.)	28,784	(2,714)	29,477	(3,248)
No. of fish harvested (S.E.)	18,772	(2,092)	22,833	(2,473)
Lb of fish harvested	6,317		9,160	
Harvest Rates				
Fish/hour	1.00		0.50	
Lb/hour	0.46		0.20	
Fish/acre	138.03		153.24	
Lb/acre	46.45		61.48	
Catch Rates				
Fish/hour	1.57		0.65	
Fish/acre	211.64		197.83	
Miscellaneous Characteristics				
Male	87.4		82.5	
Female	12.6		17.6	
Resident	95.3		76.8	
Non-resident	4.7		23.2	
Method (%)				
Still fishing	79.9		58.5	
Casting	18.5		39.1	
Fly	0.8		1.5	
Trolling	0.8		0.8	
Mode (%)				
Boat	90.1		86.9	
Bank	6.4		7.5	
Dock	3.4		5.6	

^a S.E. = Standard Error

Table 170. Fish harvest derived from a creel survey on Elmer Davis (149 acres) from 09 April to 30 October 2009.

	Black bass group	Largemouth bass	Crappie group	Black crappie	White crappie	Catfish group	Channel catfish	Panfish group	Bluegill	Redear sunfish	Wamouth	Green sunfish	Rock bass	Anything	Illegal bass
No caught (per acre)	3,387.47 (24.91)	3,387.47 (24.91)	3,688.05 (27.12)	3,636.05 (26.74)	52.01 (0.38)	1,790.57 (13.17)	1,790.57 (13.17)	19,890.58 (146.25)	16,016.79 (110.42)	4,739.39 (34.85)	105.70 (0.78)	5.23 (0.04)	23.48 (0.17)		26.83 (0.20)
No. harvested (per acre)	1,325.54 (9.75)	1,325.54 (9.75)	3,081.33 (22.66)	3,076.10 (22.62)	5.23 (0.04)	1,017.56 (7.48)	1,017.56 (7.48)	13,320.99 (97.95)	9,526.35 (70.05)	3,725.24 (27.39)	53.72 (0.40)	5.23 (0.04)	10.45 (0.08)		26.83 (0.20)
% of total no. harvested	7.06	7.06	16.41	16.38	0.03	5.42	5.42	70.96	50.75	19.84	0.29	0.03	0.06		0.14
Lb. harvested (per acre)	786.8 (5.79)	786.8 (5.79)	1,436.3 (10.56)	1,433.9 (10.54)	2.4 (0.02)	1,041.3 (7.66)	1,041.3 (7.66)	3,029.9 (22.28)	1,998.0 (14.69)	1,018.3 (7.49)	11.2 (0.08)	1.1 (0.01)	1.3 (0.01)		23.1 (0.17)
% of total lb. harvested	12.45	12.45	22.74	22.70	0.04	16.48	16.48	47.96	31.63	16.12	0.18	0.02	0.02		0.37
Mean length (in)		10.6		9.7	10.0				7.0	7.5	6.8	7.0	5.5		12.0
Mean weight (lb)		0.59		0.48	0.45			1.00	0.21	0.29	0.22	0.21	0.12		0.86
No. of fishing trips for that species	788.23		538.66			149.66		1,750.00						635.66	
% of all trips	20.41		13.95			3.88		45.31						16.46	
Hours fished for that species (per acre)	3,988.58 (29.33)		2,725.73 (20.04)			755.32 (5.57)		8,855.35 (65.11)						3,216.55 (23.65)	
No. harvested fishing for that species	1,084		1,847			392		11,265							
Lb. harvested fishing for that species	604.3		864.0			388.6		2,536.6							
No./hour harvested fishing for that species	0.273		0.751			0.534		1.309							
% success fishing for that species	32.17		49.59			48.60		62.20						40.21	

Table 171. Length distribution (length of released fish are estimated) for each species of fish harvested at Elmer Davis Lake (149 acres) from 09 April to 30 October 2009.

	Inch class																							
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
Largemouth bass																								
Harvested						31	67	696	464	(27)			24	6	6	12	6		14					
Released						104	37	262	281	427	687	149	42	55		12				6				
Black crappie																								
Harvested			44	117	452	787	991	467	153	36	15	7	7											
Released	6	39	6	129	245	32	97	6																
White crappie																								
Harvested								5																
Released									16	31														
Bluegill																								
Harvested		62	549	2,626	4,142	1,653	449	45																
Released		35	2,563	2,041	551	272	28																	
Redear sunfish																								
Harvested			79	593	1,657	1,010	266	103	17															
Released	246	510	195	34	23	6																		
Warmouth																								
Harvested				20	29	5																		
Released			19	19	6	8																		
Green sunfish																								
Harvested			5																					
Rock bass																								
Harvested			5	5																				
Released			7	6																				
Channel catfish																								
Harvested										119	222	238	141	119	65	38	5	43	11	11	6	6		
Released										42	6	6	12	48	12	6	12	48	11	6	6	11		

Table 172. Black bass catch and harvest statistics derived from a creel survey at Elmer Davis Lake (149 acres) for black bass caught and released by all anglers from 09 April to 30 October 2009.

	Largemouth bass	
	Catch and Release	
	Harvest	Total
Total no of bass	1,325.54	3,387.47
	12.0-14.9 in	≥15.0 in
	1,263	114.9
% of black bass harvested by no.	100.0	
Total weight of fish (lbs)	786.8	2,651
% of black bass harvest by weight	100.0	83.2
Mean length	10.6	
Mean weight	0.59	
Rate (fish/h)	0.073	

Table 173. Monthly black bass angling success at Elmer Davis Lake during the 2009 creel survey.

Month	Total no. of black bass caught by all anglers		No. of fishing trips for black bass		Hours fished by black bass anglers		Black bass caught by black bass anglers		Black bass harvested by black bass anglers	
	black bass caught by all anglers	black bass harvested by anglers	trips for black bass	black bass	by black bass anglers	black bass	black bass	black bass	black bass	black bass
April	201.23	120.74	123.23	134	623.57	0.247	67	0.124	0.246	0.124
May	717.30	265.09	166.60	499	843.03	0.604	203	0.246	0.246	0.246
June	229.99	15.68	69.64	188	352.40	0.615	5	0.017	0.017	0.017
July	618.77	121.44	152.94	584	773.89	0.802	98	0.135	0.135	0.135
August	389.77	184.51	72.17	260	365.21	0.934	130	0.467	0.467	0.467
September	430.90	269.31	91.32	385	462.10	0.552	244	0.350	0.350	0.350
October	799.77	348.77	112.32	758	568.38	0.960	337	0.427	0.427	0.427
Total	3,387.47	1,325.54	788.23	2,808	3,988.58	0.697	1,084	0.273	0.273	0.273
Mean										

t = < 0.01

Table 174. Crappie catch and harvest statistics derived from a creel survey at Elmer Davis Lake (149 acres) for crappie caught and released by all anglers from 08 April to 30 October 2009.

	Black crappie				White crappie			
	Harvest		Catch and Release		Harvest		Catch and Release	
	<9.0 in	≥9.0 in	<9.0 in	≥9.0 in	<9.0 in	≥9.0 in	<9.0 in	≥9.0 in
Total no of crappie	3,076.10	134.95	425.0	134.95	3,636.05	5.23	46.78	52.01
% of crappie harvested by no.	99.83					0.17		
Total weight of fish (lbs)	1,433.9	41.0	130.0	41.0	1,604.9	2.4	36.0	38.4
% of crappie harvest by weight	99.83					0.17		
Mean length	9.7					10.0		
Mean weight	0.48					0.45		
Rate (fish/h)	0.142					t		

t = 0.01

Table 175. Monthly crappie angling success at Elmer Davis Lake during the 2009 creel survey.

Month	Total no. of crappie caught 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	
	anglers	crappie	trips for crappie	trips for crappie	by crappie anglers	by crappie anglers	crappie anglers	crappie anglers	crappie anglers	crappie anglers	crappie anglers	crappie anglers
April	1,032.99	872.00	273.25	273.25	1,382.71	805	0.528	684	0.449			
May	1,278.66	1,083.74	154.11	154.11	779.81	780	1.027	702	0.924			
June	454.75	439.07	20.31	20.31	102.78	267	1.656	267	1.656			
July	179.27	173.49	-	-	-	-	-	-	-			
August	95.67	88.84	3.01	3.01	15.22	7	0.556	7	0.556			
September	472.33	285.88	40.59	40.59	205.38	294	1.740	145	0.858			
October	174.39	224.36	44.34	44.34	224.36	48	0.311	42	0.272			
Total	3,688.05	3,081.33	538.66	538.66	2,725.73	2,201	0.930	1,847	0.751			
Mean												

Table 176. Channel catfish catch and harvest statistics derived from a creel survey at Elmer Davis Lake (149 acres) for catfish caught and released by all anglers from 09 April to 30 October 2009.

	Channel Catfish		
	Harvest	Catch and Release	Total
Total no of channel catfish	1,017.56	12.0-14.9 in 54.0	1,790.57
% of channel catfish harvested by no.	100.0	≥15.0 in 95.0	
Total weight of fish (lbs)	1,041.3	121.2	1,431.1
% of channel catfish harvest by weight	100.0		
Mean length	14.6		
Mean weight	1.00		
Rate (fish/hr)	0.063		

Table 177. Monthly catfish angling success at Elmer Davis Lake during the 2009 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/hr by anglers		Catfish harvested/hr by anglers	
					catfish	anglers	catfish	anglers
May	467.80	140.34	-	-	-	-	-	-
June	339.76	214.31	49.33	249.61	0.354	78	0.242	0.242
July	514.68	329.63	24.47	123.82	0.623	127	0.571	0.571
August	164.01	88.84	21.05	106.52	0.444	21	0.333	0.333
September	298.31	244.45	40.59	205.38	1.289	166	1.146	1.146
October	6.01	-	8.87	44.87	0.256	6		
Total	1,790.57	1,017.56	149.66	757.32	0.640	392	0.534	0.534
Mean								

Table 178. Panfish catch and harvest statistics derived from a creel survey at Elmer Davis Lake (149 acres) for panfish caught and released by all anglers from 09 April to 30 October 2009.

	Bluegill			Redear sunfish			Warmouth			Rock bass			Green Sunfish								
	Catch and Release			Catch and Release			Catch and Release			Catch and Release			Catch and Release								
	Harvest	6.0-9.9 in	≥10.0 in	Harvest	6.0-9.9 in	≥10.0 in	Total	Harvest	6.0-9.9 in	≥10.0 in	Total	Harvest	6.0-9.9 in	≥10.0 in	Total						
Total no	9,526.35	351.44	0.0	15,016.79	3,725.24	258.15	0.0	4,739.39	53.72	32.98	0.0	105.70	10.45	6.02	0.0	23.48	5.23	0.00	0.0	0.0	5.23
% of panfish harvested by no.	71.5			28.0				0.4				0.1					0.0				0.0
Total weight of fish (lbs)	1,998.0	63.4	0.0	2,409.4	1,018.3	33.0	0.0	258.14	11.2	4.6	0.0	18.8	1.3	0.5	0.0	2.8	1.1	0.0	0.0	0.0	1.1
% of panfish harvest by weight	65.9			33.6				0.4				0.0					0.0				0.0
Mean length	7.0			7.5				6.8				5.5					7.0				7.0
Mean weight	0.21			0.29				0.22				0.12					0.21				0.21
Rate (fish/hr)	0.514			0.207				0.004				0.001					0.0003				0.0003

Table 179. Monthly panfish angling success at Elmer Davis Lake during the 2009 creel survey.

Month	Total no. of panfish caught by all anglers		Total no. of panfish harvested by all anglers		No. of fishing trips for panfish		Hours fished by panfish anglers		Panfish caught/hr by panfish anglers		Panfish harvested/hr by panfish anglers	
	anglers	panfish	anglers	panfish	panfish	panfish	anglers	panfish	panfish	panfish	panfish	panfish
April	697.60	281.72	281.72	75.01	75.01	379.57	80	0.240	27	0.080	27	0.080
May	5,473.28	4,358.35	4,358.35	528.96	4,444	2,676.63	4,444	1.522	3,555	1.217	3,555	1.217
June	2,953.27	2,393.98	2,393.98	240.84	2,591	1,218.71	2,591	2.184	2,142	1.805	2,142	1.805
July	4,406.60	2,700.63	2,700.63	388.46	3,666	1,965.69	3,666	2.022	2,163	1.193	2,163	1.193
August	2,726.64	1,872.43	1,872.43	252.60	2,583	1,278.22	2,583	1.716	1,777	1.180	1,777	1.180
September	2,755.25	1,238.83	1,238.83	172.49	2,651	872.85	2,651	3.284	1,180	1.462	1,180	1.462
October	877.94	475.05	475.05	91.63	818	463.68	818	2.142	421	1.102	421	1.102
Total	19,890.58	13,320.99	13,320.99	1,750.00	16,833	8,855.35	16,833	2.016	11,265	1.309	11,265	1.309
Mean												

ELMER DAVIS LAKE ANGLER ATTITUDE SURVEY 2009
(Based on 546 surveys)

1. Which species of fish do you fish for at Elmer Davis Lake (check all that apply)?
 Bass 48.0% Crappie 46.3% Bluegill 66.5% Redear sunfish 41.9% Channel catfish 28.2%
 2. Which one species do you fish for most at Elmer Davis Lake (check only one)?
 Bass 29.4% Crappie 12.7% Bluegill 42.7% Redear sunfish 8.5% Channel catfish 6.7%

Bass Anglers

3. What level of satisfaction do you have with bass fishing at Elmer Davis Lake?
 Very satisfied 19.8% Somewhat satisfied 44.1% Neutral 24.7% Somewhat dissatisfied 9.9% Very dissatisfied 0.4%
 No opinion 1.1%

3a. If you responded with somewhat or very dissatisfied in question (5) – what is the single most important reason for your dissatisfaction?
 Size of fish 40.7% Number of fish 37.0% Excessive vegetation 7.4% Excessive KDFWR sampling 7.4%
 Dissatisfaction with regulations 7.4%

Crappie Anglers

4. What level of satisfaction do you have with the crappie fishing at Elmer Davis Lake?
 Very satisfied 13.9% Somewhat satisfied 38.2% Neutral 38.2% Somewhat dissatisfied 8.4% Very dissatisfied 0.4%
 No opinion 0.8%

4a. If you responded with somewhat or very dissatisfied in question (6) – what is the single most important reason for your dissatisfaction?
 Number of fish 78.9% Size of fish 15.8% Excessive vegetation 5.3%

Bluegill Anglers

5. What level of satisfaction do you have with the bluegill fishing at Elmer Davis Lake?
 Very satisfied 28.4% Somewhat satisfied 46.9% Neutral 15.3% Somewhat dissatisfied 9.4% Very dissatisfied 0.0%
 No opinion 0.0%

5a. If you responded with somewhat or very dissatisfied in question (8) – what is the single most important reason for your dissatisfaction?
 Number of fish 61.8% Size of fish 35.3% Excessive vegetation 2.9%

Redear sunfish Anglers

6. What level of satisfaction do you have with the redear sunfish fishing at Elmer Davis Lake?
 Very satisfied 25.3% Somewhat satisfied 42.9% Neutral 25.3% Somewhat dissatisfied 0.5% Very dissatisfied 0.0%
 No opinion 0.0%

6a. If you responded with somewhat or very dissatisfied in question (8) – what is the single most important reason for your dissatisfaction?
 Number of fish 84.6% Size of fish 15.4%

Catfish Anglers

7. What level of satisfaction do you have with the catfish fishing at Elmer Davis Lake?
 Very satisfied 27.5% Somewhat satisfied 39.6% Neutral 28.2% Somewhat dissatisfied 1.3% Very dissatisfied 0.0%
 No opinion 3.4%

7a. If you responded with somewhat or very dissatisfied in question (9) – what is the single most important reason for your dissatisfaction?

Number of fish 100.0%

8. Would you support or oppose a reduction in the current statewide 30 fish daily crappie creel limit to 20 fish?

Support 48.0% Oppose 21.2% No Opinion 30.9%

9. How many times do you fish Elmer Davis eaver Lake a year?

First Time 15.6% 1 to 4 42.4% 5 to 10 19.1% More than 10 22.9%

10. Are you satisfied with the current size and creel limits on all sport fish at Elmer Davis Lake?

Yes 94.0% No 6.0%

Table 180. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected in 2.0 hours of 15-minute electrofishing runs in Kincaid Lake, April 2009; 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		
Spotted bass						1		4	3	1			1							10	5.00 (1.46)
Largemouth bass	1	2	3	12	13	27	16	38	64	54	48	38	46	50	44	30	17	26	1	530	265.00 (24.36)

Dataset = cfdpskin.d09

Table 181. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Kincaid Lake from 1992-2009; numbers in parentheses are standard errors.

Year	Length group					Total
	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	
1992	4.00 (0.00)	34.00 (3.10)	13.30 (1.80)	53.30 (4.10)	11.33 (1.76)	104.70 (3.50)
1995	27.50 (3.40)	38.50 (4.50)	17.50 (2.90)	65.00 (6.50)	13.50 (3.02)	148.50 (11.90)
1997	13.50 (2.90)	59.00 (6.20)	53.00 (4.20)	92.00 (14.30)	16.00 (3.70)	217.50 (18.00)
1999	15.00 (4.30)	60.00 (8.60)	55.00 (3.70)	94.00 (6.80)	16.50 (3.42)	224.00 (8.60)
2000	15.30 (5.70)	64.50 (7.00)	36.50 (5.50)	70.00 (7.80)	6.50 (1.05)	186.00 (16.30)
2001	16.00 (2.90)	99.30 (13.70)	35.30 (5.80)	102.70 (10.60)	8.00 (1.03)	253.30 (23.50)
2002	10.00 (4.50)	35.30 (9.40)	36.70 (8.40)	110.00 (14.80)	6.67 (1.98)	192.00 (29.20)
2003	23.40 (5.80)	70.30 (12.10)	32.60 (4.00)	94.90 (15.80)	7.43 (2.03)	221.10 (22.80)
2004	7.00 (2.90)	76.00 (12.50)	38.50 (5.00)	71.00 (10.00)	9.50 (1.50)	192.50 (16.50)
2005	22.00 (3.70)	56.00 (8.20)	69.50 (9.30)	113.00 (18.50)	15.00 (2.80)	260.50 (30.70)
2006	14.50 (3.50)	82.00 (8.30)	43.00 (5.00)	112.50 (9.80)	16.50 (4.17)	252.00 (14.90)
2007	21.50 (5.30)	50.50 (6.10)	47.50 (5.30)	96.00 (6.70)	15.50 (2.44)	215.50 (13.60)
2008	16.00 (3.38)	92.50 (11.50)	48.00 (6.37)	112.00 (15.21)	12.00 (3.63)	268.50 (31.87)
2009	15.50 (2.44)	72.50 (13.72)	70.00 (9.59)	107.00 (10.97)	13.50 (1.50)	265.00 (24.36)

Dataset = cfdpskin.d09

Table 182. PSD and RSD₁₅ values obtained for largemouth bass from spring electrofishing samples in Kincaid Lake in 2009; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD ₁₅
Largemouth bass	499	71 (± 4)	43 (± 4)

Dataset = cfdpskin.d09

Table 183. Mean back calculated lengths (in.) at each annulus for otoliths from largemouth bass collected from Kincaid Lake in 2009.

Year	No.	Age														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2008	6	4.8														
2007	28	4.5	7.3													
2006	23	3.7	7.6	9.9												
2005	27	3.9	7.5	10.5	12.5											
2004	9	4.1	7.8	9.9	12.1	13.3										
2003	7	4.7	8.6	11.2	13.3	14.9	15.7									
2002	3	4.7	8.3	10.4	12.6	14.1	15.4	16.6								
2001	1	4.2	8.6	10.3	12.2	13.9	14.7	15.4	16.2							
2000	4	4.4	8.6	11.8	14.4	15.7	17.1	17.8	18.4	18.9						
1999	1	5.4	10.4	14.3	15.9	16.9	17.8	18.8	19.5	20.1	20.8					
1994	1	4.4	8.4	12.2	14.5	17.3	18.3	18.9	19.2	19.7	20.3	20.4	20.8	21.0	21.1	21.3
Mean	110	5.5	7.7	10.4	12.8	14.5	16.2	17.4	18.4	19.3	20.5	20.4	20.8	21.0	21.1	21.3
Smallest		3.5	5.6	8.1	10.3	11.1	12.6	15.4	16.2	18.5	20.3	20.4	20.8	21.0	21.1	21.3
Largest		7.8	10.4	14.3	15.9	17.3	18.3	18.9	19.5	20.1	20.8	20.4	20.8	21.0	21.1	21.3
Std Error		0.1	0.1	0.1	0.2	0.3	0.4	0.4	0.4	0.2	0.3					
95% ConLo		5.4	7.5	10.1	12.4	13.8	15.4	16.7	17.6	18.8	20.0					
95% ConHi		5.7	7.9	10.7	13.1	15.2	17.0	18.2	19.2	19.7	21.1					

Intercept value = 0.00

Dataset = cfdagelm.d09

Table 184. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 2.00 hours of electrofishing at Kincaid Lake during April 2009. Fish were collected in 15-minute runs.

Age	Inch class																				Total	%	CPUE	STD ERR
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21					
1	1	2	2																	5	1	2.50	1.14	
2			1	12	13	18	1													45	9	22.62	2.59	
3						9	15	19	27											69	13	34.72	7.06	
4								19	27	41	43	15								145	27	72.28	10.23	
5									11	7	5	15	12							49	9	24.46	3.05	
6										7		8	12		29	8					63	12	31.34	2.56
7														23	15	8					45	9	22.58	1.96
8															50					50	9	25.00	5.06	
9																15	17			32	6	16.00	2.67	
10																		26		26	5	13.00	1.46	
15																			1	1	0	0.50	0.50	
Total	1	2	3	12	13	27	16	38	64	54	48	38	46	50	44	30	17	26	1	530	100	265.00	24.36	
%	0	0	1	2	2	5	3	7	12	10	9	7	9	9	8	6	3	5	0	100				

Dataset = cfdagkin.d09 and cfdpskin.d09

Table 185. Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from Kincaid Lake from 2000-2009.

Age	Year									
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	1.50	0.00	0.00	0.00	1.00	0.00	1.50	0.00	1.00	2.50
2	26.80	17.40	15.50	39.90	12.50	36.10	36.30	36.50	44.50	22.62
3	28.10	26.90	24.80	48.10	61.00	25.70	36.77	20.20	40.98	34.72
4	27.60	45.60	43.60	31.20	35.70	81.30	64.95	59.70	70.17	72.28
5	23.20	29.80	22.30	26.70	23.90	25.30	22.59	20.20	24.73	24.46
6	15.40	28.60	35.00	30.00	20.90	35.40	36.53	29.00	41.70	31.34
7	11.00	20.90	4.50	6.50	5.10	17.20	16.15	14.30	16.10	22.58
8	17.30	13.40	5.30	28.40	22.80	19.90	17.58	16.70	14.33	25.00
9	15.20	9.30	1.30	6.50	5.10	10.10	7.88	7.00	6.25	16.00
10	5.80	9.20		0.60	1.00	0.50	2.50	2.00	0.50	13.00
11	9.50	9.20		3.10	3.60	5.50	4.75	3.50	3.25	
12	3.30	2.30				1.80	2.25	3.30	2.50	
13	0.50	0.60								
14	1.00									
15				5.30						0.50
16				1.30						
17						1.80		2.50		

Table 186. Population assessment for largemouth bass collected during spring electrofishing at Kincaid Lake from 2000-2009 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE of age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥ 15.0 in	Spring CPUE ≥ 20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2009	Value	9.9	2.50	70.00	107.00	13.50	0.401	33.1		
	Score	1	1	4	4	4			14	Good
2008	Value	10.5*	1.00	48.00	112.00	12.00	0.156	29.4		
	Score	2	1	3	4	4			14	Good
2007	Value	10.5*	0.00	47.50	96.00	15.50	0.314	27.0		
	Score	2	0	3	4	4			13	Good
2006	Value	10.5*	1.50	43.00	112.50	16.50	0.309	26.6		
	Score	2	1	3	4	4			14	Good
2005	Value	10.5	0.00	69.50	113.00	15.00	0.344	29.1		
	Score	2	0	4	4	4			14	Good
2004	Value	10.5*	1.00	38.50	71.00	9.50	0.313	26.9		
	Score	2	1	3	4	4			14	Good
2003	Value	10.5	0.00	32.60	94.90	7.40	0.389	32.2		
	Score	2	0	2	4	4			12	Good
2002	Value	10.4	0.00	36.70	110.00	6.70	0.308	26.5		
	Score	2	0	3	4	4			13	Good
2001	Value	9.0	0.00	35.30	102.70	8.00	0.261	23.0		
	Score	1	0	3	4	4			12	Good
2000	Value	9.5	0.00	36.50	70.00	6.50	0.288	25.0		
	Score	1	0	3	4	4			12	Good

Table 187. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for largemouth bass in Kincaid Lake in October 2009: 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	42	6		1	13	16	18	18	27	27	23	19	16	11	8	8	14	3	1	271	180.67 (13.99)

Dataset = cfdwrkin.d09

Table 188. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Kincaid Lake on 1 October 2009. Standard errors are in parentheses.

Species	Area	Length group						Total	
		8.0–11.9 in		12.0–14.9 in		≥15.0 in		No.	Wr
		No.	Wr	No.	Wr	No.	Wr		
Largemouth bass	Total	90	91 (2)	58	91 (1)	44	96 (1)	192	92 (1)

Dataset = cfdwrkin.d09

Table 189. 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 in		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
1999	25	3.1	(0.2)	16.70	(5.70)	0.00		1.50	(1.10)
2000	11	3.1	(0.2)	4.70	(1.60)	0.00		0.00	
2001	36	2.9	(0.1)	20.60	(6.70)	0.00		0.00	
2002	76	2.6	(0.1)	43.40	(10.60)	0.00		0.00	
2003	33	2.8	(0.1)	22.00	(4.70)	0.00		1.00	(0.70)
2004	19	3.0	(0.1)	12.70	(4.30)	0.00		0.00	
2005	259	2.5	(0.03)	129.50	(19.30)	0.00		1.50	(0.70)
2006	64	2.7	(0.1)	42.70	(11.90)	0.00		0.00	
2007	29	3.2	(0.1)	19.30	(4.80)	0.70	(0.70)	1.00	(0.65)
2008	42	3.3	(0.1)	28.00	(2.07)	0.00		2.50	(1.14)
2009	47	2.7	(0.04)	31.33	(8.16)	0.00			

Dataset = cfdwrkin.d09

Table 190. Length composition, relative abundance, and CPUE (fish/set-night) of channel catfish at Kincaid Lake. Channel catfish were collected using baited, tandem hoop nets (72 hours soak time) that were set on 26 October 2009. Nets were pulled three days after setting them, and 3 sets of tandem nets were used for the sampling event.

Species	Inch class																			Total	Average per set
	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25		
Channel catfish	2	30	41	26	19	29	27	15	8	7	4	7	8	5	5	7	7	4	1	252	84.00 (31.19)

Dataset = cfdhkin.d09

Table 191. PSD and RSD₂₄ values obtained for channel catfish from tandem hoop net samples in Kincaid Lake in 2009; confidence intervals are in parentheses.

Species	No. \geq stock size	PSD	RSD ₂₄
Channel catfish	153	36 (\pm 7)	3 (\pm 3)

Dataset = cfdhnkin.d09

Table 192. Mean length at capture of channel catfish sampled from Kincaid Lake in 2009.

	Age										
	1+	2+	3+	4+	5+	6+	7+	8+	9+	10+	11+
Number of fish	17	5	6	11	4	10	6	3	4	4	2
Mean length (in.)	9.3	11.7	14.9	14.1	16.2	17.4	20.4	23.0	22.3	21.0	21.4
Std error	(0.2)	(0.4)	(0.5)	(0.7)	(1.8)	(0.9)	(1.5)	(1.1)	(0.6)	(1.1)	(1.5)
Smallest (in.)	7.9	10.8	13.3	11.4	12.6	14.4	17.4	20.8	20.7	19.0	19.9
Largest (in.)	10.3	13.3	16.5	18.1	21.2	22.2	25.6	24.1	23.7	24.2	22.9

Table 193. Age frequency and CPUE (fish/hr) per inch class of channel catfish collected during a 72 hour set of tandem hoop nets at Kincaid Lake during October 2009. Fish were collected using baited, tandem hoop nets (72 hours soak time) that were set on 26 October 2009.

Age	Inch class																			Total	%	CPUE	STD ERR	
	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25					
1+	2	30	41	22																	95	38	31.56	10.68
2+				4	10	7	5														26	11	8.83	3.33
3+							11	3	3	2											18	7	6.07	2.98
4+					10	15	11	6		2	1	2									46	18	15.41	6.25
5+						7			1	2					5						15	6	5.11	2.04
6+								6	4	2		2	2			3					18	7	6.16	2.45
7+											3	2	2					1	1		9	3	2.87	1.37
8+														2					2		4	1	1.22	0.72
9+														2		3	7				11	5	3.82	1.91
10+												3	2						1		6	2	1.96	1.01
11+												2				1					3	1	1.00	0.50
Total	2	30	41	26	19	29	27	15	8	7	4	7	8	5	5	7	7	4	1		252	100	84.00	31.19
%	1	12	16	10	8	12	11	6	3	3	2	3	3	2	2	3	3	2	01		100			

Dataset = cfdhnkin.d09 and cfdagkin.d09

Table 194. Number of fish and the relative weight (Wr) for each length group of channel catfish collected at Kincaid Lake in October 2009. Standard errors are in parentheses.

Species	Area	Length group						Total	
		11.0–15.9 in		16.0–23.9 in		\geq 24.0 in		No.	Wr
		No.	Wr	No.	Wr	No.	Wr		
Channel catfish	Total	24	94 (2)	25	99 (2)	5	104 (7)	54	97 (2)

Dataset = cfdhnkin.d09

Table 195. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected in 1.5 hours of 15-minute electrofishing runs in McNeely Lake, April 2009; 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	5	28	55	11	1	27	37	19	27	18	18	6	5	2	4	4	1	1	1	270	180.00 (17.19)

Dataset = cfdpsmcl.d09

Table 196. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from McNeely Lake from 1996-2009; numbers in parentheses are standard errors.

Year	Length group					Total
	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	≥20.0 in	
1996	77.30 (9.20)	6.70 (2.00)	18.00 (3.40)	23.30 (2.80)	0.00 (0.00)	125.30 (11.00)
1998	80.00 (11.10)	134.70 (18.60)	7.30 (2.20)	14.00 (3.40)	0.67 (0.67)	236.00 (26.00)
1999	71.00 (10.60)	161.00 (4.40)	27.00 (7.40)	22.00 (5.30)	2.00 (1.15)	281.00 (7.50)
2000	44.70 (5.00)	144.70 (13.40)	104.70 (13.80)	20.70 (2.20)	4.00 (1.46)	314.70 (24.70)
2001	71.30 (10.10)	144.00 (6.40)	97.70 (16.40)	31.30 (3.80)	2.67 (1.33)	346.00 (28.10)
2002	28.70 (3.00)	48.00 (12.50)	43.30 (4.80)	9.30 (1.70)	0.00 (0.00)	129.30 (30.30)
2003	44.70 (8.20)	96.00 (12.40)	56.00 (10.70)	27.30 (3.20)	1.33 (0.84)	224.00 (19.70)
2004	27.30 (4.30)	58.00 (8.90)	23.30 (4.30)	28.00 (3.90)	2.67 (1.33)	136.70 (15.60)
2005	23.30 (6.30)	76.70 (5.90)	46.00 (4.90)	30.00 (6.20)	1.33 (0.84)	176.00 (8.60)
2006	56.00 (5.60)	72.70 (12.10)	37.30 (6.50)	24.00 (2.50)	1.33 (0.84)	190.00 (14.60)
2007	14.70 (1.70)	98.00 (11.90)	46.70 (13.10)	40.00 (8.90)	1.33 (1.33)	199.30 (30.80)
2008	127.30 (6.50)	124.00 (14.60)	58.70 (6.60)	20.70 (4.60)	1.33 (0.84)	330.70 (21.50)
2009	66.67 (12.29)	73.33 (10.86)	28.00 (7.66)	12.00 (3.27)	1.33 (0.84)	180.00 (17.19)

Dataset = cfdpsmcl.d09

Table 197. PSD and RSD₁₅ values obtained for largemouth bass from spring electrofishing samples in McNeely Lake in 2009; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD ₁₅
Largemouth bass	170	35 (± 7)	11 (± 5)

Dataset = cfdpsmcl.d09

Table 198. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 1.50 hours of electrofishing at McNeely Lake during April 2009. Fish were collected in 15-minute runs.

Age	Inch class																	Total	%	CPUE	ERR				
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19					20	21		
1	5	28	55	11	1	7															107	40	71.17	11.25	
2						20	37	7														65	24	43.04	7.38
3								9	24	8	3											43	16	28.90	3.61
4									3	3	5	8	1									19	7	12.89	2.42
5										5	3	3	3	1								14	5	9.54	2.75
6											3		3	1								6	2	3.83	1.23
7												3	1		1	4	2					10	4	6.73	1.49
8													1								1	2	1	1.24	0.60
9																					1	1	0	0.67	0.67
10																	2	1				3	1	2.00	1.26
Total	5	28	55	11	1	27	37	19	27	18	18	6	5	2	4	4	1	1	1	1	270	100	180.00	17.19	
%	2	10	20	4	0	10	14	7	10	7	7	2	2	1	1	1	0	0	0	0	100				

Dataset = cfdagmcl.d08 and cfdpsmcl.d09

Table 199. Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from McNeely Lake from 2001-2009.

Age	Year								
	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	70.00	23.30	20.00	24.70	12.70	50.70	5.30	130.00	71.17
2	53.10	22.60	72.90	13.80	27.60	26.90	50.20	54.36	43.04
3	35.60	10.60	22.80	41.40	51.10	45.90	52.20	72.51	28.90
4	62.10	22.10	26.90	21.40	43.70	29.90	39.90	28.47	12.89
5	47.50	17.90	22.50	11.60	12.10	12.10	19.10	19.87	9.54
6	31.40	14.40	20.60	6.30	9.60	8.00	10.20	4.63	3.83
7	23.00	13.20	20.00	5.90	8.60	5.60	8.90	12.40	6.73
8	7.80	3.60	9.20	7.30	5.30	7.30	4.70	1.43	1.24
9	5.10	1.00	3.90	0.00	0.00	0.00	0.00	1.33	0.67
10	5.10		1.70	4.20	5.50	3.70	8.80	2.33	2.00
11	4.50	0.70	3.10						
12	0.80		0.40						

Table 200. Population assessment for largemouth bass collected during spring electrofishing at McNeely Lake from 2000-2009 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE of age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥ 15.0 in	Spring CPUE ≥ 20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2009	Value	11.4*	67.80	28.00	12.00	1.30	0.566	43.2	12	Good
	Score	3	3	2	2	2				
2008	Value	11.4	130.00	58.70	20.70	1.30	0.527	40.9	16	Good
	Score	3	4	4	3	2				
2007	Value	11.0*	5.30	46.70	40.00	1.30	0.423	34.5	13	Good
	Score	3	1	3	4	2				
2006	Value	11.0*	50.70	37.30	24.00	1.30	0.387	32.1	14	Good
	Score	3	3	3	3	2				
2005	Value	11.0*	12.70	46.00	30.00	1.30	0.390	32.3	13	Good
	Score	3	1	3	4	2				
2004	Value	11.0	24.70	23.30	28.00	2.70	0.319	27.3	13	Good
	Score	3	2	2	3	3				
2003	Value	9.8*	20.00	56.00	27.30	1.30	0.392	32.5	12	Good
	Score	1	2	4	3	2				
2002	Value	9.8*	23.30	43.30	9.30	0.00	0.378	31.5	8	Fair
	Score	1	2	3	2	0				
2001	Value	9.8	70.00	99.30	31.30	2.70	0.392	32.4	15	Good
	Score	1	3	4	4	3				
2000	Value	10.4*	40.70	104.70	20.70	4.00			15	Good
	Score	2	2	4	3	4				

Table 201. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.25 hours of 15-minute electrofishing runs for black bass in McNeely Lake in September 2009; 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				
Largemouth bass	9	76	17	2	89	50	56	48	22	13	15	7	8	5	2	3	422	281.33 (27.20)		

Dataset = cfdwrmcl.d09

Table 202. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at McNeely Lake on 29 September 2009. Standard errors are in parentheses.

Species	Area	8.0–11.9 in			12.0–14.9 in			≥15.0 in			Total
		No.	Wr	Std. error	No.	Wr	Std. error	No.	Wr	Std. error	
Largemouth bass	Total	97	84 (1)	35	85 (1)	18	94 (2)	150	85 (1)		

Dataset = cfdwrmci.d09

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 McNeely Lake.

Year class	Area	Age 0			Age 0 ≥5.0 in			Age 1		
		Mean length	Std. error	CPUE	Mean length	Std. error	CPUE	Mean length	Std. error	CPUE
2000	Total	3.8	(0.1)	87.30	(16.10)	10.00	(2.30)	70.00	(9.40)	
2001	Total	4.1	(0.9)	20.70	(1.60)	2.00	(1.40)	23.30	(2.40)	
2002	Total	4.7	(0.1)	24.00	(5.80)	10.70	(3.80)	20.00	(2.50)	
2003	Total	4.1	(0.1)	56.00	(14.00)	7.00	(1.90)	24.70	(3.50)	
2004	Total	4.0	(0.1)	49.00	(2.40)	3.50	(0.90)	12.70	(2.40)	
2005	Total	4.7	(0.1)	193.30	(17.20)	88.00	(12.10)	50.70	(7.20)	
2006	Total	4.5	(0.1)	108.70	(23.30)	33.30	(5.70)	5.30	(1.70)	
2007	Total	5.2	(0.04)	174.40	(49.00)	116.00	(28.30)	130.00	(6.66)	
2008	Total	4.6	(0.1)	300.00	(34.53)	97.60	(16.62)	67.83	(11.67)	
2009	Total	4.5	(0.04)	68.00	(5.66)	11.33	(1.23)			

Table 204. Species composition, relative abundance, and CPUE (fish/hr) of bluegill and redear sunfish collected in 1.25 hours of 7.5-minute electrofishing runs in McNeely Lake, May 2009; numbers in parentheses are standard errors.

Species	Inch class										Total	CPUE
	2	3	4	5	6	7	8	9	10			
Bluegill	6	13	68	110	184	98	1				480	384.00 (37.70)
Redear sunfish	1	1	4	37	32	20	25	3			123	98.40 (21.83)

Dataset = cfdpsmci.d09

Table 205. PSD and RSD values calculated for sunfish collected during 1.25 hours of electrofishing at McNeely Lake during May 2009. Fish were collected in 7.5-minute runs.

Species	PSD		RSD ^a	
	No. ≥stock size	PSD	No. ≥stock size	RSD ^a
Bluegill	474	60 (± 4)	0.2 (± 0.4)	
Redear sunfish	122	66 (± 8)	23 (± 7)	

^aBluegill = RSD_B; Redear = RSD_R

Dataset = cfdpsmci.d09

Table 206. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from McNeely Lake from 1994-2009; numbers in parentheses are standard errors.

Year	Length group				Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥8.0 in	
1994	17.60 (3.70)	303.20 (59.60)	13.60 (2.40)	0.00	334.40 (59.10)
1996	2.70 (1.30)	187.30 (52.60)	95.30 (20.50)	0.00	285.30 (68.30)
1998	0.00	72.00 (31.80)	68.70 (15.40)	0.00	140.70 (44.80)
1999	8.00 (4.30)	108.00 (20.60)	108.00 (27.70)	0.00	224.00 (44.80)
2000	2.00 (0.90)	204.70 (36.60)	110.00 (23.30)	0.00	316.70 (46.30)
2001	73.60 (23.80)	152.00 (17.00)	200.80 (29.10)	1.60 (1.10)	428.00 (35.20)
2002	53.60 (11.70)	270.40 (33.20)	335.20 (33.80)	0.80 (0.80)	660.00 (41.90)
2003	12.00 (2.20)	132.00 (31.90)	30.40 (10.60)	0.00	174.40 (40.90)
2004	4.00 (1.80)	181.60 (25.20)	74.40 (8.60)	0.00	260.00 (27.30)
2005	22.00 (3.30)	159.00 (16.70)	174.00 (27.60)	0.00	355.00 (33.50)
2006	47.00 (11.10)	145.00 (23.70)	101.00 (27.60)	0.00	293.00 (40.60)
2007	8.80 (2.80)	114.40 (18.60)	118.40 (22.50)	0.00	241.60 (30.80)
2008	98.40 (11.81)	184.00 (17.77)	206.40 (21.53)	0.00	488.80 (37.70)
2009	4.80 (3.20)	152.80 (28.43)	225.60 (20.27)	0.80 (0.80)	384.00 (37.70)

Dataset = cfdpsmcl.d09

Table 207. Age frequency and CPUE (fish/hr) per inch class of bluegill collected during 1.25 hours of electrofishing at McNeely Lake during May 2009. Fish were collected in 7.5-minute runs.

Age	Inch class								Total	%	CPUE	STD ERR
	2	3	4	5	6	7	8					
1	6	11	8						25	5	19.76	5.56
2		2	53	80					135	28	107.80	19.82
3			8	30	153	33			224	47	178.84	16.58
4						22			22	5	17.42	2.18
5					31	11			42	9	33.24	3.19
6									0	0	0.00	0.00
7									0	0	0.00	0.00
8						33	1		34	7	26.93	3.72
Total	6	13	68	110	184	98	1		480	100	384.00	37.70
%	1	3	14	23	38	20	0		100			

Dataset = cfdagmcl.d08 and cfdpsmcl.d09

Table 208. Electrofishing catch rate (fish/hr) of each age of bluegill collected from McNeely Lake from 2001-2009.

Age	Year									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	
1	131.70	53.60	27.40	5.50	29.10	82.40	10.40	175.94	19.76	
2	76.00	244.70	39.20	79.30	103.30	110.80	128.70	88.02	107.80	
3	142.10	128.00	96.60	108.30	79.40	33.60	71.10	150.44	178.84	
4	40.20	186.10	9.50	64.90	111.40	22.80	20.50	17.78	17.42	
5	37.20	14.90	0.50		31.80	38.10	7.30	29.96	33.24	
6		32.60	0.50			5.40		0.00	0.00	
7			0.90	2.00			3.60	0.00	0.00	
8	0.80							26.67	26.93	

Table 209. Population assessment for bluegill collected during spring electrofishing at McNeely Lake from 2001-2009 (scoring based on statewide assessments).

Year		Mean length age-2+ at capture	Years to 6.0 in	CPUE ≥ 6.0 in	CPUE ≥ 8.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2009	Value	4.9*	2-2+*	226.40	0.80	0.763	53.4	13	Good
	Score	3	4	4	2				
2008	Value	4.9	2-2+	206.40	0.00			11	Good
	Score	3	4	4	0				
2007	Value	4.8	2-2+	118.40	0.00	0.963	61.8	11	Good
	Score	3	4	4	0				
2006	Value	5.1	3-3+	101.00	0.00	0.597	45.0	11	Good
	Score	4	3	4	0				
2005	Value	4.0	3-3+	174.00	0.00			9	Fair
	Score	2	3	4	0				
2004	Value	3.9	3-3+	74.40	0.00	1.111	67.1	8	Fair
	Score	2	3	3	0				
2003	Value	3.9	3-3+	30.40	0.00	1.117	67.3	7	Fair
	Score	2	3	2	0				
2002	Value	4.2	2-2+	336.00	0.80			12	Good
	Score	2	4	4	2				
2001	Value	4.8	2-2+	202.40	1.60	0.926	60.4	13	Good
	Score	3	4	4	2				

Table 210. Electrofishing CPUE (fish/hr) for each length group of redear sunfish collected from McNeely Lake from 1998-2009; numbers in parentheses are standard errors.

Year	Length group					Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	≥ 8.0 in	≥ 10.0 in	
1998	0.00	0.70 (0.70)	5.30 (2.20)	1.30 (1.30)	0.00	7.80 (3.40)
1999	0.00	10.00 (3.80)	3.00 (1.90)	1.00 (1.00)	0.00	14.00 (3.50)
2000	0.00	3.30 (2.60)	14.70 (2.50)	0.70 (0.70)	0.00	18.70 (3.40)
2001	2.40 (1.70)	8.80 (3.00)	15.20 (4.80)	8.00 (4.80)	0.00	34.40 (7.80)
2002	1.60 (1.10)	49.60 (10.60)	22.40 (5.80)	6.40 (2.00)	0.00	80.00 (13.40)
2003	0.80 (0.50)	5.20 (1.20)	20.40 (3.80)	2.40 (1.20)	0.00	28.80 (5.40)
2004	0.00	4.80 (1.80)	24.80 (6.50)	25.60 (7.00)	0.00	55.20 (9.90)
2005	1.00 (1.00)	25.00 (5.90)	16.00 (6.60)	33.00 (11.80)	0.00	75.00 (17.00)
2006	1.00 (1.00)	15.00 (3.80)	20.00 (4.00)	16.00 (2.60)	0.00	52.00 (6.20)
2007	0.00	2.40 (1.70)	29.60 (6.80)	6.40 (2.30)	0.00	38.40 (8.80)
2008	6.40 (2.87)	22.40 (4.43)	38.40 (3.83)	36.00 (4.81)	1.60 (1.07)	103.20 (9.42)
2009	0.00	4.80 (3.20)	55.20 (11.28)	38.40 (9.53)	2.40 (1.22)	98.40 (21.83)

Dataset = cfdpsmcl.d09

Table 211. Age frequency and CPUE (fish/hr) per inch class of redear sunfish collected during 1.25 hours of electrofishing at McNeely Lake during May 2009. Fish were collected in 7.5-minute runs.

Age	Inch class									Total	%	CPUE	STD
	3	4	5	6	7	8	9	10	ERR				
1	1	1								2	2	1.60	1.07
2			4	37	32					73	59	58.40	13.07
3						18	5			23	19	18.55	4.30
4						2	15			17	14	13.45	4.54
5							5			5	4	4.00	1.46
6								3		3	2	2.40	1.22
Total	1	1	4	37	32	20	25	3		123	100	98.40	21.83
%	1	1	3	30	26	16	20	2		100			

Dataset = cfdagmcl.d08 and cfdpsmcl.d09

Table 212. Electrofishing catch rate (fish/hr) of each age of redear sunfish collected from McNeely Lake from 2001-2009.

Age	Year								
	2001	2003	2004	2005	2006	2007	2008	2009	
1	0.00	3.60	0.80	1.00	14.00	0.00	26.40	1.60	
2	8.80	8.80	15.20	39.30	15.90	28.30	40.80	58.40	
3	7.40	16.40	39.20	20.60	18.50	7.80	27.30	18.55	
4	8.60			7.40	3.60	2.20	5.98	13.45	
5	5.60			4.00			1.12	4.00	
6				2.70			1.60	2.40	
7									
8	1.60								

Table 213. Population assessment for redear sunfish collected during spring electrofishing at McNeely Lake from 2001-2009 (scoring based on statewide assessments).

Year		Mean length age-3+ at capture	Years to 8.0 in	CPUE ≥ 8.0 in	CPUE ≥ 10.0 in	Total score	Assessment rating
2009	Value	8.5*	2-2+*	38.40	2.40	14	Excellent
	Score	4	4	4	2		
2008	Value	8.5	2-2+	36.00	1.60	14	Excellent
	Score	4	4	4	2		
2007	Value	8.0	3-3+	6.40	0.00	10	Fair
	Score	4	4	2	0		
2006	Value	7.9	3-3+	16.00	0.00	12	Good
	Score	4	4	4	0		
2005	Value	8.3	3-3+	33.00	0.00	12	Good
	Score	4	4	4	0		
2004	Value	7.7*	4-4+*	25.60	0.00	11	Good
	Score	4	3	4	0		
2003	Value	7.7	4-4+*	2.40	0.00	8	Fair
	Score	4	3	1	0		
2002	Value	6.7*	4-4+*	6.40	0.00	9	Fair
	Score	4	3	2	0		
2001	Value	6.7	4-4+	8.00	0.00	9	Fair
	Score	4	3	2	0		

Table 214. Number of fish and the relative weight (Wr) for each length group of bluegill and redear sunfish collected at McNeely Lake on 29 September 2009. Standard errors are in parentheses.

Species	Length group							
	No.	Wr	No.	Wr	No.	Wr	No.	Wr
Bluegill	3.0–5.9 in		6.0–7.9 in		≥8.0 in		Total	
	74	81 (2)	38	84 (2)			112	82 (2)
Redear sunfish	4.0–6.9 in		7.0–8.9 in		≥9.0 in		Total	
	62	94 (1)	25	97 (2)	3	101(5)	90	95 (1)

Dataset = cfdwrmcl.d09

Table 215. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.00 hours of 15-minute electrofishing runs in Williamstown Lake, April 2009; 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	20			
Largemouth bass	2	2	16	14	15	5	4	7	11	24	20	7	5	13	7	0	4	0	156	78.00 (10.11)	

Dataset = cfdpswil.d09

Table 216. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Williamstown Lake from 2007-2009; numbers in parentheses are standard errors.

Year	Length group					Total
	<8.0 in	8.0-11.9 in	12.0-14.9 in	≥15.0 in	>20.0 in	
2007	13.00 (4.26)	38.00 (7.01)	14.50 (2.82)	7.50 (1.40)	73.00 (10.84)	
2008	17.00 (4.19)	42.50 (7.21)	29.00 (6.54)	7.00 (2.10)	95.50 (15.67)	
2009	27.00 (5.06)	23.00 (4.12)	16.00 (2.62)	12.00 (2.51)	78.00 (10.11)	

Dataset = cfdpswil.d08

Table 217. PSD and RSD₁₅ values obtained for largemouth bass from spring electrofishing samples in Williamstown Lake in 2009; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD ₁₅
Largemouth bass	102	55 (±10)	24 (±8)

Dataset = cfdpswil.d09

Table 218. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 2.00 hours of electrofishing at Williamstown Lake during April 2009. Fish were collected in 15-minute runs.

Age	Inch class															Total	% CPUE	ERR	STD		
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16					17	18
1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	49	31	24.50	4.81
2						5	4	6	1									16	10	8.05	2.06
3								1	10	24	17	5	5					62	40	30.85	4.54
4										3	2							5	3	2.60	0.50
5												13						13	8	6.50	1.05
6																4		4	4	2.00	1.51
7																		0	0	0.00	0.00
8															7			7	4	3.50	1.18
Total	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	156	100	78.00	10.11
%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	100			

Dataset = cfdagwil.d08 and cfdpswil.d09

Table 219. Population assessment for largemouth bass collected during spring electrofishing at Williamstown Lake from 2008-2009 (scoring based on statewide assessment).

Year	Value Score	Mean length age-3 at capture	Spring CPUE of age-1		Spring CPUE of 12.0-14.9 in		Spring CPUE >20.0 in		Total score	Assessment rating
			24.50	2	16.00	12.00	0.00	0		
2009	11.6	4	24.50	2	16.00	12.00	0.00	0	9	Fair
2008	11.6	4	12.50	1	29.00	7.00	0.50	1	10	Fair

Table 220 Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.50 hours of 15-minute electrofishing runs for black bass in Williamstown Lake in October 2009; 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				
Largemouth bass	1	3	4	4	11	5	3	4	3	4	2	3	3	1	1	1	1	46	30.67 (5.99)	

Dataset = cfdwrwil.d09

Table 221. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Williamstown Lake on 1 October 2009. Standard errors are in parentheses.

Species	Area	Length group						Total	
		8.0-11.9 in		12.0-14.9 in		>15.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Total	15	92 (2)	9	92 (4)	3	93 (1)	27	92 (2)

Dataset = cidwvii.d09

Table 222. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Williamstown Lake.

Year class	Area	Mean length	Age 0			Age 0 ≥ 5.0 in			Age 1		
			Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error		
2007	Total	4.7	(0.3)	7.33	(1.61)	2.67	(1.33)	12.50	(3.58)	24.50	4.81
2008	Total	4.7	(0.2)	24.67	(6.06)	12.00	(3.27)	24.50	4.81		
2009	Total	4.1	(0.2)	2.67	(0.84)	0.00					

Table 223. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.00 hours of electrofishing in Symphon Lake, May 2009; numbers in parentheses are standard errors.

Species	Inch class																							Total	CPUE
	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23							
Largemouth bass	1	10	14	7	14	14	16	25	25	39	15	23	17	3	3								1	227	113.50 (9.83)

Dataset = cfdpsym.d09

Table 224. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.00 hours of electrofishing in Jericho Lake, April 2009; 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			
Largemouth bass	1	3	1	5	7	18	15	14	8	12	16	9	14	9	11	3	6	3	1	156	78.00 (13.65)		

Dataset = cfdpsjer.d09

Table 225. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass and bluegill collected in 1.00 hours of electrofishing in Doe Run Lake, April 2009; 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			
Bluegill	2	1	34	46	33	1																117	117.00 (10.50)
Largemouth bass	1	3	5	1	3	6	14	4	1	2	2	1	1	3	2	1	1	1	1	51	51.00 (6.61)		

Dataset = cfdpsdoe.d09

Table 226. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass and bluegill collected in 1.00 hours of electrofishing in Doe Run Lake, October 2009; numbers in parentheses are standard errors.

Species	Inch class																		Total	CPUE			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18					
Bluegill	1	1	8	28	42	34																114	114.00 (20.56)
Largemouth bass	1	3	11	6	1	6	9	3	7	4	1	1	1	2	2	2	2	2	2	57	57.00 (14.18)		

Dataset = cfdwrdoe.d09

Table 227. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 1.00 hours of 15-minute electrofishing runs in Jacobson Park Lake, April 2009; numbers in parentheses are standard errors.

Species	Inch class																Total	CPUE
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
Largemouth bass	6	3	5	2	4	1	5	2	1	1	30	30.00	(3.46)					

Dataset = cfdpsjac.d09

Table 228. Species composition, relative abundance, and CPUE (fish/hr) of fish collected in 0.50 hours of 15.0-minute electrofishing runs in Leary Lake, May 2009.

Species	Inch class																			Total	CPUE
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19			
Bluegill	7	18	20	14	6	3													68		
Largemouth bass	4	10	5	2	1	14	6	6	11	12	3	1	1	1	1	1	1	1	77		

Dataset = cfdpslry.d09

Table 229. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.00 hours of electrofishing in Willisburg Lake, May 2009; 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	3	13	6	1	19	15	34	43	29	19	16	10	11	16	13	10	1	2	262		

Dataset = cfdpswlb.d09

Table 230. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 1.50 hours of electrofishing in Willisburg Lake, September 2009; numbers in parentheses are standard errors.

Species	Inch class																				Total	CPUE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
Largemouth bass	1	24	15	26	18	3	13	33	14	20	13	10	6	3	3	4	1	1	1	212		

Dataset = cfdpswlb.d09

NORTHEASTERN FISHERY DISTRICT

Project 1: Lake and Tailwaters Fishery Surveys

FINDINGS

All sampling conditions can be found in Table 1. This includes dates, temperatures, secchi depths and any other pertinent sampling information during the sampling events.

Cave Run Lake (8,720a)

Muskellunge Sampling

Muskellunge were sampled from 30 March through 01 April 2009 for a total of 18 hours (36 30-minute runs) within all sections of the lake. A total of 154 (8.56 f/h) muskellunge were captured (including observed, but not dipped, young of year fish) ranging in size from 12.0-47.0 in (Table 2). In the upper section, 39 (6.50 f/h) fish were captured or observed, in the middle section, 48 (8.00 f/h) fish were captured or observed and in the lower section, 67 (11.17 f/h) fish were captured or observed (Table 2). Relative weights (W_r) were calculated by length groups (Table 3) and this determination showed fairly consistent W_r values across years. In 2009, the highest condition was seen in the largest and smallest fish. Condition of the intermediate size fish declined somewhat in 2009 (Table 3). The assessment value determined for muskellunge in 2009 was the second highest seen since 1995 and rated the population as "Good" (Table 4). Management objectives for catch of age 1 fish (>2.40 f/h), ≥ 20.0 in fish (>3.35 f/h), ≥ 30.0 in fish (>2.54 f/h), ≥ 36.0 in fish (>1.20 f/h) and ≥ 40.0 in fish (>0.42 f/h) were all met in 2009 (Table 13).

Black Bass Sampling (Spring)

Spring black bass sampling was attempted on Cave Run Lake in 2009, but high water at that time prevented a quality sample from being obtained. In spite of the lack of sampling in 2009, the population assessment for largemouth bass is shown in Table 5. Management objectives for largemouth bass could not be determined in 2009.

Black Bass Sampling (Fall)

Black bass were sampled on 21 – 23 September 2009 for a total of 6 hours (2 hours per section; 12 – 30 minute runs). In 2009, 1188 black bass were captured, including 721 (120.17 f/h) largemouth bass, 422 (73.67 f/h) spotted bass and 45 (7.50 f/h) smallmouth bass (Table 6). The majority of the largemouth bass captured came from the upper section of the lake (389 fish; 194.50 f/h) while the majority of the spotted bass (232 fish; 116.0 f/h) and smallmouth bass (25 fish; 12.50 f/h) came from the lower section of the lake (Table 6). Relative weight (W_r) values in the middle section of the lake were highest for largemouth bass ≥ 15.0 in. In the lower and upper sections, condition was highest for the 8.0–11.9 in and the 12.0–14.9 in fish (Table 7). For spotted bass, the W_r values were highest in the middle section for all fish captured, and for smallmouth bass, they were highest in the lower section for all fish captured (Table 7). Indices of year class strength revealed that age 0 (70.17 f/h) and age 0 ≥ 5.0 in (26.33 f/h) densities were sufficient enough to not require supplemental stocking in 2009 (Table 8).

Crappie Trap Netting

During 02 – 05 November 2009, trap nets were set for crappie in the upper portion of the lake. Fifteen nets were set for a total of 59 net nights (nn) (one net was only fished for 3 of the 4 nights). A total of 1397 crappie were netted, including 1299 white crappie (162.38 f/nn) and 98 black crappie (12.25 f/nn) (Table 9). The PSD was 17 for white crappie and 26 for black crappie, while the RSD_{10} for both white and black crappie was 3 (Table 10). In 2008, the percentage of white crappie that were young-of-year and age-1 was 52.6% and in 2009 the percentage jumped to 71.6% (Table 11). The overall assessment for white crappie in 2009 was the highest it has been since 2001 and was rated as "Good" (Table 12). This increase was observed across the board for overall CPUE, CPUE age-1 and CPUE age-0 (Table 12). 2009 was by far the best year that we have ever had sampling crappie. This may be due to the fact that we had to sample the lake a little later than normal and for that reason, the lake was at a lower level which possibly aided in increasing catch rates. Management objectives for CPUE of fish excluding age-1 (3.69 f/nn), CPUE of age-1 (1.18 f/nn), CPUE of age-0 fish (1.88 f/nn) and CPUE of fish ≥ 8.0 in (1.00 f/nn) all well exceeded the objectives for 2009 (Table 13).

Vegetation Sampling

On 29 June – 03 July 2009, Cave Run Lake was sampled for aquatic vegetation for the first time. Procedures for this sample were modified from the Long Term Resource Monitoring Program Vegetation Component (Yin, et. Al, 2000). The sampling included 90 sites that had a water depth of 10 feet or less; 30 of these sites were in each section of the lake, and all portions of the lake with a water depth of 10 foot or less had an equal chance of being picked. The sampling protocol divided the types of plants observed into ecological categories based on the plant type. Table 14 shows examples of those vegetation types. Of the 90 sites picked, only 89 were sampled (29 in the lower lake and 30 in both the middle and upper lake). Of those 89 sites, 49% had some form of submersed aquatic vegetation, 37% had no vegetation, 10% had emergent vegetation and 9% had algae (Table 15). There were no observations of non-rooted floating vegetation or rooted floating vegetation. Both the lower and middle sections of the lake were dominated by submersed aquatic vegetation (72% and 63%, respectively), while the upper section was dominated by unvegetated sites (63%). The remaining 37% of the sites in the upper unit were mostly emergent vegetation sites (Table 15). A total of 25 different plant species were observed in the vegetation samples (Table 16). Overall, the most frequent vegetation type was unvegetated sites followed by curlyleaf pondweed (*Potamogeton crispus*) and Eurasian watermilfoil (*Myriophyllum spicatum*) (Table 16). Plant density was highest in the middle unit and overall densities of vegetation seemed to be higher when Eurasian watermilfoil was one of the observed vegetation types (Table 17).

Miscellaneous

In the winter of 2009, approximately 150 recycled Christmas trees were used to refresh and create 4 fish attractor sites. Recycled wooden pallets were also used to create 1 stake bed site in the lake with assistance from Minor Clark Fish Hatchery staff as well as USFS personnel. During the fall, 2,800 muskellunge averaging 13.3 in were stocked into the lake.

Grayson Lake (1,512a)

Black Bass Sampling (Spring)

Upper, middle and lower sections of Grayson Lake were nocturnally electrofished for black bass on 04-06 May 2009. Half hour (1800 sec) sampling periods totaling two hours were completed within each section of the lake for a total effort of six hours. A total of 789 fish were captured, including 561 largemouth bass (71%), 232 spotted bass (29%), and 5 smallmouth bass (0.6%) (Table 18). Of the total black bass captured, largemouth bass comprised 59%, 75%, and 93% of the total found within the lower, middle, and upper sections of the lake, respectively. Largemouth bass were stocked into Grayson Lake from 1998 to 2004 as part of a project to try to improve their numbers in the lake. Of the total numbers of largemouth bass sampled during spring of 2009, 10 fin clipped fish were captured ranging in size from 14.0-19.0 in. In the fall of 2008, 3,780 largemouth bass averaging 4.0 in were stocked into the lake as part of the Largemouth Bass Stocking Initiative Program. Of these stocked fish, only 33 were found representing 6% of the total largemouth sampled (Table 19). Catch rates for the ≥ 15.0 in and ≥ 20.0 in length groups of largemouth bass showed substantial increases above the 10 year mean (Table 20). The Management Objectives for 8.0-11.9 in fish (60.00 f/h) and 12.0-14.9 in fish (20.00 f/h) were not met in 2009, however objectives were met for ≥ 15.0 in fish (6.00 f/h). Proportional and relative stock values remained relatively unchanged (Table 21). Age frequency can be found in Table 22. The increased catch rates across the board in 2009 are most likely due to malfunctioning of the electrofishing boat in 2008 (Table 23). The overall assessment of Grayson Lake largemouth bass in 2009 was "Fair" (Table 24).

Black Bass Sampling (Fall)

During 14 – 16 September 2009, the upper, middle, and lower reaches of the lake were sampled for black bass (4.5 h, 1.5h each section). In total, 642 fish were captured, including 354 largemouth (55%), 287 spotted (45%) and 1 smallmouth bass (<1%) (Table 25). Relative weight values (W_r) were highest for largemouth bass ≥ 15.0 in collected from the upper and lower sections of the lake (Table 26). The W_r management objective for ≥ 15.0 in fish (≥ 90) was met in all sections of the lake. The indices of largemouth bass year class strength are presented in Table 27. Based on the 2009 year class strength, supplemental stocking of largemouth bass was again needed and in the fall, 22,750 remedial bass were stocked (3,780 remedial bass were stocked in 2008).

Crappie Electrofishing (Fall)

Crappie were sampled from the upper section of Grayson Lake on 14 October 2009 for 3.0 hours using electrofishing gear. A trail boat has been used since 2007. In all, 217 fish were captured, including 210 white crappie (97%) and 7 black crappie (3%) (Table 28). Table 29 shows PSD and RSD₁₀ values from this sampling. Age frequency data for white crappie can be found in Table 30. A formal assessment criterion was developed in 2009 based on crappie data collected while electrofishing Grayson Lake during the fall in the upper section only. The 2009 assessment rated the white crappie population as "Fair" (Table 31).

Lake Carnico (114a)

Black Bass Electrofishing (Spring)

On 07 May 2009, the shoreline of Lake Carnico (Nicholas County) was nocturnally electrofished for black bass. A total of 143 (54 in 2008, 292 in 2007) largemouth bass were captured ranging in size from 2.0-21.0 in (Table 32). Largemouth bass age frequencies are found in Table 33. Population assessments (Table 34) again rated Lake Carnico as a "Fair" largemouth bass fishery. Catch rate by length group is shown in Table 35. PSD and the RSD₁₅ values compared to past years can be found in Table 36.

Bluegill / Redear Sunfish Sampling

On 03 June 2009, the shoreline of Lake Carnico was diurnally electrofished for sunfish species. A total of 694 fishes were captured, including 382 bluegill and 9 redear sunfish. The remainder was green sunfish, longear sunfish and hybrid sunfish (Table 37). CPUE for various length groups of bluegill and redear sunfish can be found in Table 38. The PSD remains below the desired level (Table 39), and the overall assessment for the bluegill population remained classified as "Fair" (Table 40).

Black Bass Electrofishing (Fall)

On 01 October 2009, the shoreline of Lake Carnico was nocturnally electrofished for black bass. In total 144 largemouth bass were sampled ranging in size from 2.0-20.0 in (Table 41). Relative weight values remained similar to previous years except for those fish in the ≥ 15.0 in length group which increased to 92 from a value of 79 in 2008 (Table 42).

Miscellaneous

During 09-11 November 2009, three tandem hoop net sets (3 nets in each set) were placed in the lake to attempt to sample the channel catfish population. The nets were set at depths ranging from 6-9 feet and yielded a total of 5 fish ranging in size from 14.0-15.0 in. Nets were also set two weeks earlier at the lake in depths ranging from 10-17 feet; this effort produced no fish. It can only be assumed that the channel catfish population in this lake is poor.

Clear Creek Lake (40a)

Black bass electrofishing (Spring)

Spring nocturnal electrofishing along the shoreline of Clear Creek Lake (Bath County) for largemouth bass was accomplished on 14 May 2009. Table 43 shows length frequency and CPUE of all largemouth bass sampled during that time. The total CPUE for all length groups (130.67 f/h) showed a noticeable decrease from previous years and is probably due to the increasing amount of aquatic vegetation at the lake making it very difficult to capture fish (Table 44). The PSD value for largemouth bass was 28 and continues to remain below the desired level (Table 45). Age and growth information can be found in Table 46. Largemouth bass are exhibiting slow growth as the mean length of age 3 fish at capture is 9.9 in and mean length of age-4 fish is 11.7 in. Age frequency data for largemouth can be found in Table 47. The population assessment rates Clear Creek Lake as having a "Fair" bass fishery (Table 48).

Bluegill/redear sunfish electrofishing

Bluegill and redear sunfish sampling was conducted on 02 June 2009 during the daytime (5-7.5 minutes runs). A total of 206 bluegill and 234 redear sunfish were collected (Table 49). Table 50 shows CPUE for each length group of bluegill and redear sunfish collected. Otoliths were removed from bluegill and redear sunfish (approximately 10 per inch class) in order to determine growth based upon back calculated lengths (Tables 51 and 52). This was the

first year for aging redear sunfish at Clear Creek Lake. Age frequency distributions are shown for bluegill and redear sunfish in Tables 53 and 54, respectively. Age-1 and age-2 fish represented 84% of the total bluegill catch and ranged in size from 1.0-4.9 in. Redear sunfish age-2 and age-3 accounted for 95% of the total redear sunfish catch. The PSD value for bluegill fell below the desirable range (Table 55). The population assessment rates the bluegill fishery as "Poor" (Table 56). This population has been rated "Good" since 2006. Notable declines in mean length of age-2 fish at capture and years to 6.0 in contributed to this decline. The population assessment also rates the redear sunfish fishery as "Poor" (Table 57).

Black bass electrofishing (Fall)

Fall sampling for largemouth bass was not conducted the past two years due to Eurasian watermilfoil covering approximately 80% of the lake. During the fall of 2009 efforts were made to conduct nocturnal electrofishing to determine largemouth bass length frequencies (Table 58) and relative weight values (Table 59). In hind sight, sampling should not have occurred because the amount of aquatic vegetation still remains high. During 2007-2009, approximately 150 grass carp were stocked in the lake. As of 2009, grass carp have had no visible effect on the aquatic vegetation.

Greenbo Lake (181a)

Black bass electrofishing (Spring)

The shoreline of Greenbo Lake was nocturnally electrofished on 30 June 2009. A total of 259 largemouth bass were collected resulting in a CPUE of 172.70 f/h (Table 60). Of the 259 largemouth bass collected, only 7 stocked fish were found comprising 2.7% of the catch (Table 61). A total of 925 bass were stocked in the fall of 2007 and 2,715 were stocked in 2008. Catch rates by length group for largemouth bass in 2009 were similar to those found in 2008, even though the 2008 sample was hindered by a malfunctioning electrofishing boat (Table 62). Catch rates exceeded the management objectives specified in the lake management plan for all length group categories: 12.0-14.9 in bass (objective = ≥ 40.00 f/h, actual = 50.00 f/h), ≥ 15.0 in bass (objective = 10.00 f/h, actual = 18.00 f/h), ≥ 20.0 in bass (objective = 2.00 f/h, actual = 2.67 f/h). Largemouth bass PSD (Table 63) remained within the desired range with a value of 53 in 2009. The age frequency for largemouth bass is shown in Table 64. Electrofishing catch rates for each age of largemouth bass from 2000 through 2009 are shown in Table 65. The population assessment rated the bass fishery as "Good" (Table 66).

Bluegill/redear sunfish electrofishing (Spring)

Daytime electrofishing for bluegill and redear sunfish was conducted on 01 June 2009. A total of 423 bluegill and 5 redear sunfish were collected. Length frequency and CPUE for all sunfish sampled are found in Table 67. Catch rates for each length group of bluegill and redear sunfish can be found in Table 68. Bluegill PSD was 17 in 2009 as compared to 19 in 2008, 22 in 2007 and 26 in 2006 (Table 69). Age frequency for bluegill is shown in Table 70. The population assessment rating for the bluegill fishery remains "Fair" (Table 71). Only 5 redear sunfish (ranging in size from 1.0-7.0 in) were sampled in 2009 compared to 19 in 2008 and 30 in 2007. Too few redear sunfish were collected to make an accurate population assessment. During 2003-2005, 181,500 1.0-in redear sunfish were stocked into the lake.

Black bass electrofishing (Fall)

On 17 September 2009, the shoreline of Greenbo Lake was nocturnally electrofished for largemouth bass relative weight and length frequency. A total of 171 largemouth bass were collected in 1.5 hours of electrofishing (6 15-minute runs). Table 72 shows length frequency and CPUE from fall sampling. Relative weight values compared to past years can be found in Table 73. Largemouth bass indices of year class strength at age 0 and age 1 are found in Table 74. During 2009, largemouth bass had a successful spawning year and there was no need for additional stocking of remedial bass. Poor spawning success during 2007 and 2008 warranted supplemental stocking of 3.0-5.0 in bass (925 in 2007 and 2,715 in 2008).

Miscellaneous

Grass carp are still being observed and one was collected during routine sampling in the spring. The grass carp were stocked in 1989. A total of 4,255 channel catfish and 15,000 rainbow trout were stocked in 2009.

Mill Creek Lake (41a)

Black Bass Electrofishing (Spring)

On 29 April 2009, the shoreline of Mill Creek Lake (Powell/Wolfe Counties) was nocturnally electrofished for black bass. In total, 117 largemouth bass were captured ranging in size from 4.0-22.0 in (Table 75). The overall catch was down when compared to 2008 but similar to values seen since 2000. Catch of fish in the 8.0-11.9 in range was down significantly from 2008, but catch of the 12.0-14.9 in, ≥ 15.0 in and ≥ 20.0 in fish was higher than 2008. Catch of fish ≥ 15.0 in and ≥ 20.0 in were the highest seen since 2000 (Table 76). The PSD and RSD_{15} values increased again this year to the highest recorded since before 2004 (Table 77). Population assessments rate this lake as a "Good" largemouth bass fishery which is an increase from the "Fair" rating a year ago. The "Good" rating was probably due to the increased catch of ≥ 15.0 in and ≥ 20.0 in fish (Table 78). Management objectives for catch of 12.0-14.9 in fish (>15.00 f/h), ≥ 15.0 in fish (>5.00 f/h) and ≥ 20.0 in fish (>1.00 f/h) were all met, but the goal of catch of age 1 fish (>15.00 f/h) was not met (Table 85).

Bluegill / Redear Sunfish Sampling

On 10 June 2009, the shoreline of Mill Creek Lake was diurnally electrofished for sunfish species. In total 911 fishes were captured, including 735 bluegill, 89 longear sunfish, 85 green sunfish and 2 sunfish hybrids (Table 79). The 2009 CPUE for all length groups was more than double the overall catch of bluegill seen since before 2005. This increase was due to the increase in fish <3.0 in (Table 80). The number of fish ≥ 8.0 in was the lowest seen in several years (Table 80). The PSD and RSD_8 values for bluegill, showed a slight decrease from 2008 (Table 81). The assessment rating for bluegill remained "Fair" in 2009 (Table 82). Management objectives for both the catch of fish ≥ 6.0 in (>40.00 f/h) and fish ≥ 8.0 inches (>5.00 f/h) were not met (Table 85).

Black Bass Electrofishing (Fall)

On 29 September 2009, the shoreline of Mill Creek Lake was nocturnally electrofished for largemouth bass. In total, 112 fish were collected ranging in size from 2.0-18.0 in (Table 83). Relative weights were calculated for fish in the 8.0-12.9 in, 12.0-14.9 in and ≥ 15.0 in length groups (Table 84). It is hypothesized that once the fish reach a size larger than 15.0 in they can utilize the rainbow trout as forage, and can grow to reach their full size potential.

Lake Reba (76a)

Black Bass Electrofishing (Spring)

On 27 April 2009, Lake Reba was nocturnally electrofished for largemouth bass. In total, 607 fish were captured that ranged in size from 3.0-20.0 in (Table 86). A total of 9 stocked fish (2008 year class) were captured ranging in size from 4.0-5.0 in (Table 87). Although total CPUE increased, the catch of fish <8.0 in was the second lowest seen since before 1999 (Table 88). PSD values increased from 2007 to 2009, but the RSD_{15} values have remained in the same range since 2000 (Table 89). The assessment rating in 2009 was "Good" which was an increase from 2008 (Table 90). The population remains fairly cyclic around the lower "Good" rating and upper "Fair" rating. Management objectives for the catch of 12.0-14.9 in fish (>40.00 f/h), ≥ 15.0 in fish (>11.00 f/h) and ≥ 20.0 in fish (>0.50 f/h) were all met, but the management objective for the catch of age 1 fish (>125.00 f/h) was not met (Table 101).

Bluegill / Redear Sunfish Sampling

On 27 May 2009, Lake Reba was diurnally electrofished for sunfish. In total, 1266 fishes were captured, including 749 bluegill, 394 redeer sunfish, 115 warmouth, 7 hybrid sunfish and 1 green sunfish (Table 91). For bluegill, the overall catch was higher than 2007 and 2008, with an increase in the <3.0 in fish but a remarkable decrease in the ≥ 6.0 in fish (Table 92). There was a decrease in the PSD values but not enough larger fish were captured to calculate RSD_8 values (Table 93). The overall assessment value for bluegill was "Fair" (Table 94). Management objectives for catch of fish ≥ 6.0 in (>75.00 f/h) and fish ≥ 8.0 in (>1.00 f/h) were not met in 2009 (Table 101). The same trend followed for redeer sunfish as there was a remarkable decrease in the numbers of ≥ 6.0 in fish (Table 95) as well as a decrease in the PSD value (Table 96). The overall assessment for redeer sunfish was "Poor" (Table 97). Reasons abound for the decrease in numbers of larger sized bluegill and redeer sunfish, but the most likely cause is the large quantities of aquatic vegetation and algae that dominate the lake. The vegetation appears to be giving the sunfish so much refuge that they are becoming stunted. In 2007 a vegetation eradication program began on the lake which included stocking of grass carp (150 in 2007) and application of herbicides (2008 – 2009). This program will

become more large scale in 2010 with increases in herbicide application and the addition of more grass carp. Removal of some of the vegetation hopefully will allow for more predation on the sunfish, increasing their overall size and increasing the relative weight of the largemouth bass.

Black Bass Electrofishing (Fall)

On the 24 September 2009, Lake Reba was nocturnally electrofished for determination of relative weights of largemouth bass. In total 333 fish were captured ranging in size from 2.0-17.0 in (Table 98). Relative weight determination showed no changes in the 8.0-11.9 in and 12.0-14.9 in length groups, but an increase in the ≥ 15.0 in length group (Table 99). Lake Reba has been classified as a "Priority 1" lake by the department and indexing of the YOY largemouth bass showed that Lake Reba needed supplemental stocking (Table 100). In the fall of 2008, Lake Reba was stocked with 1,197 5.0-in largemouth bass which was a rate slightly higher than 15 fish per acre.

Rebel Trace Lake (19a)

Black Bass Electrofishing (Spring)

Rebel Trace Lake (Menifee County) was nocturnally electrofished in the spring for largemouth bass on 14 May 2009. Table 102 gives length frequency and CPUE for largemouth bass collected. The PSD value (42) is within the desirable range (Table 103). CPUE for each length group of largemouth bass is presented in Table 104 and showed a marked decrease from past sampling years. This could possibly be attributed to the increasing aquatic vegetation and siltation.

Bluegill/Redear Electrofishing

On 02 June 2009, the lake was electrofished during the day for sunfish. Length frequency of sunfish collected is found in Table 105 and CPUE for selected length groups of bluegill and redear sunfish are presented in Table 106. The most notable increase in CPUE was for those fish in the 3.0-5.9 in and 6.0-7.9 in length groups. The bluegill PSD value of 13 (5 in 2008) remains below the desirable range (Table 107). Based on age and growth data obtained during 2009, bluegill reached 6.0 in between their third and fourth year (Table 108) and no redear sunfish were found in excess of four years old (Table 109). Age frequencies are found for bluegill and redear sunfish in Tables 110 and 111, respectively. The population assessment rated the bluegill fishery as "Fair" (Table 112) and the redear sunfish fishery as "Poor" (Table 113).

Black Bass Electrofishing (Fall)

For the third consecutive year, fall sampling for largemouth bass could not be accomplished due to the extensive coverage of Eurasian watermilfoil. During 2007-2009, approximately 75 surplus grass carp from Minor Clark Fish Hatchery were stocked in attempts to remedy this situation. At present, the grass carp appear to be having a positive effect on cutting the watermilfoil back; however, as this vegetation decreases, water shield seems to be filling in the void. Approximately 33% of the shoreline around this 19-acre lake can no longer be sampled due to increased sediment loading. Rebel Trace was originally built for flood control and sediment retention and is fulfilling this purpose.

Smoky Valley Lake (36a)

Black Bass Electrofishing (Spring)

On 13 May 2009, the shoreline of Smoky Valley Lake was nocturnally electrofished for black bass species. In total, 257 largemouth bass were sampled ranging in size from 3.0-17.0 in (Table 114). This catch was the lowest seen since before 2000, and the catch broken down by length groups showed a decrease across the board, especially for the fish in the 12.0-14.9 in group (Table 115). There has been a decrease in the PSD from 2005 to 2009, but RSD_{15} has remained unchanged over the same period (Table 116). The assessment of the lake went from "Fair" to "Poor" in 2009 and this was most likely a reflection of the dramatic decrease in numbers of 12.0-14.9 in fish (Table 117).

Bluegill / Redear Electrofishing

On 26 May 2009, the shoreline of Smoky Valley Lake was diurnally electrofished for sunfish species. In total, 679 fishes were captured. Of these, 442 were bluegill, 104 were green sunfish, 23 were hybrid sunfish and 10 were longear sunfish (Table 118). The catch of bluegill in 2009 was significantly higher than in 2008, but as seen in

previous years, the majority of these fish were in the ≤ 3.0 in and 3.0-5.9 in length groups (Table 119). PSD was significantly lower than in 2008 and since so few fish over 8.0 in were captured; the RSD_8 remains insignificant (Table 120). In 2009, the assessment of the bluegill population remained “Fair” (Table 121).

Black Bass Electrofishing (Fall)

On 30 September 2009, the shoreline of Smoky Valley Lake was nocturnally electrofished to sample black bass for determination of relative weights. In total 175 largemouth bass were captured ranging in size from 2.0-20.0 in (Table 122). Relative weights were similar to previous years (Table 123). A new regulation of no minimum size limit, 6 fish daily creel limit was implemented in 2009, and this regulation will remain for 2010.

Lake Wilgreen (169a)

Black Bass Electrofishing (Spring)

On 28 April 2009, the shoreline of Lake Wilgreen (Madison County) was nocturnally electrofished for black bass. In total, 296 largemouth bass were captured ranging in size from 3.0-20.0 in (Table 124). Overall catch was up when compared to 2008, but there was a decrease in the catch of smaller length groups (<8.0 in, 8.0-11.9 in, and 12.0-14.9 in). However, the catch of fish ≥ 15.0 in increased and the catch of fish ≥ 20.0 in remained stable when compared to previous years (Table 125). Both the PSD and RSD_{15} showed an increase over previous years (Table 126). The largemouth bass assessment for Lake Wilgreen in 2009 was “Good” but the catch of age 1 fish decreased and should be monitored (Table 127). Management objectives for the catch of ≥ 15.0 in fish (>10.00 f/h) and the catch of fish ≥ 20.0 in (>1.00 f/h) were both met. Management goals for the catch of age 1 fish (>30.00 f/h) and catch of fish in the 12.0-15.0 in length group (>75.00 f/h) were not met (Table 134).

Bluegill / Redear Sunfish Sampling

On 9 June 2009, the shoreline of Lake Wilgreen was diurnally electrofished for sunfish species. In total, 649 fishes were captured, including 502 bluegill, 100 green sunfish, 38 redeer sunfish, 6 warmouth, and 3 hybrid sunfish (Table 128). CPUE by length group was significantly higher for bluegill and redeer sunfish (Table 129). The PSD and RSD_8 for bluegill was relatively unchanged and the PSD and RSD_9 for redeer sunfish increased in 2009 (Table 130). The overall assessment for the bluegill population was “Good” (Table 131). Management objectives for the catch of bluegill ≥ 6.0 in (>90.00 f/h) and fish ≥ 8.0 in (>1.00 f/h) were both met (Table 134).

Black Bass Electrofishing (Fall)

On 28 September 2009, the shoreline of Lake Wilgreen was nocturnally electrofished for black bass. In total 358 largemouth bass were sampled (CPUE of 238.67 f/h) ranging in size from 2.0-19.0 in (Table 132). The relative weight of fish in the 8.0-12.0 in length group remained unchanged, but for both the 12.0-14.9 in and the ≥ 15.0 in length groups, the value continues to increase (Table 133). The increase in these larger length groups could be due to the abundance of large gizzard shad in the lake that can only be fed upon by these fish. Management objectives for relative weights in the 12.0-15.0 in length group (>90) and the ≥ 15.0 in length group (>90) were both met, but the goal of relative weights in the 8.0-11.9 in length group (>90) was not met (Table 134).

Miscellaneous

On 17 September 2009, blue catfish were stocked in the lake. A total of 1,630 were stocked at a rate of slightly higher than 9.5 per acre.

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

Water body	Species	Date (2008)	Time (24hr)	Gear	Weather	Water Temp (°F)	Water level	Secchi (in)	Conditions	Pertinent sampling comments*
Cave Run Lake	Muskie	3/30	900	shock	sunny/cool	52.20	728.2	30	good	upper section, slightly murky, cond 138
Cave Run Lake	Muskie	3/31	900	shock	overcast/cool	52.90	728.31	36	good	middle section, slightly murky, cond 124
Cave Run Lake	Muskie	4/1	900	shock	sunny	52.00	728.34	72	good	lower section, cond 140
Cave Run Lake	LMB	<i>did not sample because of high water</i>								
Cave Run Lake	LMB	<i>did not sample because of high water</i>								
Cave Run Lake	LMB	<i>did not sample because of high water</i>								
Cave Run Lake	LMB	9/21	2000	shock	overcast	76.82	730.28	54	good	upper section, cond 166.9
Cave Run Lake	LMB	9/22	2000	shock	overcast	79.52	730.17	56	good	middle section, cond. 168.6
Cave Run Lake	LMB	9/23	2000	shock	overcast/warm	77.90	730.06	96	good	lower section, cond. 162.9
Cave Run Lake	WC/BC	11/3	830	trap net	overcast	54.00	726.3	25	good	
Cave Run Lake	WC/BC	11/4	830	trap net	overcast	53.00	725.98	27	good	
Cave Run Lake	WC/BC	11/5	830	trap net	clear	52.10	725.92	28	good	
Cave Run Lake	WC/BC	11/6	830	trap net	clear/cool	52.00	725.87	32	good	
Grayson Lake	LMB	5/6	2100	shock	cloudy/light rain	66.10		36	good	cond 77, lower lake
Grayson Lake	LMB	5/5	2100	shock	cloudy/cool	66.00		49	good	cond 163, middle lake
Grayson Lake	LMB	5/4	2100	shock	cloudy/cool	64.90		22	good	cond 107, upper lake
Grayson Lake	LMB	9/4	2015	shock	clear/calm	80.20	585.69	24	good	cond. 157, upper lake
Grayson Lake	LMB	9/15	2010	shock	clear/calm	78.10	585.69	48	good	cond 158, middle lake
Grayson Lake	LMB	9/16	2000	shock	overcast/warm	77.02	585.69	54	good	cond 152, lower lake
Grayson Lake	WC/BC	10/20	935	shock	clear/calm	51.08		36	good	cond 171, upper lake only
Lake Carmico	LMB	5/7	2100	shock	clear/cool	67.30	slightly up	12 to 60	good	cond 222
Lake Carmico	BG/RE	6/3	920	shock	cloudy/rain	76.28	normal	54	good	cond 224
Lake Carmico	LMB	10/1	2000	shock	P-cloudy	67.30	slightly up	54	good	cond 221
Clear Creek	LMB	5/4	1930	shock	cloudy	69.60	normal	30	good	cond 106, shocked diurnally
Clear Creek	BG/RE	6/2	1100	shock	warm/clear	80.85	normal	78	good	cond 130
Clear Creek	LMB	10/5	2000	shock	clear/calm	68.00	normal	52	poor	cond 138, aquatic vegetation problem
Greenbo Lake	LMB	4/30	2100	shock	overcast	68.20	normal	156	good	
Greenbo Lake	BG/RE	6/1	1025	shock	sunny	75.10	normal	90	good	cond 85
Greenbo Lake	LMB	9/17	2015	shock	clear/calm	78.10	normal	163	good	cond 71
Mill Creek Lake	LMB	4/29	2100	shock	clear/calm	70.70	normal	84	good	cond 85
Mill Creek Lake	BG/RE	6/10	1000	shock	overcast	75.56	normal	132	good	cond 100
Mill Creek Lake	LMB	9/29	2000	shock	overcast	67.60	normal	66	good	turbid, cond
Lake Reba	LMB	4/27	2100	shock	clear/hot	72.40	normal	72	good	cond 306
Lake Reba	BG/RE	5/28	900	shock	overcast	77.90	normal	48	good	cond 249
Lake Reba	LMB	9/24	2000	shock	overcast	77.90	normal	30	good	cond 233.8
Rebel Trace Lake	LMB	5/14	1800	shock	overcast/warm	73.90	normal	31	good	cond 52, shocked diurnally
Rebel Trace Lake	BG/RE	6/2	800	shock	warm/clear	76.40	normal	42	good	cond 72
Rebel Trace Lake	LMB	<i>could not sample for aquatic vegetation problem</i>								

Table 1 cont.

Water body	Species	Date (2007)	Time (24-hr)	Gear	Weather	Water Temp (°F)	Water level	Secchi (in)	Conditions	Pertinent sampling comments
Smoky Valley	LMB	5/13	2135	shock	rain	64.70	normal	29	fair	turbid: cond: 308
Smoky Valley	BCFRE	5/27	855	shock	cloudy	72.30	up slightly	16	fair	turbid: cond: 222
Smoky Valley	LMB	9/30	2000	shock	overcast	63.70	normal	14	fair	turbid: cond: 237.7
Lake Wilgreen	LMB	4/28	2050	shock	overcast	68.50	normal	30	good	cond: 521
Lake Wilgreen	BCFRE	6/9	1000	shock	clear/hot	77.18	normal	36	good	cond: 310
Lake Wilgreen	LMB	9/28	2005	shock	cool/clear	71.60	normal	30	good	cond: 361.5

Normal Summer

Normal Summer

* cond = conductivity in $\mu\text{S/cm}$

Table 2. Relative abundance and CPUE (fish/hr) of muskellunge collected in the upper, middle and lower sections (includes ≤ 20.0 in observed but not collected) during 6 hours of 30 minute runs (18 hours total) in each area of Cave Run Lake from 30 March - 01 April 2009.

Species	Inch class																														Std.	
	12	13	14	15	16	22	25	26	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	45	46	47	Total	CPUE	Err.		
Muskellunge	3	7	7	5	4	1	4			2	2		1	1	1		1						1					39	6.50	1.23		
	3	11	11	7	3		1			1	2		2	2		2		2		1	1							48	8.00	1.39		
	3	12	6	2			1	1	1	1	2	2	2	6	5	3	3	4	4	2	1	2	1	2	1	2	1	1	67	11.17	1.42	
Total	9	30	24	14	7	1	5	1	1	3	4	4	2	5	9	5	4	3	6	5	3	1	3	1	2	1	1	154	8.56	0.83		

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Table 3. Number of fish and mean relative weight (W_r) values for length groups of muskellunge collected across all lake sections in Cave Run Lake from 2003 to 2009. Standard errors are in parentheses.

Year	≤ 20.0 in			20.1-30.0 in			30.1-38.0 in			≥ 38.1 in			Total		
	N	W _r	(se)	N	W _r	(se)	N	W _r	(se)	N	W _r	(se)	N	W _r	(se)
2009	12	88	(4)	11	97	(1)	36	93	(1)	23	93	(1)	82	93	(1)
2008	27	76	(1)	40	114	(17)	48	94	(1)	11	89	(1)	126	96	(6)
2007	35	84	(1)	9	102	(4)	18	95	(3)	14	92	(2)	76	90	(1)
2006	17	75	(1)	13	88	(2)	26	89	(1)	13	87	(1)	69	85	(1)
2005	26	81	(4)	23	91	(1)	38	89	(1)	22	85	(2)	109	87	(1)
2004	10	79	(2)	10	90	(3)	32	87	(1)	15	80	(1)	67	85	(1)
2003	22	82	(3)	16	96	(3)	33	92	(2)	9	87	(2)	80	90	(1)

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Table 4. Muskellunge assessment for Cave Run Lake spring electrofishing from 1995-2009 (scoring based on statewide assessment).

Year		CPUE age 1	Spring CPUE ≥20.0 in	Spring CPUE ≥30.0 in	Spring CPUE ≥36.0 in	Spring CPUE ≥40.0 in	Total score	Assessment rating
2009	Value	4.67	3.89	3.28	1.67	0.67	16	Good
	Score	3	2	3	4	4		
2008	Value	2.72	5.50	3.28	1.28	0.28	14	Good
	Score	2	3	3	3	3		
2007	Value	3.61	2.50	1.78	1.17	0.39	12	Good
	Score	3	1	2	3	3		
1995	Value	2.87	4.52	2.83	1.56	0.55	14	Good
	Score	2	2	3	4	3		
2006	Value	2.44	2.89	2.17	1.22	0.44	11	Fair
	Score	2	1	2	3	3		
2005	Value	2.87	5.53	4.00	2.00	0.80	17	Excellent
	Score	2	3	4	4	4		
2004	Value	1.28	3.17	2.61	1.28	0.44	12	Good
	Score	1	2	3	3	3		
2003	Value	1.94	3.22	2.33	1.00	0.33	11	Fair
	Score	1	2	2	3	3		
2002	<i>Lake flooded, muddy water, too few muskellunge collected for comparison purposes</i>							
2001	Value	2.32	4.41	3.07	1.51	0.64	15	Good
	Score	2	2	3	4	4		
2000	Value	1.72	2.78	1.78	0.94	0.28	10	Fair
	Score	1	1	2	3	3		
1999	Value	1.64	3.15	2.30	0.67	0.24	9	Fair
	Score	1	2	2	2	2		
1998	Value	3.75	2.82	2.82	1.04	0.25	13	Good
	Score	3	3	2	3	2		
1997	<i>Lake flooded, muddy water, too few muskellunge collected for comparison purposes</i>							
1996	Value	5.23	4.16	2.36	0.83	0.42	12	Good
	Score	3	2	2	2	3		
1995	Value	2.87	4.52	2.83	1.56	0.55	14	Good
	Score	2	2	3	4	3		

nedmuscr.d09; nedMS2cr.d08; nedMK1cr.d07; nedmuscr.d06-95

Table 5. Population assessment of largemouth bass based on samples collected at Cave Run Lake since the implementation of the slot limit (scoring based on statewide assessment)

Year		Mean length					Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
		age-3 at capture	Spring CPUE ¹ age-1	Spring CPUE ² 12.0-14.9 m	Spring CPUE ³ ≥15.0 m	Spring CPUE ⁴ ≥20.0 m				
2009*	Value									
	Score									
2008	Value	12.4	24.88	8.33	3.50	0.50	9	Fair	0.786	54.40%
	Score	3	2	1	1	2				
2007	Value	12.4	66.50	19.90	7.90	0.33	13	Good	0.703	51.00%
	Score	3	4	2	2	2				
2006	Value	12.4	49.20	14.70	10.20	0.17	10	Fair	0.799	55.00%
	Score	3	3	1	2	1				
2005	Value	12.4	43.00	14.70	7.25	0.67	11	Fair	0.897	59.00%
	Score	3	3	1	2	2				
2004	Value	12.4	28.1	26.00	14.70	0.33	13	Good	0.846	57.00%
	Score	3	2	3	3	2				
2003	Value	12.4	39.80	24.80	20.20	0.75	14	Good		
	Score	3	3	2	4	2				
2002*	Value									
	Score									
2001	Value	10.7	15.10	27.60	12.60	0.25	10	Fair		
	Score	1	1	3	3	2				
2000	Value	10.3	35.50	26.80	9.00	0.42	10	Fair		
	Score	1	2	3	2	2				
1999	Value	11.0	50.20	21.60	8.60	0.00	9	Fair		
	Score	1	4	2	2	0				
1998	Value	10.7	10.80	20.60	6.90	0.00	6	p		
	Score	1	1	2	2	0				
1997	Value	10.8	23.80	24.60	4.40	0.08	7	Fair		
	Score	1	1	2	2	1				
1996	Value	11.1	50.80	15.20	4.00	0.00	9	Fair		
	Score	2	4	2	1	0				

* - Lake was not sampled due to high water

Table 6. Length frequency and CPUE (fish/hr) of black bass collected in 6.0 hours (2 hours in each area; 12 30-min. runs) of nocturnal electrofishing in Cave Run Lake on 21 - 23 September 2009.

Area/Species	Inch class																					Total	CPUE	Std. error
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21				
Lower																								
Smallmouth bass	3	4	4	1	5	6	1	1	1	1	1	1	1	1										
Spotted bass	12	48	35	8	28	19	21	31	23	7														
Largemouth bass	14	34	36	18	3	1	9	14	13	11	9	3	3	2	1	3								
Middle																								
Smallmouth bass	3	5		3	4	2	1	2																
Spotted bass	26	54	7	12	15	14	29	29	7	1														
Largemouth bass	21	44	20	12		1	15	15	13	8	2	4	1											
Upper																								
Spotted bass	2	71	77	62	9	5	44	42	18	31	12	3	5	1	3	1	1	1						
Largemouth bass	2	71	77	62	9	5	44	42	18	31	12	3	5	1	3	1	1	1						
Total																								
Smallmouth bass	6	9	1	8	10	3	1	3	1	3	1	1	1	1										
Spotted bass	12	74	91	15	41	37	37	64	56	14	1													
Largemouth bass	2	106	155	118	39	8	46	66	47	57	31	14	12	5	5	2	4	3	1					

nedwrsr.d09

Table 7. Number of fish and mean relative weight (Wr) values for length groups of black bass collected in Cave Run Lake sampled by nocturnal electrofishing. Standard errors are in parentheses.

Species	Area	Length group					
		8.0-11.9 in		12.0-14.9 in		>15.0 in	
		No.	Wr(se)	No.	Wr(se)	No.	Wr(se)
Largemouth bass	Lower	37	87(2)	23	85(1)	9	91(3)
	Middle	44	82(1)	14	79(4)	3	94(7)
	Upper	135	85(1)	20	86(2)	8	91(3)
Total	216	85(1)	57	84(1)	20	92(2)	
Spotted bass		7.0-10.9 in		11.0-13.9 in		>14.0 in	
		No.	Wr(se)	No.	Wr(se)	No.	Wr(se)
	Lower	94	87(1)	7	83(2)		
	Middle	87	95(1)	8	91(3)		
Upper	13	91(2)					
Total	194	91(1)	15	87(2)			
Smallmouth bass		7.0-10.9 in		11.0-13.9 in		>14.0 in	
		No.	Wr(se)	No.	Wr(se)	No.	Wr(se)
	Lower	12	89(2)	2	80(7)	3	86(5)
Middle	10	85(2)	2	71(10)			
Total	22	87(1)	4	75(6)	3	86(5)	

nedwiser.d09

Table 8. Indices of year class strength at age 0 and age 1 and mean lengths (m) of largemouth bass collected in the fall while nocturnal electrofishing at Cave Run Lake.

Year class	Area	Age 0		Age 1	
		Mean length	Std. error	CPUE	Std. error
2009	Total	4.6	0.04	70.17	12.16
2008	Total	4.6	0.04	76.50	28.15
2007	Total	4.7	0.06	50.50	19.00
2006	Total	4.8	0.05	68.50	26.20
2005	Total	4.1	0.07	51.50	19.40
2004	Total	5.3	0.06	86.00	26.30
2003	Total	4.7	0.04	70.70	19.00
				Age 0 >= 5.0 in	Age 1
				CPUE	Std. error
				26.33	4.10
				26.33	8.13
				20.30	7.70
				31.50	13.10
				10.80	3.50
				53.50	14.00
				23.50	6.40
				28.10	3.00

* No data collected, water too high to sample

nedwiser.d09 - 03; nedpsdr.d08 - d04

nedtaagr.d03, 07

Table 9. Length frequency and CPUE (fish/net-night) for each species of crappie collected at Cave Run Lake (upper section only) in 57 net-nights during 02 - 05 November 2009.

Species	Inch class														Total	CPUE	Std. error
	2	3	4	5	6	7	8	9	10	11	12	13	14				
White crappie	11	395	53	396	195	108	58	57	16	5	4	1	1299	162.58	21.52		
Black crappie	1	15	9	17	18	19	12	5	2				98	12.25	2.43		

nedctncr.d09

Table 10. PSD and RSD₁₀ values for crappie collected in trap nets on Cave Run Lake; 95% confidence limits are in parentheses.

	No. \geq stock size	PSD (\pm 95%)	RSD ₁₀ (\pm 95%)
White crappie	840	17 (# 3)	5 (# 1)
Black crappie	73	26 (\pm 10)	3 (\pm 4)

nedctncr.d09

Table 11. Age frequency and CPUE (fish/net-night) of white crappie collected from trap nets fished in Cave Run Lake.

Age	Inch class												Total	%	CPUE	Std error
	3	4	5	6	7	8	9	10	11	12						
0+	395	53											448	35	56.00	11.48
1+			356	117									473	37	59.18	7.07
2+			40	78	108	52	38		4				316	25	39.48	3.81
3+						6	19	12	2				38	3	4.81	0.5
4+								4	2				6	0	0.71	0.15
5+										2			2	0	0.25	0.09
6+										2			4	0	0.46	0.16
9+																
Total	395	53	396	195	108	58	57	16	5	4			1287	100		
%	31	4	31	15	8	5	4	1	0	0			100			

nedctncr.d09, nedaagcr.d07

Table 12. Population assessment of white crappie based on samples collected in the fall at Cave Run Lake from 2001-2009 (scoring based on statewide assessment).

Year	CPUE excluding age-0		CPUE age-1	CPUE age-0	Fall CPUE ≥ 8.0 in	Mean length age-2 at capture	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
	2009	Value 106.4	4	59.18	56.00	3.25	7.7	15	Good	-1.490
2008	Value 2.01	1	0.64	1.30	0.56	7.7	5	Poor	0.588	45.50%
2007	Value 2.80	1	0.74	0.55	0.60	7.7	5	Fair	1.410	75.50%
2006	Value 6.89	2	5.14	3.75	0.65	7.9	8	Poor	0.951	66.30%
2005	Value 2.20	1	0.70	1.70	0.90	7.9	5	Fair	0.572	43.60%
2004	Value 9.30	2	4.20	6.40	3.00	7.9	10	Poor	0.762	53.30%
2003	Value 1.60	1	0.22	0.11	0.70	7.8	5	Poor	0.391	32.30%
2002	Value 4.39	1	1.09	0.56	0.79	7.3	5	Poor		
2001	Value 1.70	1	0.60	0.05	0.35	6.9	5	Poor		

nedctncr.d09

Table 13. Management objective results for 2009 at Cave Run Lake that can be determined through routine sampling compared to previous years.

Muskellunge	2009		2008	
	Result	Met	Result	Met
Objective 1 >2.40 f/h age 1	4.67	Yes	2.72	Yes
Objective 2 >3.35 f/h ≥20.0 in	3.89	Yes	5.50	Yes
Objective 3 >2.54 f/h ≥30.0 in	3.28	Yes	3.28	Yes
Objective 4 >1.20 f/h ≥36.0 in	1.67	Yes	1.28	Yes
Objective 5 >0.42 f/h ≥40.0 in	0.67	Yes	0.28	No
Largemouth Bass				
Objective 1 >39.38 f/h age 1	*		24.88	No
Objective 2 >21.18 f/h 11.0-12.0 in	*		32.67	Yes
Objective 3 >15.74 f/h 13.0-15.9 in	*		29.33	Yes
Objective 4 >5.67 f/h ≥16.0 in	*		10.50	Yes
Objective 5 >0.27 f/h ≥20.0 in	*		0.50	Yes
Crappie (Black and White combined)				
Objective 1 >3.69 f/nn ≥age 1	106.40	Yes	2.01	No
Objective 2 >1.18 f/nn age 1	59.18	Yes	0.64	No
Objective 3 >1.88 f/nn age 0	56.00	Yes	1.30	No
Objective 4 >1.00 f/nn ≥8.0 in	3.25	Yes	0.56	No
White Bass				
Objective 1 >11.80 f/nn ≥age 1	**		9.00	No
Objective 2 >5.76 f/nn age 1	**		2.25	No
Objective 3 >6.32 f/nn ≥12.0 in	**		7.83	Yes

* + Lake not sampled due to high water

** = Lake was not sampled for this species in this year

Table 14. Definition of aquatic vegetation categories

Vegetation Category	Definition	Example
Unvegetated	Sites with no form of vegetation	
Submersed Aquatic Vegetation	True submersed advanced vegetation	Curly Pondweed, Eurasian Water Milfoil, American Pondweed, Sago Pondweed
Emergent Vegetation	Plants with the majority of the growth above the water	Water Willow, Common Button Bush, Red Maple
Algae	Single celled basic aquatic vegetation	Filamentous Algae, Chara
Non-Rooted Floating Vegetation	Plant whose leaves and fruiting bodies float on the surface of the water with roots that do not extend into the substrate	Duckweed, Watermill
Rooted Floating Vegetation	Plant whose leaves and fruiting bodies float on the surface of the water with roots that extend into the substrate	American Lotus, Water Lilly

Table 15. Frequency of occurrence and percentages of plant types in vegetation survey.

	Overall		Lower		Middle		Upper	
	Percent of		Percent of		Percent of		Percent of	
	N	sites	N	sites	N	sites	N	sites
Submergent vegetation	44	49.4	21	72.4	19	63.3	4	13.3
Unvegetated	33	37.1	5	17.2	9	30.0	19	63.3
Emergent vegetation	9	10.1	1	3.5	1	3.3	7	23.3
Algae	8	9.0	2	6.9	6	20.0	0	0.0

Table 16. Frequency of occurrence of vegetation found in Cave Run Lake during Summer 2009 vegetation sampling.

Species		Overall	Lower	Middle	Upper
Scientific name	Common name	N=89	N=29	N=30	N=30
	Unvegetated	33	5	9	19
<i>Potamogeton crispus</i>	Curly Pondweed	29	16	12	1
<i>Myriophyllum spicatum</i>	Milfoil	28	14	12	2
<i>Chara spp</i>	Chara	15	5	9	1
<i>Cephalauthus occidentalis</i>	Button Bush	6	1	0	5
<i>Najas marina</i>	Spiny Naiad	5	1	3	1
<i>Plantanus occidentalis</i>	Sycamore	4	0	0	4
<i>Potamogeton nodosus</i>	American Pondweed	3	1	2	0
<i>Lespedeza spp</i>	Lespedeza	3	0	0	3
<i>Urtica dioica</i>	Nettle	2	0	0	2
<i>Toxicodendron radicans</i>	Poison Ivy	2	0	0	2
<i>Justicia americana</i>	Water Willow	2	0	1	1
<i>Chamaecrista nictitans</i>	Partridge Pea	2	0	0	2
	Algae	2	0	1	1
<i>Acer rubrum</i>	Red Maple	2	1	0	1
<i>Vitis vinifera</i>	Wildgrapevine	1	0	0	1
<i>Rubus spp</i>	Blackberry	1	0	0	1
<i>Rosa multiflora</i>	Multiflora Rose	1	0	0	1
<i>Polygonum spp</i>	Smartweed	1	0	0	1
<i>Nyssa sylvatica</i>	Black Gum	1	0	0	1
<i>Melilotus spp</i>	Sweet Clover	1	0	0	1
<i>Lonicera spp</i>	Honey Suckle	1	0	0	1
<i>Fagus grandifolia</i>	Beech	1	0	0	1
<i>Eriophyllum spp</i>	Sunflower	1	0	0	1
<i>Chenopodium album</i>	Lambs Quarters	1	0	0	1
<i>Asclepias spp</i>	Milkweed	1	0	0	1

Table 17. Densities of submersed aquatic vegetation (percent) for the lower, middle and upper portions of the lake. Interpretation of the abbreviations for the vegetation types are found below the table.

	All	C	M	N	A	CM	CA	MN	CMN	CMA
Overall	58.3	23.6	32.0	20.0	20.0	54.6	20.0	40.0	60.0	60.0
Lower	38.0	28.0	20.0	20.0	0.0	52.0	20.0	0.0	0.0	0.0
Middle	42.2	20.0	50.0	20.0	20.0	60.0	0.0	40.0	60.0	60.0
Upper	20.0	20.0	20.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0

C=Curly Pondweed

M=Eurasian Watermilfoil

N=Spiny Naiad

A=American Pondweed

CM=Curly Pondweed and Eurasian Watermilfoil

CA=Curly Pondweed and American Pondweed

MN=Eurasian Watermilfoil and Spiny Naiad

CMN=Curly Pondweed, Eurasian Watermilfoil and Spiny Naiad

CMA= Curly Pondweed, Eurasian Watermilfoil and American Pondweed

Table 18. Length frequency and CPUE (fish/hr) of black bass collected in 6.0 hours of nocturnal electrofishing (12 30-minute runs, four in each area) for black bass at Grayson Lake on 04 - 06 May 2009.

Area	Species	Inch class																			Total	CPUE	Std. error	
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20				22
Lower	Smallmouth bass						1															1	0.50	0.50
	Spotted bass	2	12	5	18	23	12	24	24	16	6	4										146	73.00	8.19
	Largemouth bass		3	16	10	5	1	24	26	17	22	23	10	11	18	11	4	3	4		1	209	104.50	8.54
Middle	Smallmouth bass		1				2						1									4	2.00	0.82
	Spotted bass		11	7	8	17	10	8	11	3	3											78	39.00	11.82
	Largemouth bass		4	27	28	7	10	36	29	14	25	16	16	7	7	4	4	4	4	2		244	122.00	14.35
Upper	Spotted bass			1				1	1	4	1											8	4.00	1.83
	Largemouth bass			7	15	2	2	17	12	13	11	8	6	5	3	2	1	1	1	2		108	54.00	6.68
Total	Smallmouth bass		1				3						1									5	0.83	0.39
	Spotted bass	2	23	13	26	40	22	33	36	23	10	4										232	38.67	9.55
	Largemouth bass		7	50	53	14	13	77	67	44	58	47	32	23	28	17	9	8	9	4	1	561	93.50	10.25

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Table 19. Length frequency and CPUE (fish/hr) of stocked and wild largemouth bass collected in 12.0 hours (4.0 hours in each area) of nocturnal electrofishing at Grayson Lake on 04 - 06 May 2009.

Area	Type	Inch class																				Total	CPUE	Std. error
		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	22				
Lower	Wild	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	22	201	100.50	7.50	
	Stocked	5									2				1						8	4.00	1.15	
Middle	Wild	4	25	22	7	10	36	29	14	25	16	16	7	7	4	3	4	3	2		234	117.00	11.90	
	Stocked	2	6												1						10	5.00	3.00	
Upper	Wild	5	15	2	2	17	12	13	11	8	6	5	3	2	1	1	1	1	2		106	53.00	6.24	
	Stocked	2																			2	1.00	0.58	
Total	Wild	7	41	47	14	13	77	67	44	58	47	32	21	28	16	8	8	8	4	1	541	90.17	9.40	
	Stocked	9	6								2				1	1					20	3.33	1.11	

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3,780 remedial largemouth bass stocked in Oct. 2008

22,725 remedial largemouth bass stocked in Oct. 2009

Stocked fish \geq 14.0 in represent fish stocked during 1999, 2001 and 2003.

Table 20. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Grayson Lake from 1999-2009.

Year	Length group												Total	
	<8.0 in		8.0-11.9 in		12.0-14.9 in		\geq 15.0 in		\geq 20.0 in		CPUE	Std. err.		
2009	22.83	4.03	41.00	4.22	17.00	2.68	12.67	2.04	0.83	0.30	93.50	10.25		
2008	25.67	7.21	22.50	4.35	11.50	2.48	3.67	0.85	0.33	0.22	63.33	11.51		
2007	48.00	8.03	46.83	3.75	16.00	2.09	5.00	0.76	0.17	0.17	115.83	11.64		
2006	18.83	2.88	55.50	7.40	23.67	3.91	5.33	1.11	0.33	0.22	103.33	10.07		
2005	50.11	7.95	70.22	7.87	25.11	3.66	2.89	0.52	0.22	0.15	148.33	15.86		
2004	162.33	21.99	77.78	10.10	12.89	1.38	2.89	0.59	0.33	0.18	255.89	31.87		
2003	128.33	10.65	79.50	6.51	6.33	0.77	2.17	0.63	0.67	0.38	216.33	15.11		
2002	132.50	17.87	54.50	5.48	4.83	1.42	3.00	0.76	0.83	0.39	194.83	22.74		
2001	220.78	30.58	54.22	3.23	6.67	0.89	2.22	0.48	0.22	0.15	283.89	30.19		
2000	143.33	20.56	65.67	5.86	13.44	1.51	6.67	1.04	0.33	0.18	229.11	25.92		
1999	172.67	21.58	102.44	10.12	24.11	2.13	4.56	0.66	0.22	0.15	303.78	31.25		

nedpsdg.l.d09 - d99

Table 21. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples in each area of Grayson Lake: 95% confidence intervals are in parentheses.

Area	Species	No. ≥ 8.0 in	PSD ($\pm 95\%$)	RSD ^a ($\pm 95\%$)
Lower	Spotted bass	74	12 (± 7)	-
	Largemouth bass	174	49 (± 8)	24 (± 6)
Middle	Smallmouth bass	1	*	*
	Spotted bass	25	*	*
	Largemouth bass	168	38 (± 7)	15 (± 5)
Upper	Spotted bass	7	*	*
	Largemouth bass	82	35 (± 10)	12 (± 7)
Total	Smallmouth bass	1	*	*
	Spotted bass	106	11 (± 5)	*
	Largemouth bass	424	42 (± 5)	18 (± 4)

^a For largemouth bass the preferred size used to calculate RSD was 15.0 in and for spotted and smallmouth bass it was 14.0 in.

* Not enough fish of proper size to calculate

nedpsdgl.d09

Table 22. Age frequency and CPUE (fish/hr) of largemouth bass from Grayson Lake.

Age	Inch class																		Total	%	CPUE	Std. Error
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18							
1	50	53	12	4														130	22	19.93	3.79	
2			2	9	77	67	18											172	32	28.67	3.15	
3							22	21	19	6								68	13	11.38	1.30	
4							4	26	24	6	5							65	12	10.88	1.51	
5								11	5	6	18	17						57	11	9.47	1.46	
6										13	6	6	3					21	4	3.57	0.59	
7										6	17	3	4					30	5	4.93	1.01	
8													4					4	1	0.67	0.22	
9														3				3	1	0.50	0.19	
Total	50	53	14	13	77	67	44	58	47	32	23	28	17	9	8			540	100			
%	9	10	3	2	14	12	8	11	9	6	4	5	3	2	1			100				

nedpsdgl.d09, nedaaaggl.d08

Table 23. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Grayson Lake during spring sampling from 1999-2009.

Age	Year												
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009		
1	167.02	130.80	218.11	127.20	125.23	158.93	44.34	17.30	45.90	21.46	19.93		
2	68.45	63.35	36.37	40.52	57.68	50.79	35.12	26.41	28.91	20.38	28.67		
3	21.00	9.04	11.76	10.94	14.31	16.01	18.01	16.26	10.61	5.36	11.38		
4	16.49	7.52	4.97	4.08	5.41	9.84	15.54	14.72	10.03	5.00	10.88		
5	18.48	8.30	7.37	6.48	8.55	12.22	17.37	15.84	10.40	5.07	9.47		
6	9.69	6.12	3.58	3.44	3.57	5.68	7.90	9.98	7.19	2.14	3.57		
7	0.39	0.81	0.24	0.43	0.35	0.25	0.31	0.50	0.49	1.64	4.93		
8	1.19	1.21	0.61	0.33	0.25	0.62	0.62	1.24	1.38	0.17	0.67		
9	0.22	0.11	0.11	0.67	0.22	0.22	0.11	0.17	0.29	0.28	0.50		
10	0.17	0.55	0.13	0.35	0.26	0.18	0.22	0.28	0.17	0.17	0.17		
11		0.11	0.11	0.17	0.50	0.11	0.11	0.17	0.17	0.17	0.17		
13		0.30	0.07	0.22	0.06	0.15		0.11					

nedpsdgl.d09 - d99

nedaaagl.d03: d08

Table 24. Population assessment of largemouth bass based on samples collected at Grayson Lake from 1996-2009 (scoring based on statewide assessment).

Year	Value	Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2009	Score	11.6	19.93	17.00	12.67	0.83	10	Fair	-0.361	30.30%
	Value	2	1	2	3	2				
2008	Score	11.6	21.30	11.50	3.67	0.33	7	Poor	-0.445	35.90%
	Value	2	1	1	1	2				
2007	Score	10.7	45.90	16.00	5.00	0.17	9	Fair	-0.538	41.60%
	Value	1	3	2	2	1				
2006	Score	10.7	17.30	23.67	5.33	0.30	8	Fair	-5.350	41.50%
	Value	1	1	2	2	2				
2005	Score	10.7	46.80	25.11	2.89	0.20	10	Fair	-0.731	51.90%
	Value	1	3	3	1	2				
2004	Score	10.7	40.40	12.89	2.89	0.33	8	Fair		
	Value	1	3	1	1	2				
2003	Score	10.7	125.23	6.33	2.17	0.67	9	Fair		
	Value	1	4	1	1	2				
2002	Score	10.7	127.20	4.83	3.00	0.83	9	Fair		
	Value	1	4	1	1	2				
2001	Score	10.7	218.11	6.67	2.22	0.22	9	Fair		
	Value	1	4	1	1	2				
2000	Score	10.5	130.80	13.44	6.67	0.33	10	Fair		
	Value	1	4	1	2	2				
1999	Score	10.7	167.02	24.11	4.56	0.22	11	Fair		
	Value	1	4	2	2	2				
1998	Score	10.4	145.57	20.20	4.62	0.17	10	Fair		
	Value	1	4	2	2	1				
1997	Score	10.8	87.60	19.90	3.10	0.59	10	Fair		
	Value	1	4	2	1	2				
1996	Score	10.7	56.13	13.20	3.20	0.30	9	Fair		
	Value	1	4	1	1	2				

nedpsdgl.d96-d09; nedaaggl.d03.d08

Table 25. Length frequency and CPUE (fish/hr) of black bass collected in 4.5 hours in each area) of nocturnal electrofishing (9 30-min runs) for black bass in Grayson Lake on 14 - 16 September 2009.

Area/Species	Inch class																					Total	CPUE	Std. error
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	20	21						
Lower																								
Smallmouth bass											1								1	0.67	0.67			
Spotted bass	20	54	12	39	12	12	15	23	5	6								198	132.00	12.49	12.49			
Largemouth bass	5	13	19	11	3	4	13	4	4	5	4	5	1		3	3	1	1	99	66.00	9.45	9.45		
Middle																								
Spotted bass	2	30	9	6	9	7	9	4		1								77	51.33	5.46	5.46			
Largemouth bass	3	26	36	8		20	15	11	12	10	2	2	3	2				150	100.00	12.06	12.06			
Upper																								
Spotted bass	1	3			1	1	3	1		1		1						12	8.00	3.06	3.06			
Largemouth bass	2	14	12		8	16	17	15	6	3	4	4		3	1			105	70.00	11.72	11.72			
Total																								
Smallmouth bass											1							1	0.22	0.22	0.22			
Spotted bass	23	87	21	45	22	20	27	28	5	8	1							287	63.78	18.61	18.61			
Largemouth bass	10	53	67	19	11	40	45	30	22	18	10	11	4	5	4	3	1	354	78.68	7.73	7.73			

nedwrsjld09

Table 26. Number of fish and mean relative weight (W_r) values for length groups of black bass collected in Grayson Lake. Standard errors are in parentheses.

Species	Area	Length group					
		8.0-11.9 in	12.0-14.9 in	≥ 15.0 in			
	No.	W_r (se)	No.	W_r (se)	No.	W_r (se)	
Largemouth bass	Lower	26	78 (1)	10	79 (3)	8	92 (2)
	Middle	48	81 (1)	7	84 (2)	2	91 (9)
	Upper	41	80 (1)	8	85 (3)	4	104 (9)
	Total	115	80 (1)	25	82 (2)	14	95 (3)
		7.0-10.9 in			11.0-13.9 in		
	No.	W_r (se)	No.	W_r (se)	No.	W_r (se)	
Spotted bass	Lower	55	84 (2)	6	85 (2)		
	Middle	20	88 (2)	1	88 (0)		
	Upper	5	87 (2)	2	87 (7)		
	Total	80	85 (1)	9	86 (2)		

nedwvrgld09

Table 27. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in September while nocturnal electrofishing at Grayson Lake.

Year class	Area	Age 0		Age 1		Age 0 ≥ 5.0 in		Age 1	
		Mean length	Std. error	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error
2009	Total	4.1	0.06	33.11	5.66	4.22	1.35		
2008	Total	4.1	0.04	66.00	16.42	8.67	2.77	19.93	3.79
2007	Total	4.3	0.07	44.90	9.20	12.90	2.80	29.80	9.99
2006	Total	4.1	0.04	87.10	17.94	12.00	2.58	45.90	8.00
2005	Total	4.0	0.04	72.30	17.01	11.70	2.23	17.30	2.80
2004	Total	4.3	0.08	40.40	5.74	11.30	2.08	46.80	7.80
2003	Total	4.3	0.03	59.10	6.82	10.40	1.72	158.90	21.73

nedwvrgld09 - d03; nedpsqld09 - d04

nedaaqld03; d08

Table 28. Length frequency and CPUE (fish/hr) for each species of crappie collected at Grayson Lake while electrofishing 3.0h (12 15-minute runs) 20 October 2009.

Species	Inch class											
	3	4	5	6	7	8	9	10	11	Total	CPUE	Std. error
White crappie	2	18	39	72	48	20	7	2	2	210	70.00	13.06
Black crappie	2	3	2							7	2.33	0.92

nedewrgld09

Table 29. PSD and RSD₁₀ values for crappie collected while electrofishing Grayson Lake; 95% confidence limits are in parentheses.

	No. ≥ 5.0 in	PSD ($\pm 95\%$)	RSD ₁₀ ($\pm 95\%$)
White crappie	190	16 (± 5)	2 (± 2)

nedcwrgl.d09

Not enough black crappie collected to compute a PSD

Table 30. Age frequency and CPUE (fish/hr) of white crappie collected while electrofishing (6 30-minute runs) at Grayson Lake.

Age	Inch class									Total	%	CPUE	Std error
	3	4	5	6	7	8	9	10	11				
0+	2									2	1	0.53	0.36
1+		18	32							50	24	16.77	4.56
2+			7	26	5					38	18	12.69	2.82
3+				46	34	7	2			89	42	29.56	5.69
4+					10	9	2	1		22	10	7.23	1.15
5+						2				2	1	0.61	0.13
6+							2	2	1	5	2	1.61	0.42
7+								1		1	0	0.33	0.13
10+									2	2	1	0.67	0.45
Total	2	18	39	72	48	20	7	2	2	210	100		
%	1	9	19	34	23	10	3	1	1	100			

nedcwrgl.d09; nedaaggl.d08

Table 31. Population assessment for white crappie based on samples collected during the fall at Grayson Lake from 2005-2009 (scoring based on lake-specific assessment).

Year		Mean length		CPUE	CPUE	Total score	Assessment rating	Instantaneous mortality (Z)	Annual mortality (A)%
		age-2 at capture	CPUE age-0						
2009	Value	6.4	0.50	16.80	69.30	10.30	Fair	-0.384	56.60%
	Score	1	1	3	3	2			
2008	Value	6.4	1.70	27.60	104.60	16.00	Fair	-0.754	53.00%
	Score	1	1	4	4	2			
2007	Value	5.6	0.30	1.30	21.60	6.00	Poor	-0.900	59.30%
	Score	1	1	1	1	1			
2006	Value	5.6	39.60	83.30	228.80	42.40	Excellent	-1.185	69.40%
	Score	1	4	4	4	4			
2005	Value	5.1	1.30	9.90	41.30	16.70	Fair	-0.233	20.80%
	Score	1	1	2	2	2			

nedcwrgl.d05-d09, nedaaggld05, d06, d08

Table 32. Length frequency and CPUE (fish/hr) for largemouth bass collected in 1.5 hours of nocturnal electrofishing (6 15-minute runs) at Lake Camico (Nicholas Co.) on 07 May 2009.

Species	Inch class																					Total	CPUE	Std. error
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	19	20	21					
Largemouth bass	1	3	13	17	13	11	16	16	5	7	10	13	5	5	2	3	1	1	1	143	95.33	10.75		

nedpsdle.d09

Table 33. Age frequency and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of nocturnal electrofishing at Lake Carnico.

Age	Inch class													Total	% CPUE	Std error		
	3	6	7	8	9	10	11	12	13	14	15	16	17				19	
1	3	13	11												27	25	18.00	2.00
2				16	14	2	1	3							36	33	23.87	4.31
3				2	3	5	3								14	13	9.33	2.14
4						1	3	7	2						12	11	8.25	1.39
5										5					5	5	3.33	1.23
6									3						3	3	2.22	0.82
7								7				2	3		12	10	7.67	2.16
10														1	1	1	0.67	0.67
Total	3	13	11	16	16	5	7	10	13	5	5	2	3	1	110	100		
%	3	12	10	15	15	5	6	9	12	5	5	2	3	1	100			

nedaaaglc.d08; nedpsdlic.d09

Table 34. Population assessment of largemouth bass based on samples collected at Lake Carnico from 2004-2009 (scoring based on statewide assessment).

Year	Value	Score	Mean length age-3 at capture	Spring CPUE age-1		Spring CPUE 12.0-14.9 in		Spring CPUE ≥15.0 in		Spring CPUE ≥20.0 in		Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
				18.00	2	18.67	1	8.67	2	1.33	2				
2009	11.0	3	11.0	18.00	2	18.67	1	8.67	2	1.33	2	10	Fair	-0.599	45.10%
2008	11.0	3	11.0	2.70	1	9.30	1	8.00	2	1.30	2	9	Fair	-0.673	49.00%
2007	12.2	4	12.2	39.50	2	31.30	2	14.70	2	1.30	2	12	Fair	-0.679	49.30%
2006	12.2	4	12.2	27.50	2	18.00	1	9.30	1	0.70	1	10	Fair	-0.505	39.60%
2005	12.2	4	12.2	23.20	2	24.70	2	14.00	1	0.70	1	11	Fair	-0.511	40.00%
2004	12.2	4	12.2	54.10	3	36.00	3	19.30	1	0.70	1	14	Good	-0.631	46.90%

nedpsdlic.d04-d09; nedaaaglc.d03.d08

Table 35. Spring electrofishing CPUE (fish/hr) for various length groups of largemouth bass collected at Lake Carnico from 2000 to 2009.

Year	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
2009	38.67	6.98	29.33	5.23	18.67	2.86	8.67	1.61	1.33	0.84	95.33	10.75
2008	2.67	0.84	16.00	4.5	9.33	2.46	8.00	2.07	1.33	0.84	36.00	7.3
2007	40.00	8.07	108.67	8.97	31.33	3.92	14.67	2.46	1.33	1.33	194.67	10.26
2006	28.67	5.10	41.33	8.56	18.00	3.69	9.33	2.86	0.67	0.67	97.33	18.12
2005	24.00	5.56	64.67	8.48	24.67	3.33	14.00	1.71	0.67	0.67	127.33	12.62
2004	56.67	13.36	121.33	15.62	36.00	5.16	19.33	3.00	0.67	0.67	233.33	34.71
2003	42.67	9.50	47.67	6.25	34.00	4.70	13.33	4.09	1.33	0.84	164.67	15.78
2002	49.00	9.43	51.00	17.08	30.00	7.75	9.00	1.91	-	-	139.00	29.59
2001	35.00	5.00	51.00	8.54	28.00	5.89	6.00	2.58	-	-	123.00	11.31
2000	28.00	6.32	41.00	3.00	16.00	5.66	9.00	3.00	1.00	1.00	94.00	15.87

nedpsdlc.d09 - d00

Table 36. Largemouth bass PSD and RSDs values from spring electrofishing at Lake Carnico; confidence limits are in parentheses.

Year	No. ≥8.0 in	PSD (±95%)	RSDs (±95%)
2009	85	48 (± 11)	15 (± 8)
2008	50	52 (± 14)	24 (± 12)
2007	232	30 (± 6)	10 (± 4)
2006	103	40 (± 10)	14 (± 7)
2005	155	37 (± 8)	14 (± 6)
2004	265	31 (± 6)	11 (± 4)
2003	183	39 (± 7)	11 (± 5)
2002	90	43 (± 10)	10 (± 6)
2001	85	40 (± 11)	7 (± 6)
2000	66	38 (± 12)	14 (± 8)

nedpsdlc.d09-d00

Table 37. Length frequency and CPUE (fish/hr) for sunfish collected in 1.0 hour of diurnal electrofishing (8 7.5-minute runs) at Lake Carnico on 03 June 2009.

Species	inch class								Total	CPUE	Std. Error
	1	2	3	4	5	6	7	8			
Bluegill	51	163	45	31	33	53	6	382	382.00	79.90	
Green sunfish	21	85	41	48	39	13		247	247.00	84.90	
Longear sunfish	2	6	7	27	9			51	51.00	18.82	
Redear sunfish			1	1	1	1	4	9	9.00	4.88	
Hybrid sunfish	1		1	1	1	1	1	5	5.00	3.00	

nedpsdlc.d09

Table 38. Spring electrofishing CPUE (fish/hr) for various length groups of sunfish collected at Lake Carnico in 2003, 2006-2009.

Species	Year	Length group											
		<3.0 in		3.0-5.9 in		6.0-7.9 in		≥8.0 in		Total			
		CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.		
Bluegill	2003	160.80	23.81	134.40	22.43	24.00	6.85			319.20	39.45		
	2006	540.00	73.10	3.82.4	31.00	47.20	11.20			969.60	93.57		
	2007	140.80	27.41	54.40	14.00	0.80	0.80	0.80	0.80	196.00	38.33		
	2008	292.00	42.06	58.00	14.90	7.00	2.80			357.00	38.04		
	2009	214.00	42.60	109.00	23.20	59.00	20.90			382.00	79.90		
Redear sunfish	2003	0.80	0.80	0.80	0.80	0.80	0.80			4.00	1.79		
	2006	2.40	1.22	4.80	2.72	8.80	3.86			22.86	5.90		
	2007			4.00	1.79	1.60	1.07			5.60	2.40		
	2008			1.00	1.00	3.00	2.10	2.00	1.31	6.00	2.90		
2009			2.00	1.31	5.00	2.10	2.00	2.00	9.00	4.88			

neds unlc.d09-d06. d03

Table 39. Bluegill PSD and RSDs values from spring electrofishing at Lake Carnico; confidence limits are in parentheses.

Year	No. ≥3.0 in	PSD (±95%)	RSDs (±95%)
2009	168	35 (± 7)	
2008	65	11 (± 8)	
2007	245	15 (± 5)	
2006	537	11 (± 3)	
2003	198	28 (± 6)	0.4 (± 0.8)

neds unlc.d09-d06. d03

Table 40. Population assessment for bluegill based on samples collected at Lake Carnico from 2006-2009 (scoring based on statewide assessment).

Year	Value	Mean length age-2 at capture	Years to 6.0 in	CPUE ≥ 6.0 in	CPUE ≥ 8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2009	5.3	3.00	3	59.00	0.00	10	Fair	-0.506	39.70%
2008	5.3	3.00	3	7.00	0.00	8	Fair	-0.759	53.20%
2007	5.3	4.00	2	0.80	0.00	7	Fair	-0.561	42.90%
2006	5.3	4.00	2	47.20	0.00	8	Fair	-0.037	31.10%

nedsunlc.d06-09; nedaaglc.d06

Table 41. Length frequency and CPUE (fish/hr) for largemouth bass collected in 1.5 hours of nocturnal electrofishing (6 15-minute runs) at Lake Carnico on 01 October 2009.

Species	Inch class																				Total CPUE	Std.Error
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	19	20					
Largemouth bass	4	11	13	3	12	31	19	5	9	8	11	6	5	4	1	1	1	144	96.00	7.23		

nedwrslc.d09

Table 42. Number of fish and relative weights (W_r) for each length group of largemouth bass captured at Lake Carnico.

Species	Length group			
	8.0-11.9 in		12.0-14.9 in	
	N	W_r (se)	N	W_r (se)
Largemouth bass	41	86(2)	22	88(2)
			7	92(3)

nedwrslc.d09

Table 43. Length frequency and CPUE (fish/hr) of largemouth bass collected in 0.37 hours of nocturnal electrofishing (3 7.5-minute runs) for largemouth bass at Clear Creek Lake (Bath Co.) on 14 May 2009.

Species	inch class													Total	CPUE	Std. error	
	3	4	5	6	7	8	9	10	11	12	13	15	20				21
Largemouth bass	3	16	6	21	16	11	9	4	3	2	4	1	1	1	98	130.67	15.72
nedpsdcc.d09																	

Table 44. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Clear Creek Lake.

Year	<8.0 in			8.0-11.9 in			12.0-14.9 in			>15.0 in			Total	
	CPUE	Std. err.		CPUE	Std. err.		CPUE	Std. err.		CPUE	Std. err.		CPUE	Std. err.
2009	82.67	10.67		36.00	9.24		8.00	2.31		4.00	2.31		130.67	15.72
2008	378.00	66.40		162.00	13.22		12.00	5.16		10.00	2.31		562.00	55.10
2007	197.30	23.20		149.30	11.60		46.70	19.20		16.00	8.00		405.30	35.30
2006	136.00	20.10		189.30	13.30		10.70	7.10		13.30	7.10		349.30	16.20
2005	168.00	42.30		80.00	28.80		13.30	7.10		5.30	2.70		266.70	65.70
2004	122.70	27.10		109.30	26.30		16.00	8.00		13.30	2.70		261.30	34.70
nedpsdcc.d04 - 09														

Table 45. PSD and RSDIs values for largemouth bass collected while electrofishing Clear Creek Lake: 95% confidence limits are in parentheses.

Species	No. ≥ 8.0 in	PSD ($\pm 95\%$)	RSDIs ($\pm 95\%$)
Largemouth bass	36	25 (± 14)	8 (± 9)
nedpsdcc.d09			

Table 46. Mean back-calculated lengths (in) at each annulus for largemouth bass collected from Clear Creek Lake, including size range at each age and 95% confidence intervals.

Year	No.	Age						
		1	2	3	4	5	6	7
2008	12	5.0						
2007	8	4.3	7.7					
2006	8	4.7	7.5	9.7				
2005	3	4.5	8.4	10.1	11.9			
2004	4	4.7	7.7	10.2	11.8	13.2		
2002	1	4.8	8.1	9.8	10.4	11.1	11.5	11.7
Mean		4.7	7.7	9.9	11.7	12.8	11.5	11.7
Number	36	24	16	8	5	1	1	1
Smallest	3.1	6.5	8.8	10.4	11.1	11.5	11.7	
Largest	6.9	9.4	11.7	13.7	15.1	11.5	11.7	
Std Error	0.1	0.2	0.2	0.4	0.7			
95% CI (±)	0.2	0.3	0.4	0.8	1.3			

Otoliths were used for age determination; Intercept = 0
nedhaagec.d09

Table 47. Age frequency and CPUE (fish/hr) of largemouth bass collected in 0.37 hours of nocturnal electrofishing at Clear Creek Lake.

Age	Inch class															Total	% CPUE	Std error	
	5	6	7	8	9	10	11	12	13	15	15	15	15	15					
1																42	55	56.00	17.16
2			3	9	4	1										17	22	22.58	8.21
3					5	3	2	1								11	14	14.09	2.32
4							1				2				3	4	3.67	1.20	
5										1	2	1			4	5	5.33	0.67	
7										1					1	1	1.00	0.58	
Total	6	21	16	11	9	4	3	2	4	1	4	1			77	100			
%	8	27	21	14	12	5	4	3	5	1					100				

nedhaagec.d09; nedfnsdec.d09

Table 48. Population assessment of largemouth bass based on samples collected at Clear Creek Lake in 2009 (scoring based on statewide assessment).

Year	Mean length age-3 at capture	Spring CPUE		Spring CPUE		Spring CPUE		Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
		age-1	12.0-14.9 in	≥15.0 in	≥20.0 in	Total score				
2009	10.6	56.00	8.00	4.00	0.00	8	Fair	-0.643	47.50%	
nedpsdcc.d09; nedaagcc.d09										

Table 49. Length frequency and CPUE (fish/hr) of sunfish collected in 0.625 hour of electrofishing (5 7.5-minute runs) for sunfish at Clear Creek Lake on 02 June 2009.

Species	Inch class								Total	CPUE	Std. error
	1	2	3	4	5	6	7	8			
Bluegill	27	49	81	20	8	21	206	329.60	54.16		
Redear sunfish	3	29	54	66	69	12	1	234	374.40	98.81	
Warmouth	2	17	11	15	26	2	1	74	118.40	32.04	
Longear sunfish			2	3	3		8	12.80	7.42		
Green sunfish				1			1	1.60	1.60		
Hybrids sunfish	1	4	2	4	4	1	16	25.60	9.93		
nedsuncc.d09											

Table 50. Spring electrofishing CPUE (fish/hr) for each length group of sunfish collected at Clear Creek Lake.

Species	Year	Length group										Total	
		<3.0 in		3.0-5.9 in		6.0-7.9 in		≥8.0 in		CPUE	Std. err.		
Bluegill	2009	121.60	44.57	174.40	43.04	33.6	13.48	329.60	54.16				
	2008	378.00	162.76	112.00	33.15	72.00	69.36	562.00	138.15				
	2007			122.00	16.50	102.00	33.84	224.00	50.28				
	2006	164.00	83.40	268.00	54.60	32.00	18.60	561.60	139.70				
Redear sunfish	2009	4.80	1.96	238.40	37.81	129.60	68.42	374.40	98.81				
	2008	58.00	29.64	17.00	26.81	22.00	9.45	254.00	43.74				
	2007			112.00	14.97	104.00	35.33	260.00	52.51				
	2006	60.80	18.70	60.80	18.00	24.00	10.40	150.40	23.40				
nedsuncc.d06-d09													

Table 51. Mean back-calculated lengths (in) at each annulus for bluegill collected from Clear Creek Lake, including size range at each age and 95% confidence intervals.

Year	No.	Age					
		1	2	3	4	5	6
2008	8	2					
2007	22	1.9	3.3				
2006	8	2.3	3.8	5.2			
2005	8	2.3	3.9	5.3	6.2		
2004	4	1.9	3.4	4.8	5.6	6.2	
2003	2	1.9	3.1	4.4	5.5	5.8	6.1
Mean		2.0	3.5	5.1	5.9	6.1	6.1
Number		52	44	22	14	6	2
Smallest		1.0	2.2	4.2	5.0	5.4	5.7
Largest		3.2	4.4	5.8	6.7	6.7	6.5
Std Error		0.1	0.1	0.1	0.1	0.2	0.4
95% CI (±)		0.1	0.2	0.2	0.3	0.4	0.8

Otoliths were used for age determination; Intercept = 0
nedaagec.d09

Table 52. Mean back-calculated lengths (in) at each annulus for redear sunfish collected from Clear Creek Lake, including size range at each age and 95% confidence intervals.

Year	No.	Age					
		1	2	3	4	5	6
2008	8	2.4					
2007	18	2.5	3.9				
2006	27	2.8	4.5	5.7			
2005	1	3.1	5.0	6.2	6.9		
2003	1	2.2	4.4	6.6	7.5	8.0	8.3
Mean		2.6	4.2	5.7	7.2	8.0	8.3
Number		55	47	29	2	1	1
Smallest		1.8	2.8	3.9	6.9	8.0	8.3
Largest		4.1	5.9	7.2	7.5	8.0	8.3
Std Error		0.1	0.1	0.2	0.3		
95% CI (±)		0.1	0.2	0.3	0.6		

Otoliths were used for age determination; Intercept = 0
nedaagec.d09

Table 53. Age frequency and CPUE (fish/hr) of bluegill collected during spring electrofishing in Clear Creek Lake.

Age	Inch class						Total	%	CPUE	Std. error
	1	2	3	4	5	6				
1	22	16	8				46	22	73.65	21.08
2	5	33	73	17			128	62	204.98	29.06
3				3	5	2	10	5	15.61	8.65
4					2	11	12	6	19.36	8.79
5					1	6	7	3	11.36	5.07
6					1	2	3	1	4.64	2.39
Total	27	49	81	20	8	21	206	100		
%	13	24	39	10	4	10	100			

nedaagcc.d09; nedsuncc.d09

Table 54. Age frequency and CPUE (fish/hr) of redear sunfish collected during spring electrofishing in Clear Creek Lake.

Age	Inch class							Total	%	CPUE	Std. error
	2	3	4	5	6	7	8				
1	3	6						9	4	14.08	2.55
2		23	30	26	6			86	37	137.40	21.81
3			24	40	63	11		137	58	218.92	75.71
4						2		2	1	2.40	1.29
6							1	1	0	1.60	1.60
Total	3	29	54	66	69	12	1	234	100		
%	1	12	23	28	29	5	0	100			

nedaagcc.d09; nedsuncc.d09

Table 55. PSD and RSDs values obtained from bluegill collected at Clear Creek Lake during June 2009 compared to past years; confidence intervals are in parenthesis.

Year	No. ≥ 3.0 in	PSD ($\pm 95\%$)	RSD ₈ ($\pm 95\%$)
2009	130	16 (± 6)	
2008	92	39 (± 10)	*
2007	112	45 (± 9)	*

* = No 8.0 in fish captured to calculate RSDs

nedsuncc.d07 - d09

Table 56. Population assessment of bluegill based on samples collected at Clear Creek Lake from 2006-2009 (scoring based on statewide assessment).

Year		Mean length	Years to	CPUE	CPUE	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
		age-2 at capture	6.0 m	≥6.0 m	≥8.0 m				
2009	Value	3.4	4-4+	33.60	0.00	5	Poor	-0.786	54.40%
	Score	1	2	2	0				
2008	Value	5.1	3-3+	72.00	0.00	10	Good	-1.660	80.90%
	Score	4	3	3	0				
2007	Value	5.1	3-3+	102.00	0.00	11	Good	-1.770	83.00%
	Score	4	3	4	0				
2006	Value	5.1	3-3+	35.60	1.30	11	Good	-1.930	86.00%
	Score	4	3	2	2				

nedsunce.d06-09; nedaagee.d09, d02

Table 57. Population assessment of redear sunfish based on samples collected at Clear Creek Lake in 2009 (scoring based on statewide assessment).

Year		Mean length	Years to	CPUE	CPUE	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
		age-3 at capture	8.0 m	≥8.0 m	≥10.0 m				
2009	Value	6.1	5-5+	1.60	0.00	6	Poor	-1.495	77.60%
	Score	3	2	1	0				

nedsunce.d09; nedaagee.d09

Table 58. Length frequency and CPUE (fish/hr) for largemouth bass collected in 1.0 hours of nocturnal electrofishing (4 15-minute runs) at Clear Creek Lake on 05 October 2009.

Species	Inch class											Total	CPUE	Std Error
	3	4	5	6	7	8	9	10	11	12	17			
Largemouth bass	3	10	1	3	9	17	9	1	2	1	1	57	114.00	29.46

nedwrsle.d09

Table 59. Number of fish and relative weights (W_r) for each length group of largemouth bass captured at Clear Creek Lake.

Species	Length group					
	8.0-11.9 in		12.0-14.9 in		≥15.0 in	
	N	W_r (se)	N	W_r (se)	N	W_r (se)
Largemouth bass nedwrs1c.d09	29	76(2)	1	82(0)	1	86(0)

Table 60. Length frequency and CPUE (fish/hr) of black bass collected in 1.5 hours of nocturnal electrofishing (6 15-minute runs) for black bass at Greenbo Lake (Greenup Co.) on 30 April 2009.

Species	Inch class																						Std. error	
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE		
Largemouth bass nedpsdgb.d09	8	17	5	10	27	23	21	18	28	24	36	15	9	4	6	3	1	1	1	1	2	259	172.67	16.70

Table 61. Length frequency and CPUE (fish/hr) of stocked and wild largemouth bass collected in 1.5 hours of nocturnal electrofishing at Greenbo Lake on 03 April 2009.

Area	Type	Inch class																							Std. error
		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	23	Total	CPUE		
Lower	Wild	8	11	5	10	27	23	20	18	28	24	36	15	9	4	6	3	1	1	1	2	252	168.00	16.17	
	Stocked	6						1													7	5.60	0.98		

Table 62. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Greenbo Lake.

Year	Inch class											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		>20.0 in		Total	
	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.
2009	44.67	9.43	60.00	8.70	50.00	7.98	18.00	3.39	2.67	1.33	172.67	16.70
2008	24.0	7.23	27.33	5.79	19.33	2.81	9.33	3.04	2.67	1.33	80.00	15.21
2007			39.33	11.84	48.67	13.32	8.67	2.40	1.33	1.33	164.67	21.45
2006	28.00	5.27	66.00	12.17	50.00	7.78	18.67	4.70	7.33	2.40	162.67	19.83
2005	42.00	20.34	58.67	9.56	28.00	3.43	13.33	3.53	3.33	1.23	142.00	22.46
2004	14.00	2.88	116.80	9.87	58.80	7.45	16.80	2.97	4.00	1.03	206.40	14.09
2003	101.33	20.57	76.00	18.68	45.33	4.34	10.67	3.37	2.00	0.89	233.33	41.37
2002					<i>No data collected</i>							
2001	79.00	8.06	64.00	3.27	42.00	8.08	5.00	1.00	1.00	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	3.00	3.00	204.00	17.44
1998	77.00	26.65	119.00	16.68	57.00	8.06	7.00	2.52	1.00	1.00	260.00	27.18

nedpsdgb.d09 - d98

Malfunctioning electrofishing boat in 2008

Table 63. Largemouth bass PSD and RSD1s values from spring electrofishing at Greenbo Lake; confidence limits are in parentheses.

Year	No. ≥ 8.0 in	PSD (±95%)	RSD1s (±95%)
2009	192	53 (± 7)	14 (± 5)
2008	84	51 (± 11)	9 (± 8)
2007	188	47 (± 7)	7 (± 4)

nedpsdgb.d09 - d07

Malfunctioning electrofishing boat in 2008

Table 64. Age frequency and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of nocturnal electrofishing at Greenbo Lake.

Age	Inch class																			Total	% CPUE	Std error
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19							
1	3	1																5	2	3.17	1.26	
2	2	9	27	23	12		3											75	33	50.01	8.93	
3					9	18	22	4										56	23	35.65	5.06	
4							3	17	12	3								36	15	23.71	4.40	
5									24	6	5	1						36	16	23.89	4.57	
6							2			3	5	3						12	5	8.23	1.24	
7										3								10	4	6.67	2.00	
8													6					3	1	2.00	0.89	
Total	5	10	27	23	21	18	28	24	36	15	9	4	6	3	1		230	100				
%	2	4	12	10	9	8	12	10	16	7	4	2	3	1	0		100					

nedaagb.d07. nedpsdgb.d09

Table 65. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Greenbo Lake from 2000 - 2009.

Age	Year									
	2000	2001	2003	2004	2005	2006	2007	2008	2009	
1	52.87	83.87	105.33	33.63	46.71	35.64	2.10	0.98	3.17	
2	66.13	34.13	31.33	87.17	19.96	35.69	50.35	18.05	50.01	
3	29.00	56.00	71.33	28.80	51.33	50.67	42.73	18.22	35.65	
4	6.00	6.67	9.78	26.67	7.11	14.22	27.22	10.97	23.71	
5	4.00	5.33	7.56	17.73	6.89	8.44	16.04	7.91	23.89	
6	2.00	1.00	3.33	3.20	2.67	6.67	6.09	3.47	8.23	
7	1.00	1.00	2.67	5.20	4.00	3.33	4.13	2.40	6.67	
8							0.67	0.67	2.00	

nedpsdgb.d09 - d00

nedaagb.d07.03

Note: Did not sample in 2002 due to lake draw down; malfunctioning electrofishing boat in 2008.

Table 66. Population assessment of largemouth bass based on samples collected at Greenbo Lake from 2004-2009 (scoring based on statewide assessment).

Year	Value	Score	Mean length age-3 at capture	Spring CPUE	Spring CPUE	Spring CPUE	Spring CPUE	Spring CPUE	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
				age-1	12.0-14.9 in	15.0 in	≥20.0 in					
2009	10.7	2	3.17	50.00	18.00	2.67	3	13	Good	-0.415	34.00%	
2008	10.7	2	0.98	19.33	9.33	2.67	3	9	Fair	-0.642	47.40%	
2007	10.7	2	16.00	48.70	8.70	1.30	2	11	Fair	-0.687	49.70%	
2006	11.7	4	35.60	50.00	18.70	7.30	4	17	Excellent	-0.521	40.70%	
2005	11.7	4	46.70	28.00	13.30	3.30	3	14	Good	-0.493	39.00%	
2004	11.7	4	33.60	58.80	16.80	4.00	4	16	Good	-0.557	42.70%	

nedsdgb.d04-d09; nedaagg1.d07
Malfunctioning electrofishing boat in 2008

Table 67. Species composition, relative abundance and CPUE (fish/hr) of sunfish collected in 1.25 hours of electrofishing (10 7.5-minute runs) in Greenbo Lake on 01 June 2009.

Species	inch class								Total	CPUE	Std. error
	1	2	3	4	5	6	7	8			
Bluegill	38	91	72	107	64	33	11	7	423	338.40	76.81
Longear sunfish	4	73	104	54	29	8			272	217.60	24.95
Redear sunfish	1				1	2	1		5	4.00	1.79
Green sunfish	1	7	5	7	7	4	4	1	36	28.80	6.77
Hybrid sunfish		1	1						2	1.60	1.07

nedsungb.d09

Table 68. Spring electrofishing CPUE (fish/hr) for each length group of sunfish collected at Greenbo Lake.

Species	Year	Inch class												Total	
		<3.0 in		3.0-5.9 in		6.0-7.9 in		≥8.0 in		≥10.0 in		CPUE	Std. err.	CPUE	Std. err.
		CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.				
Bluegill	2009	103.20	35.91	194.40	35.60	35.20	9.56	5.60	2.68	338.40	76.81				
	2008	80.00	15.23	196.80	51.28	40.80	7.58	6.40	2.00	324.00	56.61				
	2007	286.40	50.78	191.20	47.35	45.60	15.09	7.20	2.78	530.40	80.36				
	2006	94.40	28.01	159.20	37.27	46.40	5.03	9.60	3.92	309.60	61.57				
	2005	116.00	25.53	44.40	59.22	46.40	8.83	3.20	1.77	580.00	89.33				
	2003	366.00	41.71	187.00	29.41	11.00	4.73	11.00	5.00	575.00	26.10	1.00	1.00		
	2009	0.80	0.80	0.80	0.80	2.40	1.22	0.80	0.80	4.00	1.79				
	2008			7.20	3.67	5.60	3.38	0.80	0.80	13.60	5.73				
Redear sunfish	2007	2.40	1.17	12.00	6.11	1.60	1.07			16.00	6.85				
	2006	15.20	4.04	7.20	2.78	0.80	0.80	0.80	0.80	24.00	5.84				
	2005	2.40	1.71	2.40	1.22	1.60	1.07	4.80	3.20	11.20	3.99				
	2003	9.00	5.26	1.00	1.00					10.00	5.77				

nedsungb.d09-d05. d03

Table 69. Bluegill PSD and RSDs values from spring electrofishing at Greenbo Lake; confidence limits are in parentheses.

Year	No. ≥3.0 in	PSD (±95%)	RSDs (±95%)
2009	294	17 (±4)	2 (±2)
2008	305	19 (±4)	2 (±2)
2007	305	22 (±5)	3 (±2)

nedpsdgb.d09 - d07

Table 70. Age frequency and CPUE (fish/hr) of bluegill collected during spring electrofishing in Greenbo Lake.

Age	Inch class								Total	%	CPUE	Std. error
	1	2	3	4	5	6	7	8				
1	38	82	20						140	33	111.63	35.43
2		9	52	107	64	10			242	57	193.89	38.00
3						17	4		21	5	16.72	4.57
4						7	6	3	15	4	12.08	3.14
5							1	1	2	0	1.68	0.58
6								3	3	1	2.40	1.15
Total	38	91	72	107	64	33	11	7	423	100		
%	9	22	17	25	15	8	3	2	100			

nedaaggb.d08; nedsungb.d09

Table 71. Population assessment of bluegill based on samples collected at Greenbo Lake from 2005-2009 (scoring based on statewide assessment).

Year	Value	Mean length age-2 at capture	Years to 6.0 in	CPUE ≥ 6.0 in	CPUE ≥ 8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2009	Score	4.9	3.00	40.80	5.60	10	Fair	-1.390	75.10%
	Value	3	3	2	2				
2008	Score	4.9	3.00	47.20	6.40	10	Fair	-0.865	57.90%
	Value	3	3	2	2				
2007	Score	5.2	3.00	52.80	7.20	12	Good	-1.350	74.20%
	Value	4	3	3	2				
2006	Score	5.2	3.00	28.00	4.80	11	Good	-1.310	73.20%
	Value	4	3	2	2				
2005	Score	5.2	3.00	49.60	3.20	11	Good	-1.270	71.90%
	Value	4	3	2	2				

nedsungb.d06-09; nedaaggb.d08

Table 72. Length frequency and CPUE (fish/hr) of black bass collected in 1.5 hours of nocturnal electrofishing (6 15-minute runs) for black bass at Greenbo Lake on 17 September 2009.

Species	Inch class																				Std. error
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	20	Total	CPUE	
Largemouth bass	1	17	15	10	27	15	10	11	15	16	15	5	4	4	1	1	1	3	1	171	114.00
nedwrsb.d09																					8.93

Table 73. Number of fish and mean relative weight (W_r) values for length groups of black bass collected in Greenbo Lake by nocturnal electrofishing. Standard error in parentheses.

Year	Length group		
	8.0-11.9 in	12.0-14.9 in	>15.0 in
	No.	W_r (se)	No.
2009	52	82 (1)	24
2008	34	85 (1)	23
2007	30	88 (2)	29
nedwrsb.d09 - d07			

Table 74. Indices of year class strength at age 0 and age 1, and mean lengths (in) of largemouth bass collected in the fall while nocturnal electrofishing at Greenbo Lake.

Year class	Area	Age 0			Age 1		
		Mean length	Std. error	CPUE	Mean length	Std. error	CPUE
2009	Total	5.1	0.16	48.00	6.02	4.82	26.00
2008	Total	3.5	0.06	82.00	7.57	1.37	2.00
2007	Total	3.9	0.09	44.70	11.29	1.19	3.33
2006	Total	3.6	0.10	45.30	9.16	1.69	2.67
2005	Total	3.8	0.12	32.00	7.00	1.03	4.00
2004	Total	3.6	0.17	20.00	6.02	1.33	2.67
2003	Total	4.4	0.12	45.00	7.72	3.46	14.00
nedwrsb.d09 - d03; nedpsgb.d09 - 04; and nednaggb.d03.07							

Table 75. Length frequency and CPUE (fish/hr) for largemouth bass collected in 1 hour of nocturnal electrofishing (4 15-minute runs) at Mill Creek Lake (Powell/Wolfe Co.) on 29 April 2009.

Species	Inch class																						Total	CPUE	Std. Error
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22						
Largemouth bass	5	1	0	3	8	12	11	21	23	16	5	2	2	3	1	3	1	1	1	1	1	1	117	117.00	3.42

nedpsdmc.d09

Table 76. Spring electrofishing CPUE (fish/hr) for various length groups of largemouth bass collected at Mill Creek Lake from 2000, 2001, 2004 and 2006-2009.

Year	Length group												Total			
	<8.0 in			8.0-11.9 in			12.0-14.9 in			≥15.0 in			≥20.0 in			
	CPUE	S.E.		CPUE	S.E.		CPUE	S.E.		CPUE	S.E.		CPUE	S.E.	CPUE	S.E.
2009	9.00	3.79		52.00	5.42		44.00	3.27		12.00	4.62		4.00	1.63	117.00	3.42
2008	10.00	3.46		89.00	10.75		38.00	3.46		12.00	3.65		3.00	1.91	149.00	11.00
2007	31.00	5.30		84.00	15.90		31.00	9.00		7.00	2.50				153.00	22.29
2006	45.00	18.50		108.00	10.90		22.00	2.00		7.00	4.40				182.00	28.70
2004	50.40	16.10		52.00	68.00		17.60	2.00		5.60	1.60				141.60	18.00
2001*	36.00	8.50		59.00	10.60		13.00	3.00		7.00	2.50				115.00	17.50
2000*	39.00	11.40		70.00	11.50		12.00	3.30		4.00	0.00				125.00	21.60

nedpsdmc.d09 - d06; d04; d01; d00

* All Species Sampled

Table 77. Largemouth bass PSD and RSD₁₅ values from spring electrofishing at Mill Creek Lake; confidence limits are in parentheses.

Year	No. ≥8.0 in	PSD (±95%)	RSD ₁₅ (±95%)
2009	108	52 (± 10)	11 (± 6)
2008	139	36 (± 8)	9 (± 5)
2007	122	31 (± 8)	6 (± 4)
2006	137	21 (± 7)	5 (± 4)
2004	114	25 (± 8)	6 (± 4)

nedpsdmc.d09 - d06, d04

Table 78. Population assessment of largemouth bass based on samples collected at Mill Creek Lake from 1996-2009 (scoring based on statewide assessment).

Year	Value Score	Mean length age-3 at capture	Spring CPUE					Spring CPUE ≥20.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
			age-1	12.0-14.9 in	15.0 in	12.00	44.00					
2009	Value Score	10.5 2	1.00 1	44.00 3	12.00 2	4.00 4	12	Good	-0.085	8.10%		
2008	Value Score	10.5 2	2.00 1	38.00 3	12.00 2	3.00 3	11	Fair	-0.312	26.80%		
2007	Value Score	10.5 2	14.10 1	31.00 2	7.00 2	0.00 0	7	Poor	-0.825	56.20%		
2006	Value Score	10.5 2	19.60 2	22.00 1	7.00 2	1.60 2	9	Fair	-0.425	34.90%		
2005*	Value Score											
2004	Value Score	10.4 2	16.98 2	17.60 1	5.60 2	1.60 2	9	Fair	-0.315	27.10%		
2003*	Value Score											
2002*	Value Score											
2001	Value Score	10.4 2	30.11 2	15.00 1	7.00 2	1.00 2	9	Fair				
2000	Value Score	10.4 2	27.78 2	12.00 1	4.00 2	0.00 0	7	Fair				
1999	Value Score	10.4 2	5.78 1	7.00 1	2.00 1	0.00 0	5	Poor				
1998*	Value Score											
1997	Value Score	10.4 2	6.78 1	22.00 2	6.00 2	3.00 3	10	Fair				
1996	Value Score											

* = Lake was not sampled
nedpsdmc.d09

Table 79. Length frequency and CPUE (fish/hr) for sunfish collected in 1.0 hour of diurnal electrofishing (8 7.5-minute runs) at Mill Creek Lake on 10 June 2009.

Species	Inch class							Total	CPUE	Std. error
	1	2	3	4	5	6	7			
Bluegill	30	18	13	9	6	2	6	735	735.00	234.08
Longear sunfish	5	3	7	10	5	1		89	89.00	16.52
Green sunfish	20	19	23	9	6	2	6	85	85.00	25.32
Sunfish hybrids	1			1				2	2.00	1.15

nedsunmc.d09

Table 80. Spring electrofishing CPUE (fish/hr) for various length groups of sunfish collected at Mill Creek Lake from 2005-2009.

Species	Year	Length group						Total	CPUE	S.E.	
		<3.0 in		3.0-5.9 in		≥6.0-7.9 in					≥8.0 in
		CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.		
Bluegill	2009	519.00	218.98	193.00	15.26	19.00	7.00	4.00	1.63	735.00	234.08
	2008			164.00	49.91	20.00	10.07	8.00	4.62	192.00	55.62
	2007			76.00	14.74	18.00	6.19	7.00	3.18	101.00	14.02
	2006	123.90	48.90	73.90	16.20	33.00	8.10	9.10	7.90	241.10	73.90
	2005	42.00	8.10	98.30	16.20	77.70	12.30	22.90	7.50	241.10	17.90

nedsunmc.d09 - d05

Table 81. Bluegill PSD and RSDs values from spring electrofishing at Mill Creek Lake; confidence limits are in parentheses.

Year	No. ≥3.0 in	PSD (±95%)	RSDs (±95%)
2009	216	11 (±4)	2 (±2)
2008	96	15 (±7)	4 (±4)
2007	101	24 (±8)	7 (±5)
2006	102	36 (±9)	8 (±5)

nedsunmc.d09 - d06

Table 82. Population assessment of bluegill based on samples collected at Mill Creek Lake from 1996-2009 (scoring based on statewide assessment).

Year	Mean length age-2 at capture	Years to 6.0 in	Spring CPUE ≥ 6.0 in	Spring CPUE ≥ 8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2009	Value 4.4	3-3+	23.00	4.00	7	Fair	-1.165	68.80%
	Score 2	3	1	1				
2008	Value 4.4	3-3+	28.00	8.00	9	Fair	-0.580	44.10%
	Score 2	3	2	2				
2007	Value 4.4	3-3+	25.00	7.00	9	Fair	-1.391	75.10%
	Score 2	3	2	2				
2006	Value 4.2	3-3+	42.00	9.10	10	Fair	-0.691	49.90%
	Score 2	3	2	3				
2005	Value 4.2	3-3+	100.00	22.70	13	Good	-0.451	36.40%
	Score 2	3	4	4				
2004*	Value							
	Score							
2003*	Value							
	Score							
2002*	Value							
	Score							
2001	Value 4.2	3-3+	56.00	2.00	9	Fair		
	Score 2	3	3	1				
2000	Value 4.2	3-3+	48.00	5.00	9	Fair		
	Score 2	3	2	2				
1999	Value 4.2	3-3+	42.00	16.00	10	Fair		
	Score 2	3	2	3				
1998*	Value							
	Score							
1997	Value 4.2	3-3+	24.00	1.00	7	Fair		
	Score 2	3	1	1				
1996*	Value							
	Score							

* = Lake was not sampled
nedsummc.d09

Table 83. Length frequency and CPUE (fish/hr) for largemouth bass collected in 1.5 hours of nocturnal electrofishing (6 15-minute runs) at Mill Creek Lake on 29 September 2009.

Species	Inch class																		
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total	CPUE
Largemouth bass	7	14	6	2	3	2	1	2	14	9	7	10	1	3	2	1	112	112.00	22.21

nedpsdmc.d09

Table 84. Number of fish and relative weights (W_r) for each length group of largemouth bass captured at Mill Creek Lake.

Species	Year	Length group					
		8.0-11.9 in		12.0-14.9 in		≥ 15.0 in	
		N	W_r (se)	N	W_r (se)	N	W_r (se)
Largemouth bass	2009	36	84 (1)	18	86 (2)	6	96 (3)
	2008	34	84 (1)	18	88 (1)	2	98 (12)
	2005	58	87 (1)	12	85 (2)	3	90 (1)
	2007	42	85 (1)	10	82 (2)	1	89 (0)

nedwsmc.d09 - d07

Table 85. Management objective results for 2009 at Mill Creek Lake that can be determined through routine sampling.

Largemouth bass	2009	
	Result	Met
Objective 1 >15.00 f/h age 1	1.00	No
Objective 2 >20.00 f/h 12.0-14.9 in	44.00	Yes
Objective 3 >5.00 f/h ≥ 15.0 in	12.00	Yes
Objective 4 >1.00 f/h ≥ 20.0 in	4.00	Yes
Bluegill		
Objective 1 >40.00 f/h ≥ 6.0 in	23.00	No
Objective 2 >5.00 f/h ≥ 8.0 in	4.00	No

Table 86. Length frequency and CPUE (fish/hr) for largemouth bass collected in 1.5 hours of nocturnal electrofishing (6 15-minute runs) at Lake Reba (Madison Co.) on 27 April 2009.

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					
Largemouth bass	4	18	18	15	16	54	45	114	145	84	36	19	13	6	7	5	7	1	607	404.67	23.38		

nedpsdir.d09

Table 87. Length frequency and CPUE (fish/hr) of stocked* and wild largemouth bass collected in 1.5 hours of nocturnal electrofishing at Lake Reba.

Type	Inch class																				Total	CPUE	Std. error
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20					
Wild	4	11	16	15	16	54	45	114	145	84	36	19	13	6	7	5	7	1	598	389.67	23.11		
Stocked	7	2																	9	6.00	1.71		

*stocked in 2008 as part of the largemouth bass stocking initiative.
nedwldir.d09; nedstclir.d09

Table 88. Spring electrofishing CPUE (fish/hr) for various length groups of largemouth bass collected at Lake Reba from 1999-2008.

Year	<8.0 in			8.0-11.9 in			12.0-14.9 in			≥15.0 in			≥20.0 in			Total	
	CPUE	S.E.	S.E.	CPUE	S.E.	S.E.	CPUE	S.E.	S.E.	CPUE	S.E.	S.E.	CPUE	S.E.	S.E.	CPUE	S.E.
2009	47.33	7.55	238.67	12.89	7.33	92.67	7.33	26	3.22	0.67	0.67	0.67	0.67	0.67	0.67	404.67	23.38
2008	77.33	18.44	208.00	28.36	6.26	34.00	6.26	12.67	2.62	-	-	-	-	-	-	332.00	47.08
2007	134.67	20.93	216.67	45.87	5.21	60.67	5.21	18.67	4.09	0.67	0.67	0.67	0.67	0.67	0.67	430.67	52.20
2006	189.30	18.90	70.70	13.50	4.90	26.00	4.90	6.00	4.90	-	-	-	-	-	-	292.00	27.10
2005	53.30	9.30	57.30	8.10	4.30	45.30	4.30	13.30	2.20	0.70	0.70	0.70	0.70	0.70	0.70	169.30	16.40
2004	30.00	8.90	125.30	21.50	9.20	51.30	9.20	6.70	2.20	-	-	-	-	-	-	213.30	26.00
2003	110.00	17.90	126.00	10.90	6.10	52.00	6.10	8.00	2.50	0.70	0.70	0.70	0.70	0.70	0.70	296.00	27.30
2002	138.00	33.60	140.00	31.30	6.60	31.00	6.60	5.00	1.00	-	-	-	-	-	-	314.00	67.00
2001	196.00	25.00	30.70	15.40	9.30	9.30	5.30	4.00	2.30	-	-	-	-	-	-	240.00	33.60
2000	103.70	17.20	34.90	6.60	4.60	4.60	8.00	8.00	3.30	-	-	-	-	-	-	151.20	11.00
1999	115.20	34.90	11.20	4.10	8.80	8.80	2.30	20.00	5.20	-	-	-	-	-	-	155.20	33.10

nedpsdir.d08 - d09

Table 89. Largemouth bass PSD and RSDs values from spring electrofishing at Lake Reba; confidence limits are in parentheses.

Year	No. ≥ 8.0 in	PSD ($\pm 95\%$)	RSDs ($\pm 95\%$)
2009	536	33 (± 4)	7 (± 2)
2008	382	18 (± 4)	5 (± 2)
2007	444	27 (± 4)	6 (± 2)
2006	154	31 (± 7)	6 (± 4)
2005	174	51 (± 15)	12 (± 10)
2004	275	32 (± 6)	4 (± 3)
2003	279	32 (± 6)	4 (± 3)
2002	176	20 (± 6)	3 (± 2)
2001	33	30 (± 32)	9 (± 22)
2000	-13	36 (± 17)	22 (± 15)

nedpsdr.d09 - d00

Table 90. Population assessment of largemouth bass based on samples collected at Lake Reba from 1996-2009 (scoring based on statewide assessment).

Year	Mean length		Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
	age-3 at capture	Value								
2009	11.2	3	65.30	92.70	26.00	0.70	14	Good	-0.162	15.00%
2008	11.2	3	113.00	34.00	12.70	0.00	11	Fair	-1.030	64.30%
2007	11.2	3	183.67	60.70	18.70	0.67	15	Good	-1.040	65.00%
2006	11.2	3	192.00	26.00	6.00	0.00	11	Fair	-0.790	55.00%
2005	11.2	3	41.20	45.33	13.33	0.67	12	Good	-0.250	22.00%
2004	11.2	3	23.20	51.33	6.67	0.00	12	Good	-0.290	25.00%
2003	11.2	3	52.13	52.00	8.00	0.67	14	Good	-0.500	39.00%
2002	11.2	3	105.80	31.00	5.00	0.00	11	Fair		
2001	11.2	3	186.93	0.33	4.00	0.00	10	Fair		
2000	11.2	3	98.47	4.41	8.82	0.00	10	Fair		
1999	11.2	3	81.00	8.00	18.00	0.67	12	Good		
1998	11.2	3	144.00	23.00	21.00	2.00	14	Good		
1997*										
1996										

* = Lake was not sampled nedpsdlr.d09

Table 91. Length frequency and CPUE (fish/hr) for sunfish collected in 1.0 hours of diurnal electrofishing (8 7.5-minute runs) at Lake Reba on 27 May 2009.

Species	Inch class								Total CPUE	Std. error
	1	2	3	4	5	6	7	8		
Bluegill	227	300	157	23	20	17	5	749	749.00	100.50
Redear sunfish	4	180	35	42	73	53	7	394	394.00	65.74
Warmouth	5	16	23	18	20	23	6	115	115.00	19.24
Hybrid bluegills	1	1	1	1	2	2		7	7.00	2.56
Green sunfish			1					1	1.00	1.00

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Table 92. Spring electrofishing CPUE (fish/hr) for various length groups of bluegill collected at Lake Reba from 2003-2009.

Year	Inch class						Total CPUE	S.E.
	<3.0 in		3.0-5.9 in		6.0-7.9 in			
	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
2009	527.00	92.98	200.00	19.71	22.00	6.37	749.00	100.50
2008	188.00	41.90	194.00	41.09	71.00	11.66	453.00	59.10
2007			73.00	10.84	29.00	7.70	102.00	10.88
2006	843.20	140.70	228.80	22.90	79.20	20.30	1151.20	158.50
2005	279.20	37.00	308.00	42.70	97.60	19.40	684.80	74.40
2004	191.50	37.90	180.00	25.90	22.30	6.70	393.90	56.00
2003	178.40	27.90	356.00	49.70	49.60	20.10	584.00	75.30

nedpslir.d09 - d03

Table 93. Bluegill PSD and RSDs values from spring electrofishing at Lake Reba; confidence limits are in parentheses.

Year	No. ≥3.0 in	PSD (±95%)	RSDx (±95%)
2009	222	10 (± 4)	
2008	265	27 (± 5)	
2007	102	28 (± 9)	<i>not enough large bluegills to determine RSDs</i>
2006	385	26 (± 4)	
2005	211	24 (± 7)	
2004	263	11 (± 11)	
2003	507	12 (± 3)	

nedpslir.d09 - d05

Table 94. Population assessment of bluegill based on samples collected at Lake Reba from 1996-2009 (scoring based on statewide assessment).

Year	Mean length		Years to 6.0 in	Spring CPUE ≥6.0 in	Spring CPUE ≥8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
	age-2 at capture	4.0							
2009	Value	4.0	3-3+	22.00	0.00	7	Fair	-0.959	61.70%
	Score	2	3	2	0				
2008	Value	4.0	3-3+	71.00	0.00	8	Fair	-0.810	55.70%
	Score	2	3	3	0				
2007	Value	4.1	3-3+	29.00	0.00	7	Fair	-0.662	48.40%
	Score	2	3	2	0				
2006	Value	4.1	3-3+	72.90	0.00	9	Fair	-1.149	68.30%
	Score	2	3	4	0				
2005	Value	4.1	3-3+	97.60	0.00	9	Fair	-0.601	45.10%
	Score	2	3	4	0				
2004	Value	4.1	3-3+	23.20	0.00	6	Poor	-0.793	54.70%
	Score	2	3	1	0				
2003	Value	4.1	3-3+	46.60	0.00	7	Fair	-0.322	27.90%
	Score	2	3	2	0				
2002*	Value								
	Score								
2001	Value	4.1	3-3+	89.30	0.00	9	Fair		
	Score	2	3	4	0				
2000	Value	5.0	>5	303.46	0.00	9	Fair		
	Score	4	1	4	0				
1999	Value	5.0	>5	48.00	0.00	7	Fair		
	Score	4	1	2	0				
1998	Value	5.0	>5	4.00	0.00	6	Poor		
	Score	4	1	1	0				
1997*	Value								
	Score								
1996	Value	5.0	>5	22.00	0.00	6	Poor		
	Score	4	1	1	0				

* : Lake was not sampled
nedsunlr:d09

Table 95. Spring electrofishing CPUE (fish/hr) for various length groups of redear sunfish collected at Lake Reba from 2003-2009.

Year	Length group						Total	
	<3.0 in	3.0-5.9 in	6.0-7.9 in	>8.0 in	CPUE	S.E.	CPUE	S.E.
2009	184.00	52.92	150.00	22.92	60.00	4.54	394.00	65.74
2008	10.00	4.96	134.00	18.31	225.00	18.00	370.00	32.98
2007			122.00	16.34	33.00	5.94	157.00	20.28
2006	111.20	30.70	121.60	17.20	205.60	44.70	439.20	51.50
2005	16.80	5.90	39.20	5.50	196.00	33.40	252.00	30.70
2004	16.90	4.40	56.90	17.60	64.60	13.20	138.90	29.20
2003	13.60	5.70	119.20	19.80	178.40	68.80	311.20	82.90

nedsunlr.d09 - d03

Table 96. Redear sunfish PSD and RSD₉₅ values from spring electrofishing at Lake Reba; confidence limits are in parentheses.

Year	No. ≥4.0 in	PSD (±95%)	RSD ₉₅ (±95%)
2009	175	4 (± 3)	
2008	342	11 (± 3)	
2007	141	10 (± 5)	<i>not enough large</i>
2006	294	49 (± 6)	<i>redear sunfish to</i>
2005	264	19 (± 5)	<i>determine RSD₉₅</i>
2004	146	4 (± 3)	
2003	359	4 (± 2)	

nedspsdlr.d09 - d03

Table 97. Population assessment of redear sunfish based on samples collected at Lake Reba from 1996-2009 (scoring based on statewide assessment).

Year	Mean length		Years to 8.0 in	Spring CPUE ≥ 8.0 in	Spring CPUE ≥ 10.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
	age-3 at capture	6.3							
2009	Value	6.3	> 5+	0.00	0.00	4	Poor	-1.158	68.60%
	Score	3	1	0	0				
2008	Value	6.3	> 5+	1.00	0.00	5	Poor	-0.719	51.30%
	Score	3	1	1	0				
2007	Value	6.6	> 5+	2.00	0.00	6	Poor	-1.046	64.90%
	Score	4	1	1	0				
2006	Value	6.6	> 5+	0.80	0.00	6	Poor	-0.335	28.50%
	Score	4	1	1	0				
2005	Value	6.6	6+	0.00	0.00	5	Poor	-0.165	15.20%
	Score	4	1	0	0				
2004	Value	6.6	6+	67.20	0.00	9	Fair	-0.659	48.30%
	Score	4	1	4	0				
2003	Value	6.6	6+	178.40	0.00	9	Fair	-0.422	34.40%
	Score	4	1	4	0				
2002*	Value								
	Score								
2001	Value	6.6	6+	85.33	0.00	9	Fair		
	Score	4	1	4	0				
2000	Value	6.6	6+	134.90	0.00	9	Fair		
	Score	4	1	4	0				
1999	Value	6.6	6+	122.00	0.00	9	Fair		
	Score	4	1	4	0				
1998	Value	6.6	6+	44.00	0.00	9	Fair		
	Score	4	1	4	0				
1997*	Value								
	Score								
1996	Value	6.6	6+	14.00	0.00	8	Fair		
	Score	4	1	3	0				

* = Lake was not sampled
nedsumlr.d09

Table 98. Length frequency and CPUE (fish/hr) for largemouth bass collected in 1.5 hours of nocturnal electrofishing (6 15-minute runs) at Lake Reba on 24 September 2009.

Species	Inch class																	Std. Error
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total	
Largemouth bass	1	10	12	3	9	32	56	38	46	48	38	29	6	3	2	333	222.00	9.95

nedwrs1r.d09

Table 99. Number of fish and relative weights (W_r) for each length group of largemouth bass captured at Lake Reba.

Species	Year	Length group					
		8.0-11.9 in		12.0-14.9 in		≥15.0 in	
		N	Wr (se)	N	Wr (se)	N	Wr (se)
Largemouth bass	2009	91	86 (1)	31	84 (1)	2	88 (11)
	2008	219	84 (1)	32	86 (1)	1	81 (0)
	2007	142	91 (6)	17	83 (2)	18	93 (3)
	2006	243	91 (1)	75	93 (1)	8	101 (2)

nedwrs1r.d09 - d06

Table 100. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass while nocturnal electrofishing at Lake Reba

Year class	Area	Age 0			Age 0			Age 0 ≥5.0 in			Age 1		
		Mean Length	Std. Error	Std.	CPUE	Error	Std.	CPUE	Error	Std.	CPUE	Error	Std.
2009	Total	4.0	0.1	58.67	15.55	11.33	8.13	8.13	7.06	65.33	7.06	7.06	
2008	Total	4.2	0.1	58.67	15.55	11.33	8.13	8.13	27.17	113.00	27.17	27.17	
2007	Total	4.3	0.1	44.00	11.20	5.30	2.20	2.20	22.10	183.70	22.10	22.10	
2006	Total	4.3	0.0	175.30	35.90	30.00	8.70	8.70	192.00	61.00	10.40	10.40	
2005	Total	5.2	0.1	225.00	48.60	133.00	30.20	30.20	47.30	14.00	14.00	14.00	
2004	Total	4.2	0.1	76.70	9.60	15.30	1.90	1.90	47.30	14.00	14.00	14.00	
2003	Total	3.7	0.2	23.30	4.80	0.67	0.67	0.67	47.30	14.00	14.00	14.00	

nedwrs1r.d09 - d03, nedpsd1r.d08-d02

Table 101. Management objective results from 2008-2009 at Lake Reba that can be determined through routine sampling.

Largemouth bass	2008		2009	
	Result	Met	Result	Met
Objective 1 >125.00 f/h age 1	113.00	No	65.33	No
Objective 2 >40.00 f/h 12.0-14.9 in	34.00	No	92.67	Yes
Objective 3 >11.00 f/h ≥15.0 in	12.67	Yes	26.00	Yes
Objective 4 >0.50 f/h ≥20.0 in	0.00	No	0.67	Yes
Bluegill				
Objective 1 >75.00 f/h ≥6.0 in	71.00	No	22.00	No
Objective 2 >1.00 f/h ≥8.0 in	0.00	No	0.00	No

Table 102. Length frequency and CPUE (fish/hr) of largemouth bass collected in 0.375 hours of nocturnal electrofishing (3 7.5-minute runs) for largemouth bass at Rebel Trace (Meniffee Co.) on 14 May 2009.

Species	Inch class														Std. error
	3	4	5	6	7	8	9	10	11	12	13	14	Total	CPUE	
Largemouth bass	2	3	4	1	3	1	2	3	5	3	4	1	32	42.67	9.33

nedpsdir.d09

Table 103. PSD and RSD₁₅ values for largemouth bass collected while electrofishing Rebel Trace Lake; 95% confidence limits are in

Species	No. ≥8.0 in	PSD (± 95%)	RSD ₁₅ (± 95%)
Largemouth bass	19	42 (± 19)	

nedpsdir.d09

Table 104. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Rebel Trace.

Year	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		Total			
	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.		
2009	17.33	7.42	14.67	7.06	10.67	5.33			42.67	9.33		
2008	29.33	5.33	56.00	9.24	32.00	9.24	2.67	2.67	120.00	4.62		
2007	42.67	7.06	109.33	32.77	40.00	8.00	10.67	5.33	202.67	30.75		
2006	69.30	13.30	88.00	8.00	52.00	9.20			189.30	23.70		
2005	61.30	37.60	90.70	25.40	24.00	9.20	2.70	2.70	178.70	62.70		
2004	50.70	16.20	50.70	17.50	2.70	2.70	5.30	5.30	109.30	39.30		

nedpsdrt.d09 - d04

Table 105. Length frequency and CPUE (fish/hr) of sunfish collected in 0.50 hours of electrofishing (4 7.5-min runs) for sunfish at Rebel Trace on 02 June 2009.

Species	Inch class								Total	CPUE	Std. error
	1	2	3	4	5	6	7	8			
Bluegill	75	194	163	50	17	16	19		534	1068.00	394.96
Redear sunfish		17	11	44	31	11	1	1	116	232.00	91.62
Warmouth	2	6	7	5	3	5	1		29	58.00	21.51
Sunfish hybrids		4	3	3	3	3	1		17	34.00	10.52
Green sunfish				1					1	2.00	2.00

nedsumrt.d09

Table 106. Spring electrofishing CPUE (fish/hr) for each length group of sunfish collected at Rebel Trace.

Species	Year	Length group															
		<3.0 in			3.0-5.9 in			6.0-7.9 in			≥8.0 in			Total			
		CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.		
Bluegill	2009	538.00	214.60	460.00	188.54	70.00	30.53										
	2008	518.40	41.21	337.60	49.15	16.00	7.16										
	2007			348.00	89.10	40.00	13.50										
	2006	124.00	27.00	246.00	72.80	50.00	34.60										
Redear sunfish	2009	34.00	17.40	172.00	76.56	24.00	10.83										
	2008	70.40	11.14	432.40	47.63	41.60	12.50										
	2007			544.00	107.80	84.00	14.10										
	2006	172.00	60.30	282.00	53.70	22.00	19.40										
nedsunrt.d09 - 06																	

Table 107. PSD and RSDs values obtained for bluegill collected at Rebel Trace; 95% confidence intervals are in parentheses.

Species	No. ≥3.0 in	PSD (±95%)	RSDs (±95%)
Bluegill	265	13 (±4)	*

* = No 8.0 in fish captured to calculate RSD
nedsunrt.d09

Table 108. Mean back-calculated lengths (in) at each annulus for bluegill collected from Rebel Trace Lake, including size range at each age and 95% confidence intervals

Year	No.	Age					
		1	2	3	4	5	6
2008	12	2.2					
2007	19	2.2	3.6				
2006	5	2.4	3.8	5.2			
2005	14	2.4	3.9	5.2	6.2	5.8	
2004	7	2.3	3.8	4.9	5.9	6.7	
2003	2	2.3	3.4	4.9	5.7	6.2	6.8
Mean		2.3	3.7	5.1	6.1	6.5	6.8
Number	59	47	28	23	9	2	
Smallest	1.4	2.7	4.3	5.0	5.5	6.1	
Largest	3.4	4.9	6.1	6.7	7.2	7.5	
Std Error		0.1	0.1	0.1	0.2	0.2	0.7
95% CI (±)		0.1	0.1	0.1	0.2	0.4	1.4

Otoliths were used for age determination; Intercept = 0
mediant.d09

Table 109. Mean back-calculated lengths (in) at each annulus for redear sunfish collected from Rebel Trace Lake, including size range at each age and 95% confidence intervals

Year	No.	Age			
		1	2	3	4
2008	15	2.6			
2007	20	2.8	4.5		
2006	12	2.6	4.3	5.7	
2005	2	2.9	4.8	6.1	6.9
Mean		2.7	4.4	5.7	6.9
Number	49	34	14	2	
Smallest	2.0	3.7	4.9	6.1	
Largest	3.4	5.7	6.9	7.7	
Std Error		0.1	0.1	0.1	0.8
95% CI (±)		0.1	0.1	0.2	1.5

Otoliths were used for age determination; Intercept = 0
mediant.d09

Table 110. Age frequency and CPUE (fish/hr) of bluegill collected during spring electrofishing in Rebel Trace Lake.

Age	Inch class							Total	%	CPUE	Std. error
	1	2	3	4	5	6	7				
1	75	172	23					271	51	541.46	211.68
2		22	140	50				211	40	422.54	168.42
3					9			9	2	17.00	11.36
4					7	11	4	22	4	43.35	14.48
5					2	4	11	17	3	33.58	15.48
6						1	4	5	1	10.06	5.21
Total	75	194	163	50	17	16	19	534	100		
%	14	36	31	9	3	3	4	100			

nedaagrt.d09; nedsunrt.d09

Table 111. Age frequency and CPUE (fish/hr) of redear sunfish collected during spring electrofishing in Rebel Trace Lake.

Age	Inch class							Total	%	CPUE	Std. error
	2	3	4	5	6	7	8				
1	17	9						26	22	51.60	29.88
2		2	44	10				57	49	113.07	49.52
3				21	8	1		30	26	59.83	22.68
4					3		1	4	3	7.50	2.75
Total	17	11	44	31	11	1	1	116	100		
%	15	9	38	27	9	1	1	100			

nedaagrt.d09; nedsunrt.d09

Table 112. Population assessment of bluegill based on samples collected at Rebel Trace Lake from 2006-2009 (scoring based on statewide assessment).

Year		Mean length		CPUE ≥6.0	CPUE ≥8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
		age-2 at capture	Years to 6.0 in						
2009	Value	3.8	4 - 4+	70.00	0.00	7	Fair	-0.760	53.30%
	Score	2	2	3	0				
2008	Value	4.3	3 - 3+	16.00	0.00	6	Poor	-1.919	85.30%
	Score	2	3	1	0				
2007	Value	4.3	3 - 3+	40.00	0.00	7	Fair	-1.360	74.30%
	Score	2	3	2	0				
2006	Value	4.3	3 - 3+	50.00	0.00	8	Fair	-1.216	70.40%
	Score	2	3	3	0				

nedsunrt.d09-06; nedaagrt.d09_02

Table 113. Population assessment of redear sunfish based on samples collected at Rebel Trace Lake in 2009 (scoring based on statewide assessment).

Year		Mean length		CPUE ≥8.0 in	CPUE ≥10.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
		age-3 at capture	Years to 8.0 in						
2009	Value	6.0	>6	2.00	0.00	5	Poor	-1.328	73.50%
	Score	3	1	1	0				

nedsunrt.d09; nedaagrt.d09

Table 114. Length frequency and CPUE (fish/hr) of largemouth bass collected in 1 hour of nocturnal electrofishing (4-15-min runs) at Smoky Valley Lake (Cater Co.) on 13 May 2009.

Species	Inch class																Total	CPUE	Std Error
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17				
Largemouth bass	13	26	9	3	46	62	38	27	18	10	4				1	257	257.00	31.89	

nedpsdsv.d09

Table 115. Spring electrofishing CPUE (fish/hr) for various length groups of largemouth bass collected at Smoky Valley Lake from 2000-2009.

Year	Length group								Total	
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in			
	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
2009	97.00	6.61	145.00	23.74	14.00	2.58	1.00	1.00	257.00	31.89
2008	155.00	23.29	199.00	34.42	46.00	7.75			400.00	62.14
2007	119.00	21.75	229.00	32.51	37.00	6.40	2.00	1.15	387.00	42.56
2006	112.00	12.80	256.00	33.80	62.00	8.70	4.00	1.60	434.00	45.70
2005	54.40	10.20	190.40	22.70	63.20	9.10	0.80	0.80	308.80	30.80
2001	117.30	11.60	180.00	14.10	46.70	12.70	2.70	2.70	346.70	11.60
2000	68.00	13.00	218.00	22.10	69.00	13.70	1.00	1.00	356.00	46.80

nedpsdsv.d09 - d05; d01 - d00

Table 116. PSD and RSD₁₅ values for largemouth bass collected while electrofishing Smoky Valley Lake; 95% confidence intervals in parenthesis.

Year	No. ≥8.0 in	PSD (±95%)	RSD ₁₅ (±95%)
2009	160	9 (±5)	1 (± 1)
2008	245	19 (± 5)	*
2007	268	15 (± 4)	1 (± 1)
2006	322	21 (± 4)	1 (± 2)
2005	318	25 (± 10)	1 (± 1)

* Not enough 15.0 in fish to calculate RSD₁₅

nedpsdsv.d09 - d05

Table 117. Population assessment of largemouth bass based on samples collected at Smoky Valley Lake from 2005-2009 (scoring based on statewide assessment)

Year		Mean length				Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (Δ)%	
		age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE >15.0 in					Spring CPUE ≥20.0 in
2009	Value	9.6	9.00	14.00	1.00	0.00	4	Poor	-0.223	20.00%
	Score	1	1	1	1	0				
2008	Value	9.6	6.00	46.00	0.00	0.00	8	Fair	-0.550	22.50%
	Score	1	4	3	0	0				
2007	Value	9.6	7.00	37.00	2.00	0.00	6	Poor	-0.513	40.10%
	Score	1	1	3	1	0				
2006	Value	11.0	70.10	62.00	4.00	0.00	14	Good	-0.579	43.90%
	Score	3	3	4	4	0				
2005	Value	11.0	19.10	63.20	0.80	0.00	10	Fair	-0.353	29.80%
	Score	3	2	4	1	0				

nedpsdsv.d09

Table 118. Length frequency and CPUE (fish/hr) of sunfish collected during 1.0 hour electrofishing (4 15-min runs) at Smoky Valley Lake 26 May 2009

Species	Inch class								Total	CPUE	Std Error
	1	2	3	4	5	6	7	8			
Bluegill	65	138	158	45	11	10	14	1	442	442.00	64.36
Green sunfish	5	13	34	29	11	11	1		104	104.00	25.82
Hybrid sunfish		14	7	1		1			23	23.00	7.55
Longear sunfish			8	2					10	10.00	8.72

nedsunsv.d09

Table 119. Spring electrofishing CPUE (fish/hr) for various length groups of bluegill collected at Smoky Valley Lake from 2003-2009.

Year	Length group									
	<3.0 in		3.0-5.9 in		6.0-7.9 in		≥8.0 in		Total	
	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
2009	203.00	34.54	214.00	44.32	24.00	10.71	1.00	1.00	442.00	64.36
2008			53.00	14.40	31.00	13.70			84.00	22.70
2007			89.14	17.14	10.29	5.44	1.14	1.14	100.57	21.16
2006	464.00	116.50	88.00	15.20	16.00	4.30			568.00	114.70
									(281.00 w/o 1.0 in)	
2005	164.00	41.50	169.00	10.30	38.00	9.20	4.00	3.00	375.00	60.00
									(329.00 w/o 1.0 in)	
2004	24.80	6.80	139.30	22.00	25.60	4.60	0.90	0.90	190.60	27.30
2003	200.00	61.10	102.00	30.30	107.00	32.40	4.00	2.10	413.00	99.80
									(213.00 w/o 1.0 in)	

nedsunsv.d09 - d03

Table 120. PSD and RSDs values obtained from bluegill collected at Smoky Valley Lake during 2007 as compared to previous years; confidence intervals are in parenthesis.

Year	No. ≥3.0 in	PSD (±95%)	RSDs (±95%)
2009	239	10 (± 4)	0.4 (± 0.8)
2008	84	37 (± 10)	*
2007	88	11 (± 7)	1 (± 2)
2006	104	15 (± 7)	*
2005	211	20 (± 11)	2 (± 4)

* No 8.0 in fish captured to calculate RSDs

nedsunsv.d09 - d03

Table 121. Population assessment of bluegill based on samples collected at Smoky Valley Lake from 2003-2009 (scoring based on statewide assessment).

Year		Mean length		Spring CPUE ≥6.0 in	Spring CPUE ≥8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
		age-2 at capture	Years to 6.0 in						
2009	Value	3.9	3 - 3+	25.00	1.00	8	Fair	-0.649	47.70%
	Score	2	3	2	1				
2008	Value	3.9	3 - 3+	31.00	0.00	7	Fair	-0.722	51.50%
	Score	2	3	2	0				
2007	Value	3.2	4 - 4+	103.00	1.14	6	Poor	-0.955	61.50%
	Score	1	2	1	2				
2006	Value	3.2	4 - 4+	16.00	0.00	4	Poor	-1.174	69.10%
	Score	1	2	1	0				
2005	Value	3.2	4 - 4+	42.00	4.00	7	Fair	-0.716	51.10%
	Score	1	2	2	2				
2004	Value	3.2	4 - 4+	31.00	1.00	7	Fair	-0.548	42.20%
	Score	1	2	2	2				
2003	Value	3.2	4 - 4+	11.00	4.00	9	Fair	-0.523	40.70%
	Score	1	2	4	2				

nedsunsv.d09

Table 122. Length frequency and CPUE (fish/hr) for largemouth bass collected for 1 hour (4 15-min runs) 30 September 2009 at Smoky Valley Lake.

Species	Inch class													Total	CPUE	Std Error	
	2	3	4	5	6	7	8	9	10	11	12	13	14				20
Largemouth bass	7	12	11	2	15	38	20	29	19	12	7	1	1	1	175	175.00	32.84

nedpsdsv.d09

Table 123. Number and mean relative weight (Wr) values for length groups of largemouth bass collected in Smoky Valley Lake.

Species	Year	Length group					
		8.0-11.9 in		12.0-14.9 in		≥15.0 in	
		N	Wr(se)	N	Wr(se)	N	Wr(se)
Largemouth bass	2009	80	85 (1)	9	86 (3)	1	89 (0)
	2008	104	83 (1)	20	81 (1)		
	2007	99	85 (1)	10	87 (4)		

nedwrvsv.d09 - d07

Table 124. Length frequency and CPUE (fish/hr) for largemouth bass collected in 1.5 hours of nocturnal electrofishing (6 15-minute runs) at Lake Wilgreen (Madison Co.) on 28 April 2009.

Species	Inch class																				Std. Error	
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE	Std. Error	
Largemouth bass	5	10	5	4	5	23	30	37	24	26	24	28	27	19	9	12	6	2	296	197.33	26.53	

nedpsdlw.d09

Table 125. Spring electrofishing CPUE (fish/hr) for length groups of largemouth bass collected at Lake Wilgreen from 1999-2009.

Year	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		Total	
	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
2009	19.33	5.60	76.00	14.24	52.00	12.04	50.00	9.51	1.33	0.84	197.33	26.33
2008	8.67	1.91	24.67	5.88	18.67	3.82	10.67	3.68	0.67	0.67	62.67	9.04
2007	238.70	25.90	194.70	16.10	115.30	15.00	18.70	2.20	2.70	1.30	567.30	31.00
2006	56.70	9.90	195.30	8.60	148.00	15.80	22.00	5.80	2.70	0.80	422.00	29.10
2005	86.70	17.90	170.00	12.80	108.70	23.00	6.00	2.70	0.00	0.00	371.30	45.30
2004						<i>no data collected</i>						
2003	89.20	11.10	376.80	41.00	48.00	6.30	12.80	2.50	0.00	0.00	526.80	50.20
2002						<i>no data collected</i>						
2001						<i>no data collected</i>						
2000	361.00	51.00	274.00	10.90	58.00	12.30	6.00	1.20	0.00	0.00	699.00	57.00
1999	156.00	8.00	234.00	34.00	54.00	14.00	4.00	0.00	0.00	0.00	443.00	40.00

nedpsdlw.d09 - d99

Table 126. Largemouth bass PSD and RSD₁₅ values from spring electrofishing at Lake Wilgreen; confidence limits are in parentheses.

Year	No. ≥8.0 in	PSD (±95%)	RSD ₁₅ (±95%)
2009	267	57 (± 6)	28 (± 5)
2008	81	54 (± 11)	20 (± 9)
2007	493	41 (± 4)	6 (± 2)
2006	548	47 (± 4)	6 (± 2)
2005	427	40 (± 5)	2 (± 1)
2003	1,082	14 (± 2)	3 (± 1)
2000	338	19 (± 4)	2 (± 0)

nedpsdlw.d09 - d05; d03; d00

Table 127. Population assessment of largemouth bass based on samples collected at Lake Wilgreen from 1996-2009 (scoring based on statewide assessment).

Year	Mean length		Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
	age-3 at capture	age-1								
2009	Value 4	12.6	6.00	52.00	50.00	1.33	15	Good	-0.162	15.0%
2008	Value 4	12.6	5.33	18.67	10.67	0.67	9	Fair	-0.633	46.9%
2007	Value 2	10.2	456.80	115.30	18.70	2.70	16	Good	-0.580	32.5%
2006	Value 2	10.2	469.40	148.00	22.00	2.70	16	Good	-0.069	6.6%
2005	Value 2	10.2	81.20	108.67	6.00	0.00	12	Good	-0.127	11.9%
2004	Value 2	10.2	6.00	48.00	12.80	0.00	8	Fair		
2003	Value 2	10.2	91.51	48.00	12.80	0.00	11	Fair		
2002*	Value		4	3	0	0				
2001*	Score									
2000	Value 3	10.9	54.23	58.00	6.00	0.00	12	Good		
1999	Value 3	10.9	25.53	24.00	4.00	2.00	14	Good		
1998*	Value		2	4	2	3				
1997*	Score									
1996	Value 3	10.9	106.60	90.00	15.00	5.00	17	Excellent		

* : Lake was not sampled
nedpsdlw.d09

Table 128. Length frequency and CPUE (fish/hr) for sunfish collected in 1.0 hours of diurnal electrofishing (8 7.5-minute runs) at Lake Wilgreen on 9 June 2009.

Species	inch class										Total	CPUE	Std. Error
	1	2	3	4	5	6	7	8	9	10			
Bluegill	4	101	89	106	92	82	27	1			502	502.00	55.67
Green sunfish		11	27	26	26	9	1				100	100.00	17.57
Redear sunfish			5	5	1	5	8	8	5	1	38	38.00	8.52
Warmouth					1	2	3				6	6.00	2.51
Hybrid sunfish			1	1		1					3	3.00	1.46

nedsunlv.d09

Table 129. Spring electrofishing CPUE (fish/hr) for various length groups of sunfish collected at Lake Wilgreen from 2002-2009.

Species	Year	Length group												Total		
		<3.0 in			3.0-5.9 in			6.0-7.9 in			≥8.0 in			≥10.0 in		CPUE
Bluegill	2009	105.00	23.25	287.00	36.17	109.00	27.38	1.00	1.00						502.00	55.67
	2008	50.00	17.20	115.00	17.10	45.00	17.30								210.00	38.83
	2007			283.20	26.73	88.80	16.67								372.00	39.38
	2006	279.20	51.30	409.60	39.50	64.80	20.40	2.40	1.20						756.00	79.70
	2005	211.20	67.00	576.80	73.20	40.80	10.80	0.80	0.80						829.60	122.70
	2002	354.40	91.60	496.80	99.20	177.60	18.60								1028.80	196.20
Redear sunfish	2009			11.00	4.77	13.00	5.64	14.00	2.51	1.00	1.00			38.00	8.52	
	2008	3.00	3.00	6.00	3.30	11.00	7.70	1.00	1.00					21.00	14.42	
	2007			0.80	0.80	15.20	4.37	1.60	1.07					17.60	4.59	
	2006			20.00	5.10	4.80	2.10	10.40	8.80	24.00	1.70			35.20	11.00	
	2005			4.00	2.50	7.20	3.70	7.20	3.50					18.40	6.00	
	2002			20.80	9.90	44.00	11.00	4.80	2.40					69.60	19.50	

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Table 130. Bluegill and redear sunfish PSD and RSD values from spring electrofishing at Lake Wilgreen; confidence limits are in parentheses.

	Year	No. \geq stock size	PSD ($\pm 95\%$)	RSD ^a ($\pm 95\%$)
Bluegill	2009	397	28 (± 4)	0.3 (± 0.4)
	2008	160	28 (± 7)	*
	2007	465	24 (± 4)	6 (± 2)
	2006	596	14 (± 2)	0.5 (± 0.6)
	2005	773	7 (± 3)	0.1 (± 0.3)
Redear sunfish	2009	33	67 (± 16)	18 (± 13)
	2008	13	31 (± 26)	*
	2007	22	55 (± 21)	*
	2006	40	38 (± 15)	20 (± 13)
	2005	21	57 (± 22)	5 (± 9)

Stock size 3.0 in for bluegill and 4.0 in for redear sunfish

^a RSD for bluegill is 8.0 in and for redear sunfish is 9.0 in

* No RSD length fish captured

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Table 131 Population assessment of bluegill based on samples collected at Lake Wilgreen from 2002-2009 (scoring based on statewide assessment).

Year		Mean length		Spring CPUE		Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
		age-2 at capture	Years to 6.0 in	>6.0 in	>8.0 in				
2009	Value	5.5	3 - 3+	110.00	1.00	12	Good	-1.061	65.40%
	Score	4	3	4	1				
2008	Value	5.5	3 - 3+	45.00	0.00	9	Fair	N/A	N/A
	Score	4	3	2	0				
2007	Value	5.5	3 - 3+	88.80	0.00	11	Good	-0.156	10.90%
	Score	4	3	4	0				
2006	Value	5.5	3 - 3+	67.20	2.40	12	Good	-0.686	6.60%
	Score	4	3	3	2				
2005	Value	5.5	3 - 3+	41.60	0.80	10	Fair	-0.127	11.90%
	Score	4	3	2	1				
2004*	Value								
	Score								
2003*	Value								
	Score								
2002	Value	5.5	3 - 3+	177.60	0.00	11	Good	-0.360	30.20%
	Score	4	3	4	0				

* -- Lake was not sampled
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Table 132 Length frequency and CPUE (fish/hr) for largemouth bass collected in 1.5 hours of nocturnal electrofishing (6 15-minute runs) at Lake Wilgreen on 28 September 2009.

Species	Inch class																		Total	CPUE	Std Error
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19			
Largemouth bass	32	55	43	14	4	32	32	23	29	25	14	15	13	11	7	5	3	1	358	238.67	34.56

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Table 133. Number of fish and relative weights (W_r) for each length group of largemouth bass captured at Lake Wilgreen.

Species	Year	Length group					
		8.0-11.9 in		12.0-14.9 in		≥ 15.0 in	
		N	W_r (se)	N	W_r (se)	N	W_r (se)
Largemouth bass	2009	109	84 (1)	42	92 (2)	27	100 (2)
	2008	203	87 (4)	52	89 (1)	9	98 (4)
	2007	232	84 (1)	54	86 (2)	4	72 (22)
	2006	198	90 (1)	86	90 (1)	8	96 (4)
	2005	306	88 (0)	116	88 (2)	4	98 (4)

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Table 134. Management objective results for 2009 at Lake Wilgreen that can be determined through routine sampling.

		2009	
Largemouth Bass		Result	Met
Objective 1	>30.00 f/h age 1	6.00	No
Objective 2	>75.00 f/h 12.0-14.9 in	52.00	No
Objective 3	>10.00 f/h ≥ 15.0 in	50.00	Yes
Objective 4	>1.00 f/h ≥ 20.0 in	1.33	Yes
Objective 5	W_r of 8.0-11.9 in ≥ 90	83.91	No
Objective 6	W_r of 12.0-14.9 in ≥ 90	91.83	Yes
Objective 7	W_r of ≥ 15.0 in ≥ 90	100.00	Yes
Bluegill			
Objective 1	>90.00 f/h ≥ 6.0 in	110.00	Yes
Objective 2	>1.00 f/h ≥ 8.0 in	1.00	Yes

SOUTHEASTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Conditions encountered during sampling at southeastern district lakes are listed in Table 1.

Lake Cumberland (37,680 acres)

Beginning in January 2007, water levels were reduced to 680 msl to make repairs to Wolf Creek Dam. As a result, many sampling locations that were used prior to 2007 were dry and unable to be sampled. Samples from 2007-2009 were conducted in areas further downstream in the embayments. Therefore, any comparisons of the 2007-2009 data to previous results should be interpreted accordingly.

Black Bass Sampling (Spring)

Nocturnal electrofishing studies were conducted at Wolf Creek dam, and in the Harmon Creek, Fishing Creek, and Lily Creek embayments of Lake Cumberland during May 2009 to assess the black bass populations. The length-frequency and catch-per-unit-effort (CPUE) of the three black bass species collected in each area is shown in Table 2. The catch-per-hour (by area and length group) of the three black bass species are shown in Tables 3-6. Table 7 compares the catch-per-hour by length group of black bass in Lake Cumberland to other SEFD lakes sampled in 2009.

Largemouth bass catch rates met or exceeded three CPUE management objectives (Table 8). The catch rate of age-1 largemouth bass (25.67 f/h) greatly exceeded the management objective of 5.00 f/h. Catch rates of ≥ 15.0 in (8.17 f/h) and ≥ 20.0 in (0.50 f/h) largemouth bass met the management objectives. The catch rate of 12.0-14.9 in largemouth bass (8.50 f/h) did not meet the management objective of ≥ 10.00 f/h,

The spotted bass population met two out of four catch rate management objectives (Table 9). The catch rates of age-1 spotted bass (6.83 f/h) exceeded the management objective, and the catch rate of 11.0-13.9 in spotted bass (10.00 f/h) also met the management objective. The catch rates of ≥ 14.0 in (1.00 f/h) and ≥ 17.0 in (0.00 f/h) spotted bass failed to meet the management objectives of ≥ 2.00 f/h and ≥ 0.10 f/h, respectively.

Catch rates for smallmouth bass in 2009 were lower than in previous sampling years, and as a result, smallmouth bass catch rates did not meet any of the management objectives (Table 10). The catch rate of age-1 smallmouth bass (1.83 f/h) neared the management objective of 2.0 f/h. The catch rates of ≥ 14.0 in (0.67 f/h) and ≥ 17.0 in (0.17 f/h) smallmouth bass did not meet the management objectives. The catch rate of 11.0-13.9 in (0.17 f/h) smallmouth bass failed to exceed the management objective of ≥ 3.00 f/h.

Largemouth bass exhibited excellent size structure, with a PSD value of 63 and an RSD_{15} value of 31 (Table 11). Spotted bass and smallmouth bass had a moderate size structure, with a PSD value of 29 and an RSD_{14} value of 3 for spotted bass, and a PSD value of 29 and an RSD_{14} value of 24 for smallmouth bass (Table 11). Table 12 compares the size structure values of black bass populations in Lake Cumberland to other SEFD lakes sampled in 2009.

Black Bass Sampling (Fall)

Nocturnal electrofishing was conducted in the Fishing Creek embayment during September to index the largemouth bass year class strength (Tables 13 and 14). Although the CPUE of age-0 largemouth bass was lower than the 2008 catch rate, the 2009 age-0 CPUE was still high in relationship to previous years. Table 15 compares the CPUE of age-0 largemouth bass in Lake Cumberland to other SEFD lakes sampled in fall 2009. Relative weight (Wr) values for largemouth bass and spotted bass collected during September sampling are shown in Table 16. Table 17 compares Wr values for black bass in Lake Cumberland to other SEFD lakes sampled in fall 2009.

Crappie Sampling

Fall trap netting was conducted in the Fishing Creek and Wolf Creek embayments of Lake Cumberland during October 2009 to assess the crappie population. Length frequency and CPUE for black and white crappie from each area are shown in Table 18. The PSD and RSD_{10} values for white and black crappie are shown in Table 19. Age-growth data from white and black crappie collected in 2009 are shown in Tables 20 and 21, respectively. Age-1 fish (57%) comprised the majority of the white crappie catch (Table 22). Age-0 black crappie comprised 91% of the black crappie catch (Table 23), of which, 64% of the age-0 crappie were captured in one net on one day. Due to the low number of crappie captured, population assessments were not done. Relative weight (W_r) values for white and black crappie are shown in Table 24.

Striped Bass Sampling

Gill nets were used in December 2009 to evaluate the striped bass population in Lake Cumberland. Thirty net-nights captured 192 striped bass for a catch rate of 6.40 fish/nn. Length-frequency and CPUE of striped bass are shown in Table 25. Striped bass ranged from 9.0 to 35.0 in with the mode being the 10.0 in class (44 fish). The CPUE of age 1+ and older fish (4.00 f/nn) met the management objective (Table 26). The CPUE of age 1+ fish (1.77 f/nn) did not meet the management objective of 2.00 f/nn. The catch rate of ≥ 24.0 in fish was 1.20 f/nn, which exceeded the management objective. The age-growth data for striped bass collected during 2009 is shown in Table 27. Eight year-classes were represented in the catch (Table 28). The 2009 (age 0) year class was the most abundant (36%) year class collected, which coincided with the increased (pulsed) stocking rate of 10.00 fish/acre in 2009. Mean length of age 2+ fish at capture (2007 year class) was 21.6 in, thereby exceeding the growth objective (21.0 in) for the striped bass fishery (Table 26). The striped bass assessment score was 11 (rating=good; Table 29). Relative weight (W_r) values were adequate for striped bass < 20.0 in, but condition values decreased as fish grew larger (Table 30). Warm water temperatures and decreased dissolved oxygen levels in the lake during 2009 may have affected the condition of the striped bass.

Laurel River Lake (5,830 acres)

Black Bass Sampling (Spring)

Nocturnal electrofishing sampling was conducted during April and May 2009 to assess the black bass population in Laurel River Lake. Electrofishing was conducted in four areas of the lake: 1) dam, 2) Spruce Creek, 3) Laurel River arm, and 4) upper Craigs Creek. Length-frequency and CPUE of the three black bass species collected in each area is shown in Table 31. The catch-per-hour (by area and length group) of the three black bass species is shown in Tables 32-35. Table 7 compares the catch-per-hour by length group of black bass in Laurel River Lake to other SEFD lakes sampled in 2009.

The largemouth bass population met three of the four catch rate objectives (Table 36). The CPUE of ≥ 15.0 in bass (20.83 f/h) doubled the management objective of 10.00 f/h, and the CPUE of ≥ 20.0 in bass (0.83 f/h) exceeded the management objective of 0.50 f/h. CPUE of age 1 fish (12.17 f/h) was above the management objective, but without the contribution of largemouth bass stocked in fall 2008 (2.5 f/h), the management objective for age-1 CPUE would not have been met. The 12.0-14.9 in CPUE of largemouth bass (16.83 f/h) did not meet the objective of 20.00 f/h.

Spotted bass met two of the four management catch rate objectives (Table 37). Catch rates of ≥ 14.0 in (2.67 f/h) and ≥ 17.0 in (0.17 f/h) spotted bass met the management objectives. CPUE of 11.0-13.9 in fish (6.83 f/h) neared the management objective of 7.00 f/h. Age 1 CPUE (0.33 f/h) did not meet the objective of 3.00 f/h.

The smallmouth bass population met two of the four management objectives (Table 38). CPUE of ≥ 14.0 in fish (3.50 f/h) exceeded the management objective, and the CPUE ≥ 17.0 in (1.83 f/h) surpassed the objective of 0.50 f/h. The two other smallmouth bass catch rate objectives were not met. CPUE of 11.0-13.9 in fish (0.67 f/h) was below the objective of 1.50 f/h. The CPUE of age-1 smallmouth bass (0.33 f/h) did not meet the management objective.

Largemouth and smallmouth bass exhibited excellent size structure, with largemouth bass having a PSD value of 76 and an RSD_{15} value of 42, and smallmouth bass had a PSD value of 69 and an RSD_{14} value of 58 (Table 39). Spotted bass exhibited good size structure, having a PSD of 39 and an RSD_{14} of 11 (Table 39).

Black Bass Sampling (Fall)

Nocturnal electrofishing was conducted in the Laurel River arm during September 2009 to index largemouth bass year class strength (Tables 40 and 41). CPUE of age-0 largemouth bass in 2009 was slightly higher than previous years of sampling (2007-2008); however, catch rates of age-0 bass still remained below the historic average (15.09; Table 41). Relative weight (Wr) values for largemouth and spotted bass collected during September sampling are shown in Table 42.

Walleye Sampling

Gill nets were used in November 2009 to evaluate the walleye population in Laurel River Lake. A total of 354 walleye were captured in 16 net-nights for a catch rate of 22.13 f/mn. Length frequency and CPUE of walleye is shown in Table 43. Walleye ranged from 9.0-27.0 in with the mode being the 20.0 in class (56 fish). All of the catch rate management objectives for walleye were exceeded (Table 44). The CPUE of age 1+ and older walleye was 15.25 f/mn, and the CPUE of age 1+ walleye (5.13 f/mn) also met the management objective. The CPUE of ≥ 20.0 in fish was 7.19 f/mn, more than twice the objective of 2.50 f/mn. Age-growth data for male and female walleye are shown in Tables 45 and 46, respectively. The age-growth for both sexes combined is shown in Table 47. Ten year-classes were represented in the catch, with the 2009 year class (age 0; 32%) being most abundant (Table 48). Mean length of age 2+ walleye at capture (19.0 in) surpassed the growth objective of 18.0 in (Table 44). The walleye assessment score was 16 (rating=excellent; Table 49). Relative weight (Wr) values for walleye are shown in Table 50.

Cedar Creek Lake (784 acres; Lincoln Co.)

Black Bass Sampling (Spring)

Nocturnal electrofishing was conducted on 4 May 2009 to assess the largemouth bass population in Cedar Creek Lake. The length-frequency and CPUE of largemouth bass is shown in Table 51. Size structure of largemouth bass was good (PSD=53, RSD₁₅=27; Table 52). The catch-per-hour (by area and length group) of largemouth bass for 2003-2009 is shown in Table 53. All of the CPUE management objectives for the largemouth bass population were exceeded (Table 54).

Black Bass Sampling (Fall)

Nocturnal electrofishing was conducted on 28 September 2009 to index the largemouth bass year-class strength (Tables 55 and 56). Catch rates of age-0 bass had decreased over previous years (Table 56). Relative weight (Wr) values for largemouth bass are found in Table 57. Condition improved slightly as bass length increased.

Crappie Sampling

Fall trap netting was conducted in Cedar Creek Lake during October 2009 to assess the crappie population. Length frequency and CPUE for black and white crappie are shown in Table 58. The PSD and RSD₁₀ values for white and black crappie are shown in Table 59. Age-growth data from white and black crappie collected in 2009 are shown in Tables 60 and 61, respectively. Of the three white crappie collected, two were age-1 (Table 62). Age-6 black crappie (61%) dominated the black crappie catch (Table 63). Due to the low number of crappie captured, assessments were not completed for the population. Relative weight (Wr) values for black and white crappie are shown in Table 64.

Bluegill/Redear Sunfish Sampling

Daytime electrofishing was conducted on 15 June 2009, in conjunction with Black Bass Research (BBR) section, to assess the bluegill and redear sunfish populations in Cedar Creek Lake. Results from the sampling, including length-frequency and PSD values, can be found in the BBR annual performance report.

2009 Daytime Creel Survey

A roving daytime creel survey was conducted on Cedar Creek Lake (784 acres) from 1 April-31 October 2009. Results from the creel survey are shown in Tables 65-72. Anglers made an estimated 38,561 fishing trips and expended 192,691 hours (245.78 man hours/acre) during the survey period. Fishing pressure on Cedar Creek Lake in 2009 increased nearly five times from the 2005 creel survey (Table 65). Black bass anglers accounted for 48% of all fishing trips to the lake, followed by panfish (28%) and crappie (14%) anglers (Table 66).

Cedar Creek Angler Attitude Survey

An angler attitude survey was conducted in conjunction with the creel survey to gather angler opinions about the various fisheries in Cedar Creek Lake (Figure 1). A total of 506 anglers were interviewed. Eighty percent of the bass anglers were satisfied with the bass fishery in the lake, with the size of fish being the number one reason for angler dissatisfaction.

Only 39% of the crappie anglers were satisfied with the crappie fishing in the lake. Eighty-nine percent of the responses listed "size of fish" as the reason for the dissatisfaction with the crappie fishery. Sixty-three percent of all anglers would support a reduction in the current statewide 30 fish daily crappie creel limit to 20 fish.

Panfish anglers were generally satisfied with the fishing at Cedar Creek Lake. Nearly 75% of the bluegill anglers were satisfied with the bluegill fishing, and the size of fish was the main reason for angler dissatisfaction. Sixty-five percent of the redear sunfish anglers were satisfied with the redear sunfish fishery, and the "number of fish" was listed as the number one reason for angler dissatisfaction.

Seventy-two percent of the channel catfish anglers were satisfied with the channel catfish fishery in the lake. The most common response for angler dissatisfaction was the size of fish.

Sixty percent of the anglers interviewed fish Cedar Creek Lake ten or more times per year. In addition, 73% of the anglers are satisfied with the current fishing regulations on the lake.

Bert T. Combs Lake (36 acres; Clay Co.)

Black Bass Sampling (Spring)

Nocturnal electrofishing was conducted on 21 April 2009 at Bert T. Combs Lake to assess the black bass population. Length frequency and CPUE for largemouth are shown in Table 73. The catch-per-hour (by length group) for largemouth bass is shown in Table 74. The size structure of largemouth bass is good, having a PSD value of 50 ($RSD_{15}=7$; Table 75).

Beulah Lake (87 acres; Jackson Co.)

Largemouth Bass Sampling (Spring)

Nocturnal electrofishing was conducted on 23 April 2009 at Beulah Lake to assess the black bass population. Length frequency and CPUE for largemouth bass is shown in Table 76. Catch-per-hour (by length group) for largemouth bass is shown in Table 77. Although the largemouth bass size structure was relatively poor ($PSD=26$, $RSD_{15}=3$; Table 78), the PSD value had improved since the 2006 sample ($PSD=5$). Age-growth for largemouth bass collected during 2009 is shown in Table 79. Nine year classes were represented in the catch, with ages 2 and 3 comprising 71% of the catch (Table 80). The largemouth bass population assessment score was 15 (rating=good; Table 81). Overall, the largemouth bass growth and size structure had improved since the 2006 sample, when approximately 100 largemouth bass were removed from the population during sampling for age-growth analysis.

Channel Catfish Sampling

Channel catfish sampling using tandem hoop nets was attempted in August and October of 2009. Five channel catfish were collected in August, and 27 channel catfish were collected during the October sample. Additional catfish sampling will be conducted in 2010.

Cannon Creek Lake (243 acres; Bell Co.)

Black Bass Sampling (Spring)

Nocturnal electrofishing was conducted on 27 April 2009 at Cannon Creek Lake to assess the black bass population. Length frequency and CPUE for largemouth are shown in Table 82. The catch-per-hour (by length group) for the three bass species is shown in Table 83. Table 84 lists the PSD and RSD values for the black bass species in the lake.

Lake Linville (361 acres; Rockcastle Co.)

Black Bass Sampling (Spring)

Nocturnal electrofishing was conducted on 19 May 2009 at Lake Linville to assess the black bass population. Length frequency and CPUE for the black bass populations are shown in Tables 85-87. A population assessment for largemouth bass is shown in Table 88. The size structure for the largemouth bass population is poor, with a PSD value of 17 ($RSD_{13}=9$), and the spotted bass population is also comprised of small individuals ($PSD=3$, $RSD_{14}=0$; Table 89).

Black Bass Sampling (Fall)

Nocturnal electrofishing was conducted on 23 September 2009 to index the largemouth bass year-class strength (Tables 90 and 91). Catch rates of age-0 largemouth bass in 2009 were higher than in previous years (Table 91). Table 15 compares the CPUE of age 0 largemouth bass in Lake Linville to other SEFD lakes sampled in 2009. Relative weight values for largemouth bass and spotted bass are in Table 92.

Wood Creek Lake (625 acres; Laurel Co.)

Black Bass Sampling (Spring)

Nocturnal electrofishing was conducted on 11 May 2009 in the Dam, Pump Station, and Dock areas of Wood Creek Lake to assess the black bass population. Length frequency and CPUE for black bass are shown in Table 93. The size structure for largemouth bass was good, having a PSD value of 55 ($RSD_{15}=17$; Table 94). The spotted bass population had a poor size structure ($PSD=16$, $RSD_{14}=1$; Table 94). Catch-per-hour (by length group) for largemouth and spotted bass are shown in Tables 95 and 96, respectively. A largemouth bass population assessment is shown in Table 97.

Black Bass Sampling (Fall)

Nocturnal electrofishing was conducted on 17 September 2009 in the Dam, Pump Station, and Dock areas of Wood Creek Lake to index largemouth bass year class strength (Tables 98 and 99). Catch rates of age-0 largemouth bass in 2009 were lower than in previous years (Table 99). As a result of the low age-0 catch rate, the lake received a supplemental stocking of 10,100 5.0-in fingerlings in October 2009 to bolster the low year class. Table 15 compares the CPUE of age 0 largemouth bass in Wood Creek Lake to other SEFD lakes sampled in 2009. Relative weight values for largemouth and spotted bass are in Table 100.

Table 1. Summary of sampling conditions by waterbody, species sampled, and date for the Southeastern Fisheries District in 2009.

Water body	Location	Species	Date	Time (24hr)	Gear	Weather	Water temp, F	Water level (ft)	Secchi (in)	Conditions	Pertinent sampling comments
Lake Cumberland											
	Dam	Black bass	5/5/2009	2000	shock	cloudy	65	688	84	good	all 2009 samples for all species conducted under reduced water levels due to dam repairs, which altered sampling locations
	Harmon Creek	Black bass	5/5/2009	2015	shock	partly cloudy/60s	64	688	120	good	inexperienced volunteer dipper
	Lily Creek	Black bass	5/12/2009	2000	shock	clear/70s	74	696	72	fair	bass looked good
	Fishing Creek	Black bass	5/18/2009	2000	shock	sunny/cool/60s	69	691	36	good	clearish, green, lots of debris in water
	Fishing Creek	Black bass	9/21/2009	2000	shock	cloudy, a few showers	79	680	36	good	water murky, green, some largemouth bass thin; lots of debris in water
	Fishing Creek	Crappie	10/26-10-29		trap net	overcast/rain 50s	59	682		good	saw several 8-8" white bass
	Wolf Creek	Crappie	10/26-10/29		trap net	overcast/rain 60s	63	682		good	water murky and green
	Beaver	Siniper	11/30-12/3		gill net	overcast/40s	55	681		good	
	Wolf/Lily/Caney	Striper	11/30-12/3		gill net	sunny/overcast/40s	55	681		good	
Laurel River Lake											
	Spruce Creek	Black bass	5/4/2009	1930	shock	overcast/60s	67	1018	60	good	water green, a little murky
	Dam	Black bass	4/28/2009	2000	shock	mostly cloudy/70s	67	1016	78-84	good	water green, clearish
	Craig's Creek	Black bass	5/7/2009	2000	shock	clear/upper 60s	67	1017	84	good	floating debris in upper portion of the creek
	312 Bridge	Black bass	5/26/2009	1945	shock	partly cloudy/80s/humid	78	1015	60	good	murky, greenish brown; fish look plump
	312 Bridge	Black bass	9/16/2009	2000	shock	cloudy, 70s and falling	78	1013	48	good	water green; largemouth and spotted bass had sores on them
	Entire lake	Walleye	11/16-11/19		gill net	sunny/cloudy/rainy/50s	56	1016		good	
Cedar Creek Lake											
		LMB	5/4/2009	2015	shock	cloudy/50s	66	normal	42	fair	murky in 770 area; filamentous algae in lower area, mid-size bass average, large bass plump
		LMB	9/28/2009	2000	shock	70s falling into the 50s	75	normal	24	good	murky in upper end; all sizes of bass look good
		RLG/redear	6/15/2009	1000	shock	sunny/not	79	normal	48	good	water clear to slightly murky
		Crappie	10/20-10/22		trap net	sunny	58	normal	60-72	good	coffee-colored, clear mid-lake, green water in upper end
	Bert T. Combs Lake	LMB	4/21/2009	2000	shock	cloudy/windy/mid 50s	57	normal	102	fair	good visibility; larger bass plump, most bass average
	Beulah Lake	LMB	4/23/2009	1930	shock	cloudy/warm/60s	63	normal	102	good	water green, clear
		Catfish	8/18-8/21		hcop net	cloudy/70s	78	3 ft low	84	good	water greenish
		Catfish	10/15-10/18		hcop net	rain/50s	60	normal		good	
	Cannon Creek Lake	Black bass	4/27/2009	2000	shock	mostly clear/w arm	70	normal	120	good	water clear, greenish; largemouth bass skinny; spotted bass average
	Lake Linville	Black Bass	5/19/2009	2000	shock	clear/w arm/70s	72	normal	6-18	fair	two crews; water murky and muddy and brownish; bass were skinny
		Black Bass	9/23/2009	1915	shock	cloudy/mid 70s	75	normal	18	good	one crew; largemouth bass a little thin, spotted bass skinny
	Wood Creek Lake	Black bass	5/11/2009	2000	shock	mostly clear/60s	68	normal	36-84	good	two crews; water was murky; most fish look healthy
		Black bass	9/17/2009	2000	shock	cloudy/70s/light rain late	77	normal	84-114	good	two crews

Table 2. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.00 hours of 15-minute nocturnal electrofishing runs for black bass in Lake Cumberland during May 2009; 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			22
Dam	Largemouth bass					8	2		3		1	3					1		1		19	12.67 (4.78)	
	Spotted bass			3		11	6	11	10	3	7	5	1	1	1							66	44.00 (10.93)
	Smallmouth bass	1				3	3		2						1							10	6.67 (3.96)
Harmon Creek	Largemouth bass				1	2	2									1	1	1			8	5.33 (2.46)	
	Spotted bass	4	2	9	6	7	6	5	5	7	2	1	1								55	36.67 (9.55)	
	Smallmouth bass	1	2	1	2			2				1		1			1				11	7.33 (2.40)	
Fishing Creek	Largemouth bass	5	20	17	34	21	21	6	6	10	9	17	13	16	5	4	2	3			209	139.33 (21.60)	
	Spotted bass	8	4	3		3	1	1	1	2	1										24	16.00 (5.66)	
	Smallmouth bass														1						1	0.67 (0.67)	
Lily Creek	Largemouth bass			1	1	4	4	6	1		5	3	2	5	2	2	2	1	3	1	44	29.33 (6.08)	
	Spotted bass	4	4	10	7	20	25	28	43	9	14	10	4	1	1						180	120.00 (21.27)	
	Smallmouth bass	5	2	1				1	1	3											13	8.67 (3.17)	
Total	Largemouth bass	5	21	19	48	29	27	7	9	15	13	20	18	21	7	7	5	6	2	1	280	46.67 (12.52)	
	Spotted bass	4	16	16	22	37	41	46	59	18	30	20	10	3	1	2					325	54.17 (10.25)	
	Smallmouth bass	1	8	2	2	5	3	1	3	5		1	1	1	2		1				35	5.83 (1.46)	

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Table 3. Comparison of catch-per-hour of black bass (by area) captured during spring electrofishing on Lake Cumberland during the period of 2005-2009.

Species/Area	Stock				Quality				Preferred						
	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
Largemouth bass															
Dam	2.00	1.33	7.20	14.67	6.00	2.00	1.33	6.40	11.33	4.00	2.00	0.66	4.00	8.67	1.33
Beaver Creek	2.00	*	*	*	*	2.00	*	*	*	*	2.00	*	*	*	*
Harmon Creek	1.30	0.00	4.65	2.00	2.00	0.70	0.00	4.00	1.33	2.00	0.70	0.00	3.33	0.67	2.00
Fishing Creek	66.00	76.66	154.00	138.00	74.67	58.70	54.66	111.33	106.67	46.00	13.30	26.66	42.67	43.33	20.00
Lily Creek	13.30	22.66	28.00	42.00	22.67	13.30	20.00	18.00	33.33	14.67	9.30	13.33	9.33	19.33	9.33
Mean	16.90	25.18	48.48	49.17	26.33	15.30	19.00	34.95	38.17	16.67	5.50	10.18	14.80	18.00	8.17
Spotted bass															
Dam	50.00	47.33	78.40	86.67	34.67	25.30	26.66	54.40	35.33	14.67	7.30	9.33	24.00	12.67	2.00
Beaver Creek	21.30	*	*	*	*	6.00	*	*	*	*	0.00	*	*	*	*
Harmon Creek	27.30	33.33	74.67	32.00	22.67	8.00	9.33	20.00	4.00	7.33	0.70	2.00	4.67	0.67	0.67
Fishing Creek	13.30	12.00	18.67	26.00	6.00	5.30	4.00	0.67	3.33	2.00	0.00	0.00	0.00	0.00	0.00
Lily Creek	32.00	80.00	48.00	88.00	90.00	26.70	47.33	12.67	38.67	20.00	7.30	20.66	2.00	6.67	1.33
Mean	28.80	43.18	54.93	58.17	38.33	14.30	21.83	21.93	20.33	11.00	3.10	8.00	7.68	5.00	1.00
Smallmouth bass															
Dam	14.00	4.00	36.80	16.67	4.00	7.30	0.66	12.80	7.33	0.67	3.30	0.66	2.40	4.00	0.67
Beaver Creek	0.00	*	*	*	*	0.00	*	*	*	*	0.00	*	*	*	*
Harmon Creek	18.00	4.00	22.67	8.67	3.33	18.00	2.00	9.33	7.33	2.00	15.30	0.66	3.33	6.00	1.33
Fishing Creek	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00	0.67
Lily Creek	0.70	0.66	0.67	2.67	3.33	0.70	0.00	0.00	0.67	0.00	0.70	0.00	0.00	0.67	0.00
Mean	6.50	2.18	15.03	7.00	2.83	5.20	0.68	5.53	3.83	0.83	3.90	0.33	1.43	2.67	0.67

Largemouth bass - ≥ 8.0 in = stock, ≥ 12.0 in = quality, ≥ 15.0 in = preferred.

Smallmouth bass and spotted bass - ≥ 7.0 in = stock, ≥ 11.0 in = quality, ≥ 14.0 in = preferred.

* Not sampled.

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Table 4. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Lake Cumberland during May 2009.

Year	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in		Total	
	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.
2009	20.33	6.46	9.67	3.45	8.50	2.76	8.17	2.25	0.50	0.28	46.67	12.52
2008	7.33	2.33	11.00	2.84	20.17	5.73	18.00	3.96	0.17	0.17	56.50	13.17
2007	8.35	3.17	14.09	4.49	20.87	7.13	15.30	4.09	0.52	0.29	58.61	18.06
2006	0.83	0.42	6.17	2.17	8.83	3.06	10.17	2.63	0.50	0.28	26.00	7.61
2005	0.80	0.45	1.60	0.68	9.87	3.60	5.47	1.25	0.00	0.00	17.73	5.21
2004	0.80	0.30	5.20	1.46	6.93	1.38	6.53	1.59	0.00	0.00	19.50	4.00
2003	2.00	0.78	5.71	1.39	6.14	1.86	8.29	1.90	0.14	0.14	22.14	4.31
2002	0.40	0.22	1.87	0.57	7.73	2.52	6.27	0.99	0.13	0.13	16.30	3.30

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Table 5. Spring electrofishing CPUE (fish/hr) for each length group of spotted bass collected at at Lake Cumberland during May 2009.

Year	Length group											
	<8.0 in		8.0-10.9 in		11.0-13.9 in		>14.0 in		>17.0 in		Total	
	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.
2009	22.67	4.28	20.50	5.14	10.00	2.11	1.00	0.43	0.00	0.00	54.17	10.25
2008	34.67	4.49	26.67	3.67	15.33	4.03	5.00	2.14	0.00	0.00	81.67	11.08
2007	27.13	6.84	27.48	4.96	13.57	3.56	6.96	2.69	0.35	0.24	75.13	13.48
2006	12.00	2.53	16.50	2.30	13.83	2.97	8.00	2.10	0.17	0.17	50.33	7.09
2005	16.27	3.59	9.47	1.40	11.20	2.02	3.07	1.15	0.00	0.00	40.00	6.29
2004	15.60	2.69	25.47	3.91	10.53	2.08	1.87	0.66	0.00	0.00	53.50	7.80
2003	32.57	5.45	31.60	3.80	9.10	1.50	2.90	0.80	0.00	0.00	76.10	8.60
2002	8.10	1.80	10.30	1.70	5.20	1.10	1.50	0.50	0.00	0.00	25.10	3.70

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Table 6. Spring electrofishing CPUE (fish/hr) for each length group of smallmouth bass collected at Lake Cumberland during May 2009.

Year	Length group											
	<8.0 in		8.0-10.9 in		11.0-13.9 in		>14.0 in		>17.0 in		Total	
	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.
2009	3.50	1.28	1.50	0.58	0.17	0.17	0.67	0.31	0.17	0.17	5.83	1.46
2008	5.17	1.79	2.00	0.80	1.17	0.51	2.67	0.95	0.83	0.42	11.00	2.76
2007	6.78	2.64	7.13	2.35	3.83	1.29	1.39	0.60	0.52	0.38	19.13	5.43
2006	2.50	0.86	1.17	0.38	0.33	0.33	0.33	0.23	0.17	0.17	4.33	1.15
2005	2.27	0.87	0.80	0.56	1.33	0.48	3.87	1.50	1.33	0.70	8.27	2.32
2004	2.93	1.83	1.87	0.87	1.20	0.51	1.33	0.65	0.00	0.00	7.33	3.10
2003	2.14	0.95	3.86	1.14	1.57	0.56	3.43	1.12	1.00	0.44	11.00	2.70
2002	2.93	1.10	3.47	1.33	2.40	0.76	0.93	0.46	0.13	0.13	9.70	2.90

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Table 7. Catch-per-hour of black bass captured during spring electrofishing on lakes in the Southeastern Fishery District during 2009.

Species/Lake	Stock*	Quality*	Preferred*
Largemouth bass			
Lake Cumberland	26.33	16.67	8.17
Laurel River Lake	49.83	37.67	20.83
Cedar Creek Lake	133.71	70.29	36.29
Bert T. Combs Lake	90.00	44.67	6.00
Beulah Lake	226.67	58.00	6.67
Cannon Creek Lake	23.00	10.00	0.00
Linville Lake	112.00	18.80	10.40
Wood Creek Lake	80.33	44.33	13.33
Spotted bass			
Lake Cumberland	38.33	11.00	1.00
Laurel River Lake	24.17	9.50	2.67
Cannon Creek Lake	42.50	10.50	0.00
Linville Lake	98.80	3.20	0.40
Wood Creek Lake	23.00	3.67	0.33
Smallmouth bass			
Lake Cumberland	2.83	0.83	0.67
Laurel River Lake	6.00	4.17	3.50
Cannon Creek Lake	11.00	9.50	0.00
Linville Lake	8.00	0.40	0.40
Wood Creek Lake	2.00	0.33	0.00

*Largemouth bass - ≥ 8.0 in = stock, ≥ 12.0 in = quality, ≥ 15.0 in = preferred

*Smallmouth and spotted bass - ≥ 7.0 in = stock, ≥ 11.0 in = quality, ≥ 14.0 in = preferred

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Table 8. Population assessment for largemouth bass based on spring electrofishing at Lake Cumberland from 1990-2009.

Year		Mean length age-3 at capture	Spring CPUE age 1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Total score	Assesment rating
	Management objective	≥13.0 in	≥5.00 f/h	≥10.00 f/h	≥8.00 f/h	≥0.50 f/h		
2009	Value	13.4	25.67	8.50	8.17	0.50		
	Score	4	2	1	2	2	11	F
2008	Value	13.4	10.00	20.17	18.00	0.17		
	Score	4	1	2	3	1	11	F
2007	Value	13.4	10.26	20.87	15.30	0.52		
	Score	4	1	2	3	2	12	G
2006	Value	13.6	1.17	8.83	10.17	0.50		
	Score	4	1	1	2	2	10	F
2005	Value	13.6	1.20	9.90	5.50	0.00		
	Score	4	1	1	2	0	8	F
2004	Value	13.6	1.10	7.00	6.50	1.00		
	Score	4	1	1	2	2	10	F
2003	Value	13.6	3.00	6.10	8.30	0.14		
	Score	4	1	1	2	1	9	F
2002	Value	13.6	0.40	7.60	6.40	0.13		
	Score	4	1	1	2	1	9	F
2001	Value	13.5	2.90	7.70	5.20	0.27		
	Score	4	1	1	2	2	10	F
2000	Value	13.5	2.80	9.50	5.20	0.27		
	Score	4	1	1	2	2	10	F
1999	Value	13.5	9.50	13.30	11.70	0.38		
	Score	4	1	1	2	2	10	F
1997	Value	13.5	2.60	29.50	18.60	0.44		
	Score	4	1	3	3	2	13	G
1996	Value	13.5	1.70	9.60	9.60	0.46		
	Score	4	1	1	2	2	10	F
1995	Value	13.5	1.50	21.70	13.90	0.38		
	Score	4	1	2	3	2	12	G
1993	Value	13.5	1.80	20.50	4.40	0.10		
	Score	4	1	2	2	1	10	F
1992	Value	13.5	3.70	27.10	4.40	0.17		
	Score	4	1	3	2	1	11	F
1991	Value	13.5	5.70	11.80	3.90	0.13		
	Score	4	1	1	1	1	8	F
1990	Value	13.5	19.60	10.10	4.20	0.00		
	Score	4	1	1	2	0	8	F

Table 9. Population assessment for spotted bass based on spring electrofishing at Lake Cumberland from 1990-2009.

Year		Mean length age-3 at capture	Spring CPUE age 1	Spring CPUE 11.0-13.9 in	Spring CPUE ≥14.0 in	Spring CPUE ≥17.0 in	Total score	Assesment rating
Management objective		≥9.6 in	≥4.00 f/h	≥7.00 f/h	≥2.00 f/h	≥0.10 f/h		
2009	Value	11.0	6.83	10.00	1.00	0.00		
	Score	4	2	4	3	0	13	G
2008	Value	11.0	8.83	15.33	5.00	0.00		
	Score	4	3	4	4	0	15	G
2007	Value	11.4	1.30	13.57	6.96	0.35		
	Score	4	2	4	4	3	17	E
2006	Value	11.4	1.83	13.83	3.00	0.17		
	Score	4	2	4	4	2	16	G
2005	Value	11.4	5.10	11.20	3.10	0.00		
	Score	4	2	4	4	0	14	G
2004	Value	11.4	6.00	10.50	1.90	0.00		
	Score	4	2	4	3	0	13	G
2003	Value	11.4	16.70	9.10	2.90	0.00		
	Score	4	3	4	4	0	15	G
2002	Value	11.4	5.10	5.20	1.50	0.00		
	Score	4	2	3	3	0	12	G
2001	Value	11.4	2.10	4.70	1.60	0.00		
	Score	4	2	3	3	0	12	G
2000	Value	11.4	1.90	5.60	1.20	0.00		
	Score	4	2	3	3	0	12	G
1999	Value	11.4	3.00	11.20	3.00	0.13		
	Score	4	2	4	4	2	16	G
1997	Value	11.4	6.00	6.70	1.90	0.00		
	Score	4	2	3	3	0	12	G
1996	Value	11.4	1.00	6.60	1.30	0.00		
	Score	4	2	3	3	0	12	G
1995	Value	11.4	1.30	2.30	0.60	0.00		
	Score	4	2	3	3	0	12	G
1993	Value	11.4	0.70	2.70	0.00	0.00		
	Score	4	1	3	0	0	8	F
1992	Value	11.4	0.70	2.70	0.40	0.00		
	Score	4	1	3	3	0	11	F
1991	Value	11.4	1.30	1.30	0.00	0.00		
	Score	4	2	2	0	0	8	F
1990	Value	11.4	3.50	1.20	0.00	0.00		
	Score	4	2	2	0	0	8	F

Table 10. Population assessment for smallmouth bass based on spring electrofishing at Lake Cumberland from 1990-2009.

Year		Mean length age-3 at capture	Spring CPUE age 1	Spring CPUE 11.0-13.9 in	Spring CPUE ≥14.0 in	Spring CPUE ≥17.0 in	Total score	Assesment rating
Management objective		≥11.0 in	≥2.00 f/h	≥3.00 f/h	≥2.00 f/h	≥0.50 f/h		
2009	Value	12.2	1.83	0.17	0.67	0.17		
	Score	4	3	2	3	2	14	G
2008	Value	12.2	2.50	1.17	2.67	0.83		
	Score	4	4	3	4	4	19	E
2007	Value	12.2	2.61	3.83	1.39	0.52		
	Score	4	4	4	4	4	20	E
2006	Value	12.2	0.00	0.33	0.33	0.17		
	Score	4	0	2	2	2	10	F
2005	Value	12.2	0.80	1.30	3.90	1.33		
	Score	4	2	3	4	4	17	E
2004	Value	9.6	1.90	1.20	1.30	0.00		
	Score	2	3	3	4	0	12	G
2003	Value	9.6	1.30	1.60	3.40	1.00		
	Score	2	3	3	4	4	16	G
2002	Value	9.6	1.70	2.40	0.90	0.13		
	Score	2	3	3	3	2	13	G
2001	Value	9.6	0.50	0.40	0.90	0.53		
	Score	2	2	2	3	4	13	G
2000	Value	9.6	0.00	1.40	1.10	0.00		
	Score	2	0	3	4	0	9	F
1999	Value	9.6	0.50	2.60	2.50	0.75		
	Score	2	2	4	4	4	16	G
1997	Value	9.6	6.10	3.80	1.30	0.33		
	Score	2	4	4	4	3	17	E
1996	Value	9.6	0.10	3.20	2.50	0.80		
	Score	2	1	4	4	4	15	G
1995	Value	9.6	6.70	7.40	4.00	1.52		
	Score	2	4	4	4	4	18	E
1993	Value	9.6	0.70	2.20	1.10	0.19		
	Score	2	2	3	4	2	13	G
1992	Value	9.6	0.80	4.70	1.80	0.25		
	Score	2	2	4	4	3	15	G
1991	Value	9.6	3.20	5.50	2.30	0.76		
	Score	2	4	4	4	4	18	E
1990	Value	9.6	5.20	4.00	1.30	0.65		
	Score	2	4	4	4	4	18	E

Table 11. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Lake Cumberland during May 2009; 95% confidence limits are in parentheses.

Area	Species	No. \geq stock size	PSD (+/- 95%)	RSD ^a (+/- 95%)
Dam	Largemouth bass	9	67 (\pm 33)	22 (\pm 29)
	Spotted bass	52	42 (\pm 14)	6 (\pm 6)
	Smallmouth bass	6	17 (\pm 33)	17 (\pm 33)
Harmon Creek	Largemouth bass	3	100 (\pm 0)	100 (\pm 0)
	Spotted bass	34	32 (\pm 16)	3 (\pm 6)
	Smallmouth bass	5	60 (\pm 48)	40 (\pm 48)
Fishing Creek	Largemouth bass	112	62 (\pm 9)	27 (\pm 8)
	Spotted bass	9	33 (\pm 33)	0
	Smallmouth bass	1	100 (NA)	0
Lily Creek	Largemouth bass	34	65 (\pm 16)	41 (\pm 17)
	Spotted bass	135	22 (\pm 7)	1 (\pm 2)
	Smallmouth bass	5	0	0
Total	Largemouth bass	158	63 (\pm 8)	31 (\pm 7)
	Spotted bass	230	29 (\pm 6)	3 (\pm 2)
	Smallmouth bass	17	29 (\pm 22)	24 (\pm 21)

^aLargemouth bass = RSD₁₅, spotted and smallmouth bass = RSD₁₄
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Table 12. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Lake Cumberland, Laurel River Lake, Cedar Creek Lake, Bert T. Combs Lake, Beulah Lake, Cannon Creek Lake, Lake Linville, and Wood Creek Lake during 2009; 95% confidence limits are in parentheses.

Lake	Largemouth bass		Smallmouth bass		Spotted bass	
	PSD	RSD ₁₅	PSD	RSD ₁₄	PSD	RSD ₁₄
Lake Cumberland	63 (+8)	31 (+7)	29 (+22)	24 (+21)	29 (+6)	3 (+2)
Laurel River Lake	76 (+5)	42 (+6)	69 (+15)	58 (+16)	39 (+8)	11 (+5)
Cedar Creek Lake	53 (+5)	27 (+4)				
Bert T. Combs Lake	50 (+8)	7 (+4)				
Beulah Lake	26 (+5)	3 (+2)				
Cannon Creek Lake	43 (+14)	0 (0)	86 (+15)	0 (0)	25 (+9)	0 (0)
Lake Linville	17 (+4)	9 (+3)	5 (+10)	5 (+10)	3 (+2)	0 (+1)
Wood Creek Lake	55 (+6)	17 (+5)	17 (+33)	0 (0)	16 (+9)	1 (+3)

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Table 13. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 1.5 hours of 15-minute nocturnal electrofishing runs for black bass in Fishing Creek of Lake Cumberland on 21 September 2009; standard error is in parentheses.

Species	inch class																			CPUE
	2	3	4	5	6	7	8	9	10	11	12	13	15	16	17	18	19	Total		
Largemouth bass	8	11	10	22	12	2	4	9	8	7	5	2	4	3	1	1	1	110	73.33 (9.89)	
Spotted bass	1	2	1	1	1	1	1	1	3	1	3	1						12	8.00 (2.31)	
Smallmouth bass											1							1	0.67 (0.67)	

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Table 14. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall (September and October) in electrofishing samples at Lake Cumberland.

Year class	Area	Age 0			Age 0 >5.0 in			Age 1		
		Mean length	Std. error	Std.	CPUE	Std. error	Std.	CPUE	Std. error	Std.
Lake Cumberland										
2009	Fishing Creek	4.8	0.16		42.00	9.45		22.67	6.42	
2008	Fishing Creek	5.0	0.08		166.00	40.12		80.67	31.30	81.33 13.45
2007	Fishing Creek	5.0	0.29		4.67	3.17		2.67	1.33	24.92 5.50
2006	Fishing Creek	6.3	0.17		22.00	3.06		20.67	2.40	32.00 8.20
2005	Fishing Creek	6.2	0.16		14.00	4.47		13.30	4.09	3.30
2004	Fishing Creek	6.2	0.14		50.70	8.18		41.30	7.35	4.00
2003	Fishing Creek	5.8	0.42		6.00	2.68		4.00	2.53	1.30 0.30
2002	Fishing Creek	6.0	0.07		192.70	36.67		160.70	36.32	4.00 1.46

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Table 15. Year class strength at age 0 and mean lengths (in) of largemouth bass collected in September 2009 in electrofishing samples at Lake Cumberland, Laurel River Lake, Wood Creek Lake, Cedar Creek Lake, and Lake Linville.

Lake	Area	Age 0		Age 0		Age 0 >5.0 in	
		Mean length	Std. error	CPUe	Std. error	CPUe	Std. error
Lake Cumberland	Fishing Creek	4.76	0.16	42.00	9.45	22.67	6.42
Laurel River Lake	Laurel River Arm	3.80	0.30	6.00	3.22	0.67	0.67
Cedar Creek Lake		4.1	0.11	17.43	4.31	3.71	1.77
Lake Linville		4.52	0.06	75.33	33.71	18.00	6.35
Wood Creek Lake		3.74	0.43	2.67	1.66	0.67	0.45

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sedyoywc.d09

Table 16. Number of fish and mean relative weight (Wr) for each length group of black bass collected in Fishing Creek of Lake Cumberland during 21 September 2009. Standard error is in parentheses.

Species	Length group					
	8.0-11.9 in		12.0-14.9 in		>15.0 in	
	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	28	93 (1)	6	85 (2)	10	84 (5)
Spotted bass	2	106 (6)	4	86 (5)	0	-

sedyoycb.d09

Table 17. Number of fish and mean relative weight (Wr) for each length group of black bass collected in Lake Cumberland, Laurel River Lake, Cedar Creek Lake, Lake Linville, and Wood Creek Lake during September 2009. Standard error is in parentheses.

Species	Location	Length group					
		No.	Wr	No.	Wr	No.	Wr
Largemouth bass		8.0-11.9 in		12.0-14.9 in		≥15.0 in	
	Lake Cumberland (Fishing Creek)	28	93 (1)	6	85 (2)	10	84 (5)
	Laurel River Lake (Laurel River Arm)	13	98 (3)	3	98 (9)	2	95 (3)
	Cedar Creek Lake	206	92 (1)	102	94 (1)	66	100 (1)
	Lake Linville	75	88 (1)	27	81 (2)	8	94 (2)
	Wood Creek Lake	36	91 (4)	29	88 (2)	5	91 (4)
Spotted bass		7.0-10.9 in		11.0-13.9 in		≥14.0 in	
	Lake Cumberland (Fishing Creek)	2	106 (6)	4	86 (5)	0	-
	Laurel River Lake (Laurel River Arm)	13	109 (3)	3	116 (2)	1	103 (-)
	Lake Linville	75	91 (4)	24	83 (2)	0	-
	Wood Creek Lake	71	94 (1)	13	96 (2)	0	-

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Table 18. Length frequency and CPUE (fish/nn) for each species of crappie collected in the Wolf Creek (27 net-nights) and Fishing Creek (27 net-nights) embayments of Lake Cumberland in 54 net-nights during October 2009.

Area	Species	Inch class										Total	CPUE	Std. error	
		2	3	4	5	6	7	8	9	10	11				
Fishing Creek															
	White crappie	4	28		3	3	6	23	5	3			75	2.78	0.67
	Black crappie	51	23	9	10	2	2				5		102	3.78	0.86
Wolf Creek															
	White crappie												0	0	0.00
	Black crappie	227	90					3	7		1		328	12.15	9.17
Total															
	White crappie	4	28		3	3	6	23	5	3			75	1.39	0.38
	Black crappie	278	113	9	10	2	2	3	7	5	1		430	7.96	4.60

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Table 19. PSD and RSD₁₀ values calculated for crappie collected in trapnets at Lake Cumberland in October 2009; 95% confidence limits are in parentheses.

Species	No.	PSD	RSD ₁₀
White crappie			
Fishing Creek	43	72 (\pm 14)	7 (\pm 8)
Wolf Creek	0	0	0
Lake Cumberland	43	72 (\pm 14)	7 (\pm 8)
Black crappie			
Fishing Creek	19	26 (\pm 20)	26 (\pm 20)
Wolf Creek	11	100 (\pm 0)	9 (\pm 18)
Lake Cumberland	30	53 (\pm 18)	20 (\pm 15)

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Table 20. Mean back calculated lengths (in) at each annulus for white crappie collected from Lake Cumberland during 2009, including the 95% confidence interval (CI) for each mean length per age group.

Year	No.	Age
		1
2008	35	4.5
Mean		4.5
Number		35
Smallest		3.1
Largest		6.6
Std error		0.2
95% CI +		0.3

Otoliths were used for age-growth determinations; Intercept = 0
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Table 21. Mean back calculated lengths (in) at each annulus for black crappie collected from Lake Cumberland during 2009, including the 95% confidence interval (CI) for each mean length per age group.

Year	No.	Age					
		1	2	3	4	5	6
2008	27	3.8					
2006	5	4.1	7.0	9.2			
2003	1	3.4	6.4	8.5	9.7	10.1	10.6
Mean		3.9	6.9	9.1	9.7	10.1	10.6
Number		33	6	6	1	1	1
Smallest		3.1	6.4	8.4	9.7	10.1	10.6
Largest		4.9	7.5	10.3	9.7	10.1	10.6
Std error		0.1	0.2	0.3			
95% CI +		0.2	0.4	0.6			

Otoliths were used for age-growth determinations; Intercept = 0
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Table 22. Age-frequency and CPUE (fish/nn) of white crappie trap-netted at Lake Cumberland in 54 net-nights in October 2009.

Age	Inch class								Total	%	CPUE	Std error
	2	3	5	6	7	8	9	10				
0+	4	28							32	42.7	0.59	-
1+			3	3	6	23	5	3	43	57.3	0.80	0.25
Total	4	28	3	3	6	23	5	3	75	100.0	1.39	
%	5.3	37.3	4.0	4.0	8.0	30.7	6.7	4.0				

CPUE of ≥ 8.0 in (quality size) crappie = 0.57 fish/nn

CPUE of ≥ 10.0 in (preferred size) crappie = 0.06 fish/nn

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Table 23. Age-frequency and CPUE (fish/nn) of black crappie trap-netted at Lake Cumberland in 54 net-nights in October 2009.

Age	Inch class											Total	%	CPUE	Std error
	2	3	4	5	6	7	8	9	10	11					
0+	278	113	2									393	91.4	7.28	4.61
1+			7	10	2	2	3	7				31	7.2	0.57	0.11
3+									4	1		5	1.2	0.09	0.05
6+									1			1	0.2	0.02	0.01
Total	278	113	9	10	2	2	3	7	5	1		430	100.0	7.96	
%	64.7	26.3	2.1	2.3	0.5	0.5	0.7	1.6	1.2	0.2					

CPUE of ≥ 8.0 in (quality size) crappie = 0.30 fish/nn

CPUE of ≥ 10.0 in (preferred size) crappie = 0.11 fish/nn

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Table 24. Number of fish and mean relative weight (Wr) for each length group of crappie collected in Lake Cumberland in October 2009. Standard error is in parentheses.

Species	Location	Length group					
		5.0-7.9 in		8.0-9.9 in		>10.0 in	
		No.	Wr	No.	Wr	No.	Wr
White Crappie							
	Fishing Creek	12	85 (3)	28	97 (1)	3	98 (5)
	Wolf Creek	0	-	0	-	0	-
	Lake Cumberland	12	85 (3)	28	97 (1)	3	98 (5)
Black crappie							
	Fishing Creek	14	92 (3)	0	-	5	89 (3)
	Wolf Creek	0	-	10	95 (2)	1	93 (-)
	Lake Cumberland	14	92 (3)	10	95 (2)	6	89 (3)

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Table 25. Length frequency and CPUE (fish/nn) of striped bass collected at Lake Cumberland in 30 net-nights on 1-3 December 2009.

Species	Inch class																											Total	CPUE	Std. error
	9	10	11	12	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	32	33	35						
Striped bass	8	44	10	1	2	9	14	10	9	2	4	14	5	7	8	7	6	5	5	1	1	1	1	1	1	1	192	6.40	1.19	

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Table 26. Population assessment for striped bass based on fall gill netting at Lake Cumberland from 1994-2009.

Year		CPUE ≥age 1	Mean length age 2 at capture	CPUE ≥24.0 in	CPUE Age-1	Total score	Assesment rating
	Management objective	≥4.0 f/nn	≥21.0 in	≥1.00 f/nn	≥2.00 f/nn		
2009	Value	4.00	21.6	1.20	1.77		
	Score	3	3	3	2	11	G
2008	Value	9.15	22.1	1.50	2.70		
	Score	4	4	3	3	14	E
2007	Value	5.27	23.7	1.23	3.87		
	Score	3	4	3	4	14	E
2006	Value	3.90	22.8	1.60	1.30		
	Score	2	4	3	2	11	G
2005	Value	3.40	23.3	1.50	1.20		
	Score	2	4	3	2	11	G
2004	Value	4.40	23.4	2.10	1.80		
	Score	3	4	4	2	13	G
2003	Value	4.10	21.9	1.20	1.70		
	Score	3	3	3	2	11	G
2002	Value	3.50	22.9	1.25	1.80		
	Score	2	4	3	2	11	G
2001	Value	3.10	21.0	0.11	2.70		
	Score	2	3	1	3	9	F
2000	Value	3.40	23.3	0.70	2.50		
	Score	2	4	2	3	11	G
1999	Value	3.40	22.4	0.30	2.70		
	Score	2	4	1	3	10	G
1998	Value	5.30	21.5	0.40	4.80		
	Score	3	3	1	4	11	G
1997	Value	1.90	21.5	1.10	0.40		
	Score	1	3	3	1	8	F
1996	Value	2.70	22.2	0.90	1.00		
	Score	2	4	2	2	10	G
1995	Value	3.50	22.7	1.50	1.50		
	Score	2	4	3	2	11	G
1994	Value	4.30	21.7	0.80	2.70		
	Score	3	3	2	3	11	G

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Table 27. Mean back calculated lengths (in) at each annulus for striped bass collected from Lake Cumberland during 2009, including the 95% confidence interval (CI) for each mean length per age group.

Year	No.	Age										
		1	2	3	4	5	6	7	8	9	10	
2008	33	10.6										
2007	22	11.4	18.0									
2006	29	10.8	18.6	22.9								
2005	7	13.8	20.5	24.8	27.5							
2004	2	9.3	18.4	22.4	25.5	27.8						
2002	2	14.0	21.6	26.3	29.0	30.7	32.1	32.9				
1999	1	12.9	19.5	23.3	26.5	28.0	29.3	30.6	31.5	32.5	33.1	
Mean		11.1	18.7	23.4	27.3	29.0	31.1	32.1	31.5	32.5	33.1	
Number		96	63	41	12	5	3	3	1	1	1	
Smallest		6.2	14.7	20.7	24.8	27.7	29.3	30.6	31.5	32.5	33.1	
Largest		14.9	21.9	26.4	29.4	31.5	33.2	34.2	31.5	32.5	33.1	
Std error		0.2	0.2	0.2	0.4	0.7	1.1	1.1				
95% CI ±		0.5	0.4	0.5	0.8	1.5	2.2	2.1				

Otoliths were used for age-growth determinations; Intercept = 0
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Table 28. Age-frequency and CPUE (fish/mn) of striped bass gill netted for 30 net-nights at Lake Cumberland in December 2009. Standard error is in parentheses.

Age	Inch class																														Total	%	CPUE
	9	10	11	12	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	32	33	35									
0+	8	44	19	1																									72	37.5	2.40	(0.79)	
1+				2	9	14	18	9	1																				53	27.6	1.77	(0.37)	
2+									1	4	13	5	3															26	13.5	0.87	(0.26)		
3+											1		4	8	7	5	4											29	15.1	0.97	(0.23)		
4+															1	1	3	1	1									7	3.6	0.23	(0.08)		
5+																		2										2	1.0	0.07	(0.03)		
7+																												2	1.0	0.07	(0.07)		
10+																						1						1	0.5	0.03	(0.03)		
Total	8	44	19	1	2	9	14	18	9	2	4	14	5	7	8	7	6	5	5	1	1	1	1	1	1	1	192	100.0	6.40				
%	4.2	22.9	9.9	0.5	1.0	4.7	7.3	9.4	4.7	1.0	2.1	7.3	2.6	3.6	4.2	3.6	3.1	2.6	2.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5							

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Table 29. Striped bass population assessment for striped bass gill netted at Lake Cumberland in December 2009.

Parameter	Actual value	Assessment score
Population density (CPUE age 1 and older)	4.00	3
Growth rate (Mean length age 2+ at capture)	21.6	3
Size structure (CPUE \geq 24.0 in)	1.20	3
Recruitment (CPUE age 1)	1.77	2
Instantaneous mortality (Z)	0.467	
Annual mortality (A)	37.3	
Total score		11
Assessment rating		G

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Table 30. Number of fish and mean relative weight (Wr) for each length group of striped bass collected in Lake Cumberland December 2009. Standard error is in parentheses.

Length group					
12.0-19.9 in		20.0-29.9 in		\geq 30.0 in	
No.	Wr	No.	Wr	No.	Wr
55	94 (1)	62	80 (1)	4	69 (2)

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Table 31. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.00 hours of 15-minute nocturnal electrofishing runs for black bass in Laurel River Lake during April and May 2009; 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		2	2	22	10	16	4	5	2	8	7	3	10	5	17	5	3	1		122	81.33 (15.55)	
	Spotted bass			3	5	3	6	7	5	1	12	3	6	2	1							54	36.00 (11.12)	
	Smallmouth bass			1	2	5		1	2	1	2	1	1	3	3	2	2	2	3	1	29	19.33 (7.48)		
Spruce Creek	Largemouth bass	1	1	3	7		7	1	1	1	1	3	10	10	8	3	6	2	2	2	2	63	42.00 (11.02)	
	Spotted bass							1	2	2	1	2									8	5.33 (2.46)		
	Smallmouth bass			1				1	1	1			1	1	1	1	1	2			8	5.33 (1.69)		
Laurel River Arm	Largemouth bass	2	2	9	3	6	3	8	4	17	20	12	9	18	12	13	7	3			148	98.67 (16.90)		
	Spotted bass			1		4	8	5	3	4	2	4	1	1	1						34	22.67 (4.92)		
	Smallmouth bass			1																	1	0.67 (0.67)		
Upper Craigs Creek	Largemouth bass			3		4	2	4		1	6	8	4	7	2	1	2	1			45	30.00 (8.12)		
	Spotted bass	2		3	6	6	6	11	13	12	7	1	4	2	1	1					75	50.00 (3.39)		
	Smallmouth bass									1	1	1									3	2.00 (0.89)		
Total	Largemouth bass	2	8	12	32	25	23	13	11	26	39	33	29	38	21	36	16	9	3	2	378	63.00 (8.54)		
	Spotted bass	2	3	10	11	13	26	27	22	12	16	13	9	4	2	1					171	28.50 (4.56)		
	Smallmouth bass		1	1	3	5		2	4	2	2	4	4	4	2	3	2	2	3	1	41	6.83 (2.38)		

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Table 32. Comparison of catch-per-hour of black bass (by area) captured during spring electrofishing on Laurel River Lake during the period of 2005-2009.

Species/Area	Stock					Quality					Preferred				
	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
Largemouth bass															
Dam	49.30	34.00	54.00	29.33	57.33	32.70	22.00	47.33	19.33	39.33	20.70	11.33	34.00	13.33	27.33
Spruce Creek	56.00	45.71	37.33	59.33	34.00	52.00	38.28	34.67	34.67	32.00	31.30	29.14	21.33	26.67	16.67
Laurel River Arm	96.00	95.33	56.00	52.67	84.00	62.00	65.33	40.67	37.33	62.67	28.70	28.66	20.67	24.00	35.33
Craigs Cr. headwaters	22.70	28.00	29.33	20.67	24.00	17.30	20.66	22.67	10.67	16.67	9.30	7.33	11.33	6.67	4.00
Mean	56.00	50.56	44.17	40.50	49.83	41.00	36.64	36.33	25.50	37.67	22.50	19.52	21.83	17.67	20.83
Spotted bass															
Dam	24.70	33.33	36.67	20.67	30.67	17.30	13.33	20.67	5.33	16.67	9.30	4.66	5.33	1.33	6.00
Spruce Creek	6.00	14.85	16.67	14.00	5.33	2.00	5.71	9.33	9.33	2.00	0.00	1.71	1.33	3.33	0.00
Laurel River Arm	8.70	34.00	38.67	60.00	22.00	6.00	9.33	8.67	14.00	8.67	0.70	2.00	0.67	1.33	2.00
Craigs Cr. headwaters	26.00	44.00	36.00	34.00	38.67	20.00	19.33	12.00	14.67	10.67	4.70	2.00	0.67	3.33	2.67
Mean	16.30	30.88	32.00	32.17	24.17	11.30	11.68	12.68	10.83	9.50	3.70	2.56	2.00	2.33	2.67
Smallmouth bass															
Dam	14.00	0.66	6.67	11.33	17.33	10.70	0.66	1.33	6.67	12.00	10.00	0.00	1.33	3.33	10.67
Spruce Creek	15.30	5.14	7.33	13.33	4.67	15.30	3.42	4.00	11.33	3.33	10.70	3.42	2.67	9.33	3.33
Laurel River Arm	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	1.30	0.00	0.00	0.00	0.00
Craigs Cr. headwaters	0.00	0.00	4.00	0.67	2.00	0.00	0.00	0.67	0.00	1.33	0.00	0.00	0.67	0.00	0.00
Mean	7.80	1.60	4.50	6.33	6.00	7.00	1.12	1.50	4.50	4.17	5.50	0.96	1.18	3.17	3.50

Largemouth bass - ≥ 8.0 in = stock, ≥ 12.0 in = quality, ≥ 15.0 in = preferred.

Smallmouth bass and spotted bass - ≥ 7.0 in = stock, ≥ 11.0 in = quality, ≥ 14.0 in = preferred.

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Table 33. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Laurel River Lake during April and May 2009.

Year	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in		Total	
	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.
2009	13.17	2.44	12.17	2.74	16.83	2.59	20.83	3.20	0.83	0.54	63.00	8.54
2008	37.50	11.53	15.00	1.97	7.83	1.47	17.67	2.66	0.67	0.46	78.00	13.81
2007	2.33	0.80	7.83	1.93	14.50	1.86	21.83	2.55	0.50	0.28	46.50	4.03
2006	20.80	5.65	13.92	2.72	17.12	2.86	19.52	2.76	0.64	0.30	71.36	11.44
2005	6.17	1.23	15.00	2.85	18.50	2.67	22.50	2.90	0.17	0.17	62.17	7.54
2004	3.80	1.50	11.00	1.40	18.50	3.00	14.20	1.90	0.00	0.00	47.50	4.80
2003	9.80	2.90	37.00	5.80	29.30	4.10	13.80	2.00	0.00	0.00	90.00	12.30
2002	21.70	5.00	24.00	3.80	23.30	3.30	8.30	1.40	0.00	0.00	77.30	9.70

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Table 34. Spring electrofishing CPUE (fish/hr) for each length group of spotted bass collected at Laurel River Lake during April and May 2009.

Year	Length group												Total	
	<8.0 in		8.0-10.9 in		11.0-13.9 in		>14.0 in		>17.0 in		CPUE	Std. Err.	CPUE	Std. Err.
	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.				
2009	6.50	1.50	12.50	2.38	6.83	1.45	2.67	0.79	0.17	0.17	28.50	4.56	28.50	4.56
2008	20.17	4.23	12.67	2.63	8.50	1.43	2.33	0.63	0.00	0.00	43.67	6.99	43.67	6.99
2007	12.17	2.32	13.50	2.15	10.67	1.71	2.00	0.64	0.00	0.00	38.33	4.04	38.33	4.04
2006	15.04	2.39	13.44	1.74	9.12	1.74	2.56	0.73	0.00	0.00	40.16	4.55	40.16	4.55
2005	4.83	0.83	3.33	0.79	7.67	1.60	3.67	1.13	0.00	0.00	19.50	2.65	19.50	2.65
2004	3.20	1.00	12.50	2.90	9.80	2.30	2.20	0.70	0.00	0.00	27.70	5.60	27.70	5.60
2003	23.30	5.30	17.80	3.10	10.20	2.00	0.80	0.50	0.00	0.00	52.20	8.90	52.20	8.90
2002	13.70	3.20	13.30	1.80	5.50	1.40	0.30	0.20	0.00	0.00	32.80	5.60	32.80	5.60

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Table 35. Spring electrofishing CPUE (fish/hr) for each length group of smallmouth bass collected at Laurel River Lake during April and May 2009.

Year	Length group											
	<8.0 in		8.0-10.9 in		11.0-13.9 in		>14.0 in		>17.0 in		Total	
	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.
2009	1.67	1.18	1.00	0.36	0.67	0.39	3.50	1.45	1.83	0.80	6.83	2.38
2008	1.67	0.68	1.83	0.72	1.33	0.52	3.17	1.23	1.83	0.64	8.00	2.28
2007	2.83	0.78	1.67	0.68	0.33	0.23	1.17	0.45	0.83	0.42	6.00	1.36
2006	0.48	0.27	0.48	0.35	0.16	0.16	0.96	0.58	0.32	0.22	2.08	0.96
2005	0.17	0.17	0.83	0.42	1.50	0.63	5.50	1.46	2.83	1.09	8.00	1.83
2004	2.00	0.60	1.20	0.40	0.70	0.40	1.20	0.50	0.00	0.00	5.00	1.10
2003	8.30	2.20	7.50	1.80	1.80	0.80	2.20	0.80	0.17	0.17	19.80	4.30
2002	8.20	2.50	4.50	1.50	2.20	0.60	0.70	0.30	0.17	0.17	15.50	3.80

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Table 36. Population assessment for largemouth bass based on spring electrofishing at Laurel River Lake from 1990-2009

Year	Management objective	Mean length age-3 at capture			Spring CPUE			Spring CPUE			Assessment rating
		≥13.0 in	≥10.00 in	≥10.00 in	12.0-14.9 in	≥15.0 in	≥20.0 in	≥20.0 in	≥0.50 in		
2009	Value Score	13.3 4	12.17* 1	16.83 2	20.83 4	20.83 4	0.83 2			13 G	
2008	Value Score	13.3 4	36.33 3	7.83 1	17.67 3	17.67 3	0.67 2			13 G	
2007	Value Score	13.7 4	2.08 1	14.50 1	21.83 4	21.83 4	0.50 2			12 G	
2006	Value Score	13.7 4	18.40 1	17.12 2	19.52 3	19.52 3	0.64 2			12 G	
2005	Value Score	13.7 4	4.61 1	18.50 2	22.50 4	22.50 4	0.17 1			12 G	
2004	Value Score	13.7 4	2.61 1	18.50 2	14.17 3	14.17 3	0.00 0			10 F	
2003	Value Score	13.7 4	7.80 1	29.33 3	13.83 3	13.83 3	0.00 0			11 F	
2002	Value Score	13.7 4	18.19 1	23.33 2	8.83 2	8.83 2	0.00 0			9 F	
2001	Value Score	13.7 4	17.82 1	22.13 2	2.55 1	2.55 1	0.27 2			10 F	
2000	Value Score	13.7 4	2.30 1	16.29 2	2.14 1	2.14 1	0.14 1			9 F	
1999	Value Score	13.7 4	6.24 1	26.00 3	6.40 2	6.40 2	0.53 2			12 G	
1998	Value Score	13.7 4	5.96 1	9.17 1	7.83 2	7.83 2	1.50 2			10 F	
1997	Value Score	13.7 4	14.51 1	25.38 3	6.21 2	6.21 2	0.69 2			12 G	
1996	Value Score	13.7 4	8.71 1	15.43 2	6.57 2	6.57 2	0.86 2			11 F	
1995	Value Score	13.7 4	1.21 1	9.33 1	6.13 2	6.13 2	1.07 2			10 F	
1994	Value Score	13.7 4	5.70 1	13.86 1	7.00 2	7.00 2	1.29 2			10 F	
1993	Value Score	13.7 4	5.98 1	11.41 1	6.52 2	6.52 2	1.33 2			10 F	
1992	Value Score	13.7 4	9.10 1	24.42 2	8.75 2	8.75 2	1.31 2			11 F	
1991	Value Score	13.7 4	22.10 2	11.60 1	4.71 2	4.71 2	0.00 0			9 F	
1990	Value Score	13.7 4	17.52 1	10.20 1	4.90 2	4.90 2	1.10 2			10 F	

* Includes largemouth bass stocked in Fall 2008; CPUE of naturally reproduced bass=9.67 fish/hr sedpsdir d09

Table 37. Population assessment for spotted bass based on spring electrofishing at Laurel River Lake from 1990-2009.

Year		Mean length	Spring	Spring	Spring	Spring	Total score	Assesment rating
		age-3 at capture	CPUE age 1	CPUE 11.0-13.9 in	CPUE ≥ 14.0 in	CPUE ≥ 17.0 in		
Management objective		≥ 11.0 in	≥ 3.00 f/h	≥ 7.00 f/h	≥ 1.00 f/h	≥ 0.10 f/h		
2009	Value	10.4	0.33	6.83	2.67	0.17		
	Score	4	1	3	4	2	14	G
2008	Value	10.4	4.00	8.50	2.33	0.00		
	Score	4	2	4	4	0	14	G
2007	Value	10.4	0.83	10.67	2.00	0.00		
	Score	4	1	4	4	0	13	G
2006	Value	11.5	4.25	9.12	2.56	0.00		
	Score	4	2	4	4	0	14	G
2005	Value	11.5	1.52	7.67	3.67	0.00		
	Score	4	2	4	4	0	14	G
2004	Value	11.5	0.00	9.83	2.17	0.00		
	Score	4	0	4	4	0	12	G
2003	Value	11.5	2.26	10.17	0.83	0.00		
	Score	4	2	4	3	0	13	G
2002	Value	11.5	2.19	5.50	0.33	0.00		
	Score	4	2	3	3	0	12	G
2001	Value	11.5	5.96	8.27	0.13	0.00		
	Score	4	2	4	2	0	12	G
2000	Value	11.5	2.55	2.29	0.14	0.00		
	Score	4	2	3	2	0	11	F
1999	Value	11.5	1.54	5.60	0.40	0.00		
	Score	4	2	3	3	0	12	G
1998	Value	11.5	6.64	4.83	0.33	0.00		
	Score	4	2	3	3	0	12	G
1997	Value	11.5	1.64	7.45	0.69	0.00		
	Score	4	2	4	3	0	13	G
1996	Value	11.5	0.29	7.86	0.71	0.00		
	Score	4	1	4	3	0	12	G
1995	Value	11.5	1.18	9.87	0.00	0.00		
	Score	4	2	4	0	0	10	F
1994	Value	11.5	4.76	5.43	1.43	0.00		
	Score	4	2	3	3	0	12	G
1993	Value	11.5	1.21	5.33	0.59	0.15		
	Score	4	2	3	3	2	14	G
1992	Value	11.5	3.36	13.22	0.99	0.00		
	Score	4	2	4	3	0	13	G
1991	Value	11.5	3.99	12.68	0.00	0.00		
	Score	4	2	4	0	0	10	F
1990	Value	11.5	6.74	3.23	2.43	0.00		
	Score	4	2	3	4	0	13	G

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Table 38. Population assessment for smallmouth bass based on spring electrofishing at Laurel River Lake from 1990-2009.

Year		Mean length age-3 at capture	Spring CPUE age 1	Spring CPUE 11.0-13.9 in	Spring CPUE >14.0 in	Spring CPUE >17.0 in	Total score	Assesment rating
Management objective		≥13.0 in	≥3.00 f/h	≥1.5 f/h	≥1.00 f/h	≥0.50 f/h		
2009	Value	13.6	0.33	0.67	3.50	1.83		
	Score	4	2	2	4	4	16	G
2008	Value	13.6	0.83	1.33	3.17	1.83		
	Score	4	2	3	4	4	17	E
2007	Value	13.6	1.20	0.33	1.17	0.83		
	Score	4	3	2	4	4	17	E
2006	Value	13.6	0.38	0.16	0.96	0.32		
	Score	4	2	2	3	3	14	G
2005	Value	13.6	0.06	1.50	5.50	2.83		
	Score	4	1	3	4	4	16	G
2004	Value	13.6	0.40	0.67	1.17	0.00		
	Score	4	2	2	4	0	12	G
2003	Value	13.6	4.00	1.83	2.17	0.17		
	Score	4	4	3	4	2	17	E
2002	Value	13.6	6.04	2.17	0.67	0.17		
	Score	4	4	3	3	2	16	G
2001	Value	13.6	3.40	2.80	1.07	0.00		
	Score	4	4	4	4	0	16	G
2000	Value	13.6	0.88	1.29	0.57	0.14		
	Score	4	2	3	3	2	14	G
1999	Value	13.6	2.12	1.87	0.53	0.13		
	Score	4	3	3	3	2	15	G
1998	Value	13.6	12.67	0.67	0.67	0.50		
	Score	4	4	2	3	4	17	E
1997	Value	13.6	6.67	2.07	1.52	0.14		
	Score	4	4	3	4	2	17	E
1996	Value	13.6	0.14	2.86	0.43	0.00		
	Score	4	1	4	3	0	12	G
1995	Value	13.6	1.20	0.53	1.07	0.27		
	Score	4	3	2	4	3	16	G
1994	Value	13.6	3.36	1.29	0.71	0.29		
	Score	4	4	3	3	3	17	E
1993	Value	13.6	1.57	0.59	0.44	0.30		
	Score	4	3	2	3	3	15	G
1992	Value	13.6	1.89	1.47	0.15	0.00		
	Score	4	3	3	2	0	12	G
1991	Value	13.6	0.36	0.36	0.00	0.00		
	Score	4	2	2	0	0	8	F
1990	Value	13.6	8.63	1.35	1.35	0.54		
	Score	4	4	3	4	4	19	E

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Table 39. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Laurel River Lake during April and May 2009; 95% confidence limits are in parentheses.

Area	Species	No. \geq stock size	PSD (+/- 95%)	RSD ^a (+/- 95%)
Dam				
	Largemouth bass	86	69 (\pm 10)	48 (\pm 11)
	Spotted bass	46	54 (\pm 15)	20 (\pm 12)
	Smallmouth bass	26	69 (\pm 18)	62 (\pm 19)
Spruce Creek				
	Largemouth bass	51	94 (\pm 7)	49 (\pm 14)
	Spotted bass	8	38 (\pm 36)	0 (\pm 0)
	Smallmouth bass	7	71 (\pm 36)	71 (\pm 36)
Laurel River Arm				
	Largemouth bass	126	75 (\pm 8)	42 (\pm 9)
	Spotted bass	33	39 (\pm 17)	9 (\pm 10)
	Smallmouth bass	0	0 (\pm 0)	0 (\pm 0)
Upper Craigs Creek				
	Largemouth bass	36	69 (\pm 15)	17 (\pm 12)
	Spotted bass	58	28 (\pm 12)	7 (\pm 7)
	Smallmouth bass	3	67 (\pm 65)	0 (\pm 0)
Total				
	Largemouth bass	299	76 (\pm 5)	42 (\pm 6)
	Spotted bass	145	39 (\pm 8)	11 (\pm 5)
	Smallmouth bass	36	69 (\pm 15)	58 (\pm 16)

^aLargemouth bass = RSD₁₅, spotted and smallmouth bass = RSD₁₄
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Table 40. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 1.5 hours of 15-minute nocturnal electrofishing runs for black bass in Laurel River Lake on 16 September 2009; standard error is in parentheses.

Area	Species	Inch class														Total	CPUE
		2	3	4	5	6	7	8	9	10	11	12	14	15	16		
Laurel River Arm	Largemouth bass	2	3	3	3	5	15	6	2	3	2	1	2	1	1	49	32.67 (7.69)
	Spotted bass	7	10	1	11	15	4	4	3	2	3		1			61	40.67 (11.19)
	Smallmouth bass				1											1	0.67 (0.67)

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

Year Class	Area	Age 0		Age 0		Age 0 >5.0 in		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2009	Laurel River Arm	3.8	0.30	6.00	3.22	0.67	0.67		
2008 ^a	Laurel River Arm	3.2	0.30	1.33	0.84	0.00	0.00	14.00 ^b	4.59
2007 ^a	Laurel River Arm	3.5	0.12	5.30	4.58	0.00	0.00	118.91 ^c	12.4
2006 ^a	Laurel River Arm	3.7	0.14	12.70	4.89	0.67	0.67	5.39 ^d	2.12
2005 ^a	Laurel River Arm	4.4	0.16	14.00	3.54	3.30	1.61	58.33 ^e	9.18
2004	Laurel River Arm	4.9	0.15	14.00	5.82	8.00	3.43	8.30	2.35
2003	Laurel River Arm	3.4	0.05	36.70	13.99	0.70	0.67	2.60	1.00
2002	Laurel River Arm	4.5	0.11	30.70	5.81	8.70	3.49	10.30	4.05

^a Age-0 largemouth bass stocked in the fall

^b Includes bass stocked in fall 2008; CPUE of fin-clipped bass=8.00 f/h

^c Includes bass stocked in fall 2007; CPUE of fin-clipped bass=108.00 f/h

^d Includes bass stocked in fall 2006; CPUE of fin-clipped bass=2.00 f/h

^e Includes bass stocked in fall 2005; CPUE of fin-clipped bass=36.00 f/h

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Table 42. Number of fish and mean relative weight (Wr) for each length group of black bass collected at 312 Bridge in Laurel River Lake on 16 September 2009. Standard error is in parentheses.

Species	Length group					
	8.0-11.9 in		12.0-14.9 in		> 15.0 in	
	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	13	98 (3)	3	98 (9)	2	95 (3)
	7.0-10.9 in		11.0-13.9 in		≥14.0 in	
	No.	Wr	No.	Wr	No.	Wr
Spotted bass	13	109 (3)	3	116 (2)	1	103 (-)

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Table 43. Length frequency and CPUE (fish/m) of walleye collected from Laurel River Lake in 16 net-nights in November 2009.

Species	Inch class																Total	CPUE	Std. error	
	9	10	11	12	14	15	16	17	18	19	20	21	22	23	24	25				27
Walleye	6	41	49	16	1	9	33	34	16	34	56	31	19	4	3	1	1	354	22.13	3.21

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Table 44. Population assessment for walleye based on fall gill netting at Laurel River Lake from 1990-2009.

Year	Parameters						Assessment Rating
	CPUE >age 1+ >10.00 f/nn	Mean length age 2+ at capture >18.0 in	CPUE >20.0 in	CPUE Age 1+ >4.00 f/nn	Total score		
2009	Value Score 15.25 4	19.0 4	7.19 4	5.13 4	16	E	
2007	Value Score 21.63 4	19.1 4	6.50 4	8.25 4	16	E	
2005	Value Score 25.10 4	19.5 4	9.30 4	8.00 4	16	E	
2002	Value Score 10.60 4	18.8 4	0.60 2	6.10 4	14	E	
1993	Value Score 4.30 3	18.6 4	0.50 1	2.40 3	11	G	
1991	Value Score 3.70 2	18.6 4	0.80 2	0.50 1	9	F	
1990	Value Score 4.70 3	18.6 4	1.50 3	1.50 2	12	G	

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Table 45. Mean back calculated lengths (in) at each annulus for male walleye collected from Laurel River Lake during 2009, including the 95% confidence interval (CI) for each mean length per age group.

Year	No.	Age								
		1	2	3	4	5	6	7	8	9
2008	26	11.8								
2007	9	11.3	16.9							
2006	15	11.0	16.7	18.9						
2005	5	12.5	17.1	19.6	20.8					
2004	1	11.4	17.2	19.4	20.6	21.7				
2003	7	11.5	16.3	18.6	19.8	20.5	21.3			
2002	4	10.4	15.1	17.2	18.5	19.6	20.8	21.6		
2001	1	10.8	15.5	18.2	19.3	19.7	20.5	21.3	22.0	
2000	3	10.5	14.3	16.6	17.9	19.0	19.7	20.2	20.8	21.3
Mean		11.4	16.4	18.5	19.5	20.0	20.8	21.0	21.1	21.3
Number		71	45	36	21	16	15	8	4	3
Smallest		8.5	13.2	16.0	16.8	18.2	19.4	20.0	20.4	20.8
Largest		14.8	18.1	21.1	22.4	22.0	22.8	23.6	22.0	21.8
Std error		0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.3	0.3
95% CI +		0.3	0.3	0.4	0.6	0.6	0.6	0.9	0.7	0.6

Otoliths were used for age-growth determinations; Intercept = 0
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Table 46. Mean back calculated lengths (in) at each annulus for female walleye collected from Laurel River Lake during 2009, including the 95% confidence interval (CI) for each mean length per age group.

Year	No.	Age								
		1	2	3	4	5	6	7	8	9
2006	6	11.4	18.1	20.8						
2005	2	9.3	15.9	19.2	21.2					
2003	2	12.4	17.9	20.7	22.1	23.3	24.4			
2000	1	11.1	15.4	18.4	20.1	21.4	22.7	24.0	24.4	25.3
Mean		11.2	17.4	20.3	21.4	22.7	23.8	24.0	24.4	25.3
Number		11	11	11	5	3	3	1	1	1
Smallest		8.9	15.4	18.4	20.1	21.4	22.6	24.0	24.4	25.3
Largest		13.6	19.0	22.2	23.1	24.8	26.1	24.0	24.4	25.3
Std error		0.4	0.4	0.3	0.5	1.1	1.2			
95% CI +		0.9	0.8	0.7	1.0	2.1	2.3			

Otoliths were used for age-growth determinations; Intercept = 0
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Table 47. Mean back calculated lengths (in) at each annulus for walleye (both sexes) collected from Laurel River Lake during 2009, including the 95% confidence interval (CI) for each mean length per age group.

Year	No.	Age								
		1	2	3	4	5	6	7	8	9
2008	34	11.8								
2007	9	11.3	16.9							
2006	21	11.1	17.1	19.4						
2005	7	11.6	16.7	19.5	20.9					
2004	1	11.4	17.2	19.4	20.6	21.7				
2003	9	11.7	16.6	19.1	20.3	21.2	22.0			
2002	4	10.4	15.1	17.2	18.5	19.6	20.8	21.6		
2001	1	10.8	15.5	18.2	19.3	19.7	20.5	21.3	22.0	
2000	4	10.6	14.5	17.1	18.4	19.6	20.5	21.2	21.7	22.3
Mean		11.5	16.6	18.9	19.9	20.5	21.3	21.4	21.8	22.3
Number		90	56	47	26	19	18	9	5	4
Smallest		8.5	13.2	16.0	16.8	18.2	19.4	20.0	20.4	20.8
Largest		14.8	19.0	22.2	23.1	24.8	26.1	24.0	24.4	25.3
Std error		0.1	0.2	0.2	0.3	0.4	0.4	0.5	0.7	1.0
95% CI +		0.3	0.3	0.4	0.6	0.8	0.8	1.0	1.4	2.0

Otoliths were used for age-growth determinations; Intercept = 0
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Table 48. Age-frequency and CPUE (fish/nn) of walleye gill netting for 16 net-nights at Laurel River Lake during November 2009. Standard error is in parentheses.

Age	Inch class																Total	%	CPUE	Standard Error	
	9	10	11	12	14	15	16	17	18	19	20	21	22	23	24	25					27
0	6	41	49	16														112	31.5	7.00	(1.63)
1				1	9	33	31	8										82	23.0	5.13	(0.75)
2							3	6	14									23	6.5	1.44	(0.30)
3								2	17	39	11	4	1	1				75	21.1	4.69	(1.05)
4									3		6	6	1					16	4.5	1.00	(0.19)
5												2						2	0.6	0.13	(0.02)
6										11	6	2	3				1	23	6.5	1.44	(0.30)
7										6	6			1				13	3.7	0.81	(0.19)
8												2						2	0.6	0.13	(0.02)
9											3	4				1		8	2.2	0.50	(0.11)
Total	6	41	49	16	1	9	33	34	16	34	56	32	20	4	3	1	1	356	100.0	22.25	
%	1.7	11.5	13.8	4.5	0.3	2.5	9.3	9.6	4.5	9.6	15.7	9.0	5.6	1.1	0.8	0.3	0.3				

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Table 49. Walleye population assessment for walleye gill netted at Laurel River Lake in November 2009.

Parameter	Actual value	Assessment score
Population density (CPUE age 1 and older)	15.25	4
Growth rate (Mean length age 2+ at capture)	19.0	4
Size structure (CPUE \geq 20.0 in)	7.19	4
Recruitment (CPUE age 1)	5.13	4
Total score		16
Assessment rating		E
Instantaneous mortality (Z)	0.332	
Annual mortality (A)	28.3	

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Table 50. Number of fish and mean relative weight (Wr) for each length group of walleye collected in Laurel River Lake during November 2009. Standard error is in parentheses.

		Length group	
		10.0-14.9 in	15.0-19.9 in
No.	Wr	No.	Wr
107	94 (1)	126	96 (1)
			>20.0 in
			No.
			115
			Wr
			98 (1)

sedgnlrw.d09

Table 51. Length frequency and CPUE (fish/hr) of largemouth bass collected at Cedar Creek Lake in 3.5 hours (2.0 hours in lower end; 1.5 hours upper end; 30-min runs) of nocturnal electrofishing on 4 May 2009.

Area	Species	inch class																					CPUE	Std. error
		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total			
Lower	Largemouth bass	2	24	54	101	41	14	29	39	36	32	18	21	14	10	14	10	12	5	6	482	241.00	37.47	
Upper	Largemouth bass	1	15	38	23	20	11	32	37	24	22	16	10	13	5	9	9	13	3	4	305	203.33	35.67	
Total	Largemouth bass	3	39	92	124	61	25	61	76	60	54	34	31	27	15	23	19	25	8	10	787	224.86	25.32	

bbrpscccl.d09

Table 52. PSD and RSD₁₅ values obtained for largemouth bass taken in spring electrofishing samples in each area of Cedar Creek Lake on 4 May 2009; 95% confidence levels are in parentheses.

Area	No. >8.0 in	PSD	RSD ₁₅
Lower	260	55 (± 6)	27 (± 5)
Upper	208	50 (± 7)	27 (± 6)
Total	468	53 (± 5)	27 (± 4)

bbrpscccl.d09

Table 53. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from each section of Cedar Creek Lake from 2003-2009. Numbers in parentheses are standard errors.

Year	Area	Length group						Total
		<8.0 in	8.0-11.9 in	12.0-14.9 in	>15.0 in	>20.0 in		
2009	Lower	111.00 (37.78)	59.00 (10.34)	35.50 (6.65)	35.50 (6.90)	5.50 (1.26)	241.00 (37.47)	
	Upper	64.67 (38.82)	69.33 (12.98)	32.00 (6.00)	37.33 (12.77)	4.67 (1.76)	203.33 (35.67)	
	Total	91.14 (26.66)	63.43 (7.68)	34.00 (4.28)	36.29 (6.09)	5.14 (0.96)	224.86 (25.32)	
2008	Lower	81.50 (23.61)	75.50 (15.63)	15.00 (3.42)	34.00 (6.48)	4.50 (2.63)	206.00 (36.74)	
	Upper	56.67 (4.81)	64.67 (7.69)	22.67 (1.33)	30.67 (9.82)	4.00 (3.06)	174.67 (1.33)	
	Total	70.86 (13.70)	70.86 (9.11)	18.29 (2.45)	32.57 (5.12)	4.29 (1.82)	192.57 (20.64)	
2007	Lower	40.00 (9.50)	102.50 (28.60)	23.50 (6.40)	35.00 (3.10)	3.50 (0.50)	201.00 (38.50)	
	Upper	17.33 (13.50)	49.30 (8.70)	12.67 (2.70)	34.67 (3.30)	3.33 (1.30)	114.00 (21.20)	
	Total	30.29 (8.50)	79.71 (19.00)	18.86 (4.20)	34.86 (2.10)	3.43 (0.60)	163.70 (28.20)	
2006	Lower	33.00 (9.90)	76.00 (23.40)	6.00 (2.50)	37.00 (5.90)		152.00 (36.30)	
	Upper	12.00 (3.10)	30.00 (1.20)	7.33 (1.80)	28.67 (2.70)	0.67 (0.70)	78.00 (4.20)	
	Total	24.00 (6.90)	56.30 (15.60)	6.57 (1.50)	33.43 (3.70)	0.29 (0.30)	120.30 (24.50)	
2005	Lower	122.00 (11.40)	19.00 (7.00)	38.50 (5.70)	56.50 (12.30)		236.00 (25.00)	
	Upper	23.33 (9.30)	4.67 (1.80)	18.67 (0.70)	40.00 (7.20)		86.67 (12.90)	
	Total	79.70 (21.10)	12.86 (4.80)	30.00 (5.10)	49.40 (7.90)		172.00 (33.40)	
2004	Lower	37.80 (7.30)	38.30 (5.70)	68.70 (15.10)	6.50 (3.10)		151.30 (22.50)	
	Upper	11.30 (3.50)	28.00 (7.20)	84.70 (11.70)	6.00 (2.00)		130.00 (24.10)	
	Total	27.90 (6.60)	34.50 (4.60)	74.70 (10.20)	6.30 (2.00)		143.30 (16.10)	
2003	Lower	134.40 (8.50)	8.80 (2.90)	19.60 (3.30)	0.80 (0.50)		163.60 (11.70)	
	Upper	218.00 (51.30)	18.70 (9.80)	13.30 (2.40)			250.00 (54.00)	
	Total	165.80 (23.30)	12.50 (4.10)	17.30 (2.40)	0.50 (0.30)		196.00 (24.70)	

Table 54. Population assessment for largemouth bass based on spring electrofishing at Cedar Creek Lake from 2003-2009.

Year		Mean length age-3 at capture	Spring CPUE age 1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Total score	Assesment rating
Management objective		≥11.5 in	≥16.00 f/h	≥20.00 f/h	≥30.00 f/h	≥4.00 f/h		
2009	Value	12.0	92.57	34.00	36.29	5.14		
	Score	4	4	2	4	4	18	E
2008	Value	12.0	72.57	18.29	32.57	4.29		
	Score	4	3	1	4	4	16	G
2007	Value	12.0	26.57	18.90	34.90	3.40		
	Score	4	2	1	4	3	14	G
2006	Value	14.0	23.14	6.57	33.43	0.29		
	Score	4	2	1	4	1	12	G
2005	Value	14.0	1.71	30.00	49.43	0.00		
	Score	4	1	2	4	0	11	F
2004	Value	14.0	5.38	74.70	6.30	0.00		
	Score	4	1	4	2	0	11	F
2003	Value	14.0	5.97	17.30	0.50	0.00		
	Score	4	1	1	1	0	7	P

bbrpsccl.d09

Table 55. Length-frequency and CPUE (fish/hr) of largemouth bass collected during 3.5 hours of nocturnal electrofishing (2.0 hours in lower end; 1.5 hours upper end) (30 minute runs) at Cedar Creek Lake on 28 September 2009; standard error is in parentheses.

Area	Inch class																				Total	CPUE
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
Lower	1	10	12	4	4	7	47	34	22	18	16	18	12	6	6	2	4	1	1		225	112.50 (21.67)
Upper	6	8	11	9	5	15	25	40	48	19	39	25	17	13	9	6	4	7	5	2	313	208.67 (13.78)
Total	7	18	23	13	9	22	72	74	70	37	55	43	29	19	15	8	8	8	6	2	538	153.71 (23.21)

bbwrccf.d09

Table 56. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall (September and October) in electrofishing samples at Cedar Creek Lake.

Year class	Age 0		Age 0		Age 0 >5.0 in		Age 1	
	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2009	4.1	0.11	17.43	4.31	3.71	1.77		
2008	4.7	0.06	55.71	8.58	24.86	5.38	92.57	26.86
2007	5.4	0.04	32.86	7.82	28.57	6.60	72.57	13.45
2006	4.7	0.05	43.71	11.31	17.71	5.28	26.57	7.43
2005	4.8	0.06	55.70	9.51	28.00	7.73	23.14	6.69
2004	4.8	0.04	17.40	3.10	12.90		1.70	

bbwrccf.d09

Table 57. Number of fish and mean relative weight (Wr) for each length group of largemouth bass collected in Cedar Creek on 28 September 2009. Standard error is in parentheses.

Species	Area	Length group					
		8.0-11.9 in		12.0-14.9 in		>15.0 in	
		No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Lower	121	90 (1)	46	89 (1)	20	92 (2)
	Upper	85	95 (1)	56	97 (1)	46	104 (1)
Total		206	92 (1)	102	94 (1)	66	100 (1)

bbwrccl.d09

Table 58. Length frequency and CPUE for each species of crappie collected at Cedar Creek Lake in 30 net-nights during October 2009.

Species	Inch class											Total	CPUE	Std. error
	6	7	8	9	10	11								
White crappie	2		1				3					0.10	0.07	
Black crappie	3	6	12	8	1	1	31					1.03	0.32	

sedtncci.d09

Table 59. PSD and RSD₁₀ values calculated for crappie collected in trapnets at Cedar Creek Lake in October 2009; 95% confidence limits are in parentheses.

Species	No. >stock size	PSD	RSD ₁₀
White crappie	3	33 (± 65)	0
Black crappie	31	71 (± 16)	6 (± 9)

sedtncci.d09

Table 60. Mean back calculated lengths (in) at each annulus for white crappie collected from Cedar Creek Lake during 2009, including the 95%confidence interval (CI) for each mean length per age group.

Year	No.	Age	
		1	2
2008	2	4.0	
2007	1	5.0	7.2
Mean		4.3	7.2
Number		3	1
Smallest		3.6	7.2
Largest		5.0	7.2
Std error		0.4	
95% CI ±		0.8	

Otoliths were used for age-growth determinations; Intercept = 0
sedagcc1.d09

Table 61. Mean back calculated lengths (in) at each annulus for black crappie collected from Cedar Creek Lake during 2009, including the 95%confidence interval (CI) for each

Year	No.	Age						
		1	2	3	4	5	6	7
2008	3	3.8						
2007	5	3.6	5.9					
2005	1	4.9	6.4	7.5	8.2			
2004	1	4.7	6.7	7.4	7.8	8.0		
2003	19	4.5	6.1	6.9	7.4	7.9	8.3	
2002	2	4.0	6.7	7.5	7.9	8.2	8.4	8.7
Mean		4.3	6.1	7.0	7.5	7.9	8.3	8.7
Number		31	28	23	23	22	21	2
Smallest		3.3	5.1	6.0	6.4	6.6	6.9	8.3
Largest		5.3	7.5	8.5	9.0	9.8	10.3	9.1
Std error		0.1	0.1	0.1	0.1	0.1	0.2	0.4
95% CI ±		0.2	0.3	0.3	0.3	0.3	0.4	0.8

Otoliths were used for age-growth determinations; Intercept = 0
sedagcc1.d09

Table 62. Age-frequency and CPUE (fish/net-night) of white crappie trap-netted at Cedar Creek Lake in 30 net-nights in October 2009.

Age	Inch class		Total	%	CPUE	Std error
	7	9				
1+	2		2	66.7	0.07	0.07
2+		1	1	33.3	0.03	0.03
Total	2	1	3	33.3	0.10	
%	66.7	33.3				

CPUE of ≥ 8.0 in (quality size) crappie = 0.03 fish/nn
 CPUE of ≥ 10.0 in (preferred size) crappie = 0.00 fish/nn
 sedtncccl.d09
 sedagccl.d09

Table 63. Age-frequency and CPUE (fish/net-night) of black crappie trap-netted at Cedar Creek Lake in 30 net-nights in October 2009.

Age	Inch class						Total	%	CPUE	Std error
	6	7	8	9	10	11				
1+	3						3	9.7	0.10	0.06
2+		3	2				5	16.1	0.17	0.08
4+			1				1	3.2	0.03	0.01
5+			1				1	3.2	0.03	0.01
6+		3	7	7	1	1	19	61.3	0.63	0.18
7+			1	1			2	6.5	0.07	0.02
Total	3	6	12	8	1	1	31	100.0	1.03	
%	9.7	19.4	38.7	25.8	3.2	3.2				

CPUE of ≥ 8.0 in (quality size) crappie = 0.73 fish/nn
 CPUE of ≥ 10.0 in (preferred size) crappie = 0.07 fish/nn
 sedtncccl.d09
 sedagccl.d09

Table 64. Number of fish and mean relative weight (Wr) for each length class of crappie collected in Cedar Creek Lake in October 2009. Standard error is in parentheses.

Species	Length group					
	5.0 - 7.9 in		8.0 - 9.9 in		≥ 10.0 in	
	No.	Wr	No.	Wr	No.	Wr
White crappie	2	78 (3)	1	74 (-)	0	-
Black crappie	9	89 (2)	20	87 (2)	2	82 (1)

sedtncccl.d09

Table 65. Fishery statistics derived from a creel surveys on Cedar Creek Lake (784 acres) from 1 April - 31 October 2009 and 5 April - 29 October 2005.

	2009	2005
Fishing trips		
Number of fishing trips (per acre)	38,561 (49.18)	10,110 (1.43)
Average trip length	5.00	3.93
Fishing pressure		
Total man-hours (S.E.) ^a	192,691 (4,288)	39,735 (939)
Man hours/acre	245.78	50.68
Catch/harvest		
Number of fish caught (S.E.)	296,539 (20,314)	76,439 (5,559)
Number of fish harvested (S.E.)	85,321 (8,672)	36,879 (3,017)
Pounds of fish harvested	20,921	6,887
Harvest rates		
Fish/hour	0.41	0.90
Fish/acre	108.83	47.04
Pounds/acre	26.68	8.78
Catch rates		
Fish/hour	1.46	1.88
Fish/acre	378.24	97.50
Miscellaneous characteristics (%)		
Male	85	83
Female	15	17
Resident	97	97
Non-resident	3	3
Method (%)		
Still fishing	78	54
Casting	21	46
Fly	<1	1
Trolling	<1	0
Mode (%)		
Boat	77	82
Bank	23	18
Dock	<1	0

^aS.E. = standard error

Table 65 Fish harvest statistics derived from a daytime creel survey at Cedar Creek Lake (784 acres) from 1 April - 31 October 2009

	Black bass group	Largemouth bass	Spotted bass	Smallmouth bass	Crappie group	Black crappie	Catfish group	Channel catfish	Bullhead	Panfish group	Bluegill	Longear sunfish	Ridger sunfish	Warmouth	Green sunfish	Rock bass	Shad	Illegal catfish	Illegal bass
No. caught (per acre)	76.022 99.53	77.481 98.63	135 0.17	415 0.53	28.198 33.42	26.198 33.42	19.552 24.94	18.167 23.17	1.025 1.31	172.369 219.86	157.565 200.96	36 0.05	12.932 16.56	781 1.00	379 0.48	636 0.81	102 0.13	360 0.46	285 0.36
No. harvested (per acre)	200 0.25	200 0.25	0 0.00	0 0.00	17.722 22.80	17.722 22.60	7.619 9.72	7.017 8.95	241 0.31	58.495 75.89	51.482 65.68	36 0.05	7.485 9.52	115 0.15	51 0.07	334 0.43	0 0.00	360 0.46	285 0.36
% of total no. harvested	0.2	0.2	0.0	0.0	20.8	20.8	8.3	8.2	t	69.7	60.4	t	8.7	t	t	t	0.0	t	t
Lbs. harvested (per acre)	942 1.20	942 1.20	0 0.00	0 0.00	3.590 4.57	3.560 4.57	6.817 8.70	6.691 8.53	127 0.16	9,077 11.58	7,402 9.44	3 0.00	1.567 2.04	20 0.03	7 0.01	48 0.06	0 0.00	505.3 0.64	505.3 0.64
% of total lbs. harvested	4.5	4.5	0	0	17.1	17.1	32.6	32.0	0.6	43.4	35.4	t	7.6	t	t	t	0.0	t	2.4
Mean length (in)	20.7	20.7			7.9	7.9	14.3	14.3	11.8		6.0	5.0	5.6	5.8	6.0	5.6	6.2	10.6	15.4
Mean weight (lb)	4.75	4.75			0.25	0.25	0.96	0.96	0.65		0.14	0.09	0.22	0.14	0.14	0.13	0.17		1.99
Number of fishing trips for that species	16,471				5,277		3,881			10,932									
Percent of all trips	47.9				13.7		10.1			28.4									
Hours fished for that species (per acre)	92,300				29,370		19,393			54,628									
Hours fished for that species (per acre)	117.73				33.64		24.74			69.68									
Number harvested fishing for that species	171				16,240		6,042			50,370									
Lb. harvested fishing for that species	817				3,317		5,350			7,576									
No./hr. harvested fishing for that species	t				0.63		0.30			1.06									
Percent success fishing for that species	0.7				27.9		30.1			36.2									

Table 67. Length distribution for each species of fish harvested and released at Cedar Creek Lake (784 acres) during 1 April - 31 October 2009.

	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	
Largemouth bass																										
Harvested																										
Released						8147	1785	13504	1534	22732	4023	10888	5080	3269	1785	1584	1259	634	449	238	264	79				
Spotted bass																										
Released				27		27			27	54																
Smallmouth bass																										
Released				27		134			36	219																
Illegal bass																										
Harvested								24		71		24	47	47	24		48									
Black crappie																										
Harvested			127	2164	8276	4965	1630	331	229																	
Released		673	1049	3202	2691	404	296	135	25																	
Channel catfish																										
Harvested										1698	1556	1528	651	651	198	113	283									
Released	28			171	199	1564	626	2957	1080	1916	692	798	240	452	27	293	27	53								
Bullhead																										
Harvested										54	107	27														
Released				252		140		196	28	140	28															
Illegal catfish																										
Harvested										55	305															
Bluegill																										
Harvested	926	1683	6731	28046	11863	2103	112		28																	
Released	14767	61709	10244	13840	3569	1199	708	27																		
Longear sunfish																										
Harvested			36																							
Redear sunfish																										
Harvested			114	458	1859	3776	1116	142																		
Released	1061	1459	1671	1008	239			27	51																	
Warmouth																										
Harvested				29	29	57																				
Released				499	28	139																				
Green sunfish																										
Harvested										51																
Released										191																
Rock bass																										
Harvested				84	250																					
Released		33	167	67		34																				
Shad																										
Released																										

Table 68. Black bass catch and harvest statistics derived from a daytime creel survey at Cedar Creek Lake (784 acres) for each species of black bass caught and released by all anglers from 1 April - 31 October 2009.

	Largemouth bass			Spotted bass			Smallmouth bass					
	C&R			C&R			C&R					
	Harvest	12.0-14.9 in >15.0 in	Total	Harvest	12.0-14.9 in >15.0 in	Total	Harvest	12.0-14.9 in >15.0 in	Total			
Total number of bass	200	37,643	14,668	77,481	0	54	0	135	0	255	0	416
% of black bass harvested by number	100											
Total weight of fish (lb)	942	34,279	20,703	78,662	0	24	0	60	0	310	0	345
% of black bass harvested by weight	100											
Mean length (in)	20.7											
Mean weight (lb)	4.75											
Rate (fish/hour)	0.001				0.000					0.000		

Table 69. Monthly black bass angling success at Cedar Creek Lake (784 acres) during the 2009 daytime creel survey period; data does not include black bass <8.0 inches.

Month	Total no. of bass caught	Total no. of bass harvested	Number of bass fishing trips	Hours fished by bass anglers	Bass caught by bass anglers	Bass caught/hour by bass anglers	Bass harvested by bass anglers	Bass harvested/hour by bass anglers
Apr	6,003	86	1,850	9,245	4361	0.39	86	0.01
May	14,309	0	3,528	17,630	11,396	0.57	0	0.00
Jun	21,366	25	3,689	18,436	18,253	0.88	25	0.00
Jul	11,409	58	2,369	11,836	9,662	0.71	29	0.00
Aug	8,887	0	2,799	13,985	8,059	0.52	0	0.00
Sep	12,248	0	3,078	15,379	10,487	0.65	0	0.00
Oct	3,812	31	1,158	5,788	2,973	0.46	31	0.00
Total	78,032	200	18,471	92,300	65,191	0.61	171	0.00
Mean								

Table 70. Monthly crappie angling success at Cedar Creek Lake (784 acres) during the 2009 daytime creel survey period.

Month	Total no. of crappie caught	Total no. of crappie harvested	Number of crappie fishing trips	Hours fished by crappie anglers	Crappie caught by crappie anglers	Crappie caught/hour by crappie anglers	Crappie harvested by crappie anglers	Crappie harvested/hour by crappie anglers
Apr	9,782	7,601	1,518	7,584	9479	1.33	7,536	1.06
May	8,338	5,243	1,764	8,815	6,153	0.80	4,187	0.55
Jun	3,409	1,877	522	2,607	3,187	1.36	1,853	0.79
Jul	2,241	1,251	298	1,488	1,921	1.02	1,077	0.57
Aug	469	221	294	1,468	248	0.20	110	0.09
Sep	1,607	1,301	461	2,303	1,429	0.46	1,301	0.42
Oct	352	228	421	2,105	249	0.15	176	0.11
Total	26,198	17,722	5,277	26,370	22,666	0.87	16,240	0.63
Mean								

Table 71. Monthly catfish angling success at Cedar Creek Lake (784 acres) during the 2009 daytime creel survey period.

Month	Total no. of catfish caught	Total no. 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
Apr	108	65	222	1,107	87	0.11	65	0.08
May	4,806	2,221	852	4,259	3,348	0.65	1,601	0.31
Jun	7,089	2,223	751	3,751	3,581	1.06	1,679	0.50
Jul	3,289	960	826	4,126	2,183	0.51	873	0.21
Aug	2,015	1,021	602	3,007	1,298	0.46	829	0.30
Sep	2,194	1,097	580	2,898	1,633	0.49	995	0.30
Oct	52	31	49	246	10	0.07	0	0.00
Total	19,552	7,618	3,881	19,392	12,140	0.60	6,042	0.30
Mean								

Table 72. Monthly panfish angling success at Cedar Creek Lake (784 acres) during the 2009 daytime creel survey period.

Month	Total no. of panfish caught	Total no. of panfish harvested	Number 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
Apr	7,169	3,995	1,030	5,149	5809	1.45	3,563	0.89
May	51,773	23,047	2,200	10,994	41,688	4.70	19,478	2.19
Jun	41,817	11,807	2,226	11,125	32,777	3.50	9,707	1.04
Jul	40,687	12,777	2,572	12,850	34,867	3.33	11,525	1.10
Aug	16,007	3,781	1,553	7,762	13,608	2.03	3,754	0.56
Sep	10,512	2,628	1,056	5,275	5,665	1.70	1,276	0.38
Oct	4,403	1,461	295	1,473	2,766	1.99	1,067	0.77
Total	172,369	59,494	10,932	54,628	137,180		50,370	
Mean						2.94		1.06

Table 73. Length frequency and CPUE (fish/hr) of largemouth bass collected at Bert T. Combs Lake in 1.5 hours (15.0-min runs) of nocturnal electrofishing on 21 April 2009.

Species	Inch class															Total	CPUE	Std. error
	3	6	7	8	9	10	11	12	13	14	16	18	21	22	23			
Largemouth bass	1	16	15	11	6	7	44	44	11	3	2	1	2	2	2	167	111.33	16.21

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Table 74. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Bert T. Combs Lake on 21 April 2009.

Year	Length group												Total	
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in		CPUE	Std. Err.	CPUE	Std. Err.
2009	21.33	9.33	45.33	7.91	38.67	5.81	6.00	0.89	1.46	4.00	1.46	111.33	16.21	
2006	5.33	1.30	100.70	21.20	25.30	4.30	11.30	2.80	3.20	4.70	3.20	142.70	25.70	

sedpsdbc.d09

Table 75. PSD and RSD₁₅ values obtained for largemouth bass taken in spring electrofishing samples in Bert T. Combs Lake on 21 April 2009; 95% confidence levels are in parentheses.

Year	No. ≥8.0 in	PSD (+/- 95%)	RSD ₁₅ (+/- 95%)
2009	135	50 (± 8)	7 (± 4)

sedpsdbc.d09

Table 76. Length frequency and CPUE (fish/hr) of largemouth bass collected at Beulah Lake in 1.50 hours (15.0-min runs) of nocturnal electrofishing on 23 April 2009.

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	23					
Largemouth bass	10	25	25	12	51	74	47	49	83	44	17	16	3	1	1	1	1	1	2	2	1	1	463	308.67	20.46	

sedpsdbl.d09

Table 77. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Beulah Lake on 23 April 2009.

Year	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in		Total	
	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.
2009	82.00	12.76	168.67	23.33	51.33	6.88	6.67	1.69	4.00	1.46	308.67	20.46
2006	87.30	18.20	185.30	13.30	4.70	1.90	4.70	1.90	2.00	0.90	282.00	23.90

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Table 78. PSD and RSD₁₅ values obtained for largemouth bass taken in spring electrofishing samples in Beulah Lake on 23 April 2009; 95% confidence levels are in parentheses.

Year	No. >8.0 in	PSD (+/- 95%)	RSD ₁₅ (+/- 95%)
2009	340	26 (± 5)	3 (± 2)

sedpsdbl.d09

Table 79. Mean back calculated lengths (in) at each annulus for largemouth bass collected from Beulah Lake during 2009, including the 95% confidence interval (CI) for each mean length per age group.

Year	No.	Age																			
		1	2	3	4	5	6	7	8	9	10										
2008	28	4.5																			
2007	35	4.5	8.1																		
2006	29	5.3	9.0	11.0																	
2005	4	6.4	9.6	11.4	12.5																
2004	12	6.3	9.0	11.3	12.8	13.8															
2003	2	5.8	8.9	10.4	11.4	12.5	13.1														
2002	10	5.6	8.6	11.1	11.9	12.8	13.9	14.6													
2001	1	5.1	7.9	10.9	11.5	12.7	13.3	14.5	15.4												
1999	1	6.9	11.2	12.8	14.4	16.0	17.1	18.2	18.7	19.8	20.3										
Mean		5.0	8.6	11.1	12.4	13.4	13.9	14.9	17.0	19.8	20.3										
Number		122	94	59	30	26	14	12	2	1	1										
Smallest		2.8	4.8	8.4	11.1	11.8	12.6	13.3	15.4	19.8	20.3										
Largest		7.9	11.2	13.2	14.4	16.0	17.3	19.0	18.7	19.8	20.3										
Std error		0.1	0.1	0.1	0.2	0.2	0.4	0.5	1.6	1.6	20.3										
95% CI +		0.2	0.3	2.0	0.4	0.5	0.8	1.0	3.3	3.3	20.3										

Otoliths were used for age-growth determinations; Intercept = 0

sedagbl.d09

Table 80. Age-frequency and CPUE (fish/hr) of largemouth bass collected during 1.5 hours of nocturnal electrofishing at Beulah Lake on the 23 April 2009.

Age	Inch class										Total	%	CPUE	Std error									
	3	4	5	6	7	8	9	10	11	12					13	14	15	19	20	21	22	23	
1	10	25	25	2																62	13.4	41.33	(9.30)
2				10	51	67	35													163	35.1	108.67	(19.19)
3						7	12	49	75	20	2									165	35.6	110.00	(8.42)
4									8	8	2									18	3.9	12.00	(0.53)
5										12	6	8	1							27	5.8	18.00	(2.84)
6									4	2										6	1.3	4.00	(0.41)
7										6	8	1	1							16	3.4	10.67	(2.42)
8												1								1	0.2	0.67	(0.46)
10														1						1	0.2	0.67	(0.46)
Not aged															1					5	1.1	3.33	(0.67)
%	10	25	25	12	51	74	47	49	83	44	18	16	3	1	1	1	2	2	1	464	100.0	309.33	
	2.2	5.4	5.4	2.6	11.0	15.9	10.1	10.6	17.9	9.5	3.9	3.4	0.6	0.2	0.2	0.4	0.4	0.2	0.2	100.0			

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sedagbl.d09

Table 81. Population assessment for largemouth bass collected from Beulah Lake in April 2009.

Parameter	Actual value	Assessment score
Mean length age-3 at capture	11.0	3
Spring CPUE age 1	41.14	2
Spring CPUE 12.0-14.9 in	51.33	4
Spring CPUE \geq 15.0 in	6.67	2
Spring CPUE \geq 20.0 in	4.00	4
Instantaneous mortality (Z)	0.683	
Annual mortality (A)	49.5	
Total score		15
Assessment rating		G

Table 82. Length frequency and CPUE (fish/hr) of black bass collected at Cannon Creek Lake in 2.00 hours (15.0-min runs) of nocturnal electrofishing on 27 April 2009.

Species	Inch class														Total	CPUE	Std. error
	3	4	5	6	7	8	9	10	11	12	13	14					
Largemouth bass	3	5	8	3	6	6	7	4	9	13	6	1	71	35.50	4.75		
Spotted bass	5	8	15	19	16	9	14	25	15	5	1	132	66.00	9.35			
Smallmouth bass	7	13	5					3	12	7		47	23.50	2.44			

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Table 83. Spring electrofishing CPUE (fish/hr) for each length group of black bass collected at Cannon Creek Lake on 27 April 2009.

Species	Year	Length group												Total	
		<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in		CPUE	Std. Err.	CPUE	Std. Err.
Largemouth bass															
	2009	12.50	1.92	13.00	3.00	10.00	1.69	0.00	0.00	0.00	0.00	0.00	0.00	35.50	4.75
	2006	2.40	1.10	15.20	2.10	2.80	0.90	2.40	0.90	0.40	0.40	0.40	0.40	22.80	2.60
Spotted bass															
	2009	31.50	7.15	24.00	3.63	10.50	3.11	0.00	0.00	0.00	0.00	0.00	0.00	66.00	9.35
	2006	3.20	1.40	15.20	3.30	2.80	1.00	0.40	0.40	0.00	0.00	0.00	0.00	21.60	4.90
Smallmouth bass															
	2009	12.50	1.92	1.50	0.73	9.50	1.30	0.00	0.00	0.00	0.00	0.00	0.00	23.50	2.44
	2006	1.20	0.90	4.40	1.30	2.80	1.20	0.00	0.00	0.00	0.00	0.00	0.00	8.40	2.20

sedpsbcc.d09

Table 84. PSD and RSD values obtained for black bass taken in spring electrofishing samples in Cannon Creek Lake on 27 April 2009; 95% confidence levels are in parentheses.

Species	No. fish \geq stock size	PSD (+/- 95%)	RSD ^a (+/- 95%)
Largemouth bass	46	43 (\pm 14)	0 (\pm 0)
Spotted bass	85	25 (\pm 9)	0 (\pm 0)
Smallmouth bass	22	86 (\pm 15)	0 (\pm 0)

^aLargemouth bass = RSD₁₅, spotted bass = RSD₁₄, smallmouth bass = RSD₁₄
sedpsdcc.d09

Table 85. Length frequency and CPUE (fish/hr) of black bass collected at Lake Linville in 2.5 hours (15-min runs) of nocturnal electrofishing on 19 May 2009.

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					
Largemouth bass	3	46	49	28	13	52	88	57	36	9	7	5	4	1	5	8	2	3	2	1	419	167.60	17.06		
Spotted bass	4	20	7	46	79	67	65	28	6	1	1										324	129.60	19.53		
Smallmouth bass					5	8	6										1				20	8.00	2.53		

sedpsdll.d09

Table 86. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Lake Linville on 19 May 2009.

Year	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in		Total	
	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.
2009	55.60	10.76	93.20	10.88	8.40	1.51	10.40	1.60	2.40	0.88	167.60	17.06
2008	54.00	13.46	144.40	19.88	12.40	3.89	18.40	4.55	2.80	1.20	229.20	28.03
2007	46.40	15.68	101.60	19.64	13.20	1.89	25.60	3.59	4.80	2.05	186.80	32.00
2006	10.00	2.50	47.30	12.60	22.00	4.00	10.00	2.30	2.70	1.30	89.30	11.20

sedpsdll.d09

Table 87. Spring electrofishing CPUE (fish/hr) for each length group of spotted bass collected at Lake Linville on 19 May 2009.

Year	Length group											
	<8.0 in		8.0-10.9 in		11.0-13.9 in		>14.0 in		>17.0 in		Total	
	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.
2009	62.40	11.64	64.00	9.18	2.80	1.04	0.40	0.40	0.00	0.00	129.60	19.53
2008	96.00	14.47	60.40	8.61	8.00	2.15	1.60	0.88	0.00	0.00	166.00	23.60
2007	76.00	26.00	44.80	10.40	15.20	4.45	2.00	1.23	0.40	0.40	138.00	36.50
2006	24.00	7.00	35.30	7.10	10.00	2.70	2.00	1.40	0.00	0.00	71.30	14.50

sedpsdll.d09

Table 88. Population assessment for largemouth bass based on spring electrofishing at Lake Linville from 2002-2009.

Year	Value Score	Mean length age-3 at capture	Spring	Spring	Spring	Spring	Spring	Spring	Assessment rating
			CPUE age 1	CPUE 12.0-14.9 in	CPUE >15.0 in	CPUE >20.0 in	Total score		
2009	52.00 3	11.1 3	8.40 1	10.40 2	2.40 3	12	G		
2008	34.80 2	11.1 3	12.40 1	18.40 3	2.80 3	12	G		
2007	39.20 2	11.1 3	13.20 1	25.60 3	4.80 4	13	G		
2006	6.53 1	11.1 3	22.00 2	10.00 2	2.70 3	11	F		
2002	4.00 1	11.7 4	12.00 1	14.67 2	1.33 2	10	F		

sedpsdll.d09

Table 89. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Lake Linville on 19 May 2009; 95% confidence limits are in parentheses.

Species	No. fish \geq stock size	PSD (+/- 95%)	RSD ^a (+/- 95%)
Largemouth bass	280	17 (± 4)	9 (± 3)
Spotted bass	247	3 (± 2)	0 (± 1)

^aLargemouth bass = RSD₁₅; spotted bass = RSD₁₄

sedpsdll.d09

Table 90. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 1.5 hours of 15-minute nocturnal electrofishing runs for black bass in Lake Linville on 23 September 2009; 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	20			
Largemouth bass	21	65	24	3	10	81	80	48	48	17	7	3	1	2	1	3	1	415	276.67 (57.61)	
Spotted bass	9	10	6	27	34	49	64	50	21	5	2							277	184.67 (32.17)	
Smallmouth bass							3	1										4	2.67 (2.67)	

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Table 91. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall (September) in electrofishing samples at Lake Linville.

Year Class	Age 0		Age 0		Age 0 >=5.0 in		Age 1	
	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2009	4.5	0.06	75.33	33.71	18.00	6.35		
2008	5.1	0.06	49.60	12.82	29.60	8.62	52.00	10.10
2007	4.8	0.05	45.80	14.90	17.45	7.20	34.80	11.58
2006	5.1	0.05	84.00	33.50	48.00	19.80	39.20	
2005	4.4	0.16	20.70	9.82	6.00	2.00	6.53	1.42

sedyoyll.d09

Table 92. Number of fish and mean relative weight (Wr) for each length group of black bass collected in Lake Linville on 23 September 2009. Standard error is in parentheses.

Species	Length group					
	8.0-11.9 in		12.0-14.9 in		≥15.0 in	
	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	75	88 (1)	27	81 (2)	8	94 (2)
Spotted bass	7.0-10.9 in		11.0-13.9 in		≥14.0 in	
	No.	Wr	No.	Wr	No.	Wr
	75	91 (4)	24	83 (2)	0	-

sedyoil.d09

Table 93. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 3.0 hours of 15-minute nocturnal electrofishing runs for black bass in Wood Creek Lake on 11 May 2009; 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					3	3	5	5	13	7	3		1				1	44	44.00 (4.32)	
	Spotted bass			2	5		2	8	9	9	2	1		1							39	39.00 (9.15)	
	Smallmouth bass				1					1											2	2.00 (2.0)	
Pump Station	Largemouth bass						2	9	4	2	11	10	18	5	2	3	3	2	1	1	2	75	75.00 (8.39)
	Spotted bass	1		3	10	11	4	6	2	4	5	1									47	47.00 (14.55)	
	Smallmouth bass								3	1			1								5	5.00 (1.91)	
Dock	Largemouth bass			4	3	6	2	12	21	19	14	16	14	7	7	4	5	2	2	3	1	142	142.00 (20.30)
	Spotted bass		1	3	1	2	5	4	3	2	1											22	22.00 (7.39)
	Smallmouth bass																					0	0.00 (0.00)
Total	Largemouth bass	2	5	3	6	4	24	28	26	30	39	39	15	9	8	8	4	3	4	4	261	87.00 (14.06)	
	Spotted bass	1	1	8	16	13	11	18	14	15	8	2		1								108	36.00 (6.46)
	Smallmouth bass				1				4	1			1									7	2.33 (1.04)

sedpsdw.c.d09

Table 94. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Wood Creek Lake on 11 May 2009; 95% confidence limits are in parentheses.

Area	Species	No. \geq stock size	PSD (+/- 95%)	RSD ^a (+/- 95%)
Dam	Largemouth bass	41	61 (\pm 15)	5 (\pm 7)
	Spotted bass	32	13 (\pm 12)	3 (\pm 6)
Pump Station	Largemouth bass	73	64 (\pm 11)	19 (\pm 9)
	Spotted bass	22	27 (\pm 19)	0 (\pm 0)
Dock	Largemouth bass	127	48 (\pm 9)	19 (\pm 7)
	Spotted bass	15	7 (\pm 13)	0 (\pm 0)
Total	Largemouth bass	241	55 (\pm 6)	17 (\pm 5)
	Spotted bass	69	16 (\pm 9)	1 (\pm 3)

^aLargemouth bass = RSD₁₅, spotted bass = RSD₁₄
sedpsdwc.d09

Table 95. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Wood Creek Lake during May 2009.

Year	Length group										Total	
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in		CPUE	Std. Err.
	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.		
2009	6.67	3.05	36.00	7.52	31.00	2.52	13.33	3.63	2.67	0.90	87.00	14.06
2008	6.67	3.60	44.67	6.78	15.33	2.69	14.33	2.38	2.00	0.78	81.00	12.25
2007	6.67	2.27	50.33	8.49	6.00	1.15	18.00	3.32	1.33	0.57	81.00	12.52
2006	30.33	6.97	24.33	6.20	10.00	2.06	20.67	5.02	2.00	1.04	85.30	17.50
2005	4.00	1.98	14.40	3.59	28.00	4.38	12.80	2.29	3.20	1.67	59.20	9.30

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Table 96. Spring electrofishing CPUE (fish/hr) for each length group of spotted bass collected at Wood Creek Lake during May 2009.

Year	Length group								Total	
	<8.0 in		8.0-10.9 in		11.0-13.9 in		>14.0 in		CPUE	Std. Err.
	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.		
2009	16.67	4.89	15.67	3.39	3.33	0.96	0.33	0.33	36.00	6.46
2008	11.67	3.28	16.67	2.91	2.33	1.15	0.33	0.33	31.00	5.37
2007	14.67	3.86	20.67	3.84	6.67	1.58	1.67	1.04	43.67	7.52
2006	13.70	2.70	14.00	2.80	10.30	2.20	3.30	1.00	41.30	6.00
2005	8.80	2.90	13.60	5.50	15.20	2.80	4.40	1.30	42.00	10.20

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Table 97. Population assessment for largemouth bass based on spring electrofishing at Wood Creek Lake from 2005-2009.

Year		Mean length age-3 at capture	Spring CPUE age 1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Total Score	Assesment rating
2009	Value	12.3	5.33	31.00	13.33	2.67		
	Score	4	1	2	2	3	12	G
2008	Value	12.3	5.67	15.33	14.33	2.00		
	Score	4	1	1	2	3	11	F
2007	Value	12.3	5.33	6.00	18.00	1.33		
	Score	4	1	1	3	2	11	F
2006	Value	12.3	11.83	10.00	20.67	2.00		
	Score	4	1	1	3	3	12	G
2005	Value	12.3	2.40	28.00	12.80	3.20		
	Score	4	1	2	2	3	12	G

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Table 98. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 3.0 hours of 15-minute nocturnal electrofishing runs for black bass in Wood Creek Lake on 17 September 2009; 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	21		
Dam	Largemouth bass	2	1	2	2	1	3	1				3	2	1	1			19	19.00 (4.12)
	Spotted bass	6		4	2	4	3	8	6	2	2	2						39	39.00 (5.26)
	Smallmouth bass			1	1	2	1	1	1			1						8	8.00 (2.83)
Pump station	Largemouth bass				3	1	12	2	3		4	1	5					31	31.00 (3.00)
	Spotted bass	3	1	6	3	1	3	1	2	4	2	2						28	28.00 (6.32)
	Smallmouth bass																	0	0.00 (-)
Dock	Largemouth bass	1					4	5	4	5	12	8	6	3	2	1	1	52	52.00 (14.05)
	Spotted bass	1	3	1	4	6	12	14	12	4	4	1						62	62.00 (21.69)
	Smallmouth bass																	0	0.00 (-)
Total	Largemouth bass	3	1	2	5	2	19	8	7	5	16	12	13	4	3	1	1	102	34.00 (6.10)
	Spotted bass	10	4	11	9	11	18	23	20	10	8	5						129	43.00 (8.20)
	Smallmouth bass			1	1	2	1	1	1			1						8	2.67 (1.42)

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Table 99. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in fall (September and October) electrofishing samples at Wood Creek Lake.

Year Class	Age 0		Age 0		Age 0 ≥ 5.0 in		Age 1	
	Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2009 ^a	3.7	0.43	2.67	1.66	0.67	0.45	5.33	2.67
2008	3.8	0.12	13.33	3.24	1.00	0.72	5.67	3.21
2007	4.2	0.13	13.33	7.59	2.67	1.24	5.33 ^b	2.38
2006 ^a	4.4	0.27	3.70	1.74	0.70	0.45	11.83	4.37
2005	4.0	0.09	23.70	11.90	3.33	1.38	2.40	1.22
2004	4.2	0.13	17.90	4.78	4.30	1.46		

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^a Age-0 largemouth bass stocked in the fall

^b Includes stocked fish; CPUE stocked fish=0.33 fish/hr

Table 100. Number of fish and mean relative weight (Wr) for each length group of black bass collected at Wood Creek Lake during 17 September 2009. Standard error is in parentheses.

Species	Length group			
	8.0-11.9 in	12.0-14.9 in	11.0-13.9 in	≥ 15.0 in
Largemouth bass	No.	No.	No.	No.
	36	29	13	5
Spotted bass	Wr	Wr	Wr	Wr
	91 (4)	88 (2)	96 (2)	91 (4)
	No.	No.	No.	No.
	71	13	0	0
	Wr	Wr	Wr	Wr
	94 (1)	96 (2)	-	-

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Figure 1. Angler attitude survey results from Cedar Creek Lake in 2009.

CEDAR CREEK LAKE ANGLER ATTITUDE SURVEY 2009

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 Cedar Creek Lake (check all that apply)? (N=506)
 84% Bass 43% Crappie 41% Bluegill 25% Redear Sunfish 23% Channel Catfish 0% Other
4. Which one species do you fish for most at Cedar Creek Lake (check only one)? (N=498)
 69% Bass 14% Crappie 10% Bluegill 2% Redear Sunfish 5% Channel Catfish 0% Other
- Answer the following questions for each species you fish for - (see question 3)
- Bass Anglers**
 5. In general, what level of satisfaction do you have with bass fishing at Cedar Creek Lake? (N=421)
 55% Very satisfied 25% Somewhat satisfied 11% Neutral 5% Somewhat dissatisfied 2% Very dissatisfied 1% No opinion
- 5a. If you responded with somewhat or very dissatisfied in question (5) - what is the single most important reason for your dissatisfaction? (N=30)
 30% Number of fish 43% Size of fish 0% Not happy with regulations 13% Too many anglers 10% Too many weeds 3% Bank access for a boat
- Crappie Anglers**
 6. In general, what level of satisfaction do you have with crappie fishing at Cedar Creek Lake? (N=216)
 19% Very satisfied 20% Somewhat satisfied 7% Neutral 37% Somewhat dissatisfied 10% Very dissatisfied 8% No opinion
- 6a. If you responded with somewhat or very dissatisfied in question (6) - what is the single most important reason for your dissatisfaction? (N=100)
 11% Number of fish 89% Size of fish 0% Not happy with regulations 0% Too many anglers 0% Too many weeds 0% Other
- Bluegill Anglers**
 7. In general, what level of satisfaction do you have with the bluegill fishing at Cedar Creek Lake? (N=202)
 49% Very satisfied 25% Somewhat satisfied 4% Neutral 18% Somewhat dissatisfied 0% Very dissatisfied 5% No opinion
- 7a. If you responded with somewhat or very dissatisfied in question (7) - what is the single most important reason for your dissatisfaction? (N=36)
 8% Number of fish 92% Size of fish 0% Not happy with regulations 0% Too many anglers 0% Too many weeds 0% Other
- Redear Sunfish Anglers**
 8. In general, what level of satisfaction do you have with the redear sunfish fishing at Cedar Creek Lake? (N=128)
 43% Very satisfied 22% Somewhat satisfied 9% Neutral 17% Somewhat dissatisfied 3% Very dissatisfied 6% No opinion
- 8a. If you responded with somewhat or very dissatisfied in question (8) - what is the single most important reason for your dissatisfaction? (N=25)
 56% Number of fish 44% Size of fish 0% Not happy with regulations 0% Too many anglers 0% Too many weeds 0% Other
- Channel Catfish Anglers**
 9. In general, what level of satisfaction do you have with the channel catfish fishing at Cedar Creek Lake? (N=111)
 58% Very satisfied 14% Somewhat satisfied 7% Neutral 13% Somewhat dissatisfied 3% Very dissatisfied 5% No opinion
- 9a. If you responded with somewhat or very dissatisfied in question (9) - what is the single most important reason for your dissatisfaction? (N=17)
 29% Number of fish 65% Size of fish 0% Not happy with regulations 0% Too many anglers 0% Too many weeds 6% Too few trips

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All Anglers

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

63% Support 28% Oppose 9% No opinion

2. How many times do you fish Cedar Creek Lake a year? (N=504)

2% First time 16% 1 to 4 21% 5 to 10 61% More than 10

3. Are you satisfied with the current size and creel limits on all sport fish at Cedar Creek Lake? (N=506) 73% Yes 27% No

If NO:

12a. If not, which species are you dissatisfied with and what size and creel limits would you prefer?

Largemouth bass size limit (N=102)

2% 12 in

2% 14 in

18% 15 in

11% 16 in

4% 17 in

12% 18 in

1% 19 in

1% 20 in

10% 22 in

6% >23 in

8% 12-15 in harvest slot

15% Harvest slot (various lengths)

9% Protected slot (various lengths)

3% Misc limits

Largemouth bass creel limit (N=103)

27% 1

29% 2

16% 3

4% 4

10% 5

5% 6

2% 8

8% Catch and release

Crappie size limit (N=23)

4% 8 in

61% 9 in

22% 10 in

4% 9-11 in protected slot

9% no size limit

Crappie creel limit (N=23)

4% 10

83% 20

4% 30

4% 50

4% No limit

Channel catfish size limit (N=7)

29% 12 in

29% 15 in

29% 16 in

14% 24 in

Channel catfish creel limit (N=7)

14% 2

14% 4

43% 6

14% 10

14% 30

EASTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Table 1 shows sampling conditions by water body for eastern fishery district lakes in 2009.

Buckhorn Lake

Length frequency, catch-per-unit-effort (CPUE), and population assessment based on early spring sampling for muskellunge using daytime electrofishing at Buckhorn Lake (1,230 acres) are shown in Tables 2 and 3. An assessment rating of "Excellent" was observed during 2009 (Table 3). All assessment parameters were greater in 2009 as compared to 2008. The \log_{10} length-weight equation for muskellunge was $-4.36 + 3.50(\log_{10} \text{ length})$. A total of 440 muskellunge (13.2 in) were stocked during September 2009. The tailwater below Buckhorn Lake continues to provide an additional good muskellunge fishery. During 2010 muskellunge will be sampled in the spring. Beginning 1 March 2010 the musky size limit in the lake will change from 40.0 in to 36.0 in.

The black bass populations were sampled during the spring and fall (Tables 4-9). Largemouth bass comprise the major black bass species in this lake. The assessment rating has ranged from "Fair" to "Good" from 2003-2009 (Table 8). Due to low numbers of age-0 to age-1 fish, largemouth bass (4.0 in) have been supplementally stocked during October of 2005, 2006, 2008, and 2009. Fish stocked in 2005 received a right pectoral fin clip, 2006 a left pectoral fin clip, 2008 a right pelvic fin clip, and 2009 a right pectoral fin clip for future identification. Habitat improvement work (Christmas tree reefs, hardwood brushpiles, wood pallet structures, and vegetation) will continue to aid recruitment of age-0 largemouth bass and other fish in the lake. During 2010, black bass will be sampled in the spring and fall with boat electrofishing.

Carr Creek Lake

The black bass population was sampled during the spring and fall at this lake (710 acres). Tables 10-16 provide data from the spring and fall sampling. During the last several years, the overall spring and fall CPUE's have been much lower than in former years (Tables 11 and 16). A couple of the samples could possibly be attributed to poor sample conditions and/or timing. However, with three successive years of lower spring and fall CPUE's there would be other issues to examine for this. During 2010, fertilization will continue with 9-18-9 liquid fertilizer to aid recruitment success of young-of-the-year fish. Additionally, hydrilla will be monitored and control measures applied. Work will continue in cooperation with the local USACE office on habitat improvement projects including brush piles, Christmas tree reefs, native aquatic plant restoration and cypress tree plantings, hinge cut trees, and wood pallet structures. Largemouth bass remain at an assessment of "Fair", but the total assessment value of "9" is the lowest seen in the last 8 years (Table 14). During the fall of 2005-2009, largemouth bass (4.0 in) were stocked to supplement low recruitment of age-0 to age-1 fish. Fish stocked in 2005 received a right pectoral fin clip, 2006 received a left pectoral fin clip, 2007 received a left pelvic fin clip, 2008 right pelvic fin clip, and 2009 right pectoral fin clip for future identification.

Spring electrofishing was completed during the day on 10-11 March, 2009 for walleye. Tables 17-21 list length frequency, CPUE, age and growth, age frequency, relative weights, and population assessment for walleye. The fishery and growth rate remains very good. Fish are reaching the 15.0 in minimum creel size by ages 2-4 (Table 18). In 2004 there was a fish kill of walleye at Carr Creek of 100+ large adults, in 2005 a fish kill of large adult alewife, and in 2008 a fish kill of large gizzard shad. None of these fish kills seemed to have impacted the fishery. Mean relative weights exceed 100 for all length groups of walleye examined (Table 20). The \log_{10} length-weight equation for walleye was $-3.49 + 3.10(\log_{10} \text{ length})$. During 2010, walleye will be sampled in the spring (March). This fishery continues to have an assessment rating of "Good" (Table 21) and is attracting anglers from out-of-state. Approximately 30,000 walleye (1.5 in) were stocked in 2009.

Black and white crappie data sampled during the walleye spring electrofishing is presented in Tables 22-25. Due to very poor fall trap netting catches, spring electrofishing was initiated in 2007. This will continue and be used to monitor the population. The \log_{10} length-weight equation for black crappie was $-3.69+3.40(\log_{10} \text{ length})$ and for white crappie was $-4.27+3.92(\log_{10} \text{ length})$. Approximately 7,100 black and black nose white crappie (3.0 in) were stocked in November 2007. The fishery has a special regulation of a 9.0-in minimum size. During the fall of 2009, approximately 5,444 white crappie (2.7 in) were stocked into the lake and will be followed in an ongoing research study through 2011. Most legal size fish at present are black crappie.

A day (1 April-31 October) and night (1 May-31 August) creel survey was conducted at Carr Creek Lake during 2009. Former surveys were daytime only. A nocturnal or night survey was added during the summer period to catch this part of the fishery that was previously missed. Both day and night surveys were random roving creel designs (date and time) and the lake was treated as one area. Day surveys consisted of 2- 6 hour periods (morning starting at 600hrs and afternoon starting at 1300hrs) and night surveys of 1- 6 hour period starting at dusk. Angler counts were conducted in the middle of each respective 6 hour time period. Data from the day and night creel survey is presented in Tables 26-35.

The 2009 day creel survey from 1 April-31 October produced more fishing trips and angler hours than the last survey in 2006 from 6 April-31 October on the lake. During 2009, the total number of day fishing trips was 2,387 (Table 26). A total of 1,291 fishing trips occurred during the 2006 creel survey. Also, as expected, a significant number of angler trips and hours occurred at night even though the calendar time was of shorter duration. From 1 May-31 August, 2009 at night a total of 2,614 trips occurred. The night survey was intended to provide more detailed information on the fishery than former surveys looking at day only periods. Total angler hours were 17,643 and 13,462 for day and night surveys, respectively (Table 26). A total of 6,647 angler hours were observed in the 2006 day survey at the lake. Angler success rates at the lake during the day in 2009 were 40.68% for panfish, 29.41% for catfish, 28.41% for crappie, 26.87% for walleye, and 3.93% for black bass (Table 27). During the 2006 daytime survey at the lake, angler success rates were 64.71% for panfish, 40.00% for catfish, 35.71% for crappie, 32.35% for walleye, and 0.78% for black bass. Night fishing success rates during the summer in 2009 were 18.18% for panfish, 15.38% for catfish, 33.33% for crappie, 32.00% for walleye, and 3.85% for black bass (Table 28). Largemouth bass were the most numerous fish caught during 2009 day and night surveys (Tables 27-28). The previous 2006 day survey observed largemouth bass (1,710 fish) to be the most numerous fish caught at the lake.

An angler attitude survey was conducted in conjunction with the angler creel survey at the lake to obtain further information. Anglers were asked to answer a series of questions regarding the fishery at Carr Creek Lake (Appendix A). Anglers were surveyed throughout the creel during 2009 with anglers only being asked the questions once. A total of 248 surveys were completed during the lake creel. Black bass at 50.04% (N=119) were the most popular species fished for on the lake followed by crappie at 19.50% (N=46), bluegill at 14.00% (N=33), walleye at 8.50% (N=20), and catfish at 7.60% (N=18). Level of fishing satisfaction was asked for several fish groups or species and all categories exceeded 50.00% being somewhat satisfied to very satisfied except crappie and flathead catfish (Appendix A). Anglers dissatisfied with crappie were split between having too many small fish and not enough fish. Anglers dissatisfied with flathead catfish were similar in wanting more fish.

Cranks Creek

Spring electrofishing was not completed for black bass in 2009, however, size class and assessment data from previous spring samples is shown in Tables 36 and 37. Anglers continue to have good success bass fishing at this lake. Fall electrofishing was completed on 19 October 2009 for black bass. Largemouth bass were collected up to 23.0 in and 6 spotted bass were collected with the largest at 12.0 in (Table 38). The CPUE of age-0 largemouth bass collected in the fall of 2009 is higher than other years on record indicating a strong 2009 year class (Table 39). However, mean length of age-0 largemouth bass is lower than all other years on record. This lake is very low in fertility and has had periodic problems with low pH. During 2010, black bass will be sampled in the spring and fall.

Channel catfish were collected using baited-tandem hoop nets (3 sets; 72 hrs soak time) set on 19 October 2009. Twenty-one channel catfish were collected with only one measuring over 17.0 in (Table 40). The oldest fish

collected was age-3 and 71 % of the channel catfish collected were age 2 (Table 41). Angling pressure appears to be limiting the length and age structure of channel catfish stocked in Cranks Creek Lake.

Additional concerns at this lake are possible aquatic vegetation control and random stockings of various sport fish by local residents. Due to the very clear water, various aquatic plants can be very thick and thorough in coverage. Monitoring of the aquatic vegetation will continue and herbicide will be applied to selected areas of thick stands of brittle naiad. Fisheries and law enforcement staff will continue guidance to public on fish stockings and the possible management implications.

Dewey Lake

Black bass were sampled at Dewey Lake (1,100 acres) in the spring and fall of 2009. The spring sample was of less total time than normal as some areas could not be sampled due to muddy water from flooding. Tables 42-48 contain spring and fall sampling data. Although the lake is currently exploited by heavy tournament action and two invasive species (zebra mussels and hydrilla), the spring electrofishing assessment for largemouth bass has consistently rated "Good" (Table 46). Recruitment of young-of-year fish remains consistent (Table 48) and has prevented the need for supplemental stocking of largemouth bass. Fish habitat improvement work will continue in 2010.

Several stockings of various fish occurred during 2009. A total of 334,960 fry and 16,844 fingerling redear sunfish, 39,998 blue catfish (4.0-8.0 in), 352 grass carp (20.0 in) and 750 grass carp (10.0-12.0 in) were stocked. These stockings were all in conjunction with zebra mussel and hydrilla management at the lake.

White bass were sampled during March by electrofishing and in November by gill netting. This was in coordination with the Lake Fisheries Research (LFR) project. A summary of the data collected can be found in the LFR annual report. The last stocking of white bass (1.5 in) during this study ended in 2007. White bass will continue to be sampled through 2010 and a creel survey will also be conducted in 2010.

Fishpond Lake

Largemouth bass were sampled at Fishpond Lake (32 acres) on 22 April 2009 (Table 49). Due to the water clarity of this lake, nocturnal electrofishing was utilized. CPUE of largemouth bass <8.0 in increased slightly from its lowest point of 4.97 fish/hr in 2008 to 11.43 fish/hr in 2009, but still isn't back up to normal levels (Table 50). Densities of fish 8.0-12.0 in were low in 2009 as well, due to the weak year class seen in 2008. While overall CPUE was down, CPUE of fish greater than 20.0 in was at its second highest level of 10.29 fish/hr, which is well above the average for lakes in the eastern district. PSD and RSD both increased from 2008 (42 and 9 respectively) to 2009 (66 and 17 respectively; Table 51). The PSD is also well above average for largemouth bass in the eastern district. Additional management at Fishpond Lake entails fertilization of the lake during the spring for increasing zooplankton density for young-of-year fishes. A total of 5,000 rainbow trout (8.0 in) are stocked annually during January, April, May, and October. Channel catfish (9.0 in) are stocked every other year. Largemouth bass will again be sampled in 2010.

Fishtrap Lake

Spring and fall black bass sampling data for Fishtrap Lake (1,143 acres) is shown in Tables 52-60. Largemouth, smallmouth, and spotted bass all provide significant fisheries at this lake. The population assessment rating for largemouth bass and smallmouth bass remains "Good" (Tables 57 and 58). A below average recruitment rate of age-0 largemouth bass was supplemented with 11,173 largemouth bass (4.5 in) in October. These stocked fish received a right pectoral fin clip for future identification. Often, there are high water events with flood control management that can act to lower recruitment at this lake. During March 2010, some smallmouth bass will be collected for broodfish for the hatchery to produce fingerlings for stocking. Additional sampling during 2009 will occur in the spring and fall for black bass.

Hybrid-striped bass sampling using gill nets was completed in early December (Tables 61-64). Fish were sampled from 10.0-25.0 in total length (Table 61) and age and growth information was taken (Table 62). The assessment rating continues to be "Excellent" for the fishery (Table 64). A size of 26.0-28.0 in appears to be the maximum size attained by hybrid striped bass in the lake as observed by angler catch and some die-offs each year.. Some white bass contribute to the numbers of *Morone* sp. in the lake. The \log_{10} length-weight equation for hybrid striped bass was $-3.75 + 3.34(\log_{10} \text{ length})$.

A research study and stocking of fry and fingerlings will begin in 2010 with native strain river walleye at Fishtrap Lake. Stockings and data collection will be coordinated through the Lake Fisheries Research section.

A lake management plan has been written for Fishtrap Lake and contains management objectives for largemouth and smallmouth bass, white crappie, and hybrid striped bass. During 2009, largemouth bass exceeded one of the spring electrofishing assessment value objectives (mean length age-3 at capture), met two (CPUE age-1 and CPUE ≥ 20.0 in), and failed to meet two (CPUE 12.0-14.9 in and CPUE ≥ 15.0 in). Smallmouth bass exceeded two of the spring electrofishing assessment value objectives (CPUE ≥ 14.0 in and CPUE ≥ 17.0 in), met one objective (mean length age 3 at capture), and failed to meet two objectives (CPUE age-1 and CPUE 11.0-13.9 in). Hybrid striped bass exceeded all four of the fall gill netting assessment value objectives (total CPUE excluding age 0, mean length age 2+ at capture, CPUE ≥ 15.0 in, and CPUE age-1).

Martin County Lake

Bluegill and redear sunfish were sampled with electrofishing on 19 April 2009. Bluegill up to age-5 and 9.0 in were collected while redear sunfish were found up to 10.0 in (Table 65 and 67). While CPUE for bluegill less than 3.0 in was at its lowest point since 2002, CPUE of bluegill 6.0-8.0 in and 8.0-10.0 in were at their highest point since 2002 (Table 66). PSD values of 30 and 22 were observed for bluegill and redear sunfish respectively (Table 68). While the bluegill PSD is low for a "big bluegill" fishery, it does fall within the range of a balanced bass and bluegill fishery (20-60). Due to the increased numbers of bluegill ≥ 6.0 in, an assessment value of 14 (Excellent) was recorded for the first time for bluegill in Martin County Lake. Largemouth bass will be sampled in 2010 and bluegill again in 2011.

Martin County Reservoir

This lake has recovered slowly since the Martin County coal slurry spill of October 2000. Current fish stockings occur with a total of 4,500 rainbow trout stocked annually during April, May, and October and channel catfish on an every other year rotation. Spring daytime electrofishing was conducted at this lake for bluegill on 20 May 2009. Length frequency and CPUE is presented in Table 70. Distribution and numbers are good up to 9.0 in. CPUE has increased for every length group and age since 2005 (Tables 71 and 73). Bluegill growth was better than average for small lakes in the eastern district (Table 72). A PSD value of 64 was observed for bluegill in 2009 (Table 74), while largemouth bass had a PSD of 28 in 2008. Such PSD values indicate that numerous small largemouth bass are foraging on small bluegill leading to better growth of bluegill. Largemouth bass will be sampled in 2010 and bluegill again in 2011.

Martins Fork Lake

Martins Fork Lake (330 acres) was sampled for black bass in the spring and fall (Tables 76-83) and walleye in the spring (Table 84). Largemouth bass anglers have been reporting high numbers of large fish in 2009. Largemouth bass sampling in 2007 and 2008 showed relatively high CPUE values for fish 12.0-14.9 in and ≥ 15.0 in (Table 77). This is due to strong year classes in 2002, 2003, and 2004 (Table 83). A drop in the CPUE values from 2008-2009 for fish 12.0-14.9 in and ≥ 15.0 in is probably due to the mortality of fish from the 2002-2004 year classes. The CPUE of fish ≥ 15.0 in was still higher than years prior to 2007 and the CPUE of fish ≥ 20.0 in was higher than any recorded in the past six years. Growth seemed typical for lakes in the eastern district (Table 79). Largemouth bass were collected up to age-6 and age-7 in 2009 while in other years, the oldest fish collected were age-5 (Table 80).

This again is likely due to the aforementioned strong year classes. Assessment scores were down slightly for largemouth bass in 2009, mainly because of the drop in abundance of midsize fish, but the total score was still as high or higher than years prior to 2007 (Table 81). Although the smaller coosa bass (redestye bass) continues to maintain a viable population in the lake, the black bass fishery is dominated in numbers by largemouth bass and spotted bass. Largemouth bass ($n=5,000$, mean length=4.5 in) were stocked in Martins Fork Lake in October of 2009.

Walleye numbers continue to decrease greatly with the elimination of their annual stocking in 2005. Once the Erie strain walleye have been eliminated from Martins Fork Lake, native Rockcastle strain walleye will be stocked. Largemouth bass will be sampled again in the spring and fall of 2010 and walleye will be sampled again in the spring of 2010. Channel catfish are scheduled to be stocked in 2010.

An additional fishery furnished by Martins Fork Lake that continues to be popular with anglers is the tailwater rainbow trout fishery. Occasionally walleye are also caught in this area. A new lake management plan will be finalized in the future. Objectives from this plan will be referenced with sampling data to see if management goals are being met.

Paintsville Lake

During 2009, black bass were sampled in both the spring and fall (Tables 85–91). Spring largemouth bass sampling was cut short in 2009 due to a break down in one of the boats, possibly causing numbers to be lower than normal. In 2002, a 12.0-15.0 in protective slot length limit was implemented on largemouth and smallmouth bass. Anglers do not seem to be making an impact in the numbers of 8.0-12.0 in largemouth bass and fish numbers are decreasing in the protected 12.0-15.0 in slot (Table 86). The assessment rating of the largemouth bass fishery is “Poor” (Table 89). During 2006, smallmouth bass were removed from the 12.0-15.0 in protective slot length limit and placed under an 18.0 in minimum length limit. Also, water quality parameters have prevented smallmouth bass from ever developing a good fishery in the 1,150 acre lake. During 2006, water withdrawals from the lake were altered to avoid pulling water from the preferred smallmouth bass cool water habitat. Smallmouth bass ($n=7,430$, mean length=2.6 in) were stocked in June 2009 to supplement low numbers of smallmouth bass in hopes of establishing a smallmouth bass fishery. Smallmouth bass will be stocked again in 2010.

During 2006 the method of summer-time water discharges were changed to prevent the loss of the cool water habitat preferred by smallmouth bass, trout, and walleye. This improved the cool water habitat during 2006 and in succeeding years through 2009. This trend is expected to continue in future years. Also, this will aid in regenerating the good trout and walleye fisheries once present from the late 1980’s to early 1990’s. The lake receives an annual stocking of approximately 18,500 rainbow trout (8.0 in) in January. Walleye ($n=57,407$, mean length=1.5 in) were also stocked in May 2009. Additional fisheries provided by the lake are the brown and rainbow trout fisheries found in the tailwater area below the dam.

Walleye and white crappie were sampled during March using daytime electrofishing. Walleye data is presented in Tables 92-94. Fewer walleye were collected in 2009 (11; Table 92) than in 2008 (34). Relative weights of walleye increased in all length groups in 2009 (Table 93). The walleye assessment rating in 2009 was “Fair” (Table 94). White crappie data is presented in Tables 95-98. Black crappie are present, but rare in angler catches and electrofishing samples.

Black bass, white crappie, and walleye will be sampled via electrofishing during the spring and black bass will be sampled again in the fall 2010. Spring black bass sampling will incorporate three electrofishing crews in order to get a better sample of the lake and avoid problems such as those experienced with one of only two crews having a break down in 2009. With the completion of a new lake management plan, the 2010 annual performance report will include how the largemouth bass, walleye, and crappie fisheries exceed, meet, or fail to meet plan objectives.

Pan Bowl Lake

Largemouth bass were sampled during April in 2009 for CPUE and length frequency (Table 99). The slow growth rate and sometimes cyclic high recruitment of young-of-the-year makes the fishery difficult to manage for continuous angler satisfaction. CPUE of fish ≥ 12.0 in during 2009 was less than most other years (Table 100). The CPUE of fish < 12.0 in increased from 2008 and 2009 and was higher than most years. This increase in small fish was likely due to the abundance of Eurasian milfoil in Panbowl Lake since 2007. Largemouth bass are regulated by the statewide 12.0 in minimum size limit at this lake. The PSD value decreased from 31 in 2008 to 14 in 2009 (Table 101), and is much lower than the normal 50-60 value at Pan Bowl Lake. This was influenced by the very high numbers of small fish and their success recruiting during the high abundance of Eurasian milfoil (Tables 100 and 102). The assessment rating changed from Good to Fair from 2008 to 2009 (Table 103).

Management at this 98 acre lake also includes an every other year stocking of channel catfish (9.0 in) and spring electrofishing for bluegill and redear sunfish. Sampling for 2010 will look at largemouth bass again.

Pikeville City Lake

Pikeville City Lake (20 acres) has primary fisheries of largemouth bass, bluegill, crappie, carp, and catfish. This lake has high fertility, which is not common in most lakes of the eastern district. During the summer, oxygen is added to the lake by 1 to 4 aerators as needed to prevent fish kills. The largemouth bass fishery has been very good for big fish for many years. On 1 March 2006, a regulation of catch-and-release-only for largemouth bass went into effect. During 2008, Pikeville stocked crappie and hybrid striped bass. An increase in crappie numbers was not noted during 2008 spring electrofishing and no hybrid striped bass were observed. Additional crappie were stocked in 2009. Electrofishing was conducted on 23 April 2009 for largemouth bass. Tables 104-106 contain information from the April daytime electrofishing sample for bass. Total CPUE of largemouth bass has decreased from 2008 to 2009 in all length groups except largemouth bass < 8.0 in (Table 105). A slight increase in largemouth bass < 8.0 in may indicate a strong year class. With a strong 2007 year class coming up and another possibly strong 2009 year class, CPUE is expected to increase for the larger length groups of largemouth bass in 2009. While CPUE of larger length groups was down in 2009, PSD and RSD have both increased from 2008 (56 and 46 respectively) to 2009 (65 and 48 respectively; Table 106). The increased PSD and RSD are indicative of a balanced fishery which is important under the current catch and release only regulation for largemouth bass. During 2010, sampling will be conducted in the spring for largemouth bass.

Yatesville Lake

Black bass (largemouth and spotted bass) were sampled during the spring and fall of 2009 (Tables 107-113). Smallmouth bass are present in the lake as verified by angler catches during tournaments and by department creel survey data, but none were collected in the spring or fall samples. The largemouth bass population at Yatesville Lake (2,280 acres) receives a great amount of fishing pressure (resident and nonresident) through tournaments on the weekends. However, largemouth bass continue to do well and sampling data shows no dramatic declines in the CPUE of the larger length groups (Table 108). CPUE was down for fish < 8.0 inches in 2009 though, possibly indicating a weak 2008 year class as shown by the low number of age-1 fish captured in the spring of 2009 (Tables 110 and 113). Largemouth bass had an assessment value of 10 ("Fair"), which is the lowest that it has been seen since 2004 (Table 111). This is due to the low number of age-1 fish which was also seen in 2004. Largemouth bass ($n=22,457$, mean length=4.5 in) were stocked in Yatesville Lake in October 2009 to make up for a weak year class.

White crappie were sampled in the fall of 2009 using trap nets (Tables 114-118). Total CPUE in 2009 (32.35 fish/hr; Table 114) was just over half of that recorded in 2006 (62.18 fish/hr). Also, several fish over 12.0 in were collected in 2006 with the largest over 16.0 in, while only 2 fish over 12.0 in were collected in 2009. Growth up to age-5 seemed comparable to that in 2006, however growth appeared to be slow above 6.0 inches in 2009 (Table 116). This apparent slow growth is likely due to a low number of larger fish in the age and growth sample. The assessment value for white crappie was 13 ("Good") which was comparable to previous years.

A large amount of habitat work is planned for 2010 at Yatesville Lake as the United States Army Corps of Engineers has agreed to allow some selective cutting of cedar trees on their property to be used for habitat. This habitat should improve the recruitment for largemouth bass and white crappie. Largemouth bass will be sampled again in the spring and fall of 2010.

Table 1: Summary of 2009 sampling conditions by waterbody, species sampled and date.

Water body	Species	Date	Time (24hr)	Gear	Weather	Water		Secchi (in)	Conditions	Perinent sampling comments ^{a,b}
						Temp (°F)	level (elev ft)			
Buekhorn Lake	Musky	2/10	1100	shock	cloudy/rain	41.00	757.00			lower lake; used 1 boat; murky; missed one 56-57 in
Buekhorn Lake	Musky	2/11	1030	shock	sunny/cloudy/windy	43.50	756.50			lower lake; used 1 boat; rain coming
Buekhorn Lake	LMB	5/26	2100	shock	cloudy/fewy/rain	79.00	782.50	34		cond: 280; pH 7.89; whole lake; used 2 boats; murky; cut short-lightning
Carr Creek Lake	WE/AWC	3/10	900	shock	cloudy/windy/rain	48.00	1017.30			bp: 30.09; whole lake; used 2 boats; rough water
Carr Creek Lake	WE/AWC	3/11	900	shock	cloudy/windy/rain	48.00				whole lake; used 2 boats
Carr Creek Lake	LMB	4/29	2100	shock	cloudy/rain	73.00	normal	48		cond: 446; pH 8.86; whole lake; used 1 boat;
Carr Creek Lake	LMB	9/24	2100	shock	cloudy/rain	79.00	1026.80			cond: 612; pH 8.40; whole lake; used 2 boats; fish not in timber; best in deforested creek
Crank's Crk Lake	LMB	10/19	2100	shock	clear	59.50	normal	78		cond: 198; pH 7.28; bp: 30.36; whole lake
Crank's Crk Lake	Carfish	10/19-10/22	1100	hoop net	sunny	59.50	normal	78		cond: 198; pH 7.28; whole lake; 3 tandem hoop net sets (3 nets/set)
Dewey Lake	WB	4/17	1100	shock	sunny	56.00	normal	30		upper lake - Johns Creek; used 1 boat; strong current
Dewey Lake	LMB	5/5	2100	shock	cloudy/rain	66.00	650.92			cond: 560; bp: 29.97; pH 7.76; whole lake; used 1 boats
Dewey Lake	LMB	9/15	2100	shock	cloudy	78.00	650.73			whole lake; used 2 boats; lower lake-clear; upper lake-murky
Dewey Lake	WB	11/26	1100	gill net	cloudy/rain	59.00	650.25			bp: 30.31; whole lake; set 10 nets; calm water
Dewey Lake	WB	11/27	1000	gill net	cloudy/rain					bp: 30.31; whole lake; set 10 nets; calm water
Dewey Lake	WB	11/28	1000	gill net	cloudy/rain					bp: 30.31; whole lake; set 10 nets; calm water
Dewey Lake	WB	11/29	1000	gill net	cloudy/rain					bp: 30.31; whole lake; set 10 nets; calm water
Dewey Lake	WB	11/29	1000	gill net	cloudy/rain					bp: 30.31; whole lake; set 10 nets; calm water
Fishpond	LMB	4/22	2100	shock	cloudy/rain	66.00	normal			cond: 669; pH 8.63; whole lake; used 1 boat
Fishtrap Lake	SMB	March	1000	shock	cool		738.00			lower lake; smallmouth bass broodfish acquisition; 6 days; trash; muddy
Fishtrap Lake	LMB	5/27	2100	shock	cloudy/rain	78.00	758.00	78		cond: 474; pH 8.82; whole lake; used 2 boats; 1 boat broke down
Fishtrap Lake	LMB	9/23	2100	shock	cloudy	80.00	103.2			cond: 710; pH 8.97; whole lake; used 1 boat
Fishtrap Lake	H/WB	12/3	1000	gill net	rain/windy	50.00	735.19			cond: 691; bp: 29.85; pH 7.61; lower lake, murky. 250' experimental gillnets 1"
Fishtrap Lake	H/WB	12/4	1000	gill net	rain/windy	50.00	735.36			cond: 691; bp: 29.85; pH 7.61; lower lake, murky. 250' experimental gillnets 1"
Martin Co Lake	Bluegill	4/19	1030	shock	sunny/cool	69.50	little high	15		cond: 32; pH 7.91; whole lake; used 1 boat; muddy
Martin Co Res	Bluegill	5/20	1100	shock	cloudy/hot	71.00	normal		good	cond: 93; pH 7.34; whole lake; used 1 boat; trouble shocking fish
Martins FK Lake	WE	3/16	1100	shock	rain	47.00	1308.00 ^c	6-40		whole lake-random, water rising/murky, for small walleye-verification
Martins FK Lake	LMB	4/28	2100	shock	partly cloudy	72.00	1309.70	72		cond: 122; pH: 7.57; whole lake; used 1 boat; broke down
Martins FK Lake	LMB	4/30	2100	shock	rain/storms	70.00	1309.70	96		cond: 122; pH: 7.57; whole lake; used 1 boat; broke down
Martins FK Lake	LMB	9/21	2100	shock	cloudy/rain	77.00	1310.00	72		cond: 122; pH: 7.79; whole lake; used 1 boat
Paintsville Lake	WE/AWC/BC	3/12	930	shock	cloudy/snow/cold	51.00	709.32			bp: 30.43; upper lake; used 1 boat; muddy
Paintsville Lake	WE/AWC/BC	3/13	900	shock	cloudy/snow/cold	46.00	709.32			bp: 30.43; lower lake; used 1 boat; clear
Paintsville Lake	LMB	4/27	2100	shock	Sunny	72.00	normal	52		cond: 116; pH 7.42; whole lake; used 1 boat; generator broke down
Paintsville Lake	LMB	9/22	2100	shock	cloudy/calm	79.00	90			cond: 133; pH 7.21; whole lake; used 1 boat

Table 1 cont

Water body	Species	Date	Time (24-hr)	Gear	Weather	Water Temp (°F)	Water level (elev ft)	Secchi (in)	Conditions	Pertinent sampling comments ^{a,b}
Pan Bowl Lake	LMB	4/27	1100	shock	sunny	21.20	normal	54		cond: 198; pH 7.67; whole lake; used 1 boat
Pikeville City Lake	LMB	4/23	1100	shock	sunny/cool	60.50	normal	30		cond: 449; bp: 30.16; pH 7.69; whole lake; used 1 boat
Yatesville Lake	LMB	5/19	2100	shock	clear/cool	71.00	normal	48		cond: 141; pH 7.82; whole lake; used 2 boats
Yatesville Lake	LMB	10/7	2100	shock	cloudy	68.00	630.69	42		cond: 178; bp: 30.05; pH 7.60; whole lake; used 2 boats; upper lake murky
Yatesville Lake	WC	11/23	1100	trap net	cloudy/light rain	52.00	626.57			cond: 232; bp: 30.15; pH 7.61; upper lake
Yatesville Lake	WC	11/24	1100	trap net	cloudy/light rain	51.00				cond: 232; bp: 30.15; pH 7.61; upper lake
Yatesville Lake	WC	11/25	1100	trap net	cloudy/light rain	51.00	625.93			cond: 232; bp: 30.15; pH 7.61; upper lake

^a cond = conductivity in µS/cm

^b bp = barometric pressure in inches

Table 2. Length frequency and electrofishing CPUE (fish/hr) of muskellunge collected during spring sampling on Buckhorn Lake from 1998-2009; numbers in parentheses are standard errors. Total electrofishing time in 2009 was approximately 3.90 hours. Results from 2002 are from fall electrofishing.

Year	Inch class																																																
	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	Total	CPUE									
1998	1	1	2	7	4	1	1				1	4	3	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	33	6.60 (2.90)				
1999	1	1	2	3	3	1				1	3	6	6	11	4	4	3						3	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	59	10.90 (4.40)		
2000	1	3	2	3	1									4									1	2	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	31	8.20 (0.50)		
2001																																																13	3.20 (0.70)
2002																																															12	6.00 (0.80)	
2003	1	5	2	1	1	1																																								22	7.10 (1.90)		
2004	2	9	23	16	2	2																																									155	16.70 (2.10)	
2005																																															27	6.30 (1.70)	
2006	1	8	10	6																																											45	14.20 (2.20)	
2007																																																32	13.66 (4.51)
2008																																																43	8.27 (1.61)
2009	1	2	4	11	12	6																																										68	17.58 (3.36)

EFDBLMS5.D98-D09

Table 3. Population assessment for muskeellunge from Buckhorn Lake (1,230 acres) captured during spring electrofishing from 1998-2009. Assessment scores for 2002 were derived from fall electrofishing data. Actual values are in parentheses. Scoring based on statewide assessment.

Parameter	Assessment scores											
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CPUE age 1	2 (3.50)	2 (2.03)	2 (2.70)	1 (1.50)	1 (0.50)	2 (3.30)	3 (5.90)	2 (2.50)	3 (7.90)	1 (1.71)	3 (4.81)	4 (9.31)
CPUE \geq 20.0 in	2 (3.20)	3 (8.50)	3 (5.40)	1 (1.70)	3 (5.50)	2 (3.90)	4 (11.10)	2 (3.70)	3 (6.30)	4 (11.98)	2 (3.83)	3 (7.68)
CPUE \geq 30.0 in	1 (0.90)	2 (1.80)	3 (3.80)	1 (1.20)	4 (4.00)	2 (2.00)	4 (6.30)	3 (2.60)	4 (4.40)	4 (5.32)	2 (2.17)	4 (4.65)
CPUE \geq 36.0 in	1 (0.30)	1 (0.20)	3 (1.00)	2 (0.50)	4 (1.50)	2 (0.65)	4 (2.80)	4 (2.10)	4 (2.50)	4 (2.45)	2 (0.60)	4 (1.81)
CPUE \geq 40.0 in	0 (0.00)	0 (0.00)	2 (0.20)	3 (0.30)	3 (0.50)	3 (0.30)	3 (0.30)	4 (1.10)	4 (1.00)	4 (1.55)	3 (0.48)	4 (1.04)
Total Score	6	8	13	8	15	11	18	15	18	17	12	19
Assessment Rating	Poor	Fair	Good	Fair	Good	Fair	Excellent	Good	Excellent	Excellent	Good	Excellent
EFDLMSS.D98 - EFDLMSS.D09												

Table 4. Length frequency and CPUE (fish/hr) of black bass collected in approximately 1.085 hours of 15-min nocturnal electrofishing runs at Buckhorn Lake (1,230 acres) on 26 May 2009; numbers in parentheses are standard errors.

Area/Species	Inch class																			Total	CPUE
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total			
Upper LMB	9	15	5	6	3	5	13	4	6	1	8	6	3	1	1	1	1	87	100.02	(15.83)	
Upper SB	1					2	1											4	7.87	(7.87)	
Lower LMB	1	4	3	1	2	2	6	2	1	2	3	2	1	1	1	1	31	124.00	(0.00)		
Lower SB																	0	0.00			
Total LMB	1	9	19	8	7	5	7	19	6	7	3	11	8	4	1	2	1	118	104.82	(6.30)	
Total SB				1			2	1									4	6.30	(13.16)		

SMB = smallmouth bass
LMB = largemouth bass
SB = spotted bass
EFDBLLSS.D09

Table 5. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Buckhorn Lake (1,230 acres). SE=standard error.

Year	Length group												Total	
	<8.0 in			8.0-11.9 in			12.0-14.9 in			>15.0 in			>20.0 in	
	CPUE	SE		CPUE	SE		CPUE	SE		CPUE	SE		CPUE	SE
2003	22.67	3.53	18.67	2.33	2.33	28.33	3.76	3.76	6.33	1.15	1.15	0.00	76.00	6.89
2004	38.00	6.20	51.67	6.52	6.52	29.33	4.19	4.19	4.33	1.51	1.51	0.00	123.33	11.55
2005	17.00	3.49	45.00	5.12	5.12	38.33	5.49	5.49	8.33	1.15	1.15	0.33	108.67	7.86
2006	14.17	2.18	35.24	4.62	4.62	40.51	5.06	5.06	15.22	3.40	3.40	0.33	105.14	10.97
2007	14.50	4.27	26.00	2.73	2.73	20.50	3.33	3.33	14.00	2.39	2.39	0.50	75.00	6.04
2008	14.79	5.47	27.01	7.24	7.24	21.35	3.31	3.31	13.82	1.75	1.75	0.00	76.97	11.95
2009	41.16	3.54	32.03	7.71	7.71	17.18	4.84	4.84	14.45	3.03	3.03	0.00	104.82	13.16

EFDBLLSS.D03-D09

Table 6. PSD and RSD₁₅ values for largemouth bass taken in spring electrofishing samples in each area of Buckhorn Lake (1,230 acres) on 26 May 2009; 95% confidence intervals are in parentheses.

Area	Species	No. ≥ 8.0 in	PSD (+/- 95%)	RSD ₁₅ (+/- 95%)
Upper	Largemouth bass	22	45 (24-67)	18 (2-35)
Lower	Largemouth bass	52	52 (38-66)	23 (12-35)
Total	Largemouth bass	74	50 (39-61)	21 (12-31)

EFDBLLSS.D09

Table 7. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Buckhorn Lake (1,230 acres) from 2003-2009.

Age	Year						
	2003	2004	2005	2006	2007	2008	2009
1	19.17	35.50	16.25	11.19	13.00	11.19	43.76
2	19.92	53.33	42.42	36.41	25.25	28.73	25.94
3	17.80	17.38	30.13	24.14	13.83	14.12	19.42
4	9.81	9.75	9.56	14.66	7.87	7.74	10.96
5	4.93	4.73	5.83	9.41	7.58	7.22	0.53
6	1.71	1.64	2.15	5.02	3.47	4.41	2.11
7	1.33	0.67	2.00	3.65	2.50	3.18	0.53

EFDBLLSS.D03-D09

EFDBLLAS.D04

EFDBLLAS.D09

Table 8. Population assessments for largemouth bass collected during spring at Buckhorn Lake (1,230 acres). Actual values are in parentheses. Scoring based on statewide assessment.

Parameter	Year						
	2003	2004	2005	2006	2007	2008	2009
Mean length age 3 at capture	4 (12.6)	4 (12.6)	4 (12.6)	4 (12.6)	4 (12.6)	4 (12.6)	4 (13.3)
Spring CPUE age 1	1 (19.20)	2 (35.50)	1 (16.30)	1 (11.20)	1 (13.00)	1 (11.19)	3 (43.76)
Spring CPUE 12.0-14.9 in	3 (28.30)	3 (29.30)	4 (38.30)	4 (40.50)	2 (20.50)	2 (21.35)	2 (17.18)
Spring CPUE \geq 15.0 in	2 (6.30)	2 (4.30)	2 (8.30)	3 (15.20)	3 (14.00)	3 (13.82)	3 (14.45)
Spring CPUE \geq 20.0 in	0 (0.00)	0 (0.00)	2 (0.30)	2 (0.30)	2 (0.50)	0 (0.00)	0 (0.00)
Total score	10	11	13	14	12	10	12
Assessment rating	Fair	Fair	Good	Good	Good	Fair	Good
Instantaneous mortality (z)	0.61	0.85	0.67	0.48	0.45	0.42	0.64
Annual mortality (A)	45.60	57.20	48.70	38.00	36.40	34.20	47.40
EFDBLLSS.D03-D09							
EFDBLLAS.D04							
EFDBLLAS.D09							

Table 9. Indices of year class strength at age-0 and age-1 and mean lengths (in) of age-0 largemouth bass at Buckhorn Lake (1,230 acres) from electrofishing. CPUE=fish/hr, SE=standard error.

Year class	Mean length	Age 0			Age 1		
		SE	CPUE	SE	CPUE	SE	CPUE
2002	4.5	0.10	99.30	7.40	38.70	2.60	19.20
2003	4.7	0.50	106.00	13.80	39.70	4.60	35.50
2004	3.6	0.04	176.70	34.00	9.30	4.60	16.25
2005	4.0	0.20	44.70	6.60	10.00	3.50	11.19
2006	4.2	0.20	17.60	4.10	5.30	1.90	13.00
2007	4.5	0.20	18.78	6.43	9.59	3.44	11.19
2008	4.9	0.14	21.44	3.68	9.91	2.31	43.76
2009	no fall sample						

EFDBLLSF.D02-D08
 EFDBLLAS.D04
 EFDBLLAS.D09
 EFDBLLSS.D03-D09

Table 10. Species composition, relative abundance and CPUE (fish/hr) of black bass collected in approximately 1.75 hours of 15-minute electrofishing samples at Carr Creek Lake (710 acres) on 29 April 2009; numbers in parentheses are standard errors.

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	22	23			
Upper	Smallmouth bass								1															1	1.33 (1.33)	
	Spotted bass						1	2	1	3	5	2												14	18.67 (3.53)	
	Largemouth bass				2	2	1	2	1	2	2	6	2	2	2	1	1						1	25	33.33 (7.42)	
Lower	Smallmouth bass																							0		
	Spotted bass					1	6	5	8	2	2	1			1									26	26.00 (9.59)	
	Largemouth bass	1	2	1	1		3	4	3	4	7	7	6	4	3	6	5	3						60	60.00 (1.63)	
Total	Smallmouth bass								1															1	0.57 (0.57)	
	Spotted bass					1	7	7	8	3	5	6	2		1									40	22.86 (5.50)	
	Largemouth bass	1	2	1	1	2	2	4	6	4	4	9	13	8	6	5	7	5	4				1	85	48.57 (6.14)	

EFDBLLSS.D09

Table 11. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Carr Creek Lake (710 acres). SE=standard error.

Year	Length group																
	<8.0 in			8.0-11.9 in			12.0-14.9 in			>15.0 in			>20.0 in			Total	
	CPUE	SE		CPUE	SE		CPUE	SE		CPUE	SE		CPUE	SE		CPUE	SE
2002	116.33	14.24	16.89	1.71	12.33	1.57	7.11	1.16	0.00	152.67	13.32						
2003	67.56	11.32	15.89	2.18	11.11	1.46	10.67	1.50	0.44	105.22	14.37	0.26					
2004	135.00	17.73	24.44	5.31	8.44	1.37	9.00	1.16	0.22	176.89	18.81	0.15					
2005	20.00	2.70	19.80	1.60	24.80	2.40	14.00	1.80	0.33	78.60	4.90	0.30					
2006	22.26	6.95	30.90	4.80	27.92	3.34	29.90	3.11	0.67	111.00	10.20	0.45					
2007	7.95	1.85	20.78	4.65	18.59	3.42	15.72	3.64	0.49	63.03	5.49	0.49					
2008	2.99	1.25	16.36	2.57	24.72	5.39	23.71	3.31	0.50	67.78	8.44	0.50					
2009	5.14	0.74	10.29	2.60	17.14	2.99	16.00	3.38	0.57	48.57	6.14	0.57					

BBRPSCFL.D02-D05
EFDCLLSS.D06-D09

Table 12. PSD and RSD values for each species of black bass in each area of Carr Creek Lake (710 acres) on 29 April 2009. Number of fish (No.) is the number of stock-size or larger fish collected and numbers in parentheses are 95% confidence intervals.

Area	Largemouth bass			Smallmouth bass			Spotted bass		
	No.	PSD	RSD ₁₅	No.	PSD	RSD ₁₄	No.	PSD	RSD ₁₄
Lower	55	75 (63-86)	38 (25-51)	0			25	16 (1-31)	4 (0-12)
Upper	21	81 (64-98)	33 (13-54)	1			14	71 (47-96)	0
Total	76	76 (67-86)	37 (26-48)	1			39	36 (21-51)	3 (0-8)

EFDCLLSS.D09

Table 13. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Carr Creek Lake (710 acres) from 1999-2009.

Age	Year											
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	
1	129.60	66.90	160.40	114.40	66.20	133.70	18.84	21.10	7.61	2.43	2.00	
2	31.80	21.20	16.10	17.30	17.10	25.20	20.82	31.70	21.07	13.11	7.90	
3	17.00	17.30	13.40	11.90	6.90	5.40	14.27	14.20	11.97	20.12	14.92	
4	16.10	18.30	20.10	7.20	6.90	5.70	13.24	21.30	9.95	21.11	9.97	
5	12.00	10.60	8.20	1.30	3.20	2.50	4.44	8.90	3.91	6.41	6.44	
6	2.70	4.00	2.70	0.40	0.00	0.00	0.00	0.00	0.00	3.60	3.90	
7	0.60	0.30	0.70		2.10	1.80	2.73	5.30	3.48			
8	0.40				2.00	2.00	3.66	6.50	3.95			
9	0.30				0.10	0.00	0.00	0.30	0.00			
10					0.80	0.60	0.56	0.40	1.07			
11												
12										0.50		

BBRPSCFL.D99-D05

EFDCLLSS.D06-D09

BBRSCCF.L.D03

Table 14. Population assessments for largemouth bass collected from Carr Creek Lake (710 acres). Actual values are in parentheses. Scoring based on statewide assessment.

Parameter	Year									
	2002	2003	2004	2005	2006	2007	2008	2009		
Mean length age 3 at capture	4 (13.2)	4 (13.2)	4 (13.2)	4 (13.2)	4 (13.2)	4 (13.2)	4 (12.6)	4 (12.6)	4 (12.6)	4
Spring CPUE age 1	4 (114.40)	3 (66.20)	4 (133.70)	2 (18.84)	2 (21.10)	1 (7.61)	1 (2.43)	1 (2.00)	1 (2.00)	1
Spring CPUE 12.0-14.9 in	1 (12.33)	1 (11.11)	1 (8.44)	2 (24.80)	2 (27.92)	1 (18.59)	2 (24.72)	2 (17.14)	1 (17.14)	1
Spring CPUE \geq 15.0 in	2 (7.11)	2 (10.67)	2 (9.00)	2 (14.00)	3 (29.90)	2 (15.72)	3 (23.71)	2 (16.00)	2 (16.00)	2
Spring CPUE \geq 20.0 in	0 (0.00)	1 (0.44)	1 (0.22)	1 (0.33)	1 (0.67)	1 (0.49)	1 (0.50)	1 (0.57)	1 (0.57)	1
Total score	11	11	12	11	12	9	11	9	11	9
Assessment rating	Fair	Fair	Good	Fair	Good	Fair	Fair	Fair	Fair	Fair
Instantaneous mortality (z)		0.52	0.54	0.47	0.43	0.37	0.41	0.74	0.41	0.74
Annual mortality (A)		40.30	42.00	37.50	35.10	30.90	33.50	52.30	33.50	52.30
BBRSCFL.D02-D05										
BBRSCFL.D03										
EFDCLLSS.D06-D09										
EFDCLLAS.D08										

Table 15. Length frequency and electrofishing CPUE (fish/hr) of black bass collected in approximately 2.0 hours of 15-minute nocturnal electrofishing samples at Carr Creek Lake (710 acres) on 24 September 2009; numbers in parentheses are standard errors.

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		
Lower	Smallmouth bass				1	2					1									4	4.00 (1.63)	
	Spotted bass			1	5	9	6	4	6	1	1	3								36	36.00 (4.32)	
	Largemouth bass	2		1	3	3	2	9	2	2	3	1						1	1	30	30.00 (5.29)	
Upper	Smallmouth bass									1										1	1.00 (1.00)	
	Spotted bass		2	1	1	4	4	1	2	1	3	1		2	1				23	23.00 (3.42)		
	Largemouth bass	12	3	1	1		4	4	1	1	2	1	1	1				1	32	32.00 (5.42)		
Total	Smallmouth bass				1	3					1								5	2.50 (1.05)		
	Spotted bass		2	2	6	13	10	5	8	2	4	3	1	2	1				59	29.50 (3.54)		
	Largemouth bass	14	3	1	4	3	6	13	3	3	2	4	2	1			1	2	62	31.00 (3.53)		

EFDCLLSF.D09

Table 16. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected by electrofishing at Carr Creek Lake (710 acres). CPUE=fish/hr, SE=standard error.

Year class	Mean length	Age 0			Age 0 >5.0 in			Age 1		
		SE	CPUE	SE	CPUE	SE	CPUE	SE		
2003	4.37	0.14	14.00	5.40	5.78	2.30	67.56	11.32		
2004	5.17	0.01	132.00	17.30	88.22	12.70	18.84	2.60		
2005	4.70	0.10	15.80	6.70	5.60	1.70	21.30	6.70		
2006	4.20	0.20	11.00	4.10	3.00	1.00	7.61	2.03		
2007	3.72	0.47	4.98	2.24	0.99	0.65	2.43	1.16		
2008	4.30	0.17	15.23	6.63	3.77	1.68	2.00	0.89		
2009	3.60	0.28	12.50	2.77	3.50	1.59				

BBRWRCFL.D03-D05
 BBRSCCFL.D03
 EFDCLLSN.D06-D09
 EFDCLLAS.D08

Table 17. Length frequency and CPUE (fish/hr) of walleye collected at Carr Creek Lake (710 acres) during daytime spring electrofishing.

Year	Inch Class																			Total	CPUE	SE						
	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26				27	28				
2000					5	28	10	6	8	2	3	3	1		1	6	4	1			78	20.80	4.60					
2001					2	4	3	14	8	6	2	2	1								44	20.40	4.70					
2002	no data																											
2003		1	1	2						3	7	4	2									28	26.70	8.50				
2004										1	3	13	10	13	4	3	1					61	27.10	7.40				
2005						1	1	1	2	10	2	10	6	5	4	3	1	1				46	28.17	5.00				
2006										1	4	6	7	9	8	3	4	2	2			55	31.30	5.40				
2007						1				1	2	4	3	11	15	8	4	5	2			60	32.92	7.36				
2008							1	2	5	12	16	19	21	19	15	14	7	3	1			136	12.76	1.15				
2009						1	4	3	9	18	21	17	15	13	10	11	2					124	21.34	1.29				

EFDCLWSS.D00-D09

Table 18. Mean back-calculated length (in) at each annulus for walleye collected from Carr Creek Lake (710 acres) on 10 and 11 March 2009, including 95% confidence intervals.

Year	class	No.	Age																		
			1	2	3	4	5	6	7	8	9	10									
2007		10	10.9	16.2																	
2006		25	10.1	15.5	19.2																
2005		18	10.1	14.7	18.4	20.9															
2004		9	9.3	15.2	18.6	20.6	22.1														
2003		3	10.4	15.8	18.5	20.2	21.4	22.5													
2002		4	9.9	15.9	19.0	20.6	21.9	22.8	23.7												
2001		4	9.3	13.7	16.5	18.7	20.4	21.7	22.7	23.5											
2000		6	9.5	13.7	16.2	18.0	19.5	20.9	21.9	22.6	23.3										
1999		1	10.6	14.4	16.3	18.2	19.3	20.1	20.9	21.2	21.6	22.0									
Mean			10.0	15.1	18.4	20.1	21.1	21.7	22.5	22.8	23.0	22.0									
Smallest			7.4	10.7	13.2	15.9	17.9	19.1	19.8	20.1	20.5	22.0									
Largest			13.0	18.9	22.0	23.5	25.2	24.6	24.6	25.5	24.9	22.0									
STD error			0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.5	0.6										
95% CI LO			9.8	14.8	18.0	19.5	20.4	21.1	21.8	21.9	21.9	22.0									
95% CI HI			10.3	15.5	18.9	20.7	21.7	22.4	23.2	23.8	24.2										

Intercept = 0

EFDCLWAS.D09

Table 19. Spring electrofishing catch rate (fish/hr) for each age of walleye collected from Carr Creek Lake (710 acres) from 2007-2009.

Age	Year		
	2007	2008	2009
1			
2	1.18	0.55	2.02
3	8.79	3.43	7.22
4	7.46	3.16	5.46
5	5.41	1.71	2.41
6	1.92	0.56	0.80
7	0.94	0.65	0.79
8	3.45	0.90	0.95
9	2.39	1.09	1.43
10	0.60	0.23	0.26

EFDCLWSS.D07-D09

EFDCLWAS.D09

Table 20. Number of fish and relative weight (Wr) for each length group of walleye collected at Carr Creek Lake (710 acres) on 10 and 11 March 2009. Numbers in parentheses are standard errors.

		Length group			
10.0-14.9 in		15.0-19.9 in		>20.0 in	
No.	Wr	No.	Wr	No.	Wr
1	104	55	105	68	105
			(1)		(1)

EFDCLWSS.D09

Table 21. Spring electrofishing population assessments for the walleye population at Carr Creek Lake (710 acres). Actual values are in parentheses. Scoring based on statewide assessment.

Parameter	Year						
	2003	2004	2005	2006	2007	2008	2009
Population Density (CPUE all fish)	4 (26.70)	4 (27.10)	4 (28.17)	4 (31.30)	4 (32.92)	2 (12.76)	4 (21.34)
Growth rate (mean length age 3 at capture)	4 (20.6)	4 (20.6)	4 (20.6)	4 (20.6)	4 (20.6)	4 (20.6)	4 (19.3)
Size structure (CPUE \geq 20.0 in)	4 (10.50)	4 (19.50)	4 (18.40)	4 (24.80)	4 (20.85)	4 (9.28)	4 (11.77)
Recruitment (CPUE <13.0 in)	4 (3.80)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
Total Score	16	12	12	12	12	10	12
Assessment Rating	Excellent	Good	Good	Good	Good	Good	Good
Instantaneous mortality (z)	0.72	1.12	0.26	0.20	0.35	0.94	0.36
Annual mortality (A)	51.40	67.30	22.50	22.50	41.40	60.90	30.60

EFDCLWSS.D03-D09
EFDCLWAS.D03, D09

Table 22. Length frequency, CPUE (fish/hr) and SE (standard error) of crappie collected by electrofishing at Carr Creek Lake (710 acres) on 10 and 11 March 2009.

	Inch class								Total	CPUE	SE
	6	7	8	9	10	11	12	13			
White crappie	1	1		3	1	1	1	2	10	1.59	(0.51)
Black crappie	5	12	17	6	2	1			43	7.51	(4.78)

EFDCLWSS.D09

Table 23. Spring electrofishing CPUE (fish/hr) for each length group of black and white crappie collected at Carr Creek Lake (710 acres). SE=standard error.

Year	Length group																							
	>8.0 in		≥10.0 in		≥10.0 in		>8.0 in		>10.0 in		Total													
	WC	SE	BC	SE	WC	SE	BC	SE	all crappie	SE	all crappie	SE	WC	SE	WC	SE	CPUE	SE	CPUE	SE	CPUE	SE		
2007	10.07	9.14	3.82	3.00	6.19	5.29	0.72	0.72	13.89	12.06	6.91	5.12	27.84	26.00	6.87	5.25								
2008	1.30	0.77	0.96	0.42	0.76	0.50	0.16	0.11	2.26	0.95	0.92	0.47	1.74	1.04	1.63	0.71								
2009	1.32	0.57	4.58	2.24	0.81	0.35	0.57	0.44	5.91	2.75	1.37	0.64	1.59	0.51	7.51	4.78								

EFDCLWSS.D09

Table 24. PSD and RSD₁₀ values for black and white crappie taken in spring electrofishing samples at Carr Creek Lake (710 acres) on 10 and 11 March 2009; 95% confidence intervals are in parentheses.

Species	No. ≥5.0 in	PSD (+/- 95%)	RSD ₁₀ (+/- 95%)
White crappie	10	80 (54-106)	50 (17-83)
Black crappie	43	60 (46-75)	7 (0-15)

EFDCLWSS.D09

Table 25. Spring electrofishing catch rate (fish/hr) for each age of white and black crappie collected from Carr Creek Lake (710 acres).

Age	2007			2008			2009		
	WC	BC	WC	BC	WC	BC	WC	BC	
1	0.00	0.00							
2	1.55	0.00	0.04						
3	5.40	0.00	0.12				0.05		
4	4.37	0.76	0.11	0.09			0.06	0.51	
5	6.69	3.07	0.70	0.68			0.54	3.09	
6	7.51	2.31	0.66	0.39			0.47	2.44	
7	1.55		0.11				0.26		
8	0.78			0.06			0.21	0.34	

EFDCLWSS.D07-D09

EFDCLCAS.D07

WC=white crappie

BC=black crappie

Table 26. Fish harvest statistics derived from day (1 April-31 October) and night (1 May-31 August) creel surveys at Carr Creek Lake (710 acres) in 2009.

	Day	Night
<u>Fishing trips</u>		
No. of fishing trips (per acre)	2,387 (3.36)	2,614 (3.68)
<u>Fishing pressure</u>		
Total angler hours (S.E.) ^a	17,643 (1,191)	13,462 (943)
Man-hours/acre	24.85	18.96
<u>Catch/harvest</u>		
No. of fish caught (S.E.)	12,420 (1,545)	6,530 (1,092)
No. of fish harvested (S.E.)	3,580 (655)	1,589 (362)
Lb of fish harvested	3,700	2,462
<u>Harvest rates</u>		
Fish/hour	0.17	0.12
Fish/acre	5.04	2.24
Lb/acre	5.21	3.47
<u>Catch rate</u>		
Fish/hour	0.63	0.49
Fish/acre	17.49	9.20
<u>Miscellaneous characteristics (%)</u>		
Male	94.33	95.00
Female	5.67	5.00
Resident	99.77	99.23
Non-resident	0.23	0.77
<u>Method (%)</u>		
Still fishing	41.16	45.00
Casting	54.42	54.23
Fly fishing	0.79	
Trolling	3.63	0.77
Spider Rigging		
<u>Mode (%)</u>		
Boat	80.95	76.15
Bank	14.97	18.46
Dock	4.08	5.38

^aS.E. = standard error

Table 27 Fish harvest statistics derived from a day creel survey at Carr Creek Lake (710 acres) from 1 April through 31 October 2009.

	Carp	Suckers	Channel Catfish	Flathead Catfish	Rock Bass	Warmouth	Green Sunfish	Bluegill	Redear Sunfish	Smallmouth Bass	Spotted Bass	Largemouth Bass	White Crappie	Black Crappie	Walleye
No caught	17	11	429	135	6	149	57	3390	281	34	372	3449	2813	567	711
(per acre)	(0.02)	(0.02)	(0.60)	(0.19)	(0.01)	(0.21)	(0.08)	(4.77)	(0.40)	(0.05)	(0.52)	(4.85)	(3.95)	(0.80)	(1.00)
Lb. harvested		11	325	107		126	59	1157	291		100	340	467	163	498
(per acre)		(0.02)	(0.43)	(0.15)		(0.18)	(0.05)	(1.63)	(0.40)		(0.14)	(0.48)	(0.66)	(0.23)	(0.69)
% of total no. harvested		0.31	8.55	2.99		3.52	1.01	32.32	7.85		2.79	9.50	13.05	4.55	13.58
l.b. harvested		4.0	441.8	848.8		34.1	3.1	184.0	64.3		81.0	775.6	233.1	80.6	949.4
per acre		(0.01)	(0.62)	(1.20)		(0.05)	(0.06)	(0.26)	(0.09)		(0.11)	(1.09)	(0.33)	(0.11)	(1.34)
% of total lb. harvested		0.11	11.94	22.94		0.92	0.08	4.97	1.74		2.19	20.96	6.30	2.18	25.66
Mean length (in)		9.0	15.8	24.9		7.0	5.0	6.2	6.5		12.3	16.6	10.3	9.8	18.2
Mean weight (lb)		0.36	1.27	6.70		0.26	0.08	0.15	0.20		0.81	2.42	0.51	0.51	1.98
			Carp	Walleye	Catfish group	Panfish group	Black bass group	Crappie group	Anything						
No. of fishing trips for that species		27	170	82	173	1270	212	453							
% of all trips		1.14	7.12	3.44	7.25	53.22	8.87	18.96							
Hours fished for that species		200.58	1255.58	607.48	1278.81	9369.60	1564.70	3345.85							
(per acre)		(0.28)	(1.77)	(0.86)	(1.80)	(13.22)	(2.20)	(4.71)							
No. harvested fishing for that species			285	260	1351	276	589								
Lb. harvested fishing for that species			559.00	873.10	249.70	534.70	290.20								
No./hour harvested fishing for that species			0.19	0.37	1.40	0.02	0.35								
% success fishing for that species		0.00	26.87	29.41	40.68	3.93	28.41	7.06							

Table 28. Fish harvest statistics derived from a night creel survey at Carr Creek Lake (710 acres) from 1 May through 31 August 2009.

	Carp	Channel catfish	Flathead Catfish	Bluegill	Longear Sunfish	Smallmouth Bass	Spotted Bass	Largemouth Bass	White Crappie	Black Crappie	Walleye
No. caught (per acre)	415 (0.59)	530 (0.75)	36 0.05	1,010 (1.42)	36 (0.51)	115 (0.16)	126 (0.18)	2,243 (3.16)	1,179 (1.66)	151 (0.21)	688 (0.97)
No. harvested (per acre)		342 (0.48)	36 (0.05)	180 (0.25)	36 (0.05)		86 (0.12)	195 (0.27)	220 (0.31)	79 (0.11)	414 (0.58)
% of total no. harvested		21.54	2.27	11.34	2.27		5.42	12.28	13.85	4.98	26.07
Lb harvested (per acre)		634.9 (0.89)	223.2 (0.31)	27.1 (0.04)	4.6 (0.01)		107.5 (0.15)	460.6 (0.65)	125.0 (0.18)	29.7 (0.04)	849.0 (1.20)
% of total lb harvested		25.79	9.07	1.10	0.19		4.37	18.71	5.08	1.21	34.49
Mean length (in)		17.4	25.0	6.2	6.0		14.5	16.6	10.3	9.0	18.4
Mean weight (lb)		1.77	6.18	0.15	0.13		1.25	2.39	0.51	0.37	2.04
		Carp	Walleye	Catfish group	Black bass group	Panfish group	Crappie group	Anything			
No. of fishing trips for that species	37	282	272	1330	104	187	402				
% of all trips	1.42	10.80	10.40	50.88	3.97	7.16	15.37				
Hours fished for that species (per acre)	191.52 (0.27)	1453.91 (2.05)	1400.00 (1.97)	6849.48 (9.65)	533.93 (0.75)	964.15 (1.36)	2068.83 (2.91)				
No. harvested fishing for that species		289	191	198	216	299					
Lb harvested fishing for that species		597.9	425.7	393.8	31.7	154.7					
No./hour harvested fishing for that species		0.17	0.22	0.03	0.53	0.21					
% success fishing for that species	0.00	32.00	15.38	3.85	18.18	33.33	5.00				

Table 29. Species composition and length distribution of each species of fish harvested (H) and released (R) from a daytime creel survey on Carr Creek Lake (710 acres) from 1 April to 31 October 2009.

Species	Inch class																													
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	23	24	25	26	28	30	35	36			
Common																														
Carp	R																													
Suckers	H						11			8																				
	R																													
Walleye	H																													
	R							27		68	14	53	10	49	122	85	73	36	49	12	24		24	12						
Channel	H									12		61	98	12	37	12	12	25	12		25									
Catfish	R							15		61	15	15	17																	
Flathead	H																													
Catfish	R																13	13			13	13		27	28			14		
Bluegill	H	13	108	632	363	41																								
	R	76	744	866	501	45																								
Spotted	H																													
Bass	R								52																					
Largemouth	H																													
Bass	R							158	23	430	23	1098	68	452	217	403	103	103	10	21										
Smallmouth	H																													
Bass	R																													
White	H																													
Crappie	R																													
Black	H	39	343	912	922	119																								
Crappie	R																													
Rock Bass	H																													
	R																													
Warmouth	H																													
	R																													
Green	H																													
Sunfish	R																													
Redear	H																													
Sunfish	R																													

Table 31. Monthly black bass angling success at Carr Creek Lake during the 2009 day and night creel survey period.

	Total no. of bass caught		Total no. of bass harvested		No. of black bass fishing trips		Hours fished by bass anglers		Bass caught by bass anglers		Bass caught/hour by bass anglers		Bass harvested by bass anglers		Bass harvested/hour by bass anglers	
	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
	410		19		139		1027		360		0.262		19		0.014	
April	965	611	46	36	618	262	4570	1348	910	539	0.153	0.325	37	36	0.006	0.022
May	430	715	117	79	91	507	675	2611	177	676	0.326	0.255	39	40	0.072	0.015
June	482	469	56	36	84	232	623	1197	261	468	0.459	0.394	36	36	0.030	0.030
July	560	689	54	129	129	329	957	1694	451	645	0.382	0.295	54	86	0.046	0.039
August	475		95		85		632		412		0.722		85		0.148	
September	532		52		123		906		438		0.368		42		0.035	
October																
Total	3,855	2,484	439	281	9,390	1,330	9,390	6,849	3,009	2,328			276	198		
Mean											0.382	0.317			0.054	0.027

Table 32. Monthly crappie angling success at Carr Creek Lake during the 2009 creel survey period.

	Total no. of crappie caught		Total no. of crappie harvested		No. of crappie fishing trips		Hours fished by crappie anglers		Crappie caught by crappie anglers		Crappie caught/hour by crappie anglers		Crappie harvested by crappie anglers		Crappie harvested/hour by crappie anglers	
	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
	568		69		41		301		511		1.712		50		0.169	
April	175	395	55	144	38	36	283	186	174	396	2.000	1.222	55	144	0.632	0.444
May	293	596	156	119	34	71	253	366	293	596	0.641	0.833	156	119	0.342	0.167
June	93	253	56	36	25	56	185	287	93	253	0.556	1.045	56	36	0.333	0.149
July	415	86	126		18	24	137	125	415	86	2.584	0.500	126		0.787	
August	865		74		23		168		739		4.192		53		0.299	
September	970		94		32		238		969		5.471		93		0.529	
October																
Total	3,380	1,330	631	299	212	187	1,565	964	3,194	1,331			589	299		
Mean											2.45	0.90			0.44	0.25

Table 33. Monthly walleye angling success at Carr Creek Lake during the 2009 creel survey period.

	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		
	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	
April	44		32		27		197		25		0.200		19		0.150		
May	110	108	83	72	24	36	177	186	37	72	0.533	0.408	37	72	0.533	0.408	
June	137	119	98	40	37		274		117		0.250		78		0.167		
July	56	289	37	217	19	149	138	766	19	289	0.034	0.247	19	217	0.034	0.185	
August	145	172	90	86	24	97	176	502	126	86	0.886	0.190	90	0	0.633	0.000	
September	74		74		10		70		11		0.125		11		0.125		
October	146		73		30		223		62		0.406		31		0.203		
Total	712	688	487	415	170	282	1,256	1,454	397	447			285	289			
Mean											0.35	0.28			0.26	0.20	

Table 34. Catch and harvest statistics derived from a day creel survey at Carr Creek Lake (710 acres) for largemouth bass, white crappie, black crappie, and walleye caught and released by all anglers from 1 April to 31 October 2009.

	Largemouth bass			White crappie			Black Crappie					
	Catch & release			Catch & release			Catch & release					
	Harvest	12.0-14.9 in	>15.0 in	Total	Harvest	<9.0 in	>9.0 in	Total	Harvest	<9.0 in	>9.0 in	Total
Total number	340	1,618	857	3,449	467	2,335	10	2,813	163	403	0	143
Total weight (lb)	775.6	1,295.6	1,913.3	4,491.5	233.1	227.6	4.7	465.4	80.6	62.5		566.8
Mean length (in)	16.6				10.3				9.8			
Mean weight (lb)	2.42				0.51				0.51			
Rate (fish/hour)	0.015				0.024				0.007			
Walleye												
Catch & release												
Harvest 8.0-14.9 in >15.0 in Total												
Total number	486	162	63	711								
Total weight (lb)	949.4	87.0	117.5	1,153.9								
Mean length (in)	18.2											
Mean weight (lb)	1.98											
Rate (fish/hour)	0.024											

Table 35. Catch and harvest statistics derived from a night creel survey at Carr Creek Lake (710 acres) for largemouth bass, white crappie, black crappie, and walleye caught and released by all anglers from 1 May to 31 August 2009.

	Largemouth bass			White crappie			Black Crappie		
	Catch & release			Catch & release			Catch & release		
	Harvest	12.0-14.9 in \geq 15.0 in	Total	Harvest	<9.0 in	\geq 9.0 in	Harvest	<9.0 in	\geq 9.0 in
Total number	195	730	896	220	959	0	79	72	0
Total weight (lb)	460.6	555.7	2,015.5	125.0	117.1	242.1	29.7	7.0	36.7
Mean length (in)	16.6			10.3			9.0		
Mean weight (lb)	2.39			0.51			0.37		
Rate (fish/hour)	0.014			0.017			0.006		
Walleye									
Catch & release									
Total number	414	198	76	688					
Total weight (lb)	849.0	107.0	118.5	1,074.5					
Mean length (in)	18.4								
Mean weight (lb)	2.04								
Rate (fish/hour)	0.032								

Table 36. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Cranks Creek Lake (710 acres).
SE=standard error.

Year	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in		Total	
	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2000	51.33	11.05	24.67	3.78	2.67	1.33	2.00	1.37	2.00	1.37	80.67	12.45
2001	20.00	6.37	22.00	8.31	2.67	1.33	2.00	0.89	0.67	0.67	46.67	13.84
2002												
2003												
2004	40.67	7.55	40.00	5.75	3.33	1.91	4.00	2.07	0.67	0.67	88.00	11.12
2005	59.20	16.56	70.40	10.48	4.00	1.26	6.40	2.04	2.40	0.98	140.00	17.34
2006												
2007												
2008	33.00	7.90	51.00	6.61	27.00	4.43	8.00	3.65	3.00	1.91	119.00	8.23
2009						no sample						

EFDCCCLSS.D00-D08

Table 37. Population assessments for largemouth bass collected from Cranks Creek Lake (219 acres). Actual values are in parentheses. Scoring based on statewide assessment.

Parameter	Year	
	2005	2008
Mean length age 3 at capture	3 (11.2)	3 (11.2)
Spring CPUE age 1	3 (50.40)	2 (23.00)
Spring CPUE 12.0-14.9 in	1 (4.00)	2 (27.00)
Spring CPUE ≥ 15.0 in	2 (6.40)	2 (8.00)
Spring CPUE ≥ 20.0 in	3 (2.40)	3 (3.00)
Total score	12	12
Assessment rating	Good	Good
Instantaneous mortality (z)	0.48	0.52
Annual mortality (A)	38.40	40.60

EFDCCLAS.D08
EFDCCLSS.D05, D08

Table 38. Length frequency and CPUE (fish/hr) of black bass collected in 1.25 hours of 15-min nocturnal electrofishing runs at Cranks Creek Lake (219 acres) on 19 October 2009; 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	22	23			
LMB	2	48	21	5	9	13	9	6	11	6	7	2		1	1		1	1		1		1	145	116.00	(41.60)
SB	1	1		1	1			1			1												6	4.80	(1.50)

LMB = largemouth bass
 SB = spotted bass
 EFDCCLSF.D09

Table 39. Indices of year class strength at age-0 and age-1 and mean lengths (in) of age-0 largemouth bass at Cranks Creek Lake (219 acres) from electrofishing. CPUE=fish/hr, SE=standard error.

Year class	Age 0		Age 0		Age 0 >5.0 in		Age 1	
	Mean length	SE	CPUE	SE	CPUE	SE	CPUE	SE
1999							44.33	10.37
2000							14.33	4.83
2001	5.0	0.11	27.33	5.21	13.33	3.04		
2002	5.1	0.09	34.40	10.63	20.80	7.74		
2003							15.00	4.25
2004							50.40	15.26
2005								
2006								
2007	4.3	0.14	32.00	8.67	7.20	2.94	23.00	7.33
2008								
2009	3.9	0.10	64.00	29.75	7.20	4.80		

EFDCCLSF.D01-D02, D07, D09
 EFDCCLAS.D08
 EFDCCLSS.D00, D01, D04, D05, D08

Table 40. Length composition and CPUE (fish/net-set) of channel catfish at Cranks Creek Lake. Channel catfish were collected by baited-tandem hoop nets (3 sets; 72 hrs soak time) that were set on 19 October 2009; numbers in parentheses are standard errors.

Species	Inch class										Total	CPUE	
	8	9	10	11	12	13	14	15	16	17			
Channel catfish			3	5	7	3	1		1	1	21	7.00	(7.00)
Yellow bullhead	1	1									2	0.67	(0.33)

EFDCCIHF.D09

Table 41. Age frequency and CPUE (no./net-set) of channel catfish collected at Cranks Creek Lake, October 2009; numbers in parentheses are standard errors.

Age	Inch class							Total	Age%	CPUE	
	10	11	12	13	14	15	16			17	
1	3							3	14	1.00	(1.00)
2		5	7	2			1	15	71	5.00	(5.00)
3				1	1			3	14	1.00	(1.00)
Total	3	5	7	3	1	0	1	21	100		
%	14	24	33	14	5	0	5	100			

EFDCCIAF.D09

EFDCCIHF.D09

Table 42 Species composition, relative abundance and CPUE (fish/hr) of black bass collected in approximately 2,015 hours of 15-minute nocturnal electrofishing samples by area at Dewey Lake (1,100 acres) on 5 May 2009. Standard errors are in parentheses

Area	Species	Inch class																		Total	CPUE	
		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			
Lower	Spotted bass					5	11	6	4	8										34	22.36	(3.53)
	Largemouth bass	1	21	41	25	29	48	20	17	9	12	11	4	8	4	3	7	4		264	173.66	(19.07)
Upper	Spotted Bass		2				2	2												6	12.00	(12.00)
	Largemouth bass	1	13	24	14		15	10	4	4	4	4	3	1	1				1	99	198.00	(46.00)
Total	Spotted bass		2			5	13	8	4	8									40	19.77	(3.83)	
	Largemouth bass	2	34	65	39	29	63	30	21	13	16	15	7	9	5	3	7	4	1	363	179.75	(16.92)

EFDDLSS.D09

Table 43. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Dewey Lake (1,100 acres). SE=standard error.

Year	Length group										Total	
	<8.0 in		8.0-11.9 in		12.0-14.9 in		≥15.0 in		≥20.0 in		CPUE	SE
1987	44.60		38.30		12.00		0.60		0.00		95.40	
1988	84.00		40.70		26.70		2.00		0.00		154.70	
1989	75.00		27.50		10.80		7.00		0.00		120.70	
1990	58.80		68.00		32.00		11.40		0.57		171.40	
1991	73.80		50.60		18.40		3.50		0.18		146.40	
1992	57.40		64.10		17.20		7.40		0.22		146.10	
1993	43.70		71.80		15.60		8.80		0.80		140.00	
1994	no data											
1995	46.60		59.60		28.50		3.60		0.00		138.30	16.90
1996	no data											
1997	15.30		53.30		32.30		11.00		1.00		112.00	12.20
1998	20.10		51.40		43.20		7.20		0.60		122.00	8.50
1999	78.90		34.60		39.50		12.80		0.50		165.80	12.70
2000	62.20	4.70	44.00	4.40	23.60	3.50	10.30	1.30	0.10		140.10	9.50
2001	150.10	17.20	57.80	5.70	26.90	2.70	17.80	1.60	0.60		252.60	22.80
2002	no data											
2003	71.11	10.05	55.56	4.40	23.11	1.77	22.00	2.12	0.70		171.80	14.60
2004	96.20	11.90	34.70	3.80	20.00	3.20	17.50	2.60	1.00		168.30	13.90
2005	39.30	5.00	59.20	6.30	31.00	3.20	24.50	1.90	0.30		153.90	12.80
2006	32.30	5.70	66.40	8.60	24.20	3.60	24.90	3.60	0.70		147.80	10.00
2007	54.86	9.63	80.77	9.79	35.09	4.97	30.18	4.07	1.48	0.72	200.91	19.94
2008	87.37	10.41	86.46	9.50	21.56	3.60	16.34	3.44	0.80	0.53	211.73	12.35
2009	83.68	12.69	62.82	6.33	18.83	1.91	14.42	3.39	0.50	0.50	179.75	16.92

EFDDLSS.D87-D02, BBRPSDEW.D03-D05, EFDDLSS.D06-D09

Table 44. PSD and RSD values for each species of black bass in each area of Dewey Lake (1,100 acres) during spring 2009. Numbers in parentheses are 95% confidence intervals.

Area	Largemouth bass			Spotted bass		
	No. ≥ 8.0 in	PSD	RSD ₁₅	No. ≥ 7.0 in	PSD	RSD ₁₄
Lower	147	36 (28-44)	18 (12-24)	34	24 (9-38)	
Upper	47	30 (17-43)	6 (0-13)	4		
Total	194	35 (28-41)	15 (10-20)	38	21 (8-34)	

EFDDLSS.D09

Table 45. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Dewey Lake (1,100 acres) from 2000-2009.

Age	Year								
	2000	2001	2003	2004	2005	2006	2007	2008	2009
1	55.30	125.70	61.20	79.69	24.76	27.90	48.98	49.46	55.59
2	35.60	47.10	36.60	30.14	37.57	30.20	41.33	98.64	70.75
3	11.30	34.90	17.20	12.75	20.87	21.10	27.13	31.29	25.67
4	18.80	14.30	22.10	17.83	28.16	28.40	37.19	13.68	10.68
5	9.70	16.70	11.40	9.43	15.48	13.20	14.59	8.26	6.64
6	3.70	6.50	2.10	1.91	3.10	1.70	3.15	6.95	6.17
7	3.30	2.30	7.40	5.59	7.61	8.90	9.16	0.53	1.16
8	0.40	1.80	4.40	3.21	4.76	5.70	5.00	1.33	0.83
9	1.70	1.80	8.40	6.51	10.73	9.60	12.41	1.20	2.00
10	0.40	1.00	0.33	1.00	0.39	0.30	1.48		
11			0.30					0.40	0.25
12			0.30						
13				0.26	0.44	0.40	0.50		
14						0.30	0.30		

EFDDLSS.D06-D09

BBRPSDEW.D00-D05

BBRSCDEW.D03

EFDDLAS.D08

Table 46. Population assessments for largemouth bass collected from Dewey Lake (1,100 acres). Actual values are in parentheses. Scoring based on statewide assessment.

Parameter	Year								
	2003	2004	2005	2006	2007	2008	2009		
Mean length age 3 capture	1 (10.5)	1 (10.5)	1 (10.5)	1 (10.5)	1 (10.5)	2 (11.3)	2 (11.3)		
Spring CPUE age 1	4 (61.20)	4 (79.70)	2 (24.80)	2 (27.90)	3 (48.98)	4 (49.46)	4 (55.59)		
Spring CPUE 12.0-14.9 in	2 (23.10)	2 (20.00)	3 (31.00)	2 (24.20)	4 (35.09)	2 (21.56)	2 (18.80)		
Spring CPUE \geq 15.0 in	4 (22.00)	3 (17.50)	4 (24.50)	4 (24.90)	4 (30.18)	3 (16.34)	3 (14.40)		
Spring CPUE \geq 20.0 in	2 (0.70)	2 (1.00)	2 (0.30)	2 (0.70)	2 (1.48)	2 (0.80)	2 (0.50)		
Total score	13	12	12	11	14	13	13		
Assessment rating	Good	Good	Good	Fair	Good	Good	Good		
Instantaneous mortality (z)	0.41	0.40	0.42	0.41	0.39	0.56	0.48		
Annual mortality (A)	33.60	32.60	34.30	33.50	32.10	42.80	38.40		
BBRPSDEW.D03-D05									
EFDDLSS.D06-D09									
BBRSCDEW.D03									
EFDDLAS.D08									

Table 47. Length-frequency distribution of each black bass species captured during 2.575 hours of 15-minute nocturnal electrofishing runs at Dewey Lake (1,100 acres) on 15 September 2009. Standard errors are in parentheses.

Area	Species	Inch class																				Total	CPUE
		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			
Lower	Spotted bass	3	5	1	3	2	3	4	3	2										26	20.73 (7.76)		
	Largemouth bass	29	31	7	52	96	54	37	17	9	2	4	1	2						341	270.78 (31.26)		
Upper	Spotted Bass						1													1	0.78 (0.78)		
	Largemouth bass	6	8	7	29	75	86	44	18	9	2	4	3	2	1	1	2	1	1	299	228.00 (22.17)		
Total	Spotted bass	3	5	1	3	2	4	4	3	2										27	10.75 (4.96)		
	Largemouth bass	6	37	38	36	127	182	98	55	26	11	6	3	6	2	3	2	1	1	640	249.39 (19.42)		

EFDDLSF.D09

Table 48. Indices of year class strength at age-0 and age-1 and mean lengths (in) of age-0 largemouth bass at Dewey Lake (1,100 acres) from electrofishing. CPUE=fish/hr, SE=standard error.

Year class	Mean length	Age 0			Age 0 ≥ 5.0 in			Age 1		
		SE	CPUE	SE	CPUE	SE	CPUE	SE		
2002	5.0	0.04	75.58	14.20	37.56	9.36	61.23	9.44		
2003	4.9	0.08	38.89	10.64	15.11	3.79	79.69	10.46		
2004	5.2	0.06	45.20	7.11	25.40	4.60	24.76	4.12		
2005	4.4	0.06	58.67	16.12	16.89	6.60	27.90	5.49		
2006	5.1	0.07	38.97	9.89	21.32	5.82	48.98	9.18		
2007	4.8	0.09	54.28	12.82	21.15	4.23	49.46	10.04		
2008	5.0	0.07	54.93	14.31	30.03	7.36	55.59	12.08		
2009	5.3	0.09	45.68	8.81	28.78	5.17				

BBRPSDEW.D03-D05

BBRDLSF.D02

BBRWRDEW.D03-D04

BBRSCDEW.D03

EFDDLSF.D05-D09

EFDDLLS.D06-D09

EFDDLLAS.D08

Table 49. Length frequency and electrofishing CPUE (fish/hr) of black bass collected in approximately 0.875 hours of 7.5-min. nocturnal electrofishing samples in Fishpond Lake (32 acres) on 22 April 2009; numbers in parentheses are standard errors.

Species	Inch class																							Total	CPUE
	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23							
LMB	2	8	7	6	9	16	30	17	9	2	3	1	2	2	3	3	1	1	1	123	140.57	(15.50)			

LMB = largemouth bass
EFDPLSS.D09

Table 50. Spring nocturnal electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Fishpond Lake (32 acres). S.E. = standard error.

Year	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in		Total
	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	
2004	78.85	12.20	75.96	7.90	45.19	5.90	39.42	6.70	3.85	2.91	239.50
2006	31.88	5.54	168.05	9.90	14.67	3.82	30.42	2.40	7.94	2.92	245.02
2008	4.97	1.99	109.29	13.59	61.79	6.21	16.86	3.33	11.63	2.39	192.91
2009	11.43	2.38	43.43	6.73	64.00	10.62	21.71	4.17	10.29	2.88	140.57

EFDPLSS.D04
EFDPLSS.D06
EFDPLSS.D08-D09

Table 51. PSD and RSD₁₅ values obtained for largemouth bass species taken in spring nocturnal electrofishing samples in Fishpond Lake (32 acres) on 22 April 2009; 95% confidence intervals are in parentheses.

No. >8.0 in	PSD (+/- 95%)	RSD ₁₅ (+/- 95%)
179	66.37 (57.62-75.12)	16.81 (9.88-23.74)

EFDPLSS.D09

Table 52. Length frequency and CPUE (fish/hr) of black bass collected in approximately 1,520 hours of 15-minute nocturnal electrofishing samples on Fishtrap Lake (1,143 acres) 27 May 2009; numbers in parentheses are standard errors.

Area/ Species	Inch class																				Total	CPUE
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20					
Lower																						
LMB	4	9	10	1	3	15	21	9	9	2	2	1	4	2	1					93		
SMB	4	2	2	2	3	1	1	1	1					2	1					17		
SB	4	1	1	2	9	2	5													24		
Upper																						
LMB	3	24	16		5	19	14	7	9	4	5	3	1	2						113		
SMB							2													2		
SB																				0		
Total																						
LMB	7	33	26	1	8	34	35	16	18	6	7	4	5	4	1					206		
SMB	4	2	2	2	3	3	1	1						2	1					19		
SB	4	1	1	2	9	2	5													24		

LMB = largemouth bass

SB = spotted bass

SMB = smallmouth bass

EFDPLSS.D09

Table 53. Spring electrofishing CPUE (fish/hr) for each length group of largemouth and smallmouth bass at Fishtrap Lake (1,143 acres).

Year	Largemouth bass length group												Total	
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in		Total		CPUE	S.E.
	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.		
2000	28.70	4.20	29.00	2.30	19.00	2.60	23.00	4.30	3.40			99.70	9.90	
2001	20.30	3.70	32.70	4.30	17.30	2.50	10.30	2.90	1.30			80.70	7.70	
2002	no data													
2003	43.00	4.40	25.00	7.60	16.00	4.90	11.00	3.40	2.00			95.00	4.10	
2004	44.70	6.80	45.10	5.80	19.30	2.20	13.10	3.90	1.50			122.20	10.70	
2005	61.80	10.20	67.60	10.00	38.90	6.50	14.90	2.00	0.00			183.30	20.80	
2006	52.50	8.80	37.60	1.90	33.00	3.40	4.00	0.70	0.00			127.10	11.60	
2007	28.69	4.73	53.93	8.34	33.00	3.47	7.91	1.85	1.19	0.85		123.52	13.48	
2008	39.49	12.67	31.06	3.49	31.99	5.81	9.37	2.66	0.00			111.91	14.98	
2009	44.17	10.71	61.44	11.75	20.42	4.78	9.85	2.44	0.64			135.88	15.05	

Year	Smallmouth bass length group												Total	
	<8.0 in		8.0-10.9 in		11.0-13.9 in		>14.0 in		>17.0 in		Total		CPUE	S.E.
	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.		
2000	4.70	1.60	3.30	1.80	1.70	0.60	0.00		0.00			9.70	3.30	
2001	4.70	2.00	7.70	2.40	4.30	1.40	0.70	0.50	0.00			17.30	4.90	
2002	no data													
2003	1.00	1.00	4.00	2.80	2.00	2.00	1.00	1.00	0.33			8.00	4.90	
2004	5.10	2.20	9.50	3.00	4.40	1.40	2.90	1.60	0.45			21.80	6.60	
2005	4.40	1.70	4.70	2.20	4.40	2.00	1.80	0.80	0.36			15.30	5.30	
2006	8.30	4.30	5.00	1.90	3.00	1.10	1.30	0.70	0.66			17.80	6.20	
2007	8.39	2.83	11.59	4.71	5.58	1.71	2.38	1.06	1.19	0.61		27.95	8.67	
2008	1.50	1.05	2.47	0.72	2.97	1.25	1.50	1.50	0.50	0.50		8.43	3.07	
2009	5.27	3.17	3.97	1.02	1.31	1.31	1.98	1.35	1.98	1.35		12.52	4.93	

EFDLSS.D00-D09

Table 54. PSD and RSD values obtained for black bass collected in spring electrofishing samples in each area of Fishtrap Lake during 2009; 95% confidence intervals are in parentheses; largemouth bass stock size ≥ 8.0 in and smallmouth and spotted bass stock size > 7.0 in.

Area	Species	No. \geq stock size	PSD (+/- 95%)	RSD ^A (+/- 95%)
Lower	largemouth bass	69	30 (20-41)	12 (4-19)
	smallmouth bass	11	45 (15-76)	27 (0-55)
	spotted bass	18		
Upper	largemouth bass	70	36 (24-47)	10 (3-17)
	smallmouth bass	2		
Total	spotted bass			
	largemouth bass	139	33 (25-41)	11 (6-16)
	smallmouth bass	13	38 (11-66)	23 (0-47)
	spotted bass	18		

^A Largemouth bass = RSD₁₅, smallmouth and spotted bass = RSD₁₄

EFDLLSS.D09

Table 55. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Fishtrap Lake (1.143 acres) from 2003-2009.

Age	Year							
	2003	2004	2005	2006	2007	2008	2009	
1	42.00	44.73	61.45	52.49	28.29	38.51	44.17	
2	26.79	46.82	73.41	43.50	57.76	34.78	64.39	
3	9.61	13.30	26.53	22.99	22.68	21.33	14.08	
4	7.20	7.30	9.60	5.21	8.79	9.12	6.42	
5	2.50	2.53	4.93	1.13	2.05	2.10	3.15	
6	0.50	1.45	1.09	0.16	0.39	0.99	0.33	
7	4.40	4.96	5.69	1.60	2.57	4.11	3.02	
8	1.00	1.09			0.60		0.32	

EFDLLSS.D03-D09

EFDLLAS.D04

Table 56. Spring electrofishing catch rate (fish/hr) for each age of smallmouth bass collected from Fishtrap Lake (1,143 acres) from 2006-2009.

Age	Year			
	2006	2007	2008	2009
1	6.97	6.39	1.50	3.95
2	5.80	13.39	3.46	4.94
3	2.81	4.98	1.73	1.65
4	0.33	1.59	0.25	
5	0.49	1.00	1.25	0.66
6	0.16	0.20	0.25	0.66

EFDLLSS.D06-D09

EFDLSAS.D07

Table 57. Population assessments for largemouth bass collected from Fishtrap Lake (1,143 acres). Actual values are in parentheses. Scoring based on statewide assessment.

Parameter	Year						
	2003	2004	2005	2006	2007	2008	2009
Mean length age 3 at capture	4 (13.6)	4 (13.6)	4 (13.6)	4 (13.6)	4 (13.6)	4 (13.6)	4 (13.6)
Spring CPUE age 1	3 (42.00)	2 (35.40)	4 (61.50)	4 (52.50)	2 (28.29)	3 (38.51)	3 (44.17)
Spring CPUE 12.0-14.9 in	2 (16.00)	2 (19.30)	4 (38.90)	3 (33.00)	3 (33.00)	3 (31.99)	2 (20.42)
Spring CPUE \geq 15.0 in	2 (11.00)	3 (13.10)	3 (14.90)	1 (4.00)	2 (7.91)	2 (9.37)	2 (9.85)
Spring CPUE \geq 20.0 in	3 (2.00)	2 (1.50)	0 (0.00)	0 (0.00)	2 (1.19)	0 (0.00)	2 (0.64)
Total score	14	13	15	12	13	12	13
Assessment rating	Good	Good	Good	Good	Good	Good	Good
Instantaneous mortality (z)	0.52	0.56	0.65	0.83	0.72	0.59	0.67
Annual mortality (A)	40.40	42.70	48.00	56.50	51.30	44.30	49.10

EFDLLSS.D03-D09
EFDLLAS.D04

Table 58. Population assessments for smallmouth bass collected from Fishtrap Lake (1,143 acres). Actual values are in parentheses. Scoring based on statewide assessment.

Parameter	Year			
	2006	2007	2008	2009
Mean length age 3 at capture	4 (12.5)	4 (12.5)	4 (12.5)	4 (12.5)
Spring CPUE age 1	2 (6.97)	2 (6.39)	2 (1.50)	2 (3.95)
Spring CPUE 11.0-13.9 in	3 (2.97)	3 (5.58)	3 (2.97)	2 (1.31)
Spring CPUE \geq 14.0 in	3 (1.32)	4 (2.38)	3 (1.50)	3 (1.98)
Spring CPUE \geq 17.0 in	4 (0.66)	4 (1.19)	4 (0.50)	4 (1.98)
Total score	16	17	16	15
Assessment rating	Good	Excellent	Good	Good
Instantaneous mortality (z)	0.69	0.85	0.56	0.44
Annual mortality (A)	49.60	57.30	42.70	35.50

EFDLLSS.D06-D09

EFDLSAS.D07

Table 59. Length frequency and CPUE (fish/hr) of black bass collected in approximately 1,500 hours of 15-minute nocturnal electrofishing samples at Fishtrap Lake (1,143 acres) on 23 September 2009; numbers in parentheses are standard errors.

Area/ Species	Inch class																		Total	CPUE	
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			
Lower																					
SMB			3		1	2	1									1					
SB			1	1	3	2	4	2	3	1		1									
LMB	1	9	18	12	1	3	14	5	5	5		1	2	1		2	4	1			
Upper																					
SMB																					
SB																					
LMB	21	35	24	5	5	12	21	5	2	2				2	1	1	1				
Total																					
SMB			3		1	2	1									1					
SB			1	1	3	2	4	2	3	1		1									
LMB	22	44	42	17	6	15	35	10	7	7		1	2	3	1	3	5	1			

LMB = largemouth bass
SMB = smallmouth bass
SB = spotted bass
EFDLFSF.D09

Table 60. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected at Fishtrap Lake (1,143 acres).

Year class	Age 0		Age 0		Age 0 >5.0 in		Age 1	
	Mean length	SE	CPUE	SE	CPUE	SE	CPUE	SE
2003	5.1	0.04	106.20	32.90	59.60	15.90	35.35	6.00
2004	5.0	0.03	256.00	51.10	122.67	23.90	61.50	10.15
2005	4.5	0.05	108.00	41.30	24.00	11.10	52.49	8.75
2006	5.0	0.05	72.70	14.10	36.50	8.00	28.29	4.49
2007	5.1	0.05	114.20	23.70	63.50	11.03	38.51	12.06
2008	4.6	0.06	75.30	25.85	26.34	9.49	44.17	10.71
2009	4.8	0.08	83.33	15.09	39.33	5.41		

EFDLFSF.D03-D09
EFDLSS.D04-D09
EFDLLAS.04

Table 61. Length frequency and gillnetting CPUE (fish/net-night) of hybrid striped bass collected in 3 net-nights at Fishtrap Lake (1,143 acres) on 3 December 2009; numbers in parentheses are standard errors.

Species	Inch class															Total	CPUE	
	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			25
HB	1	5	17	32	4	4	14	28	28	20	19	29	20	5	6	1	233	77.67 (28.00)
WB			1														1	0.33 (0.33)

EFDLHGF.D09

HB=hybrid striped bass

WB=white bass

Table 62. Mean back-calculated length (in) at each annulus for hybrid striped bass collected from Fishtrap Lake (1,143 acres) in 2009, including the length range of bass at each age and the 95% confidence intervals for each age group.

Year class	No.	Age						
		1	2	3	4	5	6	7
2008	33	7.6						
2007	33	8.9	14.1					
2006	32	9.3	15.6	18.8				
2005	10	9.4	16.2	19.7	21.5			
2004	7	9.2	16.4	19.9	22.0	23.2		
2003	3	8.7	16.2	19.1	20.9	21.9	22.8	
2002	1	10.8	16.0	18.9	20.8	21.9	23.0	23.5
Mean		8.7	15.2	19.1	21.6	22.8	22.9	23.5
Smallest		6.0	11.9	16.4	19.8	21.0	21.9	23.5
Largest		11.5	17.9	21.7	23.4	24.4	23.6	23.5
Std error		0.1	0.1	0.2	0.2	0.3	0.4	
95% CI LO		8.5	14.9	18.8	21.1	22.2	22.2	
95% CI HI		8.9	15.5	19.5	22.0	23.3	23.6	

intercept=0

EFDLHAF.D09

Table 63. Age frequency and CPUE (fish/net-night) of hybrid striped bass collected at Fishtrap Lake (1,143 acres) in December 2009.

Age	Inch class															Total	Age%	CPUE		
	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					25
1	1	5	17	32	4	2											61	26	20.33	(12.18)
2						2	14	28	22	4							70	30	23.47	(10.34)
3									6	16	17	20	11				70	30	23.30	(4.04)
4											2	9	5	1	2		19	8	6.35	(0.99)
5													2	2	3	1	8	3	2.61	(0.28)
6													2	1	1		4	2	1.27	(0.22)
7														1			1	0	0.33	(0.24)
Total	1	5	17	32	4	4	14	28	28	20	19	29	20	5	6	1	233	100		
%	0	2	7	14	2	2	6	12	12	9	8	12	9	2	3	0	100			

EFDFLHAF D09
EFDFLHGF D09

Table 64. Hybrid striped bass population assessment for fish gill netted at Fishtrap Lake (1,143 acres) from 1997 - 2009, CPUE = fish/net-night. Scoring based on statewide assessment.

Parameters	Year								
	1997	1999	2000	2002	2004	2005	2007	2009	
CPUE	1	3	3	4	3	4	4	4	
Actual value	2.56	10.47	31.43	28.80	15.00	29.13	26.75	77.67	
Mean length age 2+ at capture	1	3	2	3	1	3	3	3	
Actual value	15.5	17.4	16.0	17.3	13.7	17.3	17.6	17.4	
CPUE \geq 15.0 in	1	3	3	4	3	4	4	4	
Actual value	0.56	7.94	18.80	16.90	5.00	14.91	17.75	58.00	
CPUE age-1	1	1	3	4	2	3	3	4	
Actual value	1.33	1.81	7.92	12.60	4.60	9.38	9.29	20.33	
Total Score	4	10	11	15	9	14	14	15	
Assessment rating	Poor	Good	Good	Excellent	Fair	Excellent	Excellent	Excellent	
Instantaneous mortality	0.56	0.67	0.67	0.87	0.45	0.62	0.44	1.01	
Annual mortality	42.90	48.90	48.60	58.20	36.00	46.40	35.60	63.40	

EFDFLHAF D97-D09
EFDFLHGF D97-D09

Table 65. Length frequency and CPUE (fish/hr) of bluegill and redear sunfish collected in 0.522 hours of 7.5 minute daytime electrofishing runs at Martin County Lake (3 acres) on 19 April 2009. SE = standard error.

Species	Inch class										Total	CPUE	SE
	1	2	3	4	5	6	7	8	9	10			
BG	16	19	48	38	37	21	23	6	2	210	401.39	59.98	
RE				4	3				1	1	9	17.36	8.48

BG = bluegill
 RE = redear sunfish
 EFDMCBSS.D09

Table 66. Length frequency and CPUE (fish/hr) of bluegill and redear sunfish collected in spring electrofishing samples at Martin County Lake (3 acres). SE = standard error.

Year	CPUE	SE	Length group										Total	CPUE	SE
			<3.0 in	3.0-5.9 in	6.0-7.9 in	8.0-9.9 in	>10.0 in								
Bluegill	215.38	5.51	223.07	2.52	10.25	0.33	7.69	0.00	2.56	0.00	458.97	39.81			
	90.60	27.40	240.20	72.40	13.30	1.50	1.50	1.50			345.60	99.20			
	130.77	35.53	171.79	9.25	20.51	6.78	7.69	4.44			330.77	32.03			
	67.52	22.06	234.81	31.76	83.84	17.36	15.21	4.29			401.39	59.98			
Redear sunfish															
					12.82	0.33	2.56	0.00	5.12	0.00	20.51	5.13			
							4.60	3.10			4.60	3.10			
	7.69	7.69	10.26	2.56	2.56	2.56					20.51	5.13			
			7.79	4.50	5.79	1.93	1.90	1.90	1.89	1.89	17.36	8.48			
EFDMCBSS.D02															
EFDMCBSS.D03															
EFDMCBSS.D05															
EFDMCBSS.D09															

Table 67. Electrofishing catch rate (fish/hr) for each age of bluegill collected from Martin County Lake (3 acres).

Age	Year		
	2002	2003	2005
1	315.38	177.00	187.69
2	124.36	146.61	111.03
3	8.97	17.36	21.79
4	2.56		
5	5.13		

EFDMCBSS.D02
 EFDMCBAS.D02
 EFDMCBSS.D03
 EFDMCBSS.D05
 EFDMCBSS.D09

Table 68. PSD and RSD_s values obtained for bluegill and redear sunfish collected at Martin County Lake (3 acres) on 19 April 2009; 95% confidence intervals are in parentheses.

Species	No. >stock size	PSD (+/- 95%)	RSD _s (+/- 95%)
Bluegill	175	30 (23-37)	5 (1-8)
Redear sunfish	9	22 (0-51)	22 (0-51)

EFDMCBSS.D09

Table 69. Population assessment for bluegill collected from Martin County Lake (3 acres). Actual values are in parentheses. Scoring based on statewide assessment.

Parameter	Year			
	2002	2003	2005	2009
Mean length age-2 at capture	3 (4.5)	3 (4.5)	3 (4.5)	3 (4.5)
Years to 6.0 in	3 (3-3+)	3 (3-3+)	3 (3-3+)	3 (3-3+)
CPUE \geq 6.0 in	1 (20.60)	1 (14.80)	2 (28.20)	4 (99.06)
CPUE \geq 8.0 in	3 (10.30)	2 (1.50)	3 (7.70)	4 (15.21)
Total score	10	9	11	14
Assessment rating	Fair	Fair	Good	Excellent
Instantaneous mortality (Z)	1.69	1.16	1.05	1.44
Annual mortality (A)	81.6	68.8	64.9	76.3

EFDMCBAS.D03

EFDMCBSS.D02, D03, D05, D09

Table 70. Length frequency and CPUE (fish/hr) of bluegill and green sunfish collected in 0.689 hours of 7.5 minute daytime electrofishing runs at Martin County Reservoir (19 acres) on 20 May 2009. SE = standard error.

Species	Inch class									Total	CPUE	SE
	1	2	3	4	5	6	7	8	9			
BG	4	5	5	2	5	6	2	8	5	42	62.81	19.26
GS			2		4	1	1			8	11.33	4.84

BG = bluegill

GS = green sunfish

EFDMRBSS.D09

Table 71. Length frequency and CPUE (fish/hr) of bluegill collected in spring electrofishing samples at Martin County Reservoir (19 acres). SE = standard error.

Year	Length group										Total	
	<3.0 in		3.0-5.9 in		6.0-7.9 in		8.0-9.9 in		≥10.0 in		CPUE	SE
2005	2.56	1.62	7.69	6.28	10.26	3.80	5.13	3.24			25.60	7.60
2009	14.29	8.93	18.50	9.84	11.39	5.57	18.63	6.47			62.81	19.26

EFDMRBSS.D05, D09

Table 72. Mean back-calculated length (in) at each annulus for bluegill collected from Martin County Reservoir (19 acres) on 20 May 2009, including 95% confidence intervals.

Year class	No.	Age					
		1	2	3	4	5	6
2008	5	2.0					
2007	13	2.6	4.8				
2006	8	2.0	4.2	6.7			
2005	5	2.7	4.6	7.1	8.7		
2004	1	2.7	5.2	8.0	8.6	9.1	
2003	4	3.1	5.2	7.3	8.6	9.0	9.5
Mean		2.4	4.7	7.0	8.6	9.0	9.5
Smallest		1.4	3.3	5.6	8.2	8.7	9.2
Largest		4.8	8.0	8.1	9.4	9.4	9.9
STD error		0.1	0.2	0.2	0.1	0.1	0.1
95% CI LO		2.2	4.3	6.6	8.4	8.8	9.2
95% CI HI		2.7	5.1	7.4	8.8	9.3	9.8

Intercept = 0

EFDMRBAS D09

Table 73. Electrofishing catch rate (fish/hr) for each age of bluegill collected from Martin County Reservoir (19 acres).

Age	Year	
	2005	2009
1	2.56	14.3
2	10.15	21.3
3	8.65	12.3
4	2.14	8.7
5	0.43	1.2
6	1.71	4.9

EFDMRBAS.D09

EFDMRBSS.D05, D09

Table 74. PSD and RSD_8 values obtained for bluegill collected at Martin County Reservoir (19 acres) on 20 May 2009; 95% confidence intervals are in parentheses.

Species	No. \geq stock size	PSD (+/- 95%)	RSD_8 (+/- 95%)
Bluegill	33	64 (47-80)	39 (22-56)

EFDMRBSS.D09

Table 75. Population assessment for bluegill collected from Martin County Reservoir (19 acres). Actual values are in parentheses. Scoring based on statewide assessment.

Parameter	Year	
	2005	2009
Mean length age-2 at capture	3 (4.9)	3 (4.9)
Years to 6.0 in	4 (2-3)	4 (2-3)
CPUE \geq 6.0 in	1 (15.38)	2 (30.02)
CPUE $>$ 8.0 in	2 (5.13)	4 (18.63)
Total score	10	13
Assessment rating	Fair	Good
Instantaneous mortality (Z)	0.51	0.53
Annual mortality (A)	39.90	41.00

EFDMRBAS.D09
EFDMRBSS.D05, D09

Table 76 Length frequency and CPUE (fish/hr) of black bass and walleye collected in 1.254 hours of 15-min nocturnal electrofishing runs in Martins Fork Lake (330 acres) on 30 April 2009; 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
LMB	1	2	1	6	4	11	4	8	2	5	3	4	7	2	2	1	2	65	51.81 (7.43)
RB					2	1	1		1									5	4.00 (2.53)
SB	2	3	4	13	8	9	8	7	2	2	1							59	47.09 (7.43)
WE																		0	0.00

LMB = largemouth bass

RB = redeye bass (coosa bass)

SB = spotted bass

WE = walleye

EFDMLLSS.D09

Table 77. Spring nocturnal electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Martins Fork Lake (330 acres). S.E. = standard error.

Year	Inch class											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in		Total	
	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2003	14.00	3.70	22.00	3.80	3.30	1.20	5.30	2.00	0.00	0.00	68.00	15.70
2004	2.67	2.70	89.33	19.20	4.00	2.30	5.33	3.50	0.00	0.00	101.30	26.80
2005	4.80	2.30	23.20	6.00	17.60	4.80	4.80	2.00	0.00	0.00	50.40	10.80
2006	9.30	1.97	19.89	6.03	13.26	2.99	9.30	2.66	0.70	0.70	51.74	10.70
2007	7.86	3.30	48.64	13.30	15.65	2.58	21.13	5.27	1.57	0.96	93.27	19.34
2008	7.80	4.80	19.46	7.18	20.21	3.74	19.41	2.41	0.77	0.77	66.88	12.21
2009	11.15	4.06	19.92	3.32	9.57	2.04	11.16	1.48	1.59	0.97	51.81	7.43

EFDMLLSS.D03-D09

Table 78. PSD and RSD values obtained for each black bass species taken in spring nocturnal electrofishing samples in Martins Fork Lake (330 acres) in April 2009; 95% confidence intervals are in parentheses; largemouth bass stock size ≥ 8.0 in and spotted bass stock size > 7.0 in.

Species	No. $>$ stock size	PSD (+/- 95%)	RSD ^a (+/- 95%)
Spotted bass	37	14 (2-25)	
Largemouth bass	51	51 (37-65)	27 (15-40)

^a Largemouth bass = RSD₁₅; spotted bass = RSD₁₄

EFDMLLSS.D09

Table 79. Mean back-calculated length (in) at each annulus for largemouth bass collected from Martins Fork Lake (330 acres) on 30 April 2009, including 95% confidence intervals.

Year	Age						
	1	2	3	4	5	6	7
2008	5	4.9					
2007	15	5.5	8.4				
2006	13	5.7	9.5	11.8			
2005	10	5.8	9.7	12.4	14.5		
2004	1	5.9	9.6	12.3	14.7	17.1	
2003	2	6.6	10.6	13.8	15.9	18.0	19.1
2002	2	7.0	10.6	12.8	15.1	16.6	17.6
							18.5
Mean		5.7	9.3	12.3	14.8	17.2	18.3
Smallest		3.8	7.0	10.1	12.3	16.0	16.8
Largest		7.2	12.0	15.6	17.8	19.8	20.6
STD error		0.1	0.2	0.2	0.3	0.7	0.8
95% CI LO		5.4	9.0	11.8	14.2	15.9	16.7
95% CI HI		5.9	9.6	12.7	15.4	18.5	20.0
Intercept = 0							20.3

EFDMLLAS.D09

Table 80. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Martins Fork Lake (330 acres) from 2003-2009.

Age	Year						
	2003	2004	2005	2006	2007	2008	2009
1	15.31	10.86	5.37	9.98	10.12	9.98	7.17
2	19.35	78.25	20.76	17.66	41.28	17.80	15.14
3	3.33	6.89	15.47	9.49	8.22	13.50	12.39
4	2.67	1.33	2.40	6.64	15.65	10.06	10.74
5	0.67			1.33	2.36	3.90	0.53
6							2.12
7							1.32

EFDMLLSS.D03-D09
EFDMLLAS.D03, D09

Table 81. Spring electrofishing population assessments for largemouth bass collected from Martins Fork Lake (330 acres). Actual values are in parentheses. Scoring based on statewide assessment.

Parameter	Year									
	2003	2004	2005	2006	2007	2008	2009			
Mean length age-3 at capture	4 (14.3)	4 (14.3)	4 (14.3)	4 (14.3)	4 (14.3)	4 (14.3)	4 (14.3)	3 (11.8)		
Spring CPUE age 1	2 (32.20)	1 (10.90)	1 (5.40)	1 (9.98)	1 (10.12)	1 (9.98)	1 (7.17)			
Spring CPUE 12.0-14.9 in	1 (3.30)	1 (4.00)	1 (17.60)	1 (13.30)	1 (15.65)	2 (20.21)	1 (9.57)			
Spring CPUE \geq 15.0 in	2 (5.30)	2 (5.30)	2 (4.80)	2 (9.30)	3 (21.13)	3 (19.41)	2 (11.16)			
Spring CPUE >20.0 in	0 (0.00)	0 (0.00)	0 (0.00)	1 (0.70)	2 (1.57)	1 (0.77)	2 (1.59)			
Total score	9	8	8	9	11	11	9			
Assessment rating	Fair	Fair	Fair	Fair	Fair	Fair	Fair			
Instantaneous mortality (z)	1.03	2.04	1.08	0.81	0.80	0.48	0.54			
Annual mortality (A)	64.40	87.00	66.00	55.70	55.10	38.40	41.60			
EFDMLLSS.D03-D09										
EFDMLLAS.D03, D09										

Table 82. Length frequency and CPUE (fish/hr) of black bass collected at Martins Fork Lake (330 acres) during 1.25 hours of 15 minute nocturnal electrofishing samples on 21 September 2009; 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			
LMB	14	6	9	4	4	4	3						3	2	1	1	1	51	40.80 (5.85)	
RB	3	11	6	1	2	2												25	20.00 (3.79)	
SB	3	3	3	4	12	8	8	2	3	1	1							48	38.40 (7.44)	
SMB	3	1								1								5	4.00 (2.19)	

LMB = largemouth bass
 RB = redeye bass (coosa bass)
 SB = spotted bass
 SMB = smallmouth bass
 EFDMLLSF.D09

Table 83. Electrofishing indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected during 2002 - 2009 at Martins Fork Lake (330 acres); CPUE = fish/hr, SE = standard error.

Year class	Mean length	Age 0			Age 0 >=5.0 in			Age 1		
		SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2002	5.50	0.12	34.40	8.60	25.60	7.90	15.30	3.60	77.50	18.50
2003	no fall sample						24.60	5.90		
2004	no fall sample						9.98	2.30		
2005	4.40	0.17	32.00	4.30	10.00	2.60	10.12	3.36		
2006	4.50	0.13	38.40	14.50	11.20	3.20	9.98	5.09		
2007	4.63	0.15	28.68	8.65	10.36	2.99	7.17	2.93		
2008	4.44	0.15	31.87	14.27	10.33	2.72				
2009	4.33	0.17	23.20	8.33	7.20	2.33				

EFDMLLSF.D02
 EFDMLLSF.D05-D09
 EFDMLLS.D03-D09
 EFDMLLAS.D03, D09

Table 84. Mean back-calculated length (in) at each annulus for walleye collected from Martins Fork Lake (330 acres) on 16 March 2009, including 95% confidence intervals.

Year	class	No.	Age																	
			1	2	3	4	5	6	7	8	9	10								
2004	12	9.3	12.8	16.3	19.2	20.7														
2003	3	10.7	18.7	20.7	22.7	24.2	25.4													
2000	1	9.0	12.9	15.4	17.2	18.4	19.7	20.6	21.4	22.3										
1999	1	9.3	13.7	16.8	19.5	20.3	22.1	23.0	23.9	24.8	25.2									
Mean		9.5	13.9	17.0	19.7	21.2	23.6	21.8	22.7	23.5	25.2									
Smallest		8.1	11.8	14.8	17.2	18.4	19.7	20.6	21.4	22.3	25.2									
Largest		11.4	23.4	21.5	23.6	25.4	26.7	23.0	23.9	24.8	25.2									
STD error		0.2	0.7	0.5	0.4	0.4	1.2	1.2	1.2	1.2	1.2									
95% CI LO		9.1	12.6	16.0	18.8	20.3	21.2	19.4	20.3	21.1										
95% CI HI		9.9	15.3	18.0	20.6	22.0	26.0	24.1	25.0	25.9										

Intercept = 0

EFDMLWSS.D09

Table 85. Length frequency and CPUE (fish/hr) of black bass collected in 1,029 hours of 15-minute nocturnal electrofishing samples in Paintsville Lake (1,150 acres) on 27 April 2009; numbers in parentheses are standard errors.

Species/Area	inch class																			Total	CPUE				
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19									
Upper																									
LMB	7	13	2	6	24	3	6	2	2	4	2	2	1	1	1	1	1	1	1	1	74	95.54	(9.07)		
SMB																					0	0.00	(0.00)		
SB	2			1	1					1	2	1									8	10.32	(5.68)		
Lower																									
LMB	3	4		1	5	2	3	2													20	121.33	(45.33)		
SMB																					0	0.00	(0.00)		
SB					1																1	2.00	(2.00)		
Total																									
LMB	10	17	2	7	29	5	9	4	2	4	2	1	1	1	1	1	1	1	1	1	94	105.86	(16.43)		
SMB																					0	0.00	(0.00)		
SB	2			1	2					1	2	1									9	6.99	(3.77)		

LMB = largemouth bass

SMB = smallmouth bass

SB= spotted bass

EFDPLLS.D09

Table 86. Spring nocturnal electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Paintsville Lake (1,150 acres). SE = standard error.

Year	Length group												Total
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in				
	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	
1988	6.81		10.55		1.62		0.29		0.00		19.30		
1989	15.43		16.01		3.42		0.85		0.00		36.30		
1990	34.00		31.33		2.67		2.00		0.00		70.00		
1991	26.55		33.09		12.00		0.36		0.40		72.00		
1992	16.43		43.96		21.26		0.72		0.00		82.37		
1993	16.36		26.33		22.50		2.81		0.63		68.00		
1994	34.00		47.40		26.60		3.56		0.27		111.60	15.60	
1995	no sample												
1996	no sample												
1997	29.00		40.00		26.33		1.00		0.30		96.33	11.53	
1998	25.70		87.69		26.34		0.00		0.00		139.70	17.90	
1999	36.33		65.67		36.67		2.33		0.00		141.00	12.07	
2000	12.67	4.97	95.00	19.57	27.00	7.83	2.00	0.78	0.00	0.00	136.67	27.97	
2001	42.33	5.45	63.00	10.84	46.67	4.81	4.33	0.92	0.67	0.45	156.33	17.52	
2002	41.80	1.80	70.50	2.70	36.00	1.40	2.20	0.20	0.00	0.00	150.90	14.20	
2003	106.00	21.17	71.00	10.80	19.67	5.65	3.00	1.31	0.31	0.31	199.67	35.19	
2004	62.67	10.90	92.00	19.20	17.00	3.40	2.00	0.90	0.00	0.00	173.70	25.40	
2005	80.40	31.90	133.30	38.90	35.10	6.00	6.20	1.20	0.44	0.44	255.10	72.70	
2006	30.55	4.43	65.11	12.57	13.60	1.92	2.64	1.12	0.00	0.00	111.91	14.27	
2007	39.83	9.49	81.55	22.98	11.11	3.11	6.53	0.84	0.00	0.00	139.03	20.47	
2008	37.80	6.55	79.25	11.91	9.84	1.75	3.96	1.56	0.39	0.39	130.84	14.14	
2009	28.11	8.00	69.22	24.61	6.20	2.62	2.33	0.95	0.00	0.00	105.86	16.43	

EFDPLSS.D88-D09

Table 87. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples in each area of Paintsville Lake (1,150 acres) on 27 April 2009; 95% confidence intervals are in parentheses; largemouth bass stock size ≥ 8.0 in and spotted bass stock size ≥ 7.0 in.

Area	Species	No. > stock size	PSD (+/- 95%)	RSD ^a (+/- 95%)
Upper	Spotted bass	6	67	50
	Largemouth bass	46	(25-108) 24 (11-36)	(6-94) 7 (0-14)
Lower	Spotted bass	1		
	Largemouth bass	12		
Total	Spotted bass	7	57 (18-97)	43 (3-82)
	Largemouth bass	58	19 (9-29)	5 (0-11)

^a Largemouth bass = RSD₁₅; spotted bass = RSD₁₄.

EFDPLLSS.D09

Table 88. Spring nocturnal electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Paintsville Lake (1,150 acres).

Age	Year									
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	11.80	41.00	41.20	68.30	54.60	75.60	12.28	37.95	29.76	25.16
2	68.80	29.70	50.30	21.36	81.80	104.10	70.36	47.30	72.43	34.15
3	42.60	65.70	42.80	11.19	22.40	55.60	18.87	43.41	19.95	40.18
4	7.10	9.60	8.70	4.46	9.60	8.70	4.46	3.51	3.23	2.08
5	2.90	3.90	3.90	1.28	2.60	4.10	2.86	1.63	2.04	1.44
6	1.70	2.80	2.50	0.31	1.10	1.90	2.76	1.95	1.85	0.52
7						0.40				

EFDPLLSS.D00-D09

EFDPLLAS.D03

EFDPLLAS.D06

Table 89. Spring nocturnal electrofishing population assessments for largemouth bass collected in Paintsville Lake (1,150 acres). Actual values are in parentheses. Scoring based on statewide assessment.

Parameter	Year									
	2002	2003	2004	2005	2006	2007	2008	2009		
Mean length age-3 at capture	2 (11.4)	2 (11.4)	2 (11.4)	2 (11.4)	3 (11.7)	3 (11.7)	3 (11.7)	3 (11.7)	3 (11.7)	3
Spring CPUE age 1	3 (41.20)	4 (95.20)	4 (61.44)	4 (75.60)	1 (12.30)	3 (37.95)	2 (29.76)	2 (25.16)		
Spring CPUE 12.0-14.9 in	4 (36.00)	2 (19.67)	2 (17.00)	4 (35.10)	1 (13.60)	1 (11.11)	1 (9.84)	1 (6.20)		
Spring CPUE \geq 15.0 in	1 (2.20)	1 (3.00)	1 (2.00)	2 (6.20)	1 (2.64)	2 (6.53)	1 (3.96)	1 (2.33)		
Spring CPUE \geq 20.0 in	0 (0.00)	2 (0.31)	0 (0.00)	2 (0.44)	0 (0.00)	0 (0.00)	2 (0.39)	0 (0.00)		
Total score	10	11	9	14	6	9	9	7		
Assessment rating	Fair	Fair	Fair	Good	Poor	Fair	Fair	Poor	Fair	Poor
Instantaneous mortality (z)	0.83	0.95	1.15	1.10	0.84	0.95	0.95	0.93		
Annual mortality (A)	56.50	61.30	68.20	66.60	56.80	61.20	61.30	60.40		
EFDPLLS.D02-D09										
EFDPLLAS.D03, D06										

Table 90. Length frequency and CPUE (fish/hr) of black bass collected in 1,259 hours of 15-minute nocturnal electrofishing samples in Paintsville Lake (1,150 acres) on 22 September 2009; numbers in parentheses are standard errors.

Area/ Species	Inch class																			Total	CPUE
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19			
Upper																					
LMB	1	16	27	12	11	27	14	11	3	1	2										
SMB																					
SB	8	1	1	2	1	2	1	2	1	1	1										
Lower																					
LMB	11	8	18	5	5	26	8	9	14	2											
SMB																					
SB	2	1	1	1	1	1	1	1	1	1											
Total																					
LMB	1	27	35	30	5	16	53	22	20	17	3	3	2	2	1	232	152.67	(23.20)			
SMB																					
SB	2	9	1	2	2	1	2	1	2	1	2	1	1	2	23	14.72	(9.43)				

LMB = largemouth bass
 SMB = smallmouth bass
 SB = spotted bass
 EFDPLLSF.D09

Table 91. Nocturnal electrofishing indices of year class strength at age-0 and age-1 and mean lengths (in) of largemouth bass collected at Paintsville Lake (1,150 acres); CPUE = fish/hr.

Year class	Age 0			Age 0 >= 5.0 in			Age 1			
	Mean length	Standard error	Standard error	CPUE	Standard error	Standard error	CPUE	Standard error	Standard error	
2003	4.80	0.08	6.10	31.30	6.10	2.20	14.00	2.20	61.44	10.70
2004	5.10	0.06	10.80	65.67	10.80	8.60	37.33	8.60	75.60	29.20
2005	4.50	0.09	9.60	46.00	9.60	2.70	10.70	2.70	12.30	2.40
2006	4.90	0.06	12.00	72.40	12.00	5.10	33.60	5.10	37.95	7.95
2007	5.05	0.06	24.04	52.35	24.04	15.57	30.20	15.57	29.76	4.56
2008	4.61	0.11	8.75	24.84	8.75	5.15	8.07	5.15	25.16	7.28
2009	4.58	0.09	13.30	64.57	13.30	23.08	23.08	10.74		

EFDPLLSF.D03-D09
 EFDPLLS.D04-D09
 EFDPLLAS.D03, D06

Table 92. Length frequency and CPUE (fish/hr) of walleye collected at Paintsville Lake (1,150 acres) during 4,365 hours of daytime spring electrofishing on 12 and 13 March 2009. Numbers in parentheses are standard errors.

Species	Inch class														Total	CPUE	SE	
	14	15	16	17	18	19	20	21	22	23	24	25	26	27				28
Walleye	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11	2.19	(1.05)

EFDPLWSS.D09

Table 93. Number of fish and relative weight (Wr) for each length group of walleye collected at Paintsville Lake (1,150 acres) on 12 and 13 March 2009. Numbers in parentheses are standard errors.

Length group	10.0-14.9 in		15.0-19.9 in		>20.0 in	
	No.	Wr	No.	Wr	No.	Wr
	1	90	4	92	6	98
		(3)		(3)		(3)

EFDPLWSS.D09

Table 94. Spring electrofishing population assessments for the walleye population at Paintsville Lake. Actual values are in parentheses. Scoring based on statewide assessment.

Parameter	Year	
	2008	2009
Population Density (CPUE all fish)	1 (7.91)	1 (2.19)
Growth rate (mean length age 3 at capture)	3 (17.4)	3 (17.4)
Size structure (CPUE \geq 20.0 in)	3 (3.49)	2 (1.28)
Recruitment (CPUE <13.0 in)	0 (0.00)	0 (0.00)
Total Score Assessment Rating	7 Fair	6 Fair
Instantaneous mortality (z)	0.31	0.16
Annual mortality (A)	26.70	14.60

EFDPLWSS.D09
EFDPLWAS.D08

Table 95. Length frequency and CPUE (fish/hr) of white crappie collected at Paintsville Lake (1,150 acres) during 4,365 hours of daytime spring electrofishing on 12 and 13 March 2009; numbers in parentheses are standard errors.

	Inch class												
	2	3	4	5	6	7	8	9	10	11	Total	CPUE	SE
2	6	5	49	34	28	13	1	4	2	144	39.02	(21.26)	

EFDPLWSS.D09

Table 96. Spring electrofishing CPUE (fish/hr) for each length group of white crappie collected at Paintsville Lake (1,150 acres). SE=standard error.

Year	Length group				Total	
	CPUE	SE	CPUE	SE	CPUE	SE
2008	3.79	1.48	1.42	0.50	8.09	5.79
2009	5.19	2.45	1.59	1.07	39.02	21.26

EFDPLWSS.D09

Table 97. PSD and RSD₁₀ values for white crappie taken in spring electrofishing samples at Paintsville Lake (1,150 acres) on 12 and 13 March 2009, 95% confidence intervals are in parentheses.

No. \geq 5.0 in	PSD (+/- 95%)	RSD ₁₀ (+/- 95%)
131	15 (9-21)	5 (1-8)

EFDPLWSS.D09

Table 98. Spring electrofishing catch rate (fish/hr) for each age of white crappie collected from Paintsville Lake (1,150 acres).

Age	Year	
	2008	2009
1	0.00	0.00
2	2.39	23.53
3	2.15	6.89
4	1.66	3.59
5	1.41	1.23
6		
7	0.24	

EFDPLWSS.D09
 EFDPLCAS.D08

Table 99. Length frequency and electrofishing CPUE (fish/hr) of largemouth bass collected at Pan Bowl Lake (98 acres) during 1,052 hours of 7.5 minute daytime runs on 27 April 2009. SE = standard error.

Species	Inch class																					Total	CPUE	SE
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21					
LMB	2	30	11	3	7	34	21	47	26	7	2	3	2	1	3	2	1	202	190.01	22.62				

LMB = largemouth bass
 EFDPLBSS.D09

Table 100. Spring daytime electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Pan Bowl Lake (98 acres). SE = standard error.

Year	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in		Total	
	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
2003	28.80	10.20	47.20	9.60	12.00	1.30	25.60	4.10	3.20		113.60	20.50
2004					no data							
2005	12.80	4.10	65.80	13.30	9.40	3.60	18.00	4.30	1.80		106.00	18.90
2006					no data							
2007	90.29	26.63	149.71	20.19	12.57	3.85	22.86	4.43	6.86	2.72	275.43	39.19
2008	28.00	10.03	91.00	15.56	21.50	6.37	18.00	4.72	7.00	1.81	158.50	26.87
2009	50.39	8.36	119.96	17.79	11.22	3.15	8.43	2.18	2.87	1.40	190.01	22.62

EFDPLSS.D03-D09

Table 101. PSD and RSD₁₅ values for largemouth bass taken in spring electrofishing samples in Pan Bowl Lake (98 acres) on 27 April 2009; 95% confidence intervals are in parentheses.

No. ≥8.0 in	PSD (+/- 95%)	RSD ₁₅ (+/- 95%)
149	14 (9-20)	6 (2-10)

EFDPLSS.D09

Table 102. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Pan Bowl Lake (98 acres) from 2003-2009.

Age	Year				
	2003	2005	2007	2008	2009
1	19.20	3.42	72.00	17.00	43.86
2	32.00	53.68	92.11	51.40	54.42
3	15.38	14.77	45.03	32.91	46.02
4	10.05	7.5	30.29	21.83	25.81
5	10.30	10.09	14.10	13.86	9.69
6	10.40	6.84	4.57	6.50	3.45
7	2.53	3.56	4.95	2.50	2.16
8	5.60	3.42	8.00	7.00	0.90
9	1.73	2.71	4.38	2.50	1.92

EFPBLS.D03, D05, D07-D09
EFPBLAS.D07

Table 103. Population assessments for largemouth bass collected during spring at Pan Bowl Lake (98 acres). Actual values are in parentheses. Scoring based on statewide assessment.

Parameter	Year				
	2003	2005	2007	2008	2009
Mean length age 3 at capture	2 (10.5)	2 (10.5)	2 (10.5)	2 (10.5)	2 (10.5)
Spring CPUE age 1	2 (19.20)	1 (3.42)	3 (72.00)	2 (17.00)	2 (43.86)
Spring CPUE 12.0-14.9 in	1 (12.00)	1 (9.40)	1 (12.60)	2 (21.50)	1 (11.22)
Spring CPUE \geq 15.0 in	3 (25.60)	3 (18.00)	3 (22.86)	3 (18.00)	2 (8.43)
Spring CPUE \geq 20.0 in	3 (3.20)	2 (1.80)	4 (6.86)	4 (7.00)	3 (2.87)
Total score	11	9	13	13	10
Assessment rating	Fair	Fair	Good	Good	Fair
Instantaneous mortality (z)	0.36	0.37	0.43	0.42	0.62
Annual mortality (A)	30.30	31.20	35.20	34.10	46.10

EFPBLS.D03, D05, D07-D09
EFPBLAS.D07

Table 104. Length frequency and electrofishing CPUE (fish/hr) of black bass collected in approximately 0.750 hours of 7.5-min. electrofishing runs in Pikeville City Lake (20 acres) on 23 April 2009. SE = standard error.

Species	Inch class																				Total	CPUE	SE
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			
LMB	1	11	2	1	2	2	1	2	1	2	9	4	3	4	1	5	3	4	2	57	76.00	6.11	

LMB = largemouth bass
EFDHALSS.D09

Table 105. Spring electro fishing CPUE (fish/hr) for each length group of largemouth bass collected at Pikeville City Lake (20 acres). SE = standard error.

Year	Length group												Total	
	<8.0 in			8.0-11.9 in			12.0-14.9 in			>15.0 in			>20.0 in	
	CPUE	SE		CPUE	SE		CPUE	SE		CPUE	SE		CPUE	SE
2004	5.13	2.60		12.82	12.80		15.38	7.70		30.77	8.90		2.56	64.10
2005	12.80	4.30		11.50	3.30		1.30	1.30		51.30	9.50		8.90	76.90
2006	5.07	2.54		34.81	4.11		3.98	2.73		49.01	6.22		1.30	92.87
2007	43.20	15.09		11.20	3.20		8.00	4.38		46.40	6.88		2.99	108.80
2008	10.67	3.37		48.00	7.45		10.67	2.67		50.67	7.35		4.92	120.00
2009	22.67	4.81		18.67	4.92		9.33	3.21		25.33	4.81		8.00	76.00

EFDHALSS.D04-D09

Table 106. PSD and RSD₁₅ values obtained for largemouth bass species taken in spring electrofishing samples in Pikeville City Lake (20 acres) on 23 April 2009; 95% confidence intervals are in parentheses.

No. ≥8.0 in	PSD (+/- 95%)	RSD ₁₅ (+/- 95%)
40	65 (50-80)	48 (32-63)

EFDHALSS.D09

Table 107. Length frequency and nocturnal electrofishing CPUE (fish/hr) of black bass collected at Yatesville Lake (2,280 acres) during 2,815 hours of 15 minute samples on 19 May 2009; numbers in parentheses are standard errors.

Area/ Species	Inch class																		Total	CPUE
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total			
Upper																				
LMB	5	8	19	3	19	32	32	22	20	14	16	12	11	5	1	2	221	147.33 (15.81)		
SB	3	2	8	7	6	3	4			1		1		1			36	24.00 (6.89)		
Lower																				
LMB	8	19	17	2	16	26	25	19	15	5	16	8	4	2	1	183	36.60 (2.38)			
SB																0				
Total																				
LMB	13	27	36	5	35	58	57	41	35	19	32	20	15	7	1	3	404	97.00 (19.32)		
SB	3	2	8	7	6	3	4		1		1		1				36	13.09 (5.15)		

LMB = largemouth bass

SB= spotted bass

EFDYLLSS.D09

Table 108. Spring nocturnal electrofishing CPUE (fish/hr) for each length group of largemouth bass at Yatesville Lake (2,280 acres). SE = standard error.

Year	Length group											
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in		Total	
	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
1993	153.70		82.90		20.10		7.40		0.00		264.00	
1994					no data							
1995					no data							
1996	21.50		65.50		7.80		1.50		0.00		96.30	11.50
1997	50.70		23.70		16.70		2.00		0.00		93.00	10.50
1998	10.70		25.70		16.30		5.70		0.00		58.30	7.20
1999	42.70		29.00		16.30		13.70		0.30		101.70	12.20
2000	63.30	8.00	55.70	7.90	9.30	1.10	7.00	1.60	0.00		135.50	13.70
2001	35.00	7.00	58.30	7.50	19.30	3.20	9.70	2.10	0.30		122.30	7.80
2002	54.30	7.80	50.00	4.40	19.30	2.90	16.70	3.20	0.00		140.30	7.40
2003					no data							
2004	12.67	2.80	40.33	10.50	23.67	5.10	9.00	2.20	0.00		85.67	19.40
2005	43.70	7.80	61.30	6.60	42.00	4.70	21.70	2.10	0.30		168.70	15.40
2006	47.30	7.40	68.00	10.30	20.30	2.20	16.00	4.00	0.70		151.70	17.50
2007	47.70	5.91	62.25	5.71	31.33	4.15	15.78	2.65	0.00		157.05	10.65
2008	47.01	8.37	38.29	3.80	20.36	3.68	16.60	4.85	0.00		122.27	10.32
2009	16.91	5.34	46.00	9.84	21.45	4.54	12.64	3.53	0.00		97.00	19.32

EFDYLLSS:D93 - D09

Table 109. PSD and RSD values for black bass species taken in spring nocturnal electrofishing samples in each area of Yatesville Lake (2,280 acres) on 19 May 2009; 95% confidence intervals are in parentheses: largemouth bass stock size >8.0 in and spotted bass stock size >7.0 inches.

Area	Species	No. >stock size	PSD (+/- 95%)	RSD ^a (+/- 95%)
Upper	Largemouth bass	137	37 (29-45)	11 (6-16)
	Spotted bass			
Lower	Largemouth bass	186	44 (36-51)	17 (11-22)
	Spotted bass	31	23 (8-38)	6 (0-15)
Total	Largemouth bass	323	41 (36-46)	14 (10-18)
	Spotted bass	31	23 (8-38)	6 (0-15)

^a Largemouth bass = RSD₁₅; spotted bass = RSD₁₄
 EFDYLLSS.D09

Table 110. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Yatesville Lake (2,280 acres).

Age	Year									
	2000	2001	2002	2004	2005	2006	2007	2008	2009	
1	59.70	32.20	52.10	13.00	42.30	45.90	46.98	44.95	16.63	
2	56.00	54.90	46.60	35.70	54.90	69.20	63.06	40.12	46.43	
3	11.30	23.40	22.70	23.60	43.00	16.80	23.71	16.41	16.69	
4	5.70	8.50	16.40	11.90	23.20	15.70	18.54	16.38	13.56	
5	1.10	1.20	1.00	0.60	1.90	3.40	4.77	3.78	2.87	
6	1.60	1.80	1.20	0.90	2.80	0.30				
7										
8		0.30								

EFDYLLSS.D00-D02
 EFDYLLSS.D04-D09
 EFDYLLAS.D05
 EFDYLLAS.D06

Table 111. Spring nocturnal electrofishing population assessments for largemouth bass collected at Yatesville Lake (2,280 acres). Actual values are in parentheses. Scoring based on statewide assessment.

Parameter	Year								
	2002	2004	2005	2006	2007	2008	2009		
Mean length age-3 at capture	4 (13.2)	4 (13.2)	4 (13.2)	4 (13.5)	4 (13.5)	4 (13.5)	4 (13.5)	4 (13.5)	
Spring CPUE age 1	4 (52.10)	1 (13.00)	3 (42.30)	3 (45.90)	3 (46.98)	3 (44.95)	3 (16.63)	1 (16.63)	
Spring CPUE 12.0-14.9 in	2 (19.30)	2 (23.70)	4 (42.00)	2 (20.30)	3 (31.33)	2 (20.36)	2 (21.45)	2 (21.45)	
Spring CPUE \geq 15.0 in	3 (16.70)	2 (9.00)	4 (21.70)	3 (16.00)	3 (15.78)	3 (16.50)	3 (12.64)	3 (12.64)	
Spring CPUE \geq 20.0 in	0 (0.00)	0 (0.00)	2 (0.30)	2 (0.70)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	
Total score	14	10	17	14	13	12	10	10	
Assessment rating	Good	Fair	Excellent	Good	Good	Good	Fair	Fair	
Instantaneous mortality (z)	0.86	1.07	0.91	1.23	0.80	0.57	0.91	0.91	
Annual mortality (A)	57.80	65.80	59.80	70.80	55.20	43.60	59.80	59.80	
EFDYLLSS.D02-D09									
EFDYLLAS.D05									
EFDYLLAS.D06									

Table 112. Length frequency and CPUE (fish/hr) of black bass collected in approximately 3,000 hours of 15-minute nocturnal electrofishing samples in Yatesville Lake (2,280 acres) on 7 October 2009; numbers in parentheses are standard errors.

Area/ Species	Inch class																			Total	CPUE
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19					
Upper																					
LMB	8	19	17	2	16	26	25	19	15	5	16	8	4	2	1	183	36.60	(2.38)			
SB																0	0.00	(0.00)			
Lower																					
LMB	5	8	19	3	19	32	32	22	20	14	16	12	11	5	1	2	221	147.33	(15.81)		
SB	3	2	8	7	6	3	4	1	1	1	1	1	1	1	1	36	24.00	(6.69)			
Total																					
LMB	13	27	36	5	35	58	57	41	35	19	32	20	15	7	1	3	404	97.00	(19.32)		
SB	3	2	8	7	6	3	4	1	1	1	1	1	1	1	1	36	13.09	(5.15)			

LMB = largemouth bass
 SB= spotted bass
 EFDYLLSF.D09

Table 113. Fall electrofishing indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected during 2003 - 2009 at Yatesville Lake (2,280 acres); CPUE = fish/hr, SE = standard error.

Year class	Mean length	Age 0			Age 0 ≥5.0 in			Age 1		
		SE	CPUE	SE	SE	CPUE	SE	SE	CPUE	SE
2003	5.3	0.1	46.00	6.30	29.30	4.40	12.70	2.80		
2004	4.8	0.1	69.50	13.50	32.50	10.80	42.30	7.10		
2005	4.7	0.1	47.00	12.30	20.00	7.10	45.93	7.21		
2006	4.9	0.1	29.50	7.80	13.80	3.80	46.98	5.95		
2007	5.3	0.1	37.36	10.64	23.22	6.12	44.95	8.09		
2008	5.1	0.1	45.93	7.78	28.42	6.00	16.63	5.25		
2009	4.9	0.1	32.67	6.45	16.33	3.95				

EFDYLLSF.D03-D09
 EFDYLLAS.D05
 EFDYLLAS.D06

Table 114. Length frequency and CPUE (fish/net-night) for white crappie collected at Yatesville Lake (2,280 acres) in 26 net-nights from 23 to 25 November 2009. Standard errors are in parentheses.

	Inch class												Total	CPUE	SE
	2	3	4	5	6	7	8	9	10	11	12	12			
3	125	240	300	83	33	33	6	9	32	8	2	841	32.35	(4.87)	

EFDYLCTF.D09

Table 115. PSD and RSD₁₀ values calculated for white crappie collected in trap nets at Yatesville Lake (2,280 acres) during November 2009; 95% confidence intervals are in parentheses.

No. ≥ stock size	PSD	RSD ₁₀
473	12 (9-15)	9 (6-11)

WC = white crappie

EFDYLCTF.D09

Table 116. Mean back-calculated length (in) at each annulus for white crappie collected from Yatesville Lake (2,280 acres) in November 2009, including 95% confidence intervals.

Year	class	No.	Age										
			1	2	3	4	5	6	7	8			
2008		11	3.6										
2007		12	3.6	4.7									
2006		24	3.9	5.2	6.3								
2005		20	3.9	5.3	6.6	7.6							
2004		26	4.2	5.6	6.8	7.8	9.0						
2003		2	4.4	5.7	6.9	8.0	8.5	10.5					
2002		2	4.0	5.1	6.0	6.6	7.0	7.9	8.7				
2001		1	4.0	5.0	5.7	6.1	6.3	6.9	7.2	7.6			
Mean			3.9	5.3	6.6	7.6	8.7	8.3	8.0	7.6			
Smallest			2.9	3.6	4.1	4.9	6.3	6.9	7.2	7.6			
Largest			5.9	9.4	10.7	11.7	10.9	10.5	8.7	7.6			
STD error			0.1	0.1	0.1	0.2	0.2	0.8	0.7				
95% CI LO			3.8	5.1	6.3	7.3	8.2	6.7	6.5				
95% CI HI			4.0	5.5	6.8	8.0	9.1	9.8	8.4				

Intercept = 0

EFDYLCAF.D09

Table 117. Age frequency and CPUE (fish/net-night) of white crappie collected by trap netting for 26 net-nights at Yatesville Lake (2,280 acres) in November 2009; numbers in parentheses are standard errors.

Age	Inch Class												Total	Age%	CPUE	
	2	3	4	5	6	7	8	9	10	11	12					
0	3	115	37										155	18	5.97	(1.28)
1		10	185										195	23	7.47	(1.29)
2			18	200	14	3							235	28	9.03	(1.76)
3				25	48	20	4	1	2				100	12	3.85	(0.69)
4				75	21	10		4	6	2			118	14	4.53	(0.85)
5							2	3	23	6	1		35	4	1.34	(0.30)
6										1	1		2	0	0.07	(0.03)
7								2					2	0	0.06	(0.02)
8							1						1	0	0.02	(0.01)
Total	3	125	240	300	83	33	7	10	31	9	2	2	843	100		
%	0	15	29	36	10	4	1	1	4	1	0	0	100			

CPUE of ≥ 8 in (quality size) = 2.19

CPUE of ≥ 10 in (preferred size) = 1.62

EFDYLCAF.D09

EFDYLCTF.D09

Table 118. Population assessment scores for white crappie collected from Yatesville Lake (2,280 acres). Actual assessment values are in parentheses. Scoring based on statewide assessment.

Parameter	Year			
	2002	2004	2006	2009
CPUE of crappie (excluding age 0)	3 (19.50)	4 (28.20)	4 (58.60)	4 (26.39)
CPUE age 1	2 (3.90)	2 (3.70)	3 (8.90)	3 (7.47)
CPUE age 0	1 (1.50)	4 (23.90)	2 (3.60)	3 (5.97)
CPUE \geq 8.0 in	2 (3.00)	2 (4.80)	4 (13.60)	2 (2.19)
Mean length age 2 at capture	1 (6.1)	1 (5.6)	1 (6.0)	1 (5.5)
Instantaneous mortality (z)	1.08	0.59	0.98	1.01
Annual Mortality (A)	66.0	45.0	62.4	63.6
Total score	9	13	14	13
Assessment rating	Fair	Good	Good	Good
EFDYLCRF.D02. D04. D06. D09				
EFDYLCAF.D02. D04. D06. D09				

Carr Creek Lake Angler Attitude Survey Results

Frequency Table (N=248)

3. Which Species do you fish for at Carr Creek Lake?

	Frequency	Percent
Bass	151	60.9%
Crappie	84	33.9%
Catfish	36	14.5%
Walleye	50	20.2%
Bluegill	43	17.3%

4. Which one species do you fish for most at Carr Creek Lake?

	Frequency	Percent
Bass	119	50.4%
Crappie	46	19.5%
Catfish	18	7.6%
Walleye	20	8.5%
Bluegill	33	14.0%
Total	236	
No Response	12	

5. In general, what level of satisfaction do you have with bass fishing at Carr Creek Lake?

	Frequency	Percent
Very Satisfied	23	15.3%
Somewhat Satisfied	54	36.0%
Neutral	21	14.0%
Somewhat Dissatisfied	44	29.3%
Very Dissatisfied	4	2.7%
No Opinion	4	2.7%
Total	150	
No Response	1	

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

	Frequency	Percent
Number of Fish	26	65.0%
Size of Fish	11	27.5%
Not happy with regulations	0	0.0%
Too many anglers	3	7.5%
Excessive water level fluctuations	0	0.0%
Total	40	
No Response	8	

6. In general, what level of satisfaction do you have with the crappie fishing at Carr Creek Lake?

	Frequency	Percent
Very Satisfied	1	1.2%
Somewhat Satisfied	16	10.7%
Neutral	21	14.0%
Somewhat Dissatisfied	33	22.0%
Very Dissatisfied	7	4.7%
No Opinion	5	3.3%
Total	83	
No Response	1	

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

	Frequency	Percent
Number of Fish	18	50.0%
Size of Fish	18	50.0%
Not happy with regulations	0	0.0%
Too many anglers	0	0.0%
Excessive water level fluctuations	0	0.0%
Total	36	
No Response	4	

7. In general, what level of satisfaction do you have with the channel catfish fishing at Carr Creek Lake?

	Frequency	Percent
Very Satisfied	4	11.4%
Somewhat Satisfied	14	40.0%
Neutral	7	20.0%
Somewhat Dissatisfied	9	25.7%
Very Dissatisfied	1	2.9%
No Opinion	0	0.0%
Total	35	
No Response	1	

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

	Frequency	Percent
Number of Fish	8	100.0%
Size of Fish	0	0.0%
Not happy with regulations	0	0.0%
Too many anglers	0	0.0%
Excessive water level fluctuations	0	0.0%
Total	8	
No Response	2	

8. In general, what level of satisfaction do you have with the flathead catfish fishing at Carr Creek Lake?

	Frequency	Percent
Very Satisfied	0	0.0%
Somewhat Satisfied	5	22.7%
Neutral	5	22.7%
Somewhat Dissatisfied	10	45.5%
Very Dissatisfied	2	9.1%
No Opinion	0	0.0%
Total	22	
No Response	14	

8a. If you responded with somewhat or very dissatisfied in question (8) - what is the single most important reason for your dissatisfaction?

	Frequency	Percent
Number of Fish	11	91.7%
Size of Fish	1	8.3%
Not happy with regulations	0	0.0%
Too many anglers	0	0.0%
Excessive water level fluctuations	0	0.0%
Total	12	
No Response	0	

9. In general, what level of satisfaction do you have with the walleye fishing at Carr Creek Lake?

	Frequency	Percent
Very Satisfied	6	12.2%
Somewhat Satisfied	25	51.0%
Neutral	9	18.4%
Somewhat Dissatisfied	2	4.1%
Very Dissatisfied	2	4.1%
No Opinion	5	10.2%
Total	49	
No Response	1	

9a. If you responded with somewhat or very dissatisfied in question (9) - what is the single most important reason for your dissatisfaction?

	Frequency	Percent
Number of Fish	3	100.0%
Size of Fish	0	0.0%
Not happy with regulations	0	0.0%
Too many anglers	0	0.0%
Excessive water level fluctuations	0	0.0%
Total	3	
No Response	1	

10. Would you support or oppose a reduction in the current statewide 30 fish daily crappie creel limit to 20 fish?

	Frequency	Percent
Support	101	41.4%
Oppose	15	6.1%
No opinion	128	52.5%
Total	244	
No Response	4	

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

	Frequency	Percent
Support	58	23.8%
Oppose	11	4.5%
No opinion	175	71.7%
Total	244	
No Response	4	

12. Are you satisfied with the current size and creel limits on all sport fish at Carr Creek Lake?

	Frequency	Percent
Yes	219	91.6%
No	20	8.4%
Total	239	
No Response	9	

12a. If not, which species are you dissatisfied with and what size and creel limits would you prefer?

Bass Size limit

	Frequency	Percent
12	2	100.0%
Total	2	

Bass Creel Limit

	Frequency	Percent
5	1	100.0%
Total	1	

Crappie Size limit

	Frequency	Percent
None	8	57.1%
6	2	14.3%
7	1	7.1%
8	3	21.4%
Total	14	

Crappie Creel Limit

	Frequency	Percent
15	5	45.5%
20	6	54.5%
Total	11	

Walleye Size limit

	Frequency	Percent
12	1	100.0%
Total	1	

Walleye Creel Limit

	Frequency	Percent
Total	0	

Bluegill Size limit

	Frequency	Percent
Total	0	

Bluegill Creel Limit

	Frequency	Percent
Total	0	

Catfish Size limit

	Frequency	Percent
Total	0	

Catfish Creel Limit

	Frequency	Percent
Total	0	