

Commonwealth of Kentucky

Date: June 30, 2011

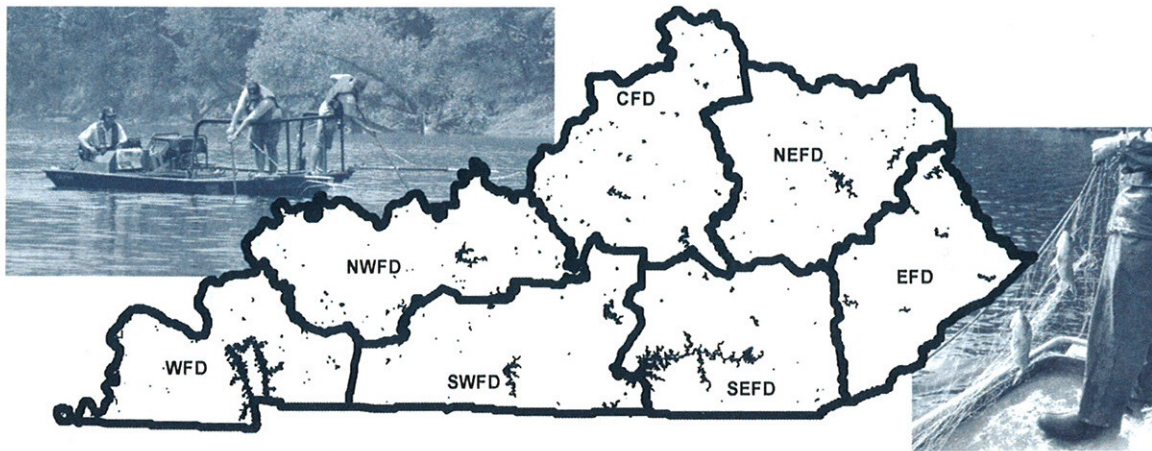
Sport Fish Restoration Grant F-50, Segment 33

Period: 01 April 2010
through
31 March 2011

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 NUMBER: F-50-33
GRANT TITLE: District Fisheries Management
GRANT PERIOD: April 1, 2010 – March 31, 2011

Project 1: Lake and Tailwater Sampling

Project Objective: To annually manage and conserve the sport fisheries and habitats throughout 221,680 acres of freshwater lakes, tailwaters, and small impoundments within the Commonwealth of Kentucky in order to provide recreational fishing opportunities to the public.

A. Activity

Sport fish species were sampled throughout Kentucky using electrofishing, gill netting, trap netting, and other gear to gather biological data in order to best manage the sport fish resources of the Commonwealth. In total over 78 lakes/reservoirs (encompassing approximately 217,498 acres), in addition to 4 major tailwaters (approximately 4,182 acres), were sampled and managed. Otoliths were removed to calculate age/growth from various sport fish species of concern. Other measures were monitored including catch rates, mortality, recruitment, length/weight, water temperature, dissolved oxygen, and other physical limnological data. Creel surveys were conducted on nine sport fisheries including: (1) Barren River Lake; (2) Corinth Lake; (3) Dewey Lake; (4) Greenbo Lake; (5) Herrington Lake; (6) Lake Linville; (7) Laurel River Lake; (8) Ohio River – McAlpine Pool; and (9) Rough River Lake. Data was analyzed and compiled into this annual performance report and will be used to effectively manage and enhance the sport fish resources of Kentucky.

B. Target Dates for Achievement and Accomplishment

Planned achievement date: March 31, 2011
Work accomplished: March 31, 2011

C. Significant Deviations

None.

D. Remarks

See accompanying report. Upon receipt and acceptance of this annual performance report and the forthcoming SF-425, please close this segment (#33) of F-50.

E. Costs

\$ 1,174,823.83

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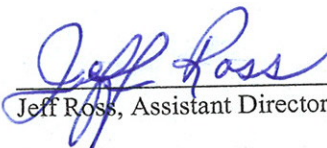
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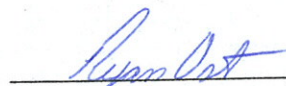
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WESTERN FISHERY DISTRICT

Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

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

Kentucky Lake

During May, 1,428 black bass were collected by diurnal electrofishing (120 PPS) from standardized sampling locations on Kentucky Lake. Sampling this year was later than normal due to prolonged flooding. The lake level rose to 363 msl elevation during the scheduled week of sampling. Some sampling was attempted while the water was high, but the results were poor. Sampling resumed one week later while water levels were still high, but not at flood stage. Despite the later sampling, the CPUE of largemouth bass was slightly higher than observed in last year's sample. Largemouth bass comprised almost 98% (121.57 fish/hr) of this catch (Table 2). The samples collected from each of the four embayments were similar, in that a high percentage (> 50%) of each sample was comprised of bass between 9.0 and 13.0 in. One exception was the samples from Sugar Bay and Big Bear also had a high number (~30%) of bass between 5.0 and 7.0 in. 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 fish/hr that are <8.0 in. The catch rate of largemouth bass <8.0 in was 29.65 fish/hr. The KLFMP objective for largemouth bass ≥ 15.0 in is to maintain a catch rate of at least 18.00 fish/hr (Table 3). The catch rate of harvestable-size largemouth bass was 12.43 fish/hr during this year's sample. High numbers of 12.0-14.9 in bass should boost the numbers of harvestable size bass in the next few years.

PSD values were similar at each of the four sampled embayments, and suggest a higher proportion of quality size (≥ 12.0 in) fish over stock size (≥ 8.0 in) (Table 4). The PSD value calculated for all largemouth bass was 60, which falls within the targeted range (PSD, 55-75) suggested in the KLFMP. The calculated RSD_{15} was 14, which falls below the range reported in the KLFMP (RSD_{15} , 20-40). This value suggests a lower proportion of preferred (≥ 15.0 in) size bass.

No age data was collected this year. Without age data, age frequency and CPUE of age classes was not calculated. Without this information the bass assessments could not be completed.

During October, 664 black bass were collected by diurnal electrofishing (120 PPS) at three locations that had been previously sampled during the spring. Largemouth bass comprised 88% (83.00 fish/hr) of this catch (Table 5). Samples at each embayment were similar in that there were high catch rates of bass between 10.0 and 14.0 in, and 3.0 to 6.0 in. These results are similar to the spring sample. Length and weight data were recorded from all bass collected to calculate relative weight values. The relative weight value for harvestable size largemouth bass was 92 (Table 6). Length-weight equations for black bass species at Kentucky Lake are:

Largemouth bass	$\text{Log}_{10}(\text{weight}) = -3.64168 + 3.28902 \times \text{Log}_{10}(\text{length})$
Smallmouth bass	$\text{Log}_{10}(\text{weight}) = -3.70240 + 3.17670 \times \text{Log}_{10}(\text{length})$
Spotted bass	$\text{Log}_{10}(\text{weight}) = -3.53034 + 3.17843 \times \text{Log}_{10}(\text{length})$

Otoliths were collected from largemouth bass up to 9.0 in during the fall sampling. Otoliths were used to age these small bass so that age-0 CPUE and growth could be evaluated. The CPUE of age-0 largemouth bass during the fall sample was 24.25 fish/hr (Table 7). The catch rate for age-0 largemouth bass has continued to decline over the past 4 years. However, the decline is coming down from a super year class that was produced in 2007. This same year class was also measured as a high catch of age-1 bass in 2008. The growth of the age-0 largemouth bass continues to be good. Ideally, the age-0 bass should average at least 5.0 in. This type growth is thought to help increase winter survival.

Trap nets were fished for crappie in Blood River and Jonathan Creek embayments for 79 net-nights (nn) during October and November. This sampling effort yielded 2,489 crappie (31.51 fish/nn), of which 14.33 fish/nn (45%) were white crappie and 17.18 fish/nn (56%) were black crappie (Table 8). The trend of black crappie making

up 80% of the sample was broken this year. The first week of sampling followed a severe storm which left the water a little more turbid than normal at Jonathan Creek. This stained water might have been more conducive to catching white crappie than in previous years when water clarity was greater. One of the management objects in the KLFMP is to maintain a catch rate of crappie (excluding age-0) of 20.00 fish/nn. This years sampling yielded 18.67 fish/nn (Table 9), which is an increase over the three previous years. The samples of white crappie collected from each embayment may have been different because of the water clarity. At Blood River, there was a lower number collected (35% of sample) where water clarity was clearer. The majority of the white crappie ranged from 3.0 to 8.0 in long. At Jonathan Creek where water clarity was reduced following the storm, almost half of the sample was white crappie. Of the white crappie collected, 54% were 3.0 in long.

As part of a three year study, Blood River was stocked for the second time with approximately 70,000 age-0 white crappie (2.0-4.0 in) that were OTC marked prior to stocking. Two samples of 50 crappie were held in floating nets for 24 hours to determine stocking mortality. There was 90% mortality of the white crappie held overnight in these nets. It was also noted during the stocking that numerous crappie were already dead on the truck. It is speculated that warmer than normal water temperatures (65° F) in October could have contributed to the higher mortality. There were 38,600 stocked in 2009, and stocking mortality was lower. The water temperature in October of 2009 was around 59° F. A portion of the small crappie collected in trapnets at Blood River was kept to examine the otoliths for OTC marks. There were 102 age-0 otoliths examined, of which 5 (14%) were found to be from stocked fish. There were 76 age-1 otoliths examined, and no OTC marks were observed.

The crappie population at Kentucky Lake continues to produce a quality fishery; however the number of harvestable size white crappie is declining due to poor year classes observed in 2006-2008. The number of crappie ≥ 8.0 in collected in trap nets declined to 8.41 fish/nn following a period of four years where it stabilized around 13.00 fish/nn (Table 9). The number of crappie ≥ 10.0 in was also down from the previous year's study, 5.19 and 10.38 fish/nn, respectively. Both of these declines, however, may have been related to sampling conditions in 2010 and its effect on collection of black crappie. The KLFMP objective for crappie is to maintain a catch rate of at least 9.00 fish/nn for crappie ≥ 8.0 in, and 3.00 fish/nn for crappie ≥ 10.0 in. Because these values would not be obtainable in a few years due to the poor production of age-0 crappie in 2006 – 2008, a reduction in the angler creel from 30 to 20 fish was warranted in 2008. The better recruitment observed in 2009 and 2010 should change this declining trend of harvestable size crappie. However, any increase will not be seen for at least one more year if not two, as the fish in these strong year classes grow. PSD and RSD₁₀ values are reported in Table 10. Length-weight equations for white and black crappie are listed below.

White crappie	$\text{Log}_{10}(\text{weight}) = -3.64063 + 3.30985 \times \text{Log}_{10}(\text{length})$
Black crappie	$\text{Log}_{10}(\text{weight}) = -3.59937 + 3.31605 \times \text{Log}_{10}(\text{length})$

Otoliths were not collected this year to make age and growth determinations. Without age data, the age frequencies and catch rates by age groups were estimated based on last year's age data. At this time, the density of adult crappie is down, therefore it is expected that growth rates will continue to be good or increase slightly. Tables 11 and 12 list age frequencies for white and black crappie collected. Almost 93% of the white crappie sample was comprised of age-0 and age-1 fish. The catch of age-1 white crappie was also up from 1.83 fish/nn collected in 2009 to 4.08 fish/nn collected this year. In the 2009 sample, age-1 black crappie comprised only 3% (3.03 fish/nn) of the black crappie collected. In this year's sample, the age-1 black crappie comprised 52% (8.96 fish/nn) of the sample. One of the management objectives is to achieve a minimum catch of age-1 crappie of at least 11.00 fish/nn. This year that value was 13.04 fish/nn, which had been below the objective during the past four years. Despite an increase in the recruitment parameter of the crappie assessment, the overall rating dropped to "fair" (Table 13). This drop was due to the decline in the parameter which rates the catch of crappie ≥ 8.0 in.

Lake Barkley

Black bass were collected by diurnal electrofishing (120 PPS) from 26 April–17 May 2010 at standardized sampling sites on Lake Barkley. A total of 996 black bass were collected at a rate of 99.60 fish/hr (Table 14). Spotted and smallmouth bass accounted for less than 1% of the total black bass sampled. Largemouth bass had a catch rate of 97.10 fish/hr. This catch rate lies below the 10 year average catch rate of largemouth bass (139.46 fish/hr) at Lake Barkley (Table 15). The CPUE of harvestable and stock size fish is also below the past 10 year's average. Our low catch rates across the board are clearly the result of unusual hydrology in the reservoir during our

sampling period. Sampling began at acceptable lake levels, but lake levels quickly jumped to well above summer pool. Areas that were typically 3-4 feet deep had an addition of 6-8 feet of water. In addition, the water was very muddy in many sampling areas which precluded efficient dipping of black bass. Estimates derived from this spring sampling period should be used with caution.

The PSD value (58) for largemouth bass is lower than in previous years (Table 16). However, this value is near the twenty year average (61) for Lake Barkley, suggesting a better size distribution than in years past. The RSD₁₅ (23) is just below the twenty year average. The PSD value still met our objective goals (PSD of 55-75) established in the BLFMP. The RSD₁₅ value met the objective goal of 20-40 as well.

The lake specific assessment score for Lake Barkley has varied between “fair” and “good” since 1999 (Table 17). The score has been “good” since 2006. The 2010 rating of “poor” should be disregarded as this value is due to poor sampling conditions. Assuming favorable sampling conditions in 2011, expect this value to rebound.

Largemouth bass were sampled in October 2010 to collect length-weight data and determine the strength of the 2010 year-class. Seven hundred seventy-two largemouth bass were collected at a catch rate of 118.77 fish/hr (Table 18). The length-weight equation for largemouth bass at Lake Barkley is:

$$\text{Log}_{10}(\text{weight}) = -3.49779 + 3.17389 \times \text{Log}_{10}(\text{length})$$

Very few smallmouth bass and spotted bass were collected during the fall sample and therefore length-weight equations were not calculated. Relative weights for the 2010 data are listed in Table 19 for all size-classes of largemouth bass. These values are at or above the 20 year average. Mean length of the age-0 cohort was higher than in 2009 (6.5 in; Table 20). Previous years have shown consistently strong numbers of age-0 largemouth bass. This year’s values are above average as well (46.00 fish/hr) with the majority of these fish greater than 5.0 inches in length (42.00 fish/hr). Since year-class-strength tends to be related to the relative size of age-0 fish during the fall of their first year, the 2010 year-class should contribute well to the population in coming years.

Redear sunfish sampling was attempted in May. However, reservoir elevation was well above summer pool and very few fish were located. The redear sampling was postponed until water level returned to normal. When the water level returned to normal, it was much later than typical sampling time might occur. No further redear sampling was conducted.

Trap nets were fished for crappie in Little River and Donaldson Creek embayments for 80 net-nights from 25 October to 5 November 2010. Two thousand four hundred thirty-seven crappie were collected at a rate of 30.46 fish/nn (Table 21). This sample is much higher than in previous years; 658 and 600 fish/nn in 2008 and 2009, respectively. White crappie accounted for 76% of the total catch, and were collected at a rate of 23.11 fish/nn. Black crappie were collected at a rate of 7.35 fish/nn. In contrast to the previous two years, the CPUE of harvestable-size (≥ 10.0 in) crappie was above the ten year average at 1.79 fish/nn (Table 22). In twenty-three years of sampling, this value has ranged from 0.55-3.37 fish/nn. The CPUE of quality-size (≥ 8.0 in) crappie was 5.24 fish/nn, which is above the management objective (4.00 fish/nn) set in the BLFMP.

In 2010, the PSD (24) and RSD₁₀ (10) of white crappie were dramatically lower than 2009 values (Table 23). The 20-year average PSD and RSD₁₀ values of white crappie are 59 and 27, respectively. The PSD (56) and RSD₁₀ (12) values of black crappie are also lower than in 2009, but exceeded the 20-year average of 55. On the surface, the low PSD and RSD values suggest gloom for the crappie fishing outlook. However, as a measure of the proportion of small fish to larger fish, these values overlook an important aspect of the population in 2010. The low values represent low catch rates of larger fish relative to the higher number of young-of-year fish that were captured. The take home message is that despite higher catch rates of larger fish, a near record catch of young fish pushed the PSD and RSD values down. Expect drastic increases in both values in coming years as the exceptional 2010 year class matures.

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

White crappie	$\text{Log}_{10}(\text{weight}) = -3.67605 + 3.36604 \times \text{Log}_{10}(\text{length})$
Black crappie	$\text{Log}_{10}(\text{weight}) = -3.56491 + 3.30923 \times \text{Log}_{10}(\text{length})$

Three hundred eighteen crappie were collected for age estimation from two embayments on Lake Barkley. Ages ranged from 0-7 years for white crappie and 0-4 years for black crappie (Tables 24 and 25). The majority of fish aged were 1-year-olds reiterating the relative lack of adult fish in the population. Growth continues to be good as crappie reach 10.0 in by age 3. Age frequencies were estimated combining catch data with age and growth data. The catch of black crappie was dominated by age-0 and age-1 fish (Table 26) while older black crappie were rare in our catch. The catch of age-0 white crappie (19.01 fish/mn) comprised 82% of the total catch of white crappie (Table 27).

Assessment of the crappie population yielded a rating of "excellent" at Lake Barkley in 2010 (Table 28). This is the only time a rating of "excellent" has been recorded since 1999. Improvements that contributed to the higher ranking include higher CPUE of age-1 and older crappie, CPUE of age-1 crappie, CPUE of age-0 crappie, CPUE of ≥ 8.0 in crappie and excellent growth.

Lake Pennyrite

Electrofishing for all species of sportfish was conducted on 12 April, 2010. One hundred forty-six largemouth bass were captured at a rate of 130.36 fish/hr (Table 29). This value is well below the long term average, but closer to the value that is preferred in the management objectives. The goal is higher catch rates of certain size classes of largemouth bass, but lower overall catch rates. The majority of largemouth bass are still below 15.0 in, but 5 fish over 20.0 in were captured in this year's sample, moving the catch rate of fish over 15.0 in (7.14 fish/hr) above any value previously recorded (Table 30). Only 5 percent of the bluegill captured were above 8.0 inches in length, despite a higher overall catch rate (131.25 fish/hr; Table 31). Catch rates for most size classes of bluegill are at or near the long-term average, suggesting a stable population of bluegill. Only thirty-four redear sunfish were captured at a rate of 30.36 fish/hr, but over half of those fish were larger than 8.0 inches in length (Table 29). Overall, catch rates for redear sunfish are well below average for all size classes (Table 31). Table 32 shows PSD and RSD values for largemouth bass, bluegill, and redear sunfish.

Lake Beshear

Largemouth bass were collected by diurnal electrofishing during May at Lake Beshear. A total of 248 largemouth bass were collected at a rate of 82.67 fish/hr (Table 33). The catch rate of harvestable-size (≥ 12.0 in) largemouth bass was 51.00 fish/hr. One objective in the Lake Beshear Fish Management Plan (LBFMP) is to maintain a catch rate of 40.00 fish/hr for harvestable-size largemouth bass. Lower catch rates observed in previous years appear to be a factor of poor sampling conditions rather than a declining fishery. Other objectives are to maintain a high catch rate of bass ≥ 15.0 and ≥ 20.0 in (Table 34). Ideally, these catch rates should be greater than 30.00 and 4.00 fish/hr, respectively. The catch rate for the number of largemouth bass ≥ 15.0 in was 39.67 fish/hr, while the catch rate for the larger (≥ 20.0 in) bass was 3.67 fish/hr. Lake Beshear continues to have a quality bass fishery with high numbers of bass ≥ 15.0 in.

Largemouth bass were collected by diurnal electrofishing in October. The catch rate (95.60 fish/hr) was higher than that of the spring sample (Table 33). As would be expected, there was a higher catch rate of smaller bass (< 8.0 in) during the fall sample as compared to the spring sample. Roughly 60% of the fall sample was comprised of these smaller bass. There were also fewer larger fish collected in the fall. This would be expected since adult bass are more concentrated along the shoreline in May in preparation for spawning activity. 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 95 for these larger bass and 92 for all sizes of bass. The length-weight equation for largemouth bass at Lake Beshear is:

$$\text{Log}_{10}(\text{weight}) = -3.78742 + 3.41712 \times \text{Log}_{10}(\text{length})$$

Otoliths were removed from a sub sample of largemouth bass ≤ 8.0 in to determine the mean fall length of the age-0 cohort and their catch rate. The catch rate for this year class was 54.00 fish/hr (Table 35). The average length of the age-0 bass was 4.9 in. Spring flooding likely contributed to the strong success of this year class and above average growth.

Lake Blythe

Lake Blythe is an 89 acre watershed lake located just north of Hopkinsville off Highway 41 in Christian County, Kentucky. The fishery in this lake is primarily largemouth bass, bluegill, redear, crappie and catfish. In recent years sampling has revealed a stunted bass population. Due to repairs to the levee, this lake was partially drained; therefore no boat access was available. This lake was not sampled in 2010.

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

Water body	Location	Species	Date	Time (hr)	Gear	Weather	Water temp. °F	Water level	Secchi (ft)	Water Conditions	Pertinent sampling comments
Barkley	Ford's	black bass	4/27/2010	1.0	electrofischer	rain	63.2	360.2		normal	water level above normal
Barkley	Parson's	black bass	4/27/2010	1.0	electrofischer	rain	63.2	360.2		normal	water level above normal
Barkley	Donaldson	black bass	5/17/2010	1.5	electrofischer	cloudy	68.0	360.5	24	rough	sampled different runs to avoid wind
Barkley	Little River	black bass	4/26/2010	2.5	electrofischer	cloudy	63.5	360.3		calm	
Barkley	Eddy Creek	black bass	4/29/2010	2.5	electrofischer	sunny	64.0	360.0		rough	sampled different runs (4) to avoid wind
Barkley	Nickel	black bass	5/3/2010	0.5	electrofischer	sunny	66.4	365.0	36	calm	water rising discharge 220,000cfs
Barkley	Derrubers	black bass	5/3/2010	1.0	electrofischer	sunny	66.4	365.0	36	calm	water rising discharge 220,000cfs
Barkley	Eddy Creek	black bass	10/15/2010	2.5	electrofischer	sunny	66.0	355.0	30	rough	
Barkley	Little River	black bass	10/12/2010	2.5	electrofischer	warm	68.5	355.0	18	calm	unusually warm for this time of year
Barkley	Crooked Creek	black bass	10/20/2010	1.5	electrofischer	sunny	62.5	354.9		calm	good sample
Barkley	Donaldson	crappie	10/25-10/29/10	40nn	trapnet	overcast, rainy	54-55	355.0		normal	good sample
Barkley	Little River	crappie	11/2-11/5/10	40nn	trapnet	overcast/cool	57.0	358-381	muddy	calm	water rose drastically through week, muddy water and debris
Pennyfle		All	4/12/2010	1.2	electrofischer	sunny		normal	30	calm	good sample
Beshear		black bass	4/13/2010	3.0	electrofischer	calm/sunny	65.0	normal	108	calm	good sample
Beshear		black bass	10/13/2010	2.5	electrofischer	overcast	66.9	low	38	calm	water color was black but very clear near ramp, could not sample some areas due to low water
Kentucky	Sugar Bay	black bass	4/30/2010	3.0	electrofischer	sunny / breezy	65.7	357.7	43	rough/falling	this sample was pre-flood and just before the storms, good sample
Kentucky	Blood River	black bass	5/19/2010	3.0	electrofischer	sunny/calm	68.6	360.3	24	calm/falling	lake has been at flood stage and sample was taken about 1 week later than normal, poor sample
Kentucky	Jonathan	black bass	5/21/2010	2.5	electrofischer	overcast/calm	69.6	360.1	24	calm	lake has been at flood stage and sample was taken about 1 week later than normal, poor sample
Kentucky	Big Bear	black bass	5/26/2010	3.0	electrofischer	sunny / breezy	77.6	359.4	38	rough	lake has been at flood stage and sample was taken about 1 week later than normal, poor sample
Kentucky	Jonathan	black bass	10/11/2009	3.0	electrofischer	sunny/calm	67.5	355.0	38	calm	good sample
Kentucky	Blood River	black bass	10/14/2009	3.0	electrofischer	calm/sunny	66.8	355.1	38	choppy	cold front just moved thru, good sample
Kentucky	Big Bear	black bass	10/19/2010	2.0	electrofischer	colder/breezy	64.9	355.1	36	rough	fair sample
Kentucky	Jonathan	crappie	10/26-10/29/09	39 nn	trapnet	overcast, rainy	64.0	355.0	30	choppy	stormy first part of week and calmed off by Thursday, good sample
Kentucky	Blood River	crappie	11/2-11/5/09	40 nn	trapnet	overcast/cool	59.6	354.9	30	choppy	calm early in week with rain later in week, fair sample

Table 2. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 11.5 hours (23 x 30-minute runs) of diurnal electrofishing at Kentucky Lake during May 2010.

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					
Blood River																								
Smallmouth bass				1					1			2										4	1.33	0.67
Spotted bass				1					1													2	0.67	0.42
Largemouth bass	1	2	10	4	3	2	21	24	33	32	19	6	4	10	3	4	1					179	59.67	9.10
Big Bear																								
Smallmouth bass	1	4	2			1	2				2											12	4.00	1.37
Spotted bass							1	1														2	0.67	0.67
Largemouth bass	2	19	52	21	9	33	59	57	54	49	26	14	10	8	12	2	6	1				434	144.67	13.43
Sugar Bay																								
Smallmouth bass	1	2	1																			4	1.33	0.99
Spotted bass		2	1																			3	1.00	0.68
Largemouth bass	10	38	81	62	17	8	50	55	65	80	42	15	6	6	2	2	2					541	180.33	0.76
Jonathan Creek																								
Spotted bass		1			1				1													3	1.20	0.80
Largemouth bass	5	9	15	10	5	13	31	34	41	34	18	9	6	6	3		3	2				244	97.60	11.41
TOTAL																								
Smallmouth bass	2	6	4			1	2		1		2	2										20	1.38	0.54
Spotted bass		3	2		1		1	2	1													10	0.69	0.30
Largemouth bass	18	68	158	97	34	56	161	170	193	195	105	44	26	30	20	8	12	3				1,398	121.57	11.04

wfdpsdky.d10

Table 3. Lake specific assessment for largemouth bass collected at Kentucky Lake from 1999 - 2010. 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	≥15.0 in	>20.0 in				
			CPUE	CPUE	CPUE				
2000 ^A	13.9	23.25	19.05	22.48	1.52				
Score	4	1	2	3	1	11	F		
2001	14.4	73.90	12.80	12.60	0.40				
Score	4	4	1	1	1	11	F		
2002	13.7	35.50	21.80	13.10	0.90				
Score	4	2	2	1	1	10	F		
2003 ^A	13.7	30.12	43.62	15.62	0.95				
Score	4	2	3	2	1	12	G		
2004 ^A	13.7	12.14	22.70	18.10	1.30				
Score	4	1	2	2	1	10	F		
2005	13.8	28.70	46.50	23.60	0.80				
Score	4	2	3	3	1	13	G		
2006 ^A	13.8	31.79	23.60	20.90	0.60				
Score	4	2	2	3	1	12	G		
2007 ^A	13.8	22.16	28.75	26.08	1.25				
Score	4	1	2	4	1	12	G		
2008 ^A	13.8	73.08	19.05	24.19	1.90				
Score	4	4	2	3	2	15	G		
2009 ^A	13.8	27.92	24.34	13.52	1.38				
Score	4	2	2	1	1	10	F		
2010 ^A			42.87	12.43	1.30				
Score			3	1	1				
Average	13.8	35.9	27.7	18.4	1.1			45.7	

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.

Since age data had not been collected in 5 years, the estimates based on age were not calculated.

Rating

5-7 = Poor (P)

8-11 = Fair (F)

12-16 = Good (G)

17-20 = Excellent (E)

(Kentucky Bass Database.xls)

Table 4. PSD and RSD₁₅ values calculated for largemouth bass collected during diurnal electrofishing at Kentucky Lake during May 2010; 95% confidence limits are in parentheses.

Area	No. fish ≥8.0 in	PSD (+/- 95%)	RSD ₁₅ (+/- 95%)
Blood River	112	69 (+/- 7)	17 (+/- 6)
Big Bear Creek	182	53 (+/- 5)	16 (+/- 4)
Jonathan Creek	122	60 (+/- 7)	14 (+/- 5)
Sugar Bay	220	63 (+/- 5)	9 (+/- 3)
TOTAL	636	60 (+/- 3)	14 (+/- 2)

wfdpsdky.d10

Table 5. Species composition, relative abundance and CPUE (fish/hr) of black bass collected during 8.0 hours (16 x 30-minute runs) of diurnal electrofishing at Kentucky Lake during October 2010.

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			
Blood River																						
Smallmouth bass	9	12	6	2		4	6	1		1		1	2	1		1	2			48	16.00	7.57
Spotted bass	2	2	2					1	3	1										11	3.67	1.20
Largemouth bass	15	22	25	31	11	7	3	12	14	18	36	24	5	3	1	3	1	4		235	78.33	7.44
Jonathan																						
Smallmouth bass										1		1	1	1	3		1			8	2.67	1.12
Spotted bass		2		1	1					2		1								7	2.33	1.58
Largemouth bass	5	11	17	14	11	3	5	23	27	48	38	19	20	8	7	7	7	1		271	90.33	16.42
Big Bear																						
Smallmouth bass	1	3		1	1				1	1	1	1	1		1					12	6.00	1.63
Spotted bass		1			1															2	1.00	0.58
Largemouth bass	2	5	10	7	3	2	9	16	32	23	24	8	7	3	3	1	2	1		158	79.00	5.20
TOTAL																						
Smallmouth bass	10	15	6	3		5	6	1	1	3	1	3	4	2	4	1	3			68	8.50	3.13
Spotted bass	2	5	2	1	1	1		1	3	3		1								20	2.50	0.76
Largemouth bass	20	35	47	55	29	13	10	44	57	98	97	67	33	18	11	13	9	7	1	664	83.00	6.64

wfdw rky.d10

Table 6. Number of bass and relative weight (W_r) for each length group of black bass collected at Kentucky Lake during October 2010. 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	No.	Wr
Largemouth bass	Blood River	36	91 (2)	78	90 (1)	17	92 (2)
	Jonathan Creek	58	94 (1)	105	93 (1)	49	89 (2)
	Big Bear	30	87 (2)	79	88 (1)	25	94 (1)
	Total	124	92 (1)	262	91 (1)	91	91 (1)

Species	Area	Length group					
		7.0-10.9 in		11.0-13.9 in		>14.0 in	
		No.	Wr	No.	Wr	No.	Wr
Spotted bass	Blood River	1	93	4	94 (3)		
	Jonathan Creek	1	94	2	94 (1)	1	79
	Big Bear	1	95	30	90 (2)		
	Total	3	94 (1)	6	94 (2)	1	79
Smallmouth bass	Blood River	11	85 (2)	1	87	7	77 (3)
	Jonathan Creek			1	87	7	80 (3)
	Big Bear	1	92	3	86 (7)	3	79 (4)
	Total	12	85 (2)	5	87 (4)	17	79 (2)

wfdwrky.d10

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

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
2000	6.2	0.11	42.20	3.62	32.40	3.38	73.90 ^C	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 ^C	0.00
2004	4.6	0.09	26.00	6.16	9.83	1.66	28.70 ^C	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 ^C	3.95
2007	7.1	0.06	122.20	26.51	106.40	24.60	73.05 ^C	8.57
2008	5.8	0.08	33.80	6.94	27.20	4.81	27.92 ^C	5.03
2009	5.0	0.09	30.91	5.42	16.73	2.83	34.43 ^C	5.90
2010	5.7	0.09	24.25	4.87	17.38	2.63		
Average	5.5		36.93		26.02		32.73	

^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).

^C Age data was not collected, this is an estimate based off previous years age data.

Data from 1990 to 1999 is listed in previous years reports.

wfdwrky.dxx, wfdwragk.dxx, wfdpsdky.dxx

Table 8. Species composition, relative abundance, and CPUE (fish/net-night) of crappie collected by trap nets fished during 79 net-nights in two embayments of Kentucky Lake during October - November 2010.

Area	Species	Inch class												Total	CPUE	Std Err
		2	3	4	5	6	7	8	9	10	11	12	13			
Blood River	White crappie	6	87	38	16	42	48	12	6	1	1	3	1	261	6.69	1.11
	Black crappie	20	105	12	109	75	27	31	30	30	12	15	8	474	12.15	1.34
Jonathan Cr.	White crappie	64	472	38	9	53	47	20	24	73	65	6		871	21.78	5.30
	Black crappie	21	100	19	190	189	37	63	69	73	83	30	9	883	22.08	2.33
TOTAL	White crappie	70	559	76	25	95	95	32	30	74	66	9	1	1,132	14.33	2.85
	Black crappie	41	205	31	299	264	64	94	99	103	95	45	17	1,357	17.18	1.41

w fdtptnk.d10

Table 9. 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) >8.0 in			CPUE (f/nn) age-1			CPUE (f/nn) >10.0 in		
	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie	WC	BC	Crappie
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
2010 ^A	5.20	13.48	18.67	9.14	3.70	12.84	11.5	10.4	10.6	2.68	5.73	8.41	4.08	8.96	13.04	1.90	3.29	5.19
Average	3.47	18.56	22.02	4.90	4.31	9.21	10.9	9.7	10.2	2.07	10.69	12.76	2.39	9.40	11.79	0.96	4.33	5.29

^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 1999 is listed in previous years reports.

Kentucky Lake Crappie Database

Table 10. Proportional stock density (PSD) and relative stock density (RSD₁₀) of white and black crappie collected with trap nets (79 net-nights) at Kentucky Lake during October 2010. 95% confidence interval is in parentheses.

Location	Species	N	PSD	RSD ₁₀
Blood River	White crappie	130	18 (± 7)	4 (± 4)
	Black crappie	337	37 (± 5)	19 (± 4)
Jonathan Creek	White crappie	297	63 (± 5)	48 (± 6)
	Black crappie	743	44 (± 4)	26 (± 3)
Total	White crappie	427	50 (± 5)	35 (± 5)
	Black crappie	1,080	41 (± 3)	24 (± 3)

wfdtpntk.d10

Table 11. Age frequency and CPUE (fish/nn) of white crappie collected in trap nets fished for 79 net-nights in Kentucky Lake during October 2010. This data is estimated using this years catch data and 2009 age data. 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					
0	70	559	76	17										722	63.8	9.14	0.74
1				8	95	95	32	30	62					322	28.4	4.08	0.54
2									12	53	4			69	6.1	0.87	0.04
3										13	2			15	1.3	0.19	0.01
4														0			
5														0			
6											3	1		4	0.4	0.05	0.03
Total	70	559	76	25	95	95	32	30	74	66	9	1		1,132		14.33	
%	6	49	7	2	8	8	3	3	7	6	1	0			100		

wfdtpntk.d10, wfdtnagk.d09

Table 12. Age frequency and CPUE (fish/nn) of black crappie collected in trap nets fished for 79 net-nights in Kentucky Lake during October 2010. This data is estimated using this years catch data and 2009 age data. 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					
0	41	205	31	15										292	21.5	3.70	0.52
1				284	264	64	84	8	4					708	52.2	8.96	0.93
2							10	91	91	63	5			260	19.2	3.29	0.45
3									4	28	25			57	4.2	0.72	0.10
4										4	4	4		12	0.9	0.15	0.02
5												2		2	0.1	0.03	0.01
6									4		11	7		22	1.6	0.28	0.04
7													1	1	0.1	0.01	0.00
8													3	3	0.2	0.04	0.01
Total	41	205	31	299	264	64	94	99	103	95	45	17		1,357		17.18	
%	3	15	2	22	19	5	7	7	8	7	3	1			100		

wfdtpntk.d10, wfdtnagk.d09

Table 13. Lake specific assessment for crappie collected at Kentucky Lake from 2000-2010. This table includes the parameter estimates and the individual scores as well as the total scores and assessment ratings. The final columns list the instantaneous mortality (Z) and annual mortality (A).

Year	CPUE age-1 and older	CPUE Age-1	CPUE Age-0	CPUE >8.0 in	Mean length	Total score	Assessment rating	Z	A
					age-2 at capture				
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	F		
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	F		
2009	16.23	4.85	3.38	13.58	10.6			0.758	53.1
Score	2	1	1	4	4	12	F		
2010	18.67	13.04	12.84	8.41	10.6			0.556	42.6
Score	2	2	1	2	4	11	F		
Average	22.02	11.79	9.21	12.77	10.15				50.8

Rating

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

Kentucky Lake Crappie Database

Table 14. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 10.0 hours (20 runs; each 0.50 hours) of diurnal electrofishing at Lake Barkley from 26 April to 17 May 2010.

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	0.67	0.67	
	Spotted bass							1	1			1	1								4	2.67	2.67	
	Largemouth bass	1	4	14	16	3	6	15	23	11	15	17	13	4	5	5	4	3	1	3	163	108.67	10.91	
Ford's Bay	Smallmouth bass									1											1	1.00	1.00	
	Spotted bass			1					1		2										4	4.00	4.00	
	Largemouth bass	2	2	4	2	2	2	9	20	6	2	5	7	4	4	4	2	3			78	78.00	4.00	
Parson's Bay	Smallmouth bass								1												1	1.00	1.00	
	Spotted bass																							
Largemouth bass		1	3	3		6	9	24	13	3	16	9	5	3	2	2	2	2			103	101.00	23.00	
Middle Little River	Smallmouth bass																							
	Spotted bass																							
	Largemouth bass	1	21	16	7	6	22	40	15	16	29	17	13	15	7	12	6	5	2		250	100.00	14.59	
Eddy Cr.	Smallmouth bass																							
	Spotted bass								1	1	2		1	2							2	0.80	0.80	
	Largemouth bass	1	12	16	3	6	11	23	24	26	30	23	22	5	9	7	7	6	2		233	93.20	11.36	
Upper Nickell Cr.	Smallmouth bass																							
	Spotted bass																							
	Largemouth bass								10	9	6	12	5								52	104.00		
Demumbers Bay	Smallmouth bass																							
	Spotted bass																							
	Largemouth bass																							
Total	Smallmouth bass																				94	93.20	11.36	
	Spotted bass																				15	1.50	0.82	
	Largemouth bass	1	9	61	62	22	26	73	152	92	79	126	79	50	31	30	34	22	17	7	973	97.10	5.37	

(wfdpsdb.d10)

Table 15. Spring diurnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Lake Barkley during late April/early May since 2000.

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
2000	32.80	4.20	28.60	2.30	24.70	2.30	27.90	2.40	2.74	0.67	114.10	6.00
2001	70.40	8.30	61.20	5.10	31.10	2.50	19.00	1.50	1.60	0.67	181.70	10.80
2002	26.40	3.60	49.70	5.90	40.60	4.10	16.30	1.80	1.33	0.37	133.00	8.50
2003	41.10	5.20	38.50	3.90	75.30	5.30	26.90	2.30	1.68	0.35	181.80	10.40
2004	11.30	1.30	40.90	2.90	29.30	1.60	24.70	2.20	1.80	0.43	106.20	5.10
2005	36.60	4.90	19.30	1.90	59.40	4.80	37.50	3.30	2.00	0.55	152.70	10.30
2006	15.60	2.20	26.70	2.20	51.80	3.90	30.80	2.40	2.10	0.57	124.20	7.40
2007	4.80	0.90	21.36	2.60	66.50	4.70	47.60	4.50	1.80	0.50	140.27	9.73
2008	24.10	3.50	25.80	3.90	32.60	3.90	41.20	4.50	3.00	0.50	123.70	6.30
2009	63.90	7.50	42.53	3.50	38.80	2.70	34.00	3.40	2.40	0.40	179.30	10.20
2010	15.50	1.50	34.30	3.40	28.40	2.40	18.90	1.90	2.20	0.50	97.10	5.37
Average	31.14		35.35		43.50		29.53		2.06		139.46	

(Barkley_LMB_Database.xls)

Data is available since 1985 in previous annual reports

Table 16. PSD and RSD₁₅ values calculated for largemouth bass collected during 10.0 hours (20 runs; each 0.50 hours) of spring diurnal electrofishing at each area of Lake Barkley from 26 April to 17 May 2010. 95% confidence intervals are in parentheses.

Area	No. fish ≥ 8.0 in	PSD (+ 95% CI)	RSD ₁₅ (+ 95% CI)
Donaldson	70	56 (9)	20 (7)
Ford's	31	46 (12)	25 (10)
Parson's	42	45 (10)	15 (7)
Little River	122	60 (7)	29 (6)
Eddy Creek	137	68 (7)	29 (6)
Nickell	27	59 (14)	9 (8)
Demumbers	44	57 (10)	14 (8)
Total	473	58 (3)	23 (3)

(w fdpsdb.d10)

Table 17. Lake specific assessment for largemouth bass collected at Lake Barkley from 1999 - 2010. 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 rate (Z) and the 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				
Score	1	1	1	3	4	10	F		
2000 ^A	12.6	23.16	24.70	27.90	2.70		0.370	31.6	
Score	1	2	1	2	3	9	F		
2001	14.7	81.00	31.10	19.00	1.60		0.692	49.9	
Score	4	4	2	1	1	12	G		
2002 ^A	14.7	28.90	40.60	16.30	1.30		0.693	50.0	
Score	4	3	3	1	1	12	G		
2003	12.9	59.20	75.30	26.90	1.70		0.658	48.2	
Score	3	4	4	2	1	14	G		
2004 ^A	12.9	29.20	29.30	24.70	1.80		0.632	47.0	
Score	3	3	2	2	1	11	F		
2005 ^A	12.9	42.50	59.40	37.50	2.00		0.674	49.0	
Score	3	3	4	4	2	16	G		
2006	13.4	18.40	51.80	30.80	2.00		0.431	40.0	
Score	4	1	3	3	2	13	G		
2007 ^A	12.7	6.70	66.50	47.60	1.80		0.317	27.0	
Score	2	1	4	4	1	12	G		
2008 ^A	12.7	28.80	32.60	41.20	3.00		0.339	29.0	
Score	2	3	2	4	3	14	G		
2009 ^A	12.7	69.16	38.80	34.00	2.40		0.422	34.0	
Score	2	4	2	3	3	14	G		
2010 ^A	12.7	17.10	28.40	18.90	2.20		0.400	33.0	
Score	2	1	1	1	2	7	P		
Average	13.1	35.12	41.77	29.90	2.27			39.8	

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 18. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.5 hours of diurnal electrofishing (13 runs; each 0.50 hours) for black bass in each area of Lake Barkley on 12 and 15 October 2010.

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					
Middle																								
Eddy Creek																								
Largemouth bass	1	8	21	26	3	12	18	37	43	51	31	30	15	5	5	4	5	2	317	126.80	12.35			
Spotted bass																			0	0.00	0.00			
Smallmouth bass			1					1			1	1			1				5	2.00	1.26			
Crooked Creek																								
Largemouth bass		15	15	29	43	23	7	3	4	7	9	4	3	3	2				167	111.33	15.38			
Spotted bass		2	11	2															15	10.00	2.31			
Smallmouth bass		1	3	1	1														6	4.00	2.00			
Lower																								
Little River																								
Largemouth bass		2	25	50	24	11	5	20	25	43	22	21	13	9	9	1	6	2	288	115.20	14.75			
Spotted bass			1																1	0.40	0.40			
Smallmouth bass				1															1	0.40	0.40			
Total																								
Largemouth bass	1	25	61	105	70	46	30	60	72	101	62	55	31	17	16	5	11	2	772	118.77	7.75			
Spotted bass		2	12	2															16	2.46	1.28			
Smallmouth bass		1	4	2	1			1			1	1			1				12	1.85	0.73			

(w fdw rb.d10)

Table 19. Number of fish and the relative weight (W_r) values for each length group of largemouth collected at Lake Barkley during 6.5 hours (13 runs; each 0.50 hours) of diurnal electrofishing on 12 and 15 October 2010.

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			
Largemouth bass													
	Eddy Creek	110	91	1	112	90	1	36	96	1	258	91	1
	Crooked Creek	37	106	1	20	98	2	8	103	4	65	104	1
	Little River	61	98	1	86	92	1	40	99	2	187	96	1
	Total	208	96	1	218	92	1	84	98	1	510	94	0

(w fdw rb.d10)

Table 20. Age-0 CPUE (fish/hr) and mean length (in) of largemouth bass collected in the fall and CPUE of age-1 largemouth bass collected the following spring during diurnal electrofishing at Lake Barkley.

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
2001	5.4		21.20	4.00	16.00		32.60	3.40
2002	5.3		26.70	2.40	10.10		59.00	6.40
2003	5.1		35.20	4.40	20.90		29.20	2.40
2004	5.4	0.80	39.80	5.75	30.40	4.27	42.50	5.40
2005	5.4	0.14	5.40	1.20	4.80	1.20	18.43	2.35
2006	4.8	0.15	9.33	1.73	4.00	1.29	6.69	0.68
2007	6.8	0.09	68.68	11.78	59.40	10.70	28.80	3.00
2008	6.2	0.05	55.60	6.74	50.20	6.31	69.16	7.35
2009	5.6	0.06	37.60	4.83	29.20	3.44	17.1	1.84
2010	6.5	0.06	46.00	7.78	42.00	6.93	*	

^A Data collected by fall (October) diurnal electrofishing. Mean lengths were determined by analysis of otoliths, removed from a subsample of LMB <8.0 in.

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

* Data will be collected during the spring, diurnal electrofishing sample of 2008.
w fdw rb.dxx, w fdpsdb.dxx

Table 21. Length frequency and CPUE (fish/net-night) of each inch class of white and black crappie collected by trap-net (80 net-nights) at Lake Barkley from 25 October-5 November 2010.

Location	Species	Inch class												Total	CPUE	Std Err	
		2	3	4	5	6	7	8	9	10	11	12	13				14
Little River	White crappie	43	168	365	545	63	22	6	51	52	10	7			1,332	33.33	2.68
	Black crappie	14	90	57	23	9	7	16	22	2	2	2		1	245	6.13	0.89
Donaldson Creek	White crappie	43	85	124	96	32	14	18	66	30	5		2	1	516	12.90	2.13
	Black crappie	14	43	69	19	33	39	64	33	5	15	7	2		343	8.58	1.03
Total	White crappie	86	253	489	641	95	36	24	117	82	15	7	2	1	1,848	23.11	2.05
	Black crappie	28	133	126	42	42	46	80	55	7	17	9	2	1	588	7.35	0.69

(w fdtptnb.d10)

Table 22. CPUE (fish/net-night) for length-groups of crappie collected from multiple years of trap netting on Lake Barkley. Includes mean lengths at capture for age-2 crappie and % of trap netting catch that is age-4 or older (catch excludes age-0 fish).

Year	CPUE >8.0 in			CPUE >10.0 in			Mean length age-2 at capture		Percent 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
2010	3.10	2.14	5.24	1.34	0.45	1.79	11.6	10.5	1.22	0.80	1.04
Average	2.50	1.54	4.05	1.17	0.57	1.74	11.1	10.4	2.30	3.05	2.26

(Barkley_Crappie_Database.xls)

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

Data since 1985 are available in previous annual reports

Table 23. Proportional stock density (PSD) and relative stock density (RSD₁₀) of white and black crappie collected by trap-nets (80 net-nights) at Lake Barkley from 25 October - 5 November 2010. Numbers in parentheses represent 95% confidence intervals.

Location	Species	N	PSD	RSD ₁₀
Little River	White crappie	756	17 (3)	9 (2)
	Black crappie	84	54 (11)	8 (6)
Donaldson	White crappie	264	46 (6)	14 (4)
	Black crappie	217	58 (7)	13 (4)
Total	White crappie	1020	24 (2)	10 (1)
	Black crappie	301	56 (6)	12 (4)

(w fdtptnb.d10)

Table 24. Mean back-calculated length (in) at each annulus of white crappie including the range in length at each age and the 95% confidence interval of each age group. Otoliths were collected from Lake Barkley in the fall 2010.

Year-class	N	Age						
		1	2	3	4	5	6	7
2009	86	4.5						
2008	15	5.4	9.0					
2007	1	4.8	9.7	11.2				
2006	1	3.6	7.1	10.0	11.3			
2004	1	4.4	8.1	9.9	11.4	12.2	13.0	
2003	1	4.8	9.7	11.2	12.5	13.3	13.9	14.3
Mean		4.6	9.0	10.6	11.7	12.7	13.4	14.3
Smallest		3.2	7.0	9.9	11.3	12.2	13.0	14.3
Largest		7.1	10.3	11.2	12.5	13.3	13.9	14.3
Std Err		0.1	0.2	0.4	0.4	0.5	0.4	
Low 95% CI		4.5	8.5	9.9	11.0	11.7	12.6	
High 95% CI		4.8	9.4	11.2	12.5	13.8	14.3	

* Intercept = 0.

wfdtnagb.d10

Table 25. Mean back-calculated length (in) at each annulus of black crappie including the range in length at each age and the 95% confidence interval of each age group. Otoliths were collected from Lake Barkley in the fall 2010.

Year-class	N	Age			
		1	2	3	4
2009	76	4.8			
2008	18	4.5	7.8		
2007	10	4.6	9.0	10.9	
2006	2	5.7	10.5	12.2	13.3
Mean		4.7	8.4	11.1	13.3
Smallest		2.8	4.7	9.4	12.5
Largest		8.7	11.1	12.8	14.0
Std Err		0.1	0.3	0.3	0.7
Low 95% CI		4.6	7.8	10.5	11.9
High 95% CI		4.9	8.9	11.6	14.7

* Intercept = 0.

wfdtnagb.d10

Table 26. Age frequency and CPUE (fish/net-night) of black crappie collected during 80 net-nights of trap-netting at Lake Barkley from 25 October - 5 November 2010.

Age	Inch class													Total	Percent	CPUE	Std. Err.	
	2	3	4	5	6	7	8	9	10	11	12	13	14					
0	28	133	126	36	4	8	3								338	58.00	4.24	0.58
1				6	38	35	70	50	2	1	1				203	34.00	2.53	0.3
2						3	7	5	4	14					33	6.00	0.41	0.07
3									1	2	8	1			12	2.00	0.15	0.04
4												1	1		2	0.00	0.03	0.02
Total	28	133	126	42	42	46	80	55	7	17	9	2	1	588		7.36		
%	5	23	21	7	7	8	14	9	1	3	2	0	0					

(w fdtptnb.d10) (w fdtngab.d10)

Table 27. Age frequency and CPUE (fish/net-night) of white crappie collected during 80 net-nights at Lake Barkley from 25 October - 5 November 2010.

Age	Inch class													Total	Percent	CPUE	Std Err	
	2	3	4	5	6	7	8	9	10	11	12	13	14					
0	86	253	489	607	75	26	2								1,538	82.0	19.01	1.97
1				34	20	10	21	117	75	5					282	16.0	3.76	0.31
2							2		7	10	5				24	1.0	0.27	0.05
3											1				1	0.0	0.01	0.01
4											1				1	0.0	0.01	0.01
6												2			2	0.0	0.03	0.02
7													1		1	0.0	0.01	0.01
Total	86	253	489	641	95	36	25	117	82	15	7	2	1	1,849		23.10		
%	5	14	26	35	5	2	1	6	4	1	0	0	0					

(w fdtptnb.d10) (w fdtngab.d10)

Table 28. Lake specific assessment for crappie collected at Lake Barkley from 1999 - 2010. 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	CPUE >8.0 in	Mean length	Total score	Assessment rating	Z	A
					age-2 at capture				
1999	4.01	1.71	3.60	2.92	9.8			1.06	65.3
Score	2	1	3	2	1	9	F		
2000	6.45	5.28	1.34	3.89	10.9			0.94	60.8
Score	2	3	1	3	4	13	G		
2001	3.25	1.57	36.66	2.63	10.4			0.83	56.3
Score	1	1	4	2	2	10	F		
2002	5.85	3.62	1.90	5.30	10.2			1.10	66.7
Score	2	2	2	4	2	12	F		
2003	7.33	4.80	12.03	3.89	10.7			1.23	70.8
Score	3	3	4	3	3	16	G		
2004	9.18	6.32	3.23	7.29	10.7			1.51	77.8
Score	4	4	2	4	3	17	G		
2005	6.50	3.10	8.60	5.20	10.7			1.42	75.8
Score	2	2	4	4	3	15	G		
2006	7.60	6.00	0.20	3.60	10.6			1.49	77.5
Score	3	3	1	2	3	12	F		
2007	3.78	1.80	2.00	3.20	10.6			0.91	59.9
Score	1	2	2	2	3	10	F		
2008	2.80	1.99	4.85	2.73	11.3			0.87	58.0
Score	1	2	3	2	4	12	F		
2009	2.30	1.71	5.26	2.56	11.3			1.33	73.6
Score	1	1	3	2	4	11	F		
2010	7.20	6.29	23.25	5.24	10.9			1.19	69.5
Score	3	4	4	3	4	18	E		
Average	5.52	3.68	8.58	4.04	10.68				67.5

Rating

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

(Barkley_Crappie_Database.xls)

Table 29. Species composition, relative abundance, and CPUE (fish/hour) of largemouth bass, bluegill and redear sunfish collected during 1.16 hours (7 runs; each 600s) of diurnal electrofishing at Lake Pennyfile on 12 April, 2010.

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	22				
Largemouth bass			13	28	2	9	23	10	26	13	8	4	2	3					2	2	1	146	130.36	17.00	
Bluegill	4	31	41	19	22	23	7															147	131.25	17.03	
Redear Sunfish			1	3	4	6	8	5	2	4	1											34	30.36	5.36	

wfdpsdp.d10

Table 30. Spring, diurnal electrofishing CPUE of each length group of largemouth bass collected at Pennyrite Lake from 1998-2010.

Year	Length group								Total	
	< 8.0 in		8.0 - 11.9 in		12.0 - 14.9 in		> 15.0 in		CPUE	Std Err
1998	12.00	8.00	70.00	1.00	7.00	1.00	2.00	2.00	91.00	21.00
1999 ^A	26.00	8.00	102.00	8.00	3.00	1.00	2.00	2.00	133.00	1.00
2000 ^A	46.00	4.00	87.00	5.00	11.00	7.00	3.00	3.00	147.00	1.00
2001 ^A	54.00	0.00	138.00	10.00	12.00	4.00	5.00	1.00	209.00	15.00
2002	132.30	24.20	116.20	14.70	30.80	5.40	5.40	3.30	284.00	36.90
2003	96.60	17.60	118.80	9.40	24.80	4.80	0.90	0.90	241.00	27.30
2004	27.50	7.10	63.70	10.70	26.40	4.70	2.20	1.40	119.80	14.40
2005	101.10	11.60	127.50	21.00	25.30	5.80	6.60	2.60	260.40	22.90
2006	81.00	21.60	105.00	11.80	26.00	5.03	6.00	2.58	218.00	30.31
2007	41.33	2.46	66.00	3.97	14.00	2.25	2.67	1.33	124.00	5.20
2008	38.87	5.09	62.99	11.96	13.28	2.82	1.96	1.24	117.11	14.48
2009					Did Not Sample					
2010	46.43	9.34	64.29	10.71	12.50	3.34	7.14	1.63	130.36	17.00
Mean	59.70		96.11		17.60		3.43		176.76	

^A Data collected by spring, nocturnal electrofishing.

w fdpsdp.dxx

Date from 1990 to 1997 is listed in previous year reports.

Table 31. Spring electrofishing CPUE for each length group of bluegill and redear sunfish collected at Lake Pennyrite during May from 1998-2010.

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	1998	16.00	4.00	40.00	2.00	16.00	6.00	1.00	1.00	73.00	11.00
	1999	6.00	0.0	61.00	15.00	72.00	2.00	4.00	0.0	143.00	17.00
	2000	80.80	9.00	95.80	18.00	65.90	12.00	9.00	3.00	251.50	35.90
	2001	0.0	0.0	21.00	3.00	65.90	53.90	3.00	3.00	89.80	53.90
	2002	77.60	22.90	98.40	32.00	29.60	7.30	1.60	1.10	207.20	52.10
	2003	27.70	5.20	80.00	14.50	18.50	5.20	12.30	5.20	138.50	8.80
	2004	3.10	3.10	38.50	10.60	23.10	11.90	6.20	4.50	70.80	21.70
	2005	51.70	20.00	262.60	64.00	45.10	13.40	1.10	1.10	360.40	72.30
	2007	4.00	1.79	35.33	8.60	23.33	7.55	1.33	0.84	64.00	15.87
	2008	38.09	19.90	136.23	42.97	93.19	42.72	11.32	4.71	278.82	85.42
	2009	Did Not Sample									
2010	3.57	1.86	81.3	17.2	40.2	6.2	6.3	2.7	131.25	17.03	
Mean	29.39		94.16		42.36		5.39		167.60		
Redear sunfish	1998	0.0	0.0	6.00	2.00	16.00	8.00	9.00	1.00	32.00	12.00
	1999	0.0	0.0	11.00	3.00	40.00	4.00	65.00	11.00	119.00	11.00
	2000	3.00	3.00	41.90	18.00	24.00	0.0	134.70	68.90	206.60	50.90
	2001	0.0	0.0	21.00	15.00	12.00	6.00	9.00	3.00	44.90	21.00
	2002	0.0	0.0	59.20	11.40	49.20	9.90	53.80	20.90	162.30	27.30
	2003	0.0	0.0	55.40	12.70	26.20	3.10	21.50	2.90	103.10	13.00
	2004	0.0	0.0	20.00	12.80	40.00	17.10	9.20	2.90	69.20	31.10
	2005	1.10	1.10	37.40	12.80	27.50	10.70	23.10	5.30	89.00	28.70
	2007	2.00	1.37	21.33	7.91	16.67	8.09	10.67	1.69	50.67	16.35
	2008	2.65	1.76	20.98	9.19	12.75	6.34	41.03	25.14	77.40	40.35
	2009	Did Not Sample									
2010	0.0	0.0	3.57	1.86	8.93	2.31	17.86	5.00	30.36	5.36	
Mean	2.19		27.07		24.84		35.90		89.50		

wfdpsdp.dxx

Table 32. PSD and RSD values obtained for largemouth bass, bluegill and redear sunfish collected during 1.25 hours of diurnal electrofishing (6 runs; each 600s) at Lake Pennyrite on 12 April 2010.

Species	N	PSD (+/- 95% CI)	RSD* (+/- 95% CI)
Largemouth bass	94	23 (8)	9 (6)
Bluegill	143	36 (8)	5 (4)
Redear sunfish	34	76 (14)	35 (16)

* Largemouth bass = RSD_{15} , Bluegill = RSD_8 , Redear sunfish = RSD_6 .

wfdpsdp.d10

Table 33. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during diurnal electrofishing at Lake Beshear during 2010.

Season	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			
Spring	Largemouth bass	2	5	2	2	16	34	21	6	7	7	8	19	26	19	32	20	11	6	5	248	82.67	15.69
Fall	Largemouth bass	19	61	29	21	7	11	14	7	5	4	7	2	5	13	13	12	4	4	1	239	95.60	3.25

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Table 34. Lake specific assessment for largemouth bass collected at Lake Beshear from 2000 - 2010. 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				
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	5.50	28.00	36.50	3.50			0.547	54.7
Score	4	1	4	3	2	14	G		
2003 ^A	14.1	6.40	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	10.40	11.20	20.80	3.60			0.316	27.1
Score	4	2	2	2	2	12	G		
2009 ^A	13.8	5.20	6.00	29.60	4.40			0.142	13.2
Score	4	1	1	3	3	12	G		
2010 ^A	13.8	22.33	11.33	39.67	3.67			0.297	25.7
Score	4	3	2	3	2	14	G		
Average	13.9	13.55	10.73	32.35	3.39				35.5

Data from 1985 to 1999 is listed in previous years reports.

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

Rating

1-7 = Poor (P)

8-11 = Fair (F)

12-16 = Good (G)

17-20 = Excellent (E)

Lake Beshear Bass Data Base

Table 35. 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 >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	4.80	1.59
2009	3.6	0.1	24.80	5.31	2.00	0.63	22.33	4.90
2010	4.9	0.1	54.00	4.60	22.00	4.52		

^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

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 2010 field season.

Nolin River Lake

Black Bass Sampling

Spring electrofishing to monitor the black bass population at Nolin River Lake could not be conducted in 2010 due to the high lake level throughout the sampling period.

Fall electrofishing to determine CPUE and mean length of age 0 largemouth bass (Tables 2-3) was conducted in October 2010. Mean length of age 0 largemouth bass and CPUE of age 0 largemouth ≥ 5.0 in both increased when compared to the last several years.

Crappie Sampling

Trap netting was conducted during October 2010 to assess Nolin River Lake's crappie population (Tables 4-6). A total of 798 crappie (16.9% black) were collected during 79 net-nights of effort (10.10 crappie/net-night). Catch rates in 2010 decreased substantially from 2009 due mostly to the decrease in age 1 fish. Catch rates in 2009 were above normal due to an abundance of age 1 fish from an exceptional 2008 year class. The strong 2008 year class did not result in an expected increase in the catch rate of crappie ≥ 8.0 in during sampling in 2010. The length-weight equation is $\log W = -3.60 + 3.27 (\log L)$. The objective in the Nolin Lake SMP for a CPUE of ≥ 8.0 in fish of ≥ 7.00 fish/nn for white crappie was met in 2010. Black crappie age data was collected in 2010 for the first time and is presented in Table 6a.

Rough River Lake

Black Bass Sampling

Spring electrofishing to assess the black bass population at Rough River Lake could not be completed in 2010 due to high water level throughout the sampling time frame.

Fall sampling for mean length and CPUE of age 0 fish was conducted during October (Tables 7-8). Mean length and CPUE of age 0 fish are similar to previous collections.

Crappie Sampling

Trap netting to evaluate Rough River Lake's crappie population was conducted the first week of November (Tables 9-11). The catch rate for crappie in 2010 decreased substantially from the 2009 catch rate; however 2009 was an exceptional year. The increased catch rate in 2009 was due to very successful year classes in 2008 and 2009. Age data collected during 2009 indicate mean length at age 1 decreased 1.2 in from when last collected in 2006. The decrease in mean length at age 1 is presumably due to competition from the increased number of small crappie. The log 10 length weight equation is $\log W = -3.80 + 3.46 (\log L)$. Rough River Lake SMP objectives for white crappie management state: a CPUE of ≥ 10.0 fish/nn (excluding age 0 fish), a CPUE of ≥ 7.00 fish/nn for age 1 fish, a CPUE of ≥ 3.00 fish/nn for age 0 fish, a CPUE of ≥ 6.00 fish/nn for white crappie ≥ 8.0 in. The only objective met in 2010 was the CPUE (excluding age 0) of greater than 10.00 fish/nn. Black crappie age data was collected from Rough River Lake for the first time in 2010. Results are presented in Table 11a.

Hybrid Striped Bass Sampling

Gill netting to assess hybrid striped bass population parameters was conducted the third week of November (Tables 12-16). Catch rates in 2010 were much greater than in any previous survey. Growth rate and age and length distributions were similar to prior collections. This is a very stable population with good growth rates. With the exception of the higher CPUE in 2010, population assessment values have fluctuated little since 1999. The log 10 length weight equation is $\log W = -3.52 + 3.14 (\log L)$. Rough River Lake SMP management objectives state: a mean length at capture of ≥ 16.5 in for age 2+ fish, a CPUE (excluding age 0 fish) of ≥ 25.00 fish/nn, a CPUE of ≥ 15.00 fish/nn for ≥ 15.0 in fish, and a CPUE of ≥ 8.00 fish/nn for age 1 fish. All management objectives were met in 2010.

Channel Catfish Sampling

The channel catfish population was sampled the third week of November in conjunction with hybrid striped bass sampling (Tables 17-19). Catch rate and length distribution are similar to when the population was first sampled in 2008. Growth rate is good and similar to rates observed at other district lakes.

Creel Survey

A random, stratified, roving creel survey was conducted at Rough River Lake from April 01 – October 31 2010 to determine angler pressure and catch/harvest statistics (Tables 20-25). The lake was divided into 2 areas (North Fork and South Fork) each with equal pressure probabilities. Days were divided into 2 time periods (morning and afternoon) six hours in length each with equal probabilities. Weekend day probabilities were 2.5x those of weekdays. Each area (North Fork/South Fork) was divided into 3 “sub-areas” of approximately equal size in which the clerk would spend 2.0 hours of the six hour time period (counting and interviewing) before moving to the next sub-area.

Total pressure, catch, and harvest statistics decreased somewhat in 2010, but are similar to results obtained in 2005 when Rough River Lake was last surveyed. Black bass was the most sought after species group in 2010 with 43,911 man-hours of pressure followed closely by the crappie group at 41,330 man-hours. In 2005, the crappie group and black bass group were nearly equal with crappie receiving 56,606 man-hours and black bass 51,009 man-hours. Man-hours spent in pursuit of “anything” decreased from 27,449 man-hours in 2005 to 18,309 in 2010. Angling pressure directed toward panfish decreased from 16,786 man-hours in 2005 to 9,469 man-hours in 2010 and hybrid striped bass pressure decreased from 19,643 man-hours in 2005 to 8,288 man-hours in 2010. Catfish angling pressure estimates were nearly equal for both surveys. Some of the decline observed in angler pressure may be attributed to an unusually hot and dry summer period. Rough River Lake surface temperatures were in the low 90's for several weeks during July and August.

The estimated 31,840 largemouth caught in 2010 is a decrease from the 49,336 caught in 2005, however estimated harvest was nearly equal for both surveys (5,480 in 2010 vs. 5,909 in 2005). Mean length of harvested fish was also similar at 14.4 inches in 2010 and 14.9 inches in 2005. In 2010, an estimated 136,221 white crappie were caught and 43,737 harvested which is a significant increase from the 49,001 caught and 19,841 harvested in 2005. Mean length of harvested white crappie decreased from 10.4 inches in 2005 to 9.5 inches in 2010. The increase in the number of crappie caught/harvested in 2010 and the decrease in mean length of harvested white crappie in 2010 is from an abundance of 4.0-6.0 in white crappie in the population due to extremely successful year classes in 2008 and 2009. Even though the hybrid striped bass angling pressure decreased from 19,643 man-hours in 2005 to 8,288 man-hours in 2010, the estimated 6,184 hybrid striped bass caught and 3,504 harvested is very similar to estimates obtained during the 2005 creel survey.

An angler attitude survey was conducted in conjunction with the creel survey (Figure 1). Overall, anglers were mostly satisfied with their fishing experiences at Rough River Lake.

Lake Malone

Largemouth Bass Sampling

Electrofishing data for the largemouth bass population assessment was collected during April 2010 (Tables 26-32). The increase in the total catch rate in 2010 is due primarily to increases in the catch rates of 8.0-12.0 in and ≥ 15.0 in bass. Catch rates in 2009 were below normal and the 2010 CPUE is similar to previous collections. Age data collected in 2010 indicate growth rate has improved slightly from when last collected in 2007, but is still somewhat slower than in the early 2000's. Lake Malone was not fertilized in 2010 for the first time in approximately 30 years. Growth rates documented in 2010 will be compared to future growth rates to document any effects of discontinuing the fertilization program. Lake Malone was again electrofished in October for relative weight and mean length and CPUE of age 0 fish (Tables 33-34). The mean length of age 0 bass is similar to previous years. The CPUE of age 0 bass and CPUE of age 0 bass ≥ 5.0 in are greater than most prior collections. Lake Malone SMP objectives for management of largemouth bass state: a mean length age 3 at capture of ≥ 12.0 in, a CPUE of ≥ 20.00 fish/hr for age 1 fish, a CPUE of ≥ 35.00 fish/hr for 12.0-14.9 in fish, a CPUE of ≥ 40.00 fish/hr for ≥ 15.0 in fish, and a CPUE of ≥ 6.00 fish/hr for ≥ 20.0 in fish. The only objectives met in 2010 were the catch rates of the 12.0-14.9 in and ≥ 15.0 in fish.

Bluegill/Redear Sunfish Sampling

Electrofishing to determine bluegill and redear sunfish population statistics at Lake Malone was conducted during May 2010 (Tables 35-38). The 2010 catch rate is the highest ever collected and follows a decade long trend of increasing total CPUE due to the increasing catch rate of 3.0-5.0 in bluegill. The Lake Malone SMP objectives for bluegill management state a CPUE of ≥ 50.00 fish/hr for ≥ 6.0 in fish, and a CPUE of at least 1.00 fish/hr for ≥ 8.0 in fish. The objective for CPUE of ≥ 8.0 in fish was not met.

Channel Catfish Sampling

To assess the current annual stocking rate of 25 fish/acre, channel catfish were sampled with tandem hoop net sets in October to determine length distribution and growth rate (Tables 39-40). Six tandem hoop net sets (3 nets in series) were fished for 3 days the second week of October. Growth rates are fair and the population is comprised of primarily ages 1-4 with a few fish in the age 5-8 range. Lake Malone will not be stocked in 2011 and then stocked at a reduced rate beginning in 2012 in an effort to increase growth.

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 reached full pool in May 2010. Low water level prevented sampling in 2009.

Largemouth Bass Sampling

Electrofishing to assess the largemouth bass population at Mauzy was conducted in April (Tables 28, 41-43). The total catch rate in 2010 for largemouth bass at Mauzy was lower than the past few surveys, due mostly to a reduction in the number of largemouth less than 12.0 in. This is probably the result of the lake having been drawn down and predation on the YOY fish. The catch rate for bass greater than 12.0 in and ≥ 15.0 in is consistent with previous surveys; however the catch rate for bass ≥ 20.0 in is greater than ever observed. Mauzy was electrofished again in October (Tables 44-45) to document mean length and catch rate of age 0 bass.

Bluegill Redear Sunfish Sampling

Electrofishing to assess the bluegill and redear sunfish populations was conducted in May (Tables 37, 46-49). The bluegill population could not be sampled in 2008 due to expansive milfoil beds along the shoreline. The leaking water control structure allowed the lake to remain lower than normal resulting in an increased abundance of shoreline vegetation. Bluegill sampling was not possible in 2009 either, due to the drawdown. Although flooded

terrestrial vegetation present before the lake reached full pool hampered sampling in 2010, results from the 2010 sample are similar to past surveys. As with the largemouth bass population, the population will take a few years to stabilize.

Redear sunfish were stocked in Lake Mauzy in 2004 and 2005 following renovation in 2003. Less than 10 redear sunfish were collected per electrofishing survey prior to 2007, during which 49 were collected. The 169 collected in 2010 shows promise that the redear sunfish population may finally develop into a viable fishery at Mauzy.

Channel Catfish Sampling

Channel catfish were sampled via tandem hoop net sets in October to determine length distribution and growth rate to assess the current annual stocking rate of 50 fish/acre (Tables 50-51). Three tandem hoop net sets (3 nets in series) were fished for 3 days the first week of October. Growth rate is good and the population is comprised of primarily ages 1-3 with a few fish in the age 4-6 range. Sampling will be conducted again to determine population statistics after 2-3 years of a stable lake level.

Carpenter Lake

Largemouth Bass

Largemouth bass were electrofished at Carpenter Lake during April 2010 to determine population parameters (Tables 28, 52-57). Catch rates at Carpenter Lake have been erratic, but the general trend since 2003 has been an increase in the number of bass <12.0 in and a decrease in the number of bass ≥ 12.0 in. Age data collected during 2010 indicate growth rates have slowed since last determined in 2007 and few fish are reaching 12.0 in prior to age 5. Carpenter Lake SMP objectives for largemouth bass management state: a mean length age 3 at capture of ≥ 11.5 in, a CPUE of ≥ 46.00 fish/hr for age 1 fish, a CPUE of ≥ 35.00 fish/hr for 12.0-14.9 in fish, a CPUE of ≥ 20.00 fish/hr for ≥ 15.0 in fish and a CPUE of ≥ 1.00 fish/hr for ≥ 20.0 in fish. The CPUE of age 1 fish was the only objective met in 2010. Largemouth bass were electrofished again in October to build an index of mean length and CPUE data for age 0 fish (Tables 58-59).

Bluegill Redear Sunfish Sampling

Electrofishing to assess the bluegill/redear sunfish populations was conducted in May (Tables 37, 60-65). Bluegill catch rates at Carpenter Lake are erratic as well, due in part to habitat conditions and sampling inefficiencies. Although down slightly in 2010, a trend for the past several years has been an increasing catch rate of bluegill <8.0 in and a decreasing catch rate of bluegill ≥ 8.0 in since gizzard shad were first discovered in Carpenter Lake in 2006. Age data collected in 2010 is similar to age data last collected in 2007, but both indicate growth rate has slowed from age data collected during 2002. The addition of shad as another forage species may be leading to the increased number of small bluegill as largemouth bass predation on bluegill decreases. Carpenter Lake SMP bluegill management objectives state: a mean length age 2 at capture of ≥ 5.0 in, 2-2+ years to reach 6.0 in, a CPUE of at least 50.00 fish/hr for bluegill ≥ 6.0 in, and a CPUE of at least 15.00 fish/hr for bluegill ≥ 8.0 in. The CPUE objective for bluegill ≥ 6.0 in. was the only objective met in 2010.

New Kingfisher Lake

Largemouth Bass Sampling

The largemouth bass population was sampled at New Kingfisher Lake in April 2010 (Tables 28, 66-68). New Kingfisher Lake's largemouth bass population has historically been dominated by an abundance of slow-growing 8.0-11.0 in fish. Sublegal largemouth bass were removed on a couple of occasions via electrofishing to reduce competition and increase growth. 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 large numbers of fish in both lakes. Catch rates in 2009 were much lower than previous years, especially the catch rate for 8.0-11.0 in bass. Results from the 2010 survey indicate the reduction in the number of the sub-legal bass has allowed the remaining bass to grow and move into the 12.0-14.9 in and ≥ 15.0 in ranges. Old and New Kingfisher lakes are both highly eutrophic and have experienced 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 (Table 69) to document length distribution.

Bluegill Sampling

The bluegill population was electrofished during May 2010 to document population statistics (Tables 37, 70-72). In 2009, the bluegill catch rate at New Kingfisher nearly doubled, most likely in response to the lack of bass predation from the 2008 fish kill. In 2010, the catch rate of < 6.0 in bluegill decreased and the catch rate of bluegill ≥ 6.0 in increased slightly. Hopefully this trend will continue in 2011 and the 6.0-7.0 in bluegill will grow into the ≥ 8.0 in size range.

Old Kingfisher Lake

Old Kingfisher Lake was not sampled in 2010 due to equipment problems. As noted earlier, both Old and New Kingfisher lakes would benefit greatly from total renovation.

Washburn Lake

Largemouth Bass

Electrofishing to assess largemouth bass population parameters at Washburn Lake was completed during April (Tables 28, 73-78). The total catch rate for largemouth bass has declined since the initial stockings in 2000 and 2001 following renovation. The catch rate for < 12.0 in bass has been fairly stable since 2007, but few fish greater than 12.0 in are collected. Age data collected in 2010 indicate largemouth are growing slowly, there are few fish in the population greater than age 3, and few fish reach 12.0 in.

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. In the spring of 2008 a phytoplankton bloom could not be achieved following fertilizer applications. An alkalinity test in June indicated an alkalinity level of 40 ppm. Approximately 50 tons of lime were applied in late July 2008 which increased the alkalinity to 60 ppm by December 2008. Fertilizer applications again produced plankton blooms during 2009-2010, although the blooms dissipated after approximately a week. Alternative fertilizers and application methods will be utilized during 2011 in an attempt to increase fertility.

Washburn was electrofished again in October to begin building an index of CPUE and mean length of age 0 bass (Tables 79-80). 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 2010. Mean length is similar to previous collections, but CPUE of age 0 fish continues to decline.

Bluegill Sampling

Sampling to assess Washburn Lake's bluegill population was conducted in May 2010 (Tables 37, 81-83). Bluegill catch rates in 2010 are similar to prior collections. Age data collected in 2009 indicate growth rates have declined and additional year classes are present in the population compared to when last examined in 2006. The slower growth rate and older fish in the population indicate few fish are reaching a harvestable size and being removed from the population. The slow bluegill growth rate is probably a result of the low fertility as well. Alternative fertilization methods will be tried in 2011 in an effort to increase growth rates.

Peabody WMA

SCUBA transects to assess fish populations at Goose and Musky Lakes on Peabody WMA were conducted in June (Table 84-85). Transects could not be conducted at Bottom Lake in 2010 due to poor visibility.

Largemouth bass observations at Goose Lake are similar to prior surveys and indicate a stable population. Total bluegill observations decreased in 2010 due to a decline in the number of 3.0-5.0 in bluegill. Redear sunfish

observations increased in 2010 as has been the case since first surveyed in 2005, indicating the redear sunfish population is increasing.

Musky Lake could not be surveyed during 2008 or 2009 due to property boundary issues. Those issues have been settled and Musky Lake is again a component of Peabody WMA. Largemouth bass observations at Musky Lake are similar to those during 2005-2007 and indicate a balanced, stable population. Observations of both bluegill and redear sunfish were greater in 2010 than when last surveyed in 2007. Monitoring will continue to document future population trends.

Merlin Lake

Largemouth Bass Sampling

Merlin Lake was electrofished in April 2010 to document catch rate and size structure for largemouth bass (Table 86). The lower conductivity of this mine lake allows effective electrofishing. Catch rates increased in 2010 compared to the first survey in 2009. Size structure improved as well, with several fish in the 12.0-15.0 in range being collected that were not observed in 2009. Age data collected during 2009 indicate growth rates are slower than non-mine lakes with bass not reaching 12.0 in until age 4 or 5. The fertilization program initiated in 2008 to increase fertility and growth will continue in 2011.

Island Lake

Channel Catfish Sampling

Channel catfish were sampled with tandem hoop net sets in October to determine length distribution and growth rate to assess stocking rate (Tables 87-88). Three tandem hoop net sets (3 nets in series) were fished for 3 days the third week of October. Growth rate is decent, but slower than non-mine lakes. Only age 1-3 fish were collected indicating catfish are being well utilized and overabundance is not a problem. .

Audubon State Park

Largemouth Bass

Audubon State Park Lake was electrofished during April 2010 to document largemouth bass population statistics (Table 89). Audubon SP Lake is a relatively infertile lake in a wooded watershed. Size structure is good, but growth rate data collected in 2009 indicated growth rates were low for both largemouth bass and bluegill. Efforts will be made in 2011 to work with State Park personnel and implement fertilization and habitat improvement programs. Annual sampling will continue to monitor the population.

Table 1. Annual summary of sampling conditions by waterbody, species sampled and date for NWFD lakes during 2010.

Water body	Species	Date	Time (24hr)	Gear	Weather ^a	Water temp. F	Water level	Secchi (ft)	Conditions ^b	Pertinent sampling comments
Nolin River Lake	LMB	10/6/10	1000	Shock	Sunny, clear, breezy, 70°s	70-73°	514.5	36"	Good	
Nolin River Lake	LMB	10/7/10	1000	Shock	Sunny, light breeze, 80°	69°	514.5	37"	Good	
Nolin River Lake	Crappie	10/25-29/10		Trap Net	Cloudy, sunny, windy, rainy, 50-70°	63-66°	510.2-508.6	24-30"	Good	
Rough River Lake	LMB	10/13/10	1000	Shock	Overcast, calm 65°	69°	494.3	34-52"	Good	
Rough River Lake	LMB	10/14/10	1000	Shock	Sunny, breezy, cool, 60°	68°	494.3	24-68"	Fair	Choppy during some samples, front went through night of 13th
Rough River Lake	Crappie	11/1-5/10		Trap Net	Cloudy, sunny, rain, breezy 50°s	56-60°	490.6-488.9	12-18"	Good	Small fronts pass through, weather varied all week
Rough River Lake	HSB/CC	11/15-17/10		Gill Net	Cloudy, rainy, 50°s	53-55°	484.7-483.7	24"	Good	Light rain, front passed through 11/15 & 11/16
Lake Malone	LMB	4/22/10	900	Shock	Mostly sunny, windy, ~70°	68°	3" low	39"	Good	
Lake Malone	LMB	4/23/10	900	Shock	Sunny, breezy, ~70°	68°	3" low	40"	Good	
Lake Malone	BG	5/24/2010	900	Shock	Sunny, 79°	80°	Pool	30"	Good	
Lake Malone	LMB	10/4/10	900	Shock	Mostly sunny, mid 60°s	68°	Pool	18"	Good	
Lake Malone	CC	10/12-15/10		Hoop Net	Sunny, front w/ rain, sunny, 70°s	66°	Pool	18"	Good	Caught mostly small recently stocked fish
Mauzy Lake	LMB	4/14/10	900	Shock	Sunny, calm 75°	72°	~3" low	30"	Good	
Mauzy Lake	BG	5/25/10	900	Shock	Sunny, 85°	82°	Pool	40"	Good	
Mauzy Lake	LMB	10/1/10	900	Shock	Sunny, windy 10-15, 65°	70°	Pool	30"	Fair	Water choppy
Mauzy Lake	CC	10/5-8/10		Hoop Net	Sunny, 80°s	65°	Pool	30"	Good	1 set messed with by angler
Carpenter Lake	LMB	4/14/10	900	Shock	Sunny, calm 70°	67°	Pool	40"	Good	
Carpenter Lake	BG	5/19/2010	900	Shock	Cloudy, 61°	70°	Pool	29"	Good	Lots of fish in lilly pads, hard to dip
Carpenter Lake	LMB	9/30/10	900	Shock	Sunny, warm	71°	Pool	18"	Good	
New Kingfisher Lake	LMB	4/13/10	1100	Shock	Sunny, calm 75°	73°	Pool	25"	Good	
New Kingfisher Lake	BG	5/21/10	900	Shock	Overcast, light breeze, 68°	69°	Pool	26"	Good	
New Kingfisher Lake	LMB	9/29/11	1100	Shock	Sunny, warm	72°	Pool	12"	Good	
Old Kingfisher Lake	BG	5/21/10	1030	Shock	Overcast, light breeze, 68°	69°	Pool	20"	Good	
Washburn Lake	LMB	4/15/10	900	Shock	Sunny, calm 75°	72°	Pool	96"	Fair	Water very clear, fish deep
Washburn Lake	BG	5/19/10	900	Shock	Partly Cloudy, 62°	69°	3" up	22"	Good	Good bloom, post spawn, some large fish with bacterial infection
Washburn Lake	LMB	9/29/10	900	Shock	Sunny, warm, mid 70°s	75°	18" low	18"	Good	
Audubon State Park	LMB	4/14/10	1100	Shock	Sunny, Calm, 80°	78°	Pool	25"	Good	
Merlin Lake (PWMA)	LMB	4/15/10	900	Shock	Sunny, breezy, 70°	74°	Pool	72"	Fair	Water slightly choppy
Goose Lake (PWMA)	ALL	7/2/2010	1200	SCUBA	Sunny, breezy, 78°	90°	Pool	12'	Good	
Musky Lake (PWMA)	ALL	6/30/2010	1200	SCUBA	Clear, sunny, breezy, 84°	90°	Pool	12'	Good	
Island Lake (PWMA)	CC	10/19-22/10		Hoop Net	Mostly cloudy to sunny, breezy, ~70°	65°	Pool	30"	Good	Lost 3rd hoop net on 3rd set
South Lake (PWMA)	CC	10/19-22/10		Hoop Net	Mostly cloudy to sunny, breezy, ~70°	65°	Pool	30"	Good	Too much unseen vegetation, caught few fish, repeat spring 2011

Table 2. Species composition, length frequency, and CPUE (fish/hr) of black bass collected during 4.5 hours of 30-minute diurnal electrofishing runs at Nolin River Lake in October 2010.

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	12	126	64	38	36	52	29	18	27	36	28	26	15	5	2	4		1		519	207.60	25.29	
	Spotted bass	4	31	10	1			1	2	5	7	9	1								71	28.40	8.08	
Lower	Largemouth bass	4	53	16	9	18	22	12	7	6	14	21	16	8	9	4	2	1			222	111.00	23.57	
	Spotted bass	1	17	11	2	4	3	1	3	7	17	4	4								74	37.00	4.80	
Total	Largemouth bass	16	179	80	47	54	74	41	25	33	50	49	42	23	14	2	8	2	1	1	741	164.67	23.63	
	Spotted bass	5	48	21	3	4	3	2	5	12	24	13	5								145	32.22	4.96	

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Table 3. 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 2001-2010.

Year class	Area	Age 0		Age 0		Age 0 >5.0 in		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2001	Total	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	n/d*	
2010	Total	5.0	0.08	107.33	21.31	46.22	9.12		

*Not able to electrofish spring 2010

Table 4. Length frequency and CPUE (fish/net-night) for each species of crappie collected in 79 net-nights of sampling at Nolin River Lake during October 2010.

Species	Inch class												Total	CPUE	Std. Error
	2	3	4	5	6	7	8	9	10	11	12				
White crappie	2	59	70	19	3	34	114	128	204	27	3	663	8.39	1.42	
Black crappie	16	79	9	1	3	18	4	3	2			135	1.71	0.37	

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Table 5. PSD and RSD₁₀ values calculated for crappie collected in trap nets from Nolin River Lake during October 2010; 95% confidence limits are in parentheses.

Lake/Species	No.	PSD	RSD ₁₀
Nolin River Lake			
White crappie	532	89 (+/- 3)	44 (+/- 4)
Black crappie	31	29 (+/- 16)	6 (+/- 8)

nwdnrln.d10

Table 6. Population assessment for white crappie based on fall trapnetting at Nolin River Lake from 2001-2010 (scoring based on statewide assessment).

Parameter	Year																			
	2001		2002		2003		2004		2005		2006		2007		2008		2009		2010	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
CPUE (excluding age 0)	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	6.73	2
CPUE age 1	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	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	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	6.02	3
Mean length age 2+ at capture	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)	0.910		1.571		1.107		0.630		0.749		0.876		0.882		0.976		1.638			
Annual Mortality (A)%	59.7		79.2		66.9		46.7		52.7		58.3		58.6		62.3		80.6			
Total score		10		13		14		13		12		11		12		11		14		
Assessment rating		F		G		G		G		F		F		F		F		G		

* Age data not collected.

Table 6a. Mean back calculated lengths (in) at each annulus for black crappie collected at Nolin River Lake in October 2010.

Year class	No.	Age	
		1	2
2009	19	3.7	
2008	4	3.6	6.7
Mean		3.7	6.7
No.		23	4
Smallest		2.0	4.6
Largest		4.7	8.0
Std error		0.1	0.8
95% CI (+)		0.2	1.5

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Table 7. Species composition, length frequency, and CPUE (fish/hr) of black bass collected during 4.5 hours of 30-minute diurnal electrofishing runs at Rough River Lake in October 2010.

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	19	28	23	20	31	41	28	34	30	20	21	16	13	15	4	3	1	1	1	365	146.00	24.52	
	Spotted bass			2	1	3	7	4	3	2	2	3	1								28	11.20	4.50	
Lower	Largemouth bass	6	19	35	18	14	10	18	35	21	10	12	8	10	4	3	2	1	1		227	113.50	8.54	
	Spotted bass		4	6	5	14	12	9	2	3	4	3	1								63	31.50	8.26	
Total	Largemouth bass	25	47	58	38	45	51	46	69	51	30	33	24	23	20	18	6	4	2	1	592	131.56	14.55	
	Spotted bass		4	8	6	17	19	13	5	5	6	6	2								91	20.22	5.45	

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Table 8. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in fall electrofishing samples at Rough River Lake 2001 - 2010.

Year class	Area	Age 0			Age 0 ≥ 5.0 in			Age 1		
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	Mean length	Std. error	CPUE
2001	Total	4.0		38.6	3.90	29.3	0.9	7.93	1.70	
2002	Total	5.0		60.5	18.30	34.3	2.6	44.30	5.61	
2003	Total	4.8		34.9	3.20	20.0	2.9	32.82	3.85	
2004	Total	4.0	0.06	100.4	18.57	24.2	5.9	28.04	5.91	
2005	Total	4.3	0.08	72.4	10.40	22.4	4.4	21.98	2.82	
2006	Total	4.9	0.09	64.0	18.70	30.2	7.4	27.06	3.33	
2007	Total	4.2	0.07	37.1	7.33	9.1	2.43	*n/d		
2008	Total	5.1	0.11	56.9	13.49	28.7	7.85			
2009*	Total							*n/d		
2010	Total	4.8	0.09	51.33	9.00	22.44	4.00			

* Water level too high to sample

Table 9. Length frequency and CPUE (fish/net-night) for each species of crappie collected in 80 net-nights of sampling at Rough River Lake during November 2010.

Species	Inch class													Total	CPUE	Std. error
	3	4	5	6	7	8	9	10	11	12	13					
White crappie	54	98	217	232	94	106	102	52	10	1	1	1	967	12.09	1.53	
Black crappie	1	1	11	4	4	3	1						21	0.26	0.10	
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Table 10. PSD and RSD₁₀ values calculated for crappie collected in trap nets from Rough River Lake during November 2010; 95% confidence limits are in parentheses.

Lake/Species	No.	PSD	RSD ₁₀
Rough River Lake			
White crappie	815	33 (+/- 3)	8 (+/- 2)
Black crappie	19	21 (+/- 18)	0
nwdrrltn.d10			

Table 11. Population assessment for white crappie based on fall trapnetting at Rough River Lake from 2000-2010 (scoring based on statewide assessment).

Parameter	Year																
	2000	2002	2003	2004	2005	2006	2008	2009	2010	Value	Score						
CPUE (excluding age 0)	4.03	1	11.99	2	13.10	3	8.22	2	4.64	2	8.16	2	4.64	2	28.10	4	10.19
CPUE age 1	1.36	1	10.02	3	10.8	3	5.5	2	3.5	2	7.52	3	3.10	2	26.10	4	5.81
CPUE age 0	2.12	1	4.26	2	18.85	4	1.8	1	4.61	2	2.33	1	20.00	4	12.39	4	1.90
CPUE ≥8.0 in	3.07	2	8.78	3	9.92	3	7.10	3	3.25	2	3.89	2	4.31	2	7.79	3	3.40
Mean length age 2+ at capture	9.2	3	9.5	3	10.6	4	10.4	4	10.4	4	10.7	4	10.7	4	10.8	4	4
Instantaneous Mortality (z)	1.160		0.871		1.066		0.734		0.869		2.180		1.030		2.04		
Annual Mortality (A)%	68.7		58.5		65.5		52.0		58.1		88.7		64.3		87.1		
Total score	8		13		17		12		12		12		14		19		
Assessment rating	F		G		G		F		F		F		G		E		

Table 11a. Mean back calculated lengths (in) at each annulus for black crappie collected at Rough River Lake in October 2010.

Year	class	No.	Age		
			1	2	3
2009		13	3.6		
2008		4	3.6	6.9	
2007		1	4.4	7.5	9.1
Mean		3.7	7.1	9.1	
No.		18	5	1	
Smallest		3.1	6.3	9.1	
Largest		4.4	8.2	9.1	
Std error		0.1	0.4		
95% CI (+)		0.1	0.6		

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Table 12. Length frequency and CPUE for hybrid striped bass collected in 13 net-nights of sampling at Rough River Lake during November 2010.

Species	Inch class													Total	CPUE	Std. Error					
	4	7	8	9	10	11	12	13	14	15	16	17	18				19	20	21	22	23
Hybrid striped bass	2	2	7	4	3	61	141	133	54	58	79	91	87	37	23	12	5	2	801	61.62	8.52

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Table 13. Mean back calculated lengths (in) at each annulus for hybrid striped bass collected at Rough River Lake in November 2010.

Year class	No.	Age																							
		1	2	3	4	5	6	7	8	9	10	11	12												
2009	74	8.8																							
2008	37	9.6	15.1																						
2007	17	9.1	14.7	17.3																					
2006	26	8.8	14.8	17.0	18.3																				
2005	17	9.7	14.8	17.4	18.8	19.6																			
2004	10	9.3	15.0	17.0	18.4	19.3	19.9																		
2003	3	8.0	13.9	16.0	17.0	17.9	18.7	19.3																	
2002	1	7.8	10.4	12.6	13.8	15.2	17.9	18.7	19.4																
2001	1	8.7	12.5	14.3	16.2	17.4	18.1	19.0	19.9	20.9															
1998	1	8.1	10.9	13.2	14.2	15.5	16.5	17.0	17.8	18.5	19.3	20.0	20.8												
Mean		9.1	14.8	17.0	18.2	19.0	19.2	18.8	19.0	19.7	19.3	20.0	20.8												
No.		187	113	76	59	33	16	6	3	2	1	1	1												
Smallest		5.9	10.4	12.6	13.8	15.2	16.5	17.0	17.8	18.5	19.3	20.0	20.8												
Largest		13.0	16.7	18.9	21.2	22.9	22.4	20.6	19.9	20.9	19.3	20.0	20.8												
Std error		0.1	0.1	0.1	0.2	0.3	0.4	0.5	0.7	1.2															
95% CI (+)		0.2	0.2	0.3	0.3	0.5	0.7	1.0	1.3	2.3															

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Table 14. Age-frequency and CPUE (fish/net-night) per inch class of hybrid striped bass collected in 13 net-nights of sampling at Rough River Lake during November 2010.

Age	Inch class													No.	CPUE	Std. Error	Age (%)								
	4	7	8	9	10	11	12	13	14	15	16	17	18					19	20	21	22	23	24		
0	2	2	7	4	3																18	1.38		2.2	
1					61	141	133	37	3													375	28.88	5.25	46.8
2							17	55														130	9.97	1.60	16.2
3									15	27	26	2										70	5.41	0.77	8.7
4									15	41	26	12	3									97	7.47	1.07	12.1
5									5	17	15	10	2									48	3.80	0.50	6.1
6									5	9	8	3	5									35	2.72	0.32	4.4
7									5	4	3	3										12	0.94	0.15	1.5
8									4													4	0.33	0.05	0.5
9																	6					6	0.46	0.12	0.7
10																3						3	0.25	0.07	0.3
Total	2	2	7	4	0	3	61	141	133	54	58	79	91	87	37	23	12	5	2		801				
(%)	0.2	0.2	0.9	0.5	0	0.3	7.6	17.6	16.6	6.7	7.2	9.9	11.2	10.9	4.6	2.9	1.5	0.6	0.2						

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Table 15. Population assessment for hybrid striped bass based on fall gill netting at Rough River Lake from 1999-2010 (scoring based on statewide assessment).

Parameter	Year											
	1999		2001		2003		2006		2008		2010	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
CPUE excluding age 0	26.38	4	29.88	4	33.87	4	23.67	4	25.10	4	60.23	4
Mean length age 2+ at capture	16.5	2	15.9	1	16.5	2	16.9	2	16.3	2	16.8	2
CPUE fish \geq 15.0 in	18.5	4	16.75	4	30.87	4	14.50	4	19.27	4	34.46	4
CPUE age 1	8.13	3	13.08	4	3.13	2	8.92	3	6.33	3	28.88	4
Instantaneous Mortality (z)					0.680		0.447		0.544		0.525	
Annual Mortality (A)%					49.8		36.1		42.0		40.8	
Total score		13		13		12		13		13		14
Assessment rating		G		G		G		G		G		E

Table 16. Number of fish and the relative weight (Wr) for each length group of hybrid striped bass collected at Rough River Lake during November 2010; 95% confidence limits are in parentheses.

Length group			
8.0-11.9 in			
No.	Wr	No.	Wr
124	90 (+/- 6)	223.00	83 (+/- 1)
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Table 17. Length frequency and CPUE of channel catfish collected during 13 net-nights of sampling at Rough River Lake during November 2010.

Species	Inch class													Total	CPUE	Std Error					
	11	12	13	14	15	16	17	18	19	20	21	22	23				24	25	26	27	29
Channel catfish	2		8	2	3	4	3	2	2	4	2	5	1	8	4	1	1	1	51	3.92	0.88

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Table 18. Mean length (in) at capture for each age of channel catfish collected from Rough River Lake in November 2010.

	Age					
	2+	3+	4+	5+	6+	8+
Mean length	11.2	14.1	16.3	15.9	21.9	25.8
No.	2	9	2	3	2	1
Smallest	11.1	13.0	16.2	14.4	21.5	25.8
Largest	11.2	16.2	16.4	18.5	22.2	25.8

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Table 19. Number of fish and the relative weight (Wr) for each length group of channel catfish collected at Rough River Lake during November 2010; 95% confidence intervals errors are in parentheses.

Length group		No.	Wr	No.	Wr
11.0-15.9 in	16.0-23.9 in	> 24.0 in			
No.	Wr	No.	Wr	No.	Wr
14	76 (+/- 1)	19	79 (+/- 2)	14	86 (+/- 3)

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Table 20. Fishery statistics derived from a creel survey at Rough River Lake (5,100 acres) from April 1 through October 30, 2010.

<u>Fishing trips</u>		
No. of fishing trips (per acre)	24,259	(4.76)
<u>Fishing pressure</u>		
Total man-hours (S.E.) ^a	124,935	(2,475.62)
Man-hours/acre	24.5	
<u>Catch/harvest</u>		
No. of fish caught (S.E.)	213,787	(16,418.48)
No. of fish harvested (S.E.)	68,683	(6,086.67)
Lb of fish harvested	41,618	
<u>Harvest rates</u>		
Fish/hour	0.55	
Fish/acre	13.47	
Lb/acre	8.16	
<u>Catch rates</u>		
Fish/hour	1.71	
Fish/acre	41.92	
<u>Miscellaneous characteristics (%)</u>		
Male	89.16	
Female	10.84	
Resident	98.59	
Non-resident	1.41	
<u>Method (%)</u>		
Still fishing	40.46	
Casting	53.17	
Fly fishing	0.07	
Trolling	5.02	
Spider Rig	0.43	
Jugging	0.56	
Grabbing	0.3	
<u>Mode (%)</u>		
Boat	90.05	
Bank	6.93	
Dock	3.02	

t < 0.5%

^aS.E. = standard error

Table 21 Continued.

	Crappie group	Illegal black crappie	Illegal white crappie	Illegal hybrid rockfish	Illegal bass
No. caught (per acre)	140,190.82 27.49	25.25 0.01	1,116.46 0.22	25.25 0.01	175.44 0.03
No. harvested (per acre)	46,560.43 9.13	25.25 0.01	1,116.46 0.22	25.25 0.01	175.44 0.03
% of total no. harvested	67.79	0.04	163	0.04	0.26
Lb harvested (per acre)	17,834.00 3.50	5.40 0.00	272.20 0.05	169.20 0.03	142.20 0.03
% of total lb harvested	42.85	0.01	0.65	0.41	0.34
Mean length (in)		8.00	7.89	23.50	12.59
Mean weight (lb)		0.21	0.24	6.70	104
No. of fishing trips for that species	8,025.30				
% of all trips	33.08				
Hours fished for that species (per acre)	41330.30 8.10				
No. harvested fishing for that species	44,109.00				
Lb harvested fishing for that species	16,893.80				
No./hour harvested fishing for that species	102				
% success fishing for that species	56.79				

Table 22. Length distribution for each species of fish harvested or released at Rough River Lake (5,100 a) during 1 April - 30 October 2010.

Species	Inch class																																					
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	28	30	31	32	34	35	36	47					
Carp																																						
Harvested																				78																		
Sublegal												15								15			15	15	14													
Drum																																						
Harvested											31			15		15		46		15																		
Sublegal											15		31	31	63		31		32																			
Gar																																						
Harvested																																						
Sublegal																																						
Green sunfish																																						
Harvested																																						
Sublegal																																						
Channel catfish																																						
Harvested																																						
Sublegal																																						
Flathead Catfish																																						
Harvested																																						
Sublegal																																						
White crappie																																						
Released																																						
Harvested																																						
Sublegal																																						
Black Crappie																																						
Released																																						
Harvested																																						
Sublegal																																						
Wormouth																																						
Harvested																																						
Sublegal																																						
Bluegill																																						
Harvested																																						
Sublegal																																						
Longear sunfish																																						
Harvested																																						
Sublegal																																						

Table 23. Monthly black bass angling success at Rough River Lake (5,100 a) from 1 April - 30 Oct. 2010 creel survey period; data does not include bass <8.0 inches that were caught and released.

Month	Total no. of bass		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	
	caught	harvested		by bass anglers	by bass anglers	by bass anglers	by bass anglers	by bass anglers	by bass anglers		
Apr	8,888.00	1,805.00	1,302.00	6,703.00	7,966	1.12	1,376	0.19			
May	5,365.00	1,100.00	1,230.00	6,334.00	5,227	0.71	1,100	0.15			
Jun	3,560.00	600.00	826.00	4,255.00	3,247	0.60	534	0.10			
Jul	2,924.00	157.00	773.00	3,980.00	2,169	0.52	62	0.02			
Aug	4,325.00	432.00	745.00	3,834.00	3,477	0.72	252	0.05			
Sep	9,252.00	1,089.00	2,109.00	10,861.00	8,666	0.77	1,008	0.10			
Oct	7,473.00	1,319.00	1,543.00	7,944.00	6,862	0.77	1,245	0.14			
Total	41,785.00	6,503.00	8,526.00	43,911.00	37,614	0.77	5,577	0.12			
Mean						0.74		0.11			

Table 24. Black bass catch and harvest statistics derived from a creel survey at Rough River Lake (5,100 a) from 1 April - 30 October 2010 for each species of black bass.

	Largemouth bass				Spotted bass				
	Harvest		Catch and release		Harvest		Catch and release		
	<15.0 in	>15.0 in	8.0-14.9 in	>15.0 in	Total	8.0-14.9 in	>15.0 in	Total	
Total no. of bass	2,440	3,039	5,480	23,907	2,452	26,359	8,590	62	8,652
% of black bass harvested by no.		84.26							15.74
Total weight of fish (lb)		8,900.90							780.20
% of bass harvested by weight		91.94							8.06
Mean length		14.38							11.62
Mean weight		1.53							0.69
Rate (f/hr)		0.05							0.01

Table 25. Monthly hybrid striped bass angling success at Rough River Lake (5,100 a) from 1 April - 30 Oct. 2010.

Month	Total number of hybrid striped bass caught	Total no. of hybrid striped bass harvested	No. of hybrid striped bass fishing trips	Hours fished by hybrid striped bass anglers		Hybrid striped bass caught by hybrid striped bass anglers		Hybrid striped bass harvested by hybrid striped bass anglers		Hybrid striped bass harvested/hour by hybrid striped bass anglers	
				anglers	852.00	Hybrid striped bass anglers	555.00	Hybrid striped bass anglers	366.00	Hybrid striped bass anglers	366.00
Apr	1,275.00	543.00	165.00	852.00	555.00	0.56	0.56	0.37	0.37	0.37	0.37
May	1,032.00	550.00	259.00	1,332.00	687.00	0.63	0.63	0.39	0.39	0.39	0.39
Jun	2,516.00	1,643.00	643.00	3,310.00	2,347.00	1.32	1.32	0.88	0.88	0.88	0.88
Jul	204.00	142.00	155.00	796.00	188.00	0.25	0.25	0.19	0.19	0.19	0.19
Aug	432.00	252.00	288.00	1,481.00	396.00	0.31	0.31	0.18	0.18	0.18	0.18
Sep	260.00	130.00	25.00	128.00	66.00	0.57	0.57	0.29	0.29	0.29	0.29
Oct	464.00	244.00	76.00	391.00	146.00	0.60	0.60	0.50	0.50	0.50	0.50
Total	6,184.00	3,504.00	1,609.00	8,288.00	4,385.00	0.74	0.74	0.48	0.48	0.48	0.48
Mean						0.61	0.61	0.40	0.40	0.40	0.40

Table 26. Length frequency and CPUE (fish/hr) of largemouth bass collected during 2.5 hours of 30-minute diurnal electrofishing runs at Lake Malone in April 2010.

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				
Largemouth bass	1	10	9	17	26	30	16	33	45	30	30	39	55	49	43	26	15	13	4	5	496	198.40	16.29	

nw dlmpsd.d10

Table 27. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Lake Malone 1999-2010.

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.
2010	37.20	8.78	49.60	5.04	49.60	5.42	62.00	7.07	3.60	1.60	198.40	16.29
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

*Nocturnal sample

Table 28. PSD and RSD₁₅ values obtained for largemouth bass taken in spring electrofishing samples at Lake Malone, Carpenter Lake, Kingfisher Lake, Mauzy Lake, Washburn Lake, Audubon State Park Lake and Merlin Lake during April 2010; 95% confidence intervals are in parentheses.

Lake	Species	No. >8.0 in	PSD (+/- 95%)	RSD ₁₅ (+/- 95%)
Malone	Largemouth	403	69 (+/- 4)	38 (+/- 4)
Mauzy	Largemouth	108	45 (+/- 10)	31 (+/- 8)
Carpenter	Largemouth	166	10 (+/- 4)	5 (+/- 3)
New Kingfisher	Largemouth	61	31 (+/- 11)	10 (+/- 7)
Washburn	Largemouth	33	9 (+/- 10)	3 (+/- 6)
Audubon St. Pk.	Largemouth	31	39 (+/- 18)	19 (+/- 14)
Merlin Lake (P-WMA)	Largemouth	102	32 (+/- 9)	6 (+/- 4)

Table 29. Mean back calculated lengths (in) at each annulus for largemouth bass collected at Lake Malone in April 2010.

Year class	No.	Age										
		1	2	3	4	5	6	7	8	9	10	11
2009	7	5.1										
2008	18	3.9	7.1									
2007	29	4.9	8.4	10.2								
2006	21	6.0	10.4	12.1	13.1							
2005	11	5.3	9.7	12.3	13.7	14.7						
2004	2	6.1	9.4	11.6	13.6	15.3	16.6					
2003	2	4.0	6.5	8.1	9.5	11.3	12.2	13.2				
2002	2	4.4	7.2	8.9	10.0	10.9	11.8	12.6	13.3			
2000	2	5.4	7.7	9.8	11.3	12.8	14.1	15.4	16.3	17.3	18.2	
1999	1	4.0	7.0	8.8	10.3	11.4	12.5	13.6	14.7	15.8	16.9	18.4
Mean		5.0	8.7	11.0	12.8	13.7	13.5	13.7	14.8	16.8	17.7	18.4
No.		95	88	70	41	20	9	7	5	5	3	1
Smallest		3.0	4.9	8.1	9.2	10.8	11.8	12.4	12.8	15.8	16.7	18.4
Largest		7.9	12.3	14.0	16.7	18.2	19.1	16.3	17.4	18.5	19.6	18.4
Std error		0.1	0.2	0.2	0.3	0.5	0.8	0.5	0.8	0.8	0.9	
95% CI (+)		0.2	0.3	0.4	0.5	1.0	1.5	1.0	1.5	1.7	1.8	

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Table 30. Age-frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 2.5 hours of 30-minute electrofishing runs at Lake Malone during April 2010.

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				
1	10	9	11	7														38	15.10	4.14	7.8
2			6	19	30	4												58	23.30	5.10	11.9
3						12	33	40	26	3								113	45.29	4.71	23.2
4								5		20	22	33	16					96	38.40	3.94	19.7
5									4	3	9	17	33		26	8		98	39.25	3.96	20.2
6												6						12	4.80	0.55	2.5
7										3	4							7	2.73	0.21	1.4
8										3	4							7	2.73	0.21	1.4
10														43				50	19.80	1.80	10.3
11																8		8	3.00	0.89	1.6
Total	10	9	17	26	30	16	33	45	30	30	39	55	49	43	26	15	13	486			
(%)	2.0	2.0	3.5	5.3	6.2	3.3	6.8	9.2	6.2	6.2	8.0	11.3	10.1	8.8	5.3	3.1	2.7				

nw dlmpsd.d10, nw dlmbag.d10

Table 31. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Lake Malone during spring samples 2002- 2010.

Age	Year								
	2002*	2003	2004	2005	2006	2007	2008	2009	2010
1	6.00	35.00	19.00	19.00	20.20	29.20	16.40	8.80	15.10
2	28.3	69.16	37.54	49.74	59.13	43.00	26.38	16.42	23.30
3	28.85	34.51	29.81	37.52	36.43	9.62	11.06	2.83	45.29
4	31.09	30.13	23.43	27.49	20.01	23.74	48.92	20.12	38.40
5	15.78	16.03	13.93	13.87	8.65	21.14	40.20	23.02	39.25
6	6.84	9.31	8.74	8.34	4.45	25.04	40.20	30.91	4.80
7	7.37	12.39	12.24	11.85	5.42	12.25	12.77	12.29	2.73
8	2.86	7.03	6.77	7.89	3.17	0.00	0.00	0.00	2.73
9	5.71	9.53	7.57	9.49	4.37	0.00	0.00	0.00	0.00
10	1.49	1.90	1.36	1.60	0.96	6.00	5.20	3.20	19.80
11									3.00

*nocturnal sample
nwdlmbag.d10

Table 32. Population assessment for largemouth bass based on spring electrofishing at Lake Malone from 2001-2010 (scoring based on statewide assessment).

Parameter	Year																			
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010										
Mean length age 3 at capture	12.9	4	11.5	4	11.5	4	11.5	4	10.3	2	10.3	2	10.3	2	10.4	2				
Spring CPUE age 1	14.00	1	6.00	1	35.00	2	19.00	2	20.20	2	29.20	2	16.40	2	8.80	1	15.10	1		
Spring CPUE 12.0-14.9 in	50.00	4	43.43	3	35.00	3	26.40	2	32.00	2	22.40	2	77.20	4	51.20	4	49.60	3		
Spring CPUE >15.0 in	31.33	4	41.71	4	48.00	4	53.20	4	53.60	4	28.00	3	37.60	4	43.60	4	37.20	4	62.00	4
Spring CPUE >20.0 in	0.67	1	8.00	4	8.50	4	6.00	4	8.40	4	5.20	4	3.60	3	6.40	4	5.60	4	3.60	3
Instantaneous Mortality (z)			0.416		0.365		0.387		0.526		0.330		0.357		0.293		0.397			
Annual Mortality (A)%			34.1		31.1		32.0		40.9		28.1		30.0		25.4		32.7			

Total score	14	16	17	16	16	16	15	13	13	16	16	15	13	16	16	15	13
Assessment rating	G	G	E	G	G	G	G	G	G	G	G	G	G	G	G	G	G

nw dlmbag.d10; nw dlmpsd.d10

Table 33. Length frequency and CPUE (fish/hr) of largemouth bass collected during 2.5 hours of 30-minute diurnal electrofishing runs at Lake Malone in October 2010.

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	22						
Total	Largemouth bass	29	86	60	19	32	56	28	26	26	28	33	18	16	24	17	12	5	5	1	1	496	198.40	13.06		

nw dlmb.d10

Table 34. 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 2002-2010.

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
2002*	Total	4.3		39.20		14.40		35.00		5.12
2003	Total	3.1		103.20		2.40		19.00		2.88
2004	Total	4.1	0.07	49.20	10.73	8.40	1.72	19.00	3.48	
2005	Total	4.9	0.09	50.00	10.00	25.50	5.00	20.20	2.08	
2006	Total	5.2	0.07	65.60	5.15	42.40	3.71	29.20	3.98	
2007	Total	4.5	0.17	30.40	7.36	11.20	2.58	16.40	7.14	
2008	Total	4.6	0.12	14.80	4.76	6.00	2.37	8.80	1.02	
2009	Total	4.1	0.14	12.00	4.43	2.00	0.63	15.10	4.14	
2010	Total	4.8	0.06	76.40	13.08	30.00	3.22			

*nocturnal sample

Table 35. Length frequency and CPUE (fish/hr) for bluegill and redear sunfish collected in 1.25 hours of electrofishing at Lake Malone in May 2010.

Species	Inch class											Total	CPUE	Std. error	
	1	2	3	4	5	6	7	8	9	10	11				
Bluegill	8	59	203	278	121	49	16						734	587.20	52.97
Redear sunfish nwdlmbg.d10			1		2	1		2	12	2	2	2	22	17.60	8.16

Table 36. Spring electrofishing CPUE (fish/hr) for each length group of bluegill and redear sunfish collected at Lake Malone in previous years.

Bluegill	Length group											
	<3.0 in		3.0-5.9 in		6.0-7.9 in		>8.0 in		>10.0 in		Total	
	Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE
2010	54.40	12.89	481.60	56.35	51.20	14.12	0.00		0.00		587.20	52.97
2009	24.80	6.36	177.60	35.01	52.00	16.62	0.00		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	0.00		461.60	57.01
2005	27.69	8.21	376.92	44.63	46.15	10.76	0.00		0.00		450.77	54.06
2004	16.15	9.62	300.77	49.90	73.08	15.44	0.00		0.00		390.00	56.47
2003	25.38	6.49	173.08	24.06	22.31	6.22	0.00		0.00		220.77	25.54
2002	16.67	6.21	331.67	40.59	59.17	10.50	0.00		0.00		407.50	50.54
2001	7.33	2.17	222.00	30.51	46.67	8.98	0.67	0.67	0.00		276.67	34.54
2000	21.33	5.23	130.67	21.95	50.67	15.79	2.00	0.89	0.00		204.67	30.51
1999	53.33	14.30	20.67	4.31	0.67	0.67	0.00		0.00		74.67	18.03

Redear	Length group											
	<3.0 in		3.0-5.9 in		6.0-7.9 in		>8.0 in		>10.0 in		Total	
	Year	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.	CPUE
2010	0.00		2.40	1.71	0.80	0.80	14.40	6.73	3.20	1.77	17.60	8.16
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 37. PSD and RSD_a values obtained for bluegill and redear sunfish collected in spring electrofishing samples at NWFD state-owned lakes during April 2010; 95% confidence intervals are in parentheses.

Lake	Species	No.	PSD (+/- 95%)	RSD ^a (+/- 95%)
		<u>></u> stock size		
Malone	Bluegill	666	10 (+/- 2)	0
	Redear sunfish	21	86 (+/- 16)	76 (+/- 9)
Mauzy	Bluegill	236	32 (+/- 7)	0
	Redear sunfish	164	26 (+/- 6)	0
Carpenter	Bluegill	151	50 (+/- 8)	0
	Redear sunfish	21	67 (+/- 19)	24 (+/- 18)
New Kingfisher	Bluegill	133	23 (+/- 7)	0
Old Kingfisher	Bluegill	99	28 (+/- 9)	0
Washburn	Bluegill	69	17 (+/- 9)	0
Audubon St. Pk.	Bluegill	179	22 (+/- 7)	0

^a Bluegill = RSD_g, redear = RSD_g

Table 38. Population assessment for bluegill based on spring electrofishing at Lake Malone from 2001-2010 (scoring based on statewide assessment).

Parameter	Year																				
	2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		
	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	3.9	2	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	3-3+	3	3-3+	3	*
CPUE \geq 6.0 in	47.33	2	56.80	3	7.75	1	73.08	3	48.00	2	93.60	4	90.40	4	100.80	4	52.00	3	51.20		
CPUE \geq 8.0 in	0.67	2	0.00	1	0.00	1	0.00	1	0.00	1	0.80	2	0	1	0.80	2	0.00	0	0.00		
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		9		9		7		9		8		11		10		11		9			
Assessment rating		F		F		P		F		F		G		F		G		F			

* Age data not collected.
nw dlmbg.d10

Table 39. Length frequency of channel catfish collected during 3 nights of tandem (6 sets with 3 nets each) hoop net sampling at Lake Malone during October 2010.

Species	Inch class															Total
	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
Channel catfish	1	100	298	507	397	139	102	77	66	47	15	7	9	4	3	1772

nw dlmtfn.d10

Table 40. Mean length (in) at capture for each age of channel catfish collected from Lake Malone in October 2010.

	Age							
	1+	2+	3+	4+	5+	6+	7+	8+
Mean length	10.5	12.5	15.3	17.0	17.0	19.7	19.7	17.7
No.	25	27	17	13	4	3	3	1
Smallest	8.4	9.5	12.3	14.5	14.6	18.5	19.1	17.7
Largest	12.2	14.5	17.3	19.8	18.5	21.1	20.1	17.7

nwdlmcag.d10

Table 41. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.75 hour of diurnal electrofishing runs at Mauzy Lake in April 2010.

Species	Inch class																					Total	CPUE	Std. Error
	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21								
Largemouth bass	1	19	31	21	3	4	7	4	5	1	4	4	6	5	7	6	128	170.67	26.67					

nw dimzpsd.d10

Table 42. Spring electrofishing CPUE (fish/hr) for each size class of largemouth bass collected at Mauzy Lake during spring 1999-2010.

Year	Inch class												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.
2010	26.67	3.53	78.67	13.13	21.33	2.67	44.00	10.07	17.33	8.11	170.67	26.67		
2009 ^a														
2008	104.00	31.37	147.00	16.28	21.00	5.00	83.00	9.29	7.00	1.91	355.00	48.23		
2007	46.00	5.29	49.00	12.26	40.00	2.83	64.00	17.51	0.00		199.00	31.0		
2006	68.00	14.05	40.00	4.00	24.00	4.00	60.00	4.62	0.00		192.00	21.17		
2005	52.00	8.64	25.00	6.61	147.00	11.47	21.00	7.90	4.00	1.63	245.00	22.29		
2004	20.00	9.24	132.00	2.31	5.33	1.33	6.67	1.33	0.00		164.00	10.58		
2003 ^b	98.61	18.69	163.19	31.92	73.61	6.05	20.83	6.36	2.78	2.78	356.25	58.72		
2002 ^c	36.00	14.05	169.33	40.55	9.33	1.33	6.67	2.67	1.33	1.33	221.33	45.39		
2001 ^c	12.00	2.31	246.67	53.53	26.67	10.67	4.00	2.31	0.00		289.33	64.18		
2000 ^c	37.33	5.81	224.00	20.53	2.67	1.33	5.33	3.53	0.00		269.33	25.33		
1999 ^c	n/d		165.33	8.74	17.33	5.35	4.00	2.31	1.33	1.33	186.67	14.11		

^aLake drawn down for repairs in 2009

^bLake renovated in 2003

^cNocturnal sample

Table 43. Population assessment for largemouth bass based on spring electrofishing at Mauzy Lake from 2001-2010 (scoring based on statewide criteria).

Parameter	Year											
	2001	2002	2003**	2004	2005	2006	2007	2008	2009*	2010	2010	2010
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age 3 at capture	10.3	2	10.3	2	10.3	2	10.3	2	12.2	4	12.2	4
Spring CPUE age 1	5.33	1	25.33	2	86.81	4	2.67	1	24.00	2	99.00	4
Spring CPUE 12.0-14.9 in	26.67	2	9.33	1	73.61	4	5.33	1	24.00	2	21.00	2
Spring CPUE \geq 15.0 in	4.00	2	6.67	2	20.83	3	6.67	2	64.00	4	83.00	4
Spring CPUE \geq 20.0 in	0.00	0	1.33	2	2.78	3	0.00	0	0.00	0	7.00	4
Instantaneous Mortality (z)							0.884		0.755		0.374	0.466
Annual Mortality (A)%				58.7		53.0		31.2		37.3		
Total score	7	9	16	6	15	10	13	18				
Assessment rating	P	F	G	P	G	F	G	E				

* Lake drawn down for repairs in 2009
 ** Lake renovated in 2003
 *** Age data not collected

Table 44. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.75 hour of diurnal electrofishing runs at Mauzy Lake in October 2010.

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			
Largemouth bass	26	31	8	19	13	13	2	0	0	25	21	9	1	1	1	1	5	2	1	2	180	240.00	22.74

nw dnrz\mb.d10

Table 45. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in fall electrofishing samples at Mauzy Lake 2007-2010.

Year class	Area	Age 0			Age 0 ≥ 5.0			Age 1		
		Mean length	Std. error	Std.	CPUE	Std. error	Std.	CPUE	Std. error	Std.
2007	Total	5.3	0.08	71.00	11.24	51.00	9.98	99.00	30.74	
2008	Total	5.3	0.06	64.00	17.36	52.00	13.86			
2009*										
2010	Total	4.5	0.16	149.33	15.38	62.67	12.72			

*Lake drawn down for repairs in 2009

Table 46. Length frequency and CPUE (fish/hr) for bluegill collected during 0.625 hour of electrofishing at Mauzy Lake in May 2010.

Species	Inch class								Total	CPUE	Std. Error
	1	2	3	4	5	6	7	8			
Bluegill	6	143	55	20	100	51	10		385	616.00	74.40
Redear sunfish			5	3	2	106	44	9	169	270.40	61.00

nwdmz.bg.d10

Table 47. Spring electrofishing CPUE (fish/hr) for each length group of bluegill and redear sunfish collected at Mauzy Lake during spring samples in previous years.

Year	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.
2010	238.40	76.54	280.00	41.03	97.60	33.98	0.00	0.00	0.00	0.00	616.00	74.40
2009*												
2008*												
2007	101.33	11.06	621.33	39.61	38.67	8.86	0.00	0.00	0.00	0.00	761.33	44.51
2006	96.00	27.90	614.00	137.73	10.00	7.57	0.00	0.00	0.00	0.00	720.00	163.43
2005	289.74	45.54	596.15	101.27	14.10	5.76	0.00	0.00	0.00	0.00	900.00	86.60
2004	101.10	18.03	84.62	17.53	64.84	11.97	1.10	1.10	0.00	0.00	251.65	36.11
2003**												
2002	9.33	3.53	94.67	19.64	125.33	29.24	1.33	1.33	0.00	0.00	230.67	48.02
2001	5.33	3.53	65.33	16.22	137.33	27.94	1.33	1.33	0.00	0.00	209.33	40.68
2000	1.33	1.33	52.00	4.00	73.33	5.33	4.00	2.31	0.00	0.00	130.67	10.91

Year	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.
2010	0.00		16.00	10.12	240.00	48.33	14.40	7.33	0.00	0.00	270.40	61.00
2009*												
2008*												
2007	2.67	1.69	41.33	13.13	14.67	3.82	6.67	5.23	0.00	0.00	65.33	12.64

*Lake drawn down for repairs in 2008-2009

**Lake renovated in 2003

Table 48. Population assessment for bluegill based on spring electrofishing at Mauzy Lake from 2001-2010 (scoring based on statewide assessment).

Parameter	Year																	
	2001		2002		2004		2005		2006		2007		2008*		2009*		2010	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age 2 at capture	4.3	2	4.3	2	4.3	2	4.3	2	3.7	2	3.3	1						**
Years to 6.0 inches	2-2+	4	2-2+	4	2-2+	4	2-2+	4	4-4+	1	4-4+	1						**
CPUE \geq 6.0 in	138.7	4	126.66	4	65.94	3	14.10	1	10.00	1	38.67	2					97.60	4
CPUE \geq 8.0 in	1.33	2	1.33	2	1.10	2	0.00	0	0.00	0	0.00	0					0.00	0
Instantaneous Mortality (z)									0.755		0.642							
Annual Mortality (A)%									53.0		35.81							
Total score	12		12		11		7		4		4							
Assessment rating	G		G		G		F		P		P							

* Lake drawn down for repairs in 2008-2009

** Age data not collected

Lake renovated in 2003

Table 49. Population assessment for Redear based on spring electrofishing at Mauzy Lake in 2007 and 2010 (scoring based on statewide assessment).

Parameter	2007		2010	
	Value	Score	Value	Score
Mean length age 2 at capture	5.7	2	**	
Years to 8.0 inches	2-2+	4	**	
CPUE \geq 8.0 in	6.67	2	14.40	3
CPUE \geq 10.0 in	0.00	1	0.00	0
Instantaneous Mortality (z)	0.79			
Annual Mortality (A)%	54.55			

Total score 9

Assessment rating F

* Lake drawn down for repairs in 2008-2009

** Age data not collected

Table 50. Length frequency of channel catfish collected during 3 nights of tandem (3 sets with 3 nets each) hoop net sampling at Mauzy Lake during October 2010.

Species	Inch class																Total
	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Channel catfish	2	4	3	5	3	12	7	20	6	5	2		6	3	1	2	81

nw dnrz:hn.d10

Table 51. Mean length (in) at capture for each age of channel catfish collected from Mauzy Lake in October 2010.

	Age						
	1+	2+	3+	4+	5+	6+	7+
Mean length	11.3	14.2	16.4	17.8	20.6	19.8	24.2
No.	8	12	15	5	7	1	1
Smallest	9.8	12.3	13.7	15.7	15.6	19.8	24.2
Largest	12.2	15.8	18.2	19.1	25.1	19.8	24.2

nwdmzcag.d10

Table 52. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.75 hour of 15-minute diurnal electrofishing runs at Carpenter Lake in April 2010.

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	21				
Largemouth bass	14	28	11	2	35	44	47	23	5	2	1	3	1	1	1	2	2	2	221	294.67	34.74		

nw dcapsd.d10

Table 53. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Carpenter Lake 1999-2010.

Year	Length group																					Total CPUE	Std. err.																																																																																																												
	<8.0 in							8.0-11.9 in							12.0-14.9 in									>15.0 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.	CPUE	Std. err.	CPUE	Std. err.	CPUE	Std. err.																																																																																																													
2010	73.33	19.37	198.67	39.62	10.67	5.81	12.00	4.62	294.67	34.74	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		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
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		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											
2008	136.00	17.66	229.00	28.82	9.00	2.52	11.00	4.12	385.00	50.32	2007	45.33	7.42	128.00	24.33	12.00	2.31	10.67	3.53	196.00	31.75	2006	97.33	12.00	134.67	8.74	24.00	1.33	9.33	2.31	265.33	55.44	2005	157.33	3.53	165.33	48.57	30.67	3.53	2.67	1.33	356.00	54.60	2004	80.00	16.65	128.00	28.00	22.67	3.53	21.33	8.74	252.00	47.72	2003	181.33	49.33	97.33	11.39	18.67	4.81	36.00	12.22	333.33	63.43	2002*	12.00	4.62	52.00	4.62	12.00	0.00	21.33	3.53	97.33	4.81	2001*	14.67	8.74	29.33	5.33	90.67	9.33	66.67	2.67	201.33	17.64	2000*	2.67	1.33	45.33	7.06	48.00	2.31	0.00		96.00	8.33	1999*	1.33	1.33	142.67	18.52	29.33	13.53	1.33	1.33	174.67	31.01																						
2007	45.33	7.42	128.00	24.33	12.00	2.31	10.67	3.53	196.00	31.75	2006	97.33	12.00	134.67	8.74	24.00	1.33	9.33	2.31	265.33	55.44	2005	157.33	3.53	165.33	48.57	30.67	3.53	2.67	1.33	356.00	54.60	2004	80.00	16.65	128.00	28.00	22.67	3.53	21.33	8.74	252.00	47.72	2003	181.33	49.33	97.33	11.39	18.67	4.81	36.00	12.22	333.33	63.43	2002*	12.00	4.62	52.00	4.62	12.00	0.00	21.33	3.53	97.33	4.81	2001*	14.67	8.74	29.33	5.33	90.67	9.33	66.67	2.67	201.33	17.64	2000*	2.67	1.33	45.33	7.06	48.00	2.31	0.00		96.00	8.33	1999*	1.33	1.33	142.67	18.52	29.33	13.53	1.33	1.33	174.67	31.01																																	
2006	97.33	12.00	134.67	8.74	24.00	1.33	9.33	2.31	265.33	55.44	2005	157.33	3.53	165.33	48.57	30.67	3.53	2.67	1.33	356.00	54.60	2004	80.00	16.65	128.00	28.00	22.67	3.53	21.33	8.74	252.00	47.72	2003	181.33	49.33	97.33	11.39	18.67	4.81	36.00	12.22	333.33	63.43	2002*	12.00	4.62	52.00	4.62	12.00	0.00	21.33	3.53	97.33	4.81	2001*	14.67	8.74	29.33	5.33	90.67	9.33	66.67	2.67	201.33	17.64	2000*	2.67	1.33	45.33	7.06	48.00	2.31	0.00		96.00	8.33	1999*	1.33	1.33	142.67	18.52	29.33	13.53	1.33	1.33	174.67	31.01																																												
2005	157.33	3.53	165.33	48.57	30.67	3.53	2.67	1.33	356.00	54.60	2004	80.00	16.65	128.00	28.00	22.67	3.53	21.33	8.74	252.00	47.72	2003	181.33	49.33	97.33	11.39	18.67	4.81	36.00	12.22	333.33	63.43	2002*	12.00	4.62	52.00	4.62	12.00	0.00	21.33	3.53	97.33	4.81	2001*	14.67	8.74	29.33	5.33	90.67	9.33	66.67	2.67	201.33	17.64	2000*	2.67	1.33	45.33	7.06	48.00	2.31	0.00		96.00	8.33	1999*	1.33	1.33	142.67	18.52	29.33	13.53	1.33	1.33	174.67	31.01																																																							
2004	80.00	16.65	128.00	28.00	22.67	3.53	21.33	8.74	252.00	47.72	2003	181.33	49.33	97.33	11.39	18.67	4.81	36.00	12.22	333.33	63.43	2002*	12.00	4.62	52.00	4.62	12.00	0.00	21.33	3.53	97.33	4.81	2001*	14.67	8.74	29.33	5.33	90.67	9.33	66.67	2.67	201.33	17.64	2000*	2.67	1.33	45.33	7.06	48.00	2.31	0.00		96.00	8.33	1999*	1.33	1.33	142.67	18.52	29.33	13.53	1.33	1.33	174.67	31.01																																																																		
2003	181.33	49.33	97.33	11.39	18.67	4.81	36.00	12.22	333.33	63.43	2002*	12.00	4.62	52.00	4.62	12.00	0.00	21.33	3.53	97.33	4.81	2001*	14.67	8.74	29.33	5.33	90.67	9.33	66.67	2.67	201.33	17.64	2000*	2.67	1.33	45.33	7.06	48.00	2.31	0.00		96.00	8.33	1999*	1.33	1.33	142.67	18.52	29.33	13.53	1.33	1.33	174.67	31.01																																																																													
2002*	12.00	4.62	52.00	4.62	12.00	0.00	21.33	3.53	97.33	4.81	2001*	14.67	8.74	29.33	5.33	90.67	9.33	66.67	2.67	201.33	17.64	2000*	2.67	1.33	45.33	7.06	48.00	2.31	0.00		96.00	8.33	1999*	1.33	1.33	142.67	18.52	29.33	13.53	1.33	1.33	174.67	31.01																																																																																								
2001*	14.67	8.74	29.33	5.33	90.67	9.33	66.67	2.67	201.33	17.64	2000*	2.67	1.33	45.33	7.06	48.00	2.31	0.00		96.00	8.33	1999*	1.33	1.33	142.67	18.52	29.33	13.53	1.33	1.33	174.67	31.01																																																																																																			
2000*	2.67	1.33	45.33	7.06	48.00	2.31	0.00		96.00	8.33	1999*	1.33	1.33	142.67	18.52	29.33	13.53	1.33	1.33	174.67	31.01																																																																																																														
1999*	1.33	1.33	142.67	18.52	29.33	13.53	1.33	1.33	174.67	31.01																																																																																																																									

*Nocturnal sample

Table 54. Mean back calculated lengths (in) at each annulus for largemouth bass collected at Carpenter Lake in April 2010.

Year	No.	Age					
		1	2	3	4	5	6
2009	18	5.5					
2008	18	6.2	8.7				
2007	17	6.2	8.9	10.1			
2006	2	5.5	8.8	9.8	10.4		
2005	8	5.7	8.6	10.2	11.3	12.1	
2004	9	5.5	8.4	9.4	10.5	11.4	12.2
Mean		5.8	8.7	10.0	10.8	11.7	12.2
No.		72	54	36	19	17	9
Smallest		3.5	5.8	7.4	8.4	9.5	10.5
Largest		8.1	9.9	11.7	12.8	14.3	15.8
Std error		0.1	0.1	0.1	0.3	0.3	0.6
95% CI (+)		0.1	0.2	0.2	0.5	0.6	1.4

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Table 55. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Carpenter Lake during spring samples 2002-2010.

Age	Year									
	2002	2003	2004	2005	2006	2007	2008	2009	2010	
1	12.00	162.67	56.00	132.00	78.67	39.87	120.30	97.87	72.00	
2	36.93	57.60	90.13	88.93	101.60	64.27	58.50	45.07	69.25	
3	25.73	55.73	56.53	107.07	55.73	61.20	150.87	85.07	77.40	
4	1.33	2.67	4.00	0.00	1.33	17.33	39.17	46.22	11.39	
5	0.00	0.00	0.00	0.00	5.33	1.33	4.17	7.11	21.36	
6	10.67	14.67	8.00	0.00	0.00	0.00	0.00	0.00	35.26	

nwdclmag.d10, nwdclpsd.d10

Table 56. Age-frequency and CPUE (fish/hr) per inch class of largemouth bass collected at Carpenter Lake in April 2010.

Age	Inch class															No.	CPUE	Std. error	Age (%)
	4	5	6	7	8	9	10	11	12	13	14	15							
1	14	28	11	1											54	72.00	19.01	25	
2				1	32	19									52	69.25	19.32	24	
3				3	25	21	9								58	77.40	14.43	27	
4						9									9	11.39	0.97	4	
5						4	6	5	1						16	21.36	4.38	7	
6						13	9	1	1	1	3	28			35.26	9.30	12		
Total	14	28	11	2	35	44	47	23	5	2	1	3	215						
(%)	7.0	13.0	5.0	1.0	16.0	20.0	22.0	11.0	2.0	1.0	<1.0	1.0							

nwdclpsd.d10, nwdclmag.d10

Table 57. Population assessment for largemouth bass based on spring electrofishing at Carpenter Lake from 2001-2010 (scoring based on statewide assessment).

Parameter	Year																			
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010										
Mean length age 3 at capture	11.6	4	11.6	4	11.6	4	11.6	4	10.3	2	10.3	2	10.3	2	10.1	2				
Spring CPUE age 1	8.00	1	12.00	1	162.67	4	56.00	4	132.00	4	78.67	4	39.87	2	120.30	4	97.87	4	72.00	4
Spring CPUE 12.0-14.9 in	90.67	4	12.00	1	54.67	4	22.67	2	30.67	2	24.00	2	12.00	1	9.00	1	18.67	1	10.67	1
Spring CPUE ≥15.0 in	66.67	4	21.33	4	36.00	4	21.33	3	2.67	1	9.33	2	10.67	2	11.00	2	8.00	2	12.00	2
Spring CPUE ≥20.0 in	1.33	2	0.00	0	1.33	2	2.67	3	0.00	0	0.00	1	1.33	2	1.00	2	0.00	0	2.67	3
Instantaneous Mortality (z)			0.943				1.155				1.160		0.560		0.561					0.438
Annual Mortality (A)%			61.1		68.5		68.5		68.67		68.67		42.86		42.94					35.46

Total score	15	9	18	16	11	13	9	11	11	13	9	9	11	11	9	9	12
Assessment rating	G	F	E	G	G	G	F	G	G	G	F	F	G	G	F	F	G
nw dclmæg.d10 nw dclpsd.d10																	

Table 58. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.75 hour of 15-minute diurnal electrofishing runs at Carpenter Lake in October 2010.

Species	Inch class																	Total	CPUE	Std. Error			
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20						
Largemouth bass	9	56	26	6	10	29	26	29	13	1								2	1	208	277.33	83.41	
nw dcalmb.d10																							

Table 59. 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 2007-2010.

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
2007	Total	5.7	0.12	52.00	20.72	41.00	15.00	120.30	18.04
2008	Total	5.7	0.05	113.00	15.78	102.00	13.22	97.87	16.78
2009	Total	5.0	0.08	85.33	18.52	50.67	15.38	72.00	19.01
2010	Total	5.7	0.07	128.00	60.71	116.00	48.88		

nwdcalmb.d10

Table 60. Length frequency and CPUE (fish/hr) of bluegill and redear sunfish collected during 0.75 hour of electrofishing at Carpenter Lake in May 2010.

Species	Inch class										Total CPUE	Std. error	
	1	2	3	4	5	6	7	8	9	10			
Bluegill	1	7	23	26	26	41	35				159	212.00	30.76
Redear sunfish				1	1	5	7	2	4	1	21	28.00	6.45

nwdclbg.d10

Table 61. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Carpenter Lake during spring samples 1999-2010.

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.
2010	10.67	6.42	100.00	18.56	101.33	19.01	0.00	0.00	212.00	30.76	281.33	42.85
2009	17.33	9.55	124.00	24.42	140.00	17.86	0.00	0.00	238.00	68.54	233.33	9.10
2008	0.00	88.00	18.76	150.00	50.74	0.00	1.33	0.00	161.33	21.31	319.78	23.07
2007	2.67	61.33	17.73	168.00	38.53	1.33	0.00	0.00	86.15	20.41	161.54	34.11
2006	1.33	57.33	10.00	102.67	12.12	0.00	0.00	0.00	28.74	0.00	392.00	108.89
2005	12.09	9.77	190.11	17.09	98.90	6.80	18.68	9.02	26.67	9.61	105.33	17.99
2004	12.31	4.62	26.15	7.13	46.15	11.41	1.54	1.54	0.00	0.00	0.00	0.00
2003	7.69	2.81	102.56	22.96	47.44	13.24	3.85	1.72	0.00	0.00	0.00	0.00
2002	2.30		8.05		17.24		1.15		0.00	0.00	0.00	0.00
2001			198.67	74.7	152.00	22.74	41.33	12.72	0.00	0.00	0.00	0.00
2000			4.00	2.31	10.67	4.81	12.00	6.11	0.00	0.00	0.00	0.00
1999			10.67	2.57	82.67	10.91	12.00	8.00	0.00	0.00	0.00	0.00

Table 62. Mean back calculated lengths (in) at each annulus for bluegill collected at Carpenter Lake in May 2010.

Year class	No.	Age					
		1	2	3	4	5	6
2009	18	3.4					
2008	19	2.4	4.7				
2007	11	2.8	5.4	6.6			
2006	10	1.9	4.7	6.3	7.0		
2005	4	2.9	5.3	6.2	6.7	7.0	
2004	2	2.4	4.2	5.7	6.4	7.0	7.2
Mean		2.7	4.9	6.4	6.9	7.0	7.2
No.		64	46	27	16	6.0	2.0
Smallest		1.3	3.5	5.3	6.2	6.5	7.2
Largest		4.7	6.1	7.4	7.5	7.2	7.2
Std error		0.1	0.1	0.1	0.1	0.1	0.0
95% CI (+)		0.2	0.2	0.2	0.2	0.2	0.0

nwdcbgag.d10

Table 63. Age-frequency and CPUE (fish/hr) per inch class of bluegill collected at Carpenter Lake in May 2010.

Age	Inch class						No.	CPUE	Std. error	Age (%)
	2	3	4	5	6	7				
1	7	15	15	2			40	52.89	17.93	25
2		8	11	24			42	56.44	8.73	27
3					24	9	33	44.33	7.68	21
4					14	14	28	36.89	7.13	18
5					3	7	10	13.89	3.06	7
6						5	5	6.22	1.81	3
Total	7	23	26	26	41	35	158			
(%)	4	15	16	16	26	22				

nwdclbg.d10, nwdcbgag.d10

Table 64. Electrofishing catch rate (fish/hr) for each age of bluegill collected from Carpenter Lake during spring samples 2002-2010.

Age	Year								
	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	2.30	7.69	12.31	10.99	4.39	15.11	120.30	44.48	52.89
2	14.71	98.80	25.23	180.24	121.69	27.42	58.50	62.32	56.44
3	9.43	27.26	33.23	66.76	32.09	108.67	150.87	97.73	44.33
4	2.30	7.26	6.15	26.62	2.22	80.80	39.17	76.80	36.89
5	0.00	0.00	0.00	0.00	0.00	1.33	4.17	0.00	13.89
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.22

nwdclbg.d10, nwdcbgag.d10

Table 65. Population assessment for bluegill based on spring electrofishing at Carpenter Lake from 2001-2010 (scoring based on statewide assessment).

Parameter	Year																			
	2001		2002		2003		2004		2005		2006		2007		2008		2009		2010	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age 2+ at capture	5.6	4	5.6	4	5.6	4	5.6	4	5.6	4	5.6	4	4.6	3	4.6	3	4.6	3	4.9	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	3-3+	3	3-3+	3	3-3+	3
CPUE \geq 6.0 in	145.67	4	18.39	1	53.33	3	47.69	2	117.58	4	84.61	4	169.33	4	150.00	4	140.00	4	101.33	4
CPUE \geq 8.0 in	41.33	4	1.15	1	4.00	2	1.54	2	18.68	4	0.00	0	1.33	2	0.00	0	0.00	0	0.00	0
Instantaneous Mortality (z)					1.427						1.657		0.386		0.571				0.615	
Annual Mortality (A)					76.0						80.9		32.0		43.9				45.92	
Total score		16		10		13		12		16		12		12		10		10		10
Assessment rating		E		F		G		G		E		G		G		F		F		F

nw dclbg.d10, nw dcbgag.d10

Table 66. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.375 hour of 7.5-minute diurnal electrofishing runs at New Kingfisher Lake in April 2010.

	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	2	38	16	1	10	20	4	8	10	5	3	5	2	2	1		1	128	341.33	84.20	

nw dnlkpsd.d10

*Major fish kill 9/5/08

Table 67. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at New Kingfisher Lake during spring samples 1999-2010.

Year	Length group												Total
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		CPUE		Std. err.		
2010	178.67	48.52	112.00	25.52	34.67	9.61	16.00	8.00	341.33	84.20			
2009	109.33	37.33	24.67	2.67	21.33	2.67	0.00		165.33	37.33			
2008	282.67	37.33	240.00	33.31	56.00	9.24	0.00		578.67	71.75			
2007	98.67	27.84	392.00	92.72	21.33	2.67	2.67	2.67	514.67	112.79			
2006	189.33	14.11	333.33	46.26	10.67	2.67	0.00		533.33	62.88			
2005	287.18	97.44	428.21	53.54	41.03	6.78	12.82	5.13	769.23	141.21			
2004	161.54	45.07	243.59	45.58	12.82	6.78	2.56	2.56	420.51	92.45			
2003	105.56	28.19	425.00	55.49	8.33	4.81	0.00		538.89	59.77			
2002*	116.28		258.14		4.65		0.00		379.07				
2001*	89.74		364.10		20.51		2.56		476.91				
2000*	137.78		493.33		24.44		6.67		662.22				
1999*	n/d		315.56		17.78		2.22		335.56				

*Nocturnal samples

**Major fish kill 9/5/08

Table 68. Population assessment for largemouth bass based on spring electrofishing at New Kingfisher Lake from 2001-2010 (scoring based on statewide assessment).

Parameter	Year																			
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010										
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score										
Mean length age 3 at capture	11.0	3	11.0	3	11.0	3	11.0	3	10.5	1	10.5	1	10.5	1	**					
Spring CPUE age 1	89.74	4	116.28	4	100.00	4	94.87	4	248.72	4	149.33	4	96.00	4	77.33	4	**			
Spring CPUE 12.0-14.9 in	20.51	2	4.65	1	8.33	1	12.82	1	41.03	3	10.67	1	21.33	2	56.00	4	21.33	2	34.67	2
Spring CPUE ≥15.0 in	2.56	1	0.00	0	0.00	0	2.56	1	12.82	2	0.00	0	2.67	1	0.00	0	0.00	0	0.00	0
Spring CPUE ≥20.0 in	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Instantaneous Mortality (z)			1.330		1.330		1.230		1.335		1.335		0.608		0.562					
Annual Mortality (A)%			73.6		70.8		73.7		39.2		43.0									
Total score	10	8	8	9	12	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Assessment rating	F	F	F	F	G	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F

* Major fish kill 9/5/08
 ** Age data not collected

Table 69. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.375 hour of 7.5-minute diurnal electrofishing runs at New Kingfisher Lake in October 2010.

Species	Inch class																
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total	CPUE	Std. error
Largemouth bass	21	21	3	29	20	13	6	8	3	1	3	2	2	1	131	349.33	52.53

nw dhkimb.d10
 *Major fish kill 9/5/08

Table 70. Length frequency and CPUE (fish/hr) of bluegill and redear sunfish collected in 0.375 hour of electrofishing at New Kingfisher Lake in May 2010.

Species	Inch class							Total	CPUE	Std. error
	1	2	3	4	5	6	7			
Bluegill	1	48	51	22	30	25	5	182	485.33	47.18
Redear sunfish nw.dhkgb.d10							2	2	5.33	5.33

Table 71. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at New Kingfisher Lake during spring 1999-2010.

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.
2010	130.67	27.06	274.67	30.75	80.00	21.17	0.00			485.33	47.18		
2009	194.67	21.33	338.67	35.28	74.67	30.05	0.00			608.00	53.27		
2008	42.67	5.33	242.67	65.54	37.33	14.85	0.00			322.67	85.21		
2007	5.33	2.67	69.33	26.26	45.33	5.33	0.00			120.00	33.31		
2006	16.00	13.47	104.00	33.78	14.00	2.00	0.00			134.00	43.98		
2005	0.00		53.85	7.69	12.82	6.78	10.26	6.78		76.92	8.88		
2004	0.00		15.38	8.88	23.08	11.75	0.00			38.46	4.44		
2003	12.82	6.78	56.41	2.56	15.38	7.69	5.13	2.56		89.74	5.13		
2002			9.30		62.79		6.98			79.07	0.00		
2001			61.54		66.67		7.69			135.90	0.00		
2000			31.11		66.67		11.11			108.99	0.00		
1999			6.67		20.00		4.44			31.11	0.00		

Table 72. Population assessment for bluegill based on spring electrofishing at New Kingfisher Lake from 2001-2010 (scoring based on statewide assessment).

Parameter	Year																					
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010												
Mean length age 2 at capture	5.7	4	5.7	4	5.7	4	5.7	4	4.3	2	4.3	2	*									
Years to 6.0 in	2-2+	4	2-2+	4	2-2+	4	2-2+	4	3-3+	3	3-3+	3	3-3+	3	*							
CPUE >6.0 in	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	80.00	4		
CPUE >8.0 in	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	0.00	0		
Instantaneous Mortality (z)	0.865										1.587	0.574										2.14
Annual Mortality (A)%	57.9										79.5	42.6										88.2

Total score	13	13	11	9	12	9	7	7	8
Assessment rating	G	G	G	F	G	F	F	F	F

* Age data not collected

Table 73. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.375 hour of 7.5-minute diurnal electrofishing runs at Washburn Lake in April 2010.

Species	Inch class										Total	CPUE	Std. error			
	4	5	6	7	8	9	10	11	12	13				14	15	21
Largemouth bass	5	28	3	6	8	8	15	1	2				1	69	184.00	45.49

nwdw\ipsd.d10

Table 74. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Washburn Lake* during spring samples 2001-2010.

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.
2010	96.00	28.10	80.00	16.65	5.33	5.33	2.67	2.67	2.67	2.67	184.00	45.49
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

nwdwlpd.d10

Table 75. Mean back calculated lengths (in) at each annulus for largemouth bass collected at Washburn Lake in April 2010.

Year class	No.	Age			
		1	2	3	4
2009	23	5.4			
2008	20	6.5	8.7		
2007	11	11.0	9.5	10.7	
2006	2	2.0	9.2	10.3	11.3
Mean		6.0	9.0	10.6	11.3
No.		56	33	13	2
Smallest		2.9	7.8	9.4	10.3
Largest		7.4	10.5	12.3	12.3
Std error		0.1	0.1	0.2	1.0
95% CI (+)		0.2	0.2	0.5	2.0

nrdwlmag.d10

Table 76. Age-frequency and CPUE (fish/hr) per inch class of largemouth bass collected at Washburn Lake in April 2010.

Age	Inch class									No.	CPUE	Std. error	Age (%)
	4	5	6	7	8	9	10	11	12				
1	5	28	3							36	96.00	28.10	53
2					6	7				13	35.20	2.57	19
3						1	13	1	1	16	43.36	15.32	24
4							2		1	3	6.78	3.01	4
Total	5	28	3		6	8	15	1	2	68			
(%)	7.0	41.0	4.0		9.0	12.0	22.0	1.0	3.0				

nrdwlpd.d10, nrdwlmag.d10

Table 77. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Washburn Lake during spring samples 2003-2010.

Age	Year							
	2003	2004	2005	2006	2007	2008	2009	2010
1	131.62	48.29	41.03	94.67	131.20	165.87	99.73	96.00
2	380.96	218.38	53.38	36.73	81.98	67.73	84.27	35.20
3	8.16	27.56	27.21	17.88	19.09	9.33	2.67	43.36
4	40.79	105.77	65.56	42.73	8.00	5.33	2.67	6.78
5	0.00	0.00	0.00	0.00	2.40	5.07	0.00	0.00

nwdwipsd.d10, nwdwlmag.d10

Table 78. Population assessment for largemouth bass based on spring electrofishing at Washburn Lake from 2003-2010 (scoring based on statewide assessment).

Parameter	Year															
	2003		2004		2005		2006		2007		2008		2009		2010	
	Value	Score	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	13.1	4	13.1	4	13.1	4	10.7	2
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	96.00	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	5.33	1
Spring CPUE \geq 15.0 in	0.00	0	0.00	0	2.56	1	18.67	3	21.33	3	13.33	2	10.67	2	0.00	0
Spring CPUE \geq 20.0 in	0.00	0	0.00	0	2.56	3	2.67	3	0.00	0	0.00	0	0.00	0	0.00	0
Instantaneous Mortality (z)							0.669		0.944		1.117					0.819
Annual Mortality (A)%							48.8		61.1		67.3					55.9
Total score		7		6		12		17		12		11		10		7
Assessment rating		P		P		G		E		G		F		F		P

*Washburn Lake renovated and restocked spring 2000

Table 79. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.375 hour of 7.5-minute diurnal electrofishing runs at Washburn Lake in October 2010.

Species	Inch class																	
	4	5	6	7	8	9	10	11	12	18	Total	CPUE	Std. error					
Largemouth bass	4	17	11	3	14	40	7	3	1	1	101	269.33	16.22					

nwdwalmb.d10

Table 80. 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 2007-2010.

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
2007	Total	5.9	0.06	472.00	60.40	424.00	56.19	165.87	42.07	
2008	Total	6.2	0.08	170.67	42.92	170.67	42.92	99.73	56.83	
2009	Total	5.1	0.08	136.00	21.17	88.00	20.13	96.00	28.10	
2010	Total	5.7	0.12	88.00	16.00	77.33	14.85			

nwdwalmb.d10

Table 81. Length frequency and CPUE (fish/hr) for bluegill collected in 0.375 hour of electrofishing at Washburn Lake in May 2010.

Species	Inch class								
	2	3	4	5	6	7	Total	CPUE	Std. error
Bluegill	20	30	25	2	3	9	89	237.33	41.65

nwdwibg.d10

Table 82. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Washburn Lake during spring samples 2001-2010.

Year	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.
2010	53.33	16.22	152.00	57.87	32.00	0.00	0.00	0.00	0.00	0.00	237.33	41.65
2009	60.00	15.14	80.00	19.04	138.00	10.00	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	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	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	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	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	161.54	12.95
2003	7.69	3.14	71.15	12.71	113.46	39.89	0.00	0.00	0.00	0.00	192.31	39.85
2002			46.51		102.33		0.00	0.00	0.00	0.00	148.84	0.00
2001			28.00		64.00		4.00	0.00	0.00	0.00	96.00	0.00

*Washburn Lake renovated summer 1999 and restocked spring 2000
nwdwfbg.d10

Table 83. Population assessment for bluegill based on spring electrofishing at Washburn Lake (scoring based on statewide assessment).

Parameter	Year															
	2003		2004		2005		2006		2007		2008		2009		2010	
	Value	Score	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 >6.0 in	118.00	4	32.69	2	9.62	1	32.00	2	40.00	2	168.00	4	138.00	4	32.00	2
CPUE >8.0 in	0.00	0	22.00	4	0.00	0	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	G	14	E	5	P	10	G	10	G	12	G	10	G	10	G
Assessment rating																

* Age data not collected

Table 84. Relative abundance, composition, and number per hour of fish observed during 1.50 hours of 30-minute scuba transects swam at Goose Lake (Peabody WMA) in June 2005-2010.

Species	Year	Length group				Total	No./hr	Std. Error
		5.0-8.0 in	8.0-12.0 in	12.0-15.0 in	>15.0 in			
Largemouth bass	2005	14	29	15	9	67	44.67	8.17
	2006	18	28	8	2	56	37.33	8.21
	2007	7	14	8	3	32	21.33	1.45
	2008	24	23	12	1	60	40.00	3.21
	2010	20	30	13	1	64	42.66	4.26

Species	Year	Length group				Total	No./hr	Std Error
		3.0-5.0 in	5.0-8.0 in	8.0-10.0 in	> 10.0 in			
Bluegill	2005	141	62	12	0	215	143.33	42.10
	2006	181	106	1	0	288	192.00	23.06
	2007	135	106	11	2	254	169.33	23.79
	2008	114	72	4	0	190	126.67	9.49
	2010	37	103	5	0	145	96.67	1.86

Species	Year	Length group				Total	No./hr	Std Error
		3.0-5.0 in	5.0-8.0 in	8.0-10.0 in	> 10.0 in			
Redear sunfish	2005	0	0	8	0	8	5.33	2.67
	2006	5	23	3	0	32	20.67	1.45
	2007	6	19	17	1	43	28.67	3.18
	2008	21	35	8	0	64	42.67	6.96
	2010	17	74	5	1	97	64.67	7.86

Table 85. Relative abundance, composition, and number per hour of fish observed during 1.00 hour of 20-minute scuba transects swam at Musky Lake (Peabody WMA) in June 2005-2010.

Species	Year	Length group				Total	No./hr	Std. Error
		5.0-8.0 in	8.0-12.0 in	12.0-15.0 in	>15.0 in			
Largemouth bass	2005	9	26	18	7	60	60.00	
	2006	27	44	26	13	110	110.00	8.00
	2007	13	26	18	2	59	59.00	5.17
	2010	31	28	20	7	86	86.00	8.19

Species	Year	Length group				Total	No./hr	Std Error
		3.0-5.0 in	5.0-8.0 in	8.0-10.0 in	> 10.0 in			
Bluegill	2005	91	55	13	0	159	159.00	
	2006	320	125	10	0	455	455.00	7.84
	2007	431	91	8	2	532	532.00	22.81
	2010	153	476	8	0	637	637.00	105.27

Species	Year	Length group				Total	No./hr	Std Error
		3.0-5.0 in	5.0-8.0 in	8.0-10.0 in	> 10.0 in			
Redear sunfish	2005	33	38	15	0	86	86.00	
	2006	17	44	18	2	81	81.00	6.56
	2007	7	41	12	4	64	64.00	1.76
	2010	44	91	25	6	166	166.00	28.47

Table 86. Length frequency and CPUE (fish/hr) of largemouth bass collected during .375 hour of diurnal electrofishing at Merlin Lake (Peabody WMA) in April 2010.

Species	Inch class															Total	CPUE	Std. error
	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
Largemouth bass	1	5	7	6	5	29	23	3	14	14	7	6	5	1	126	336.00	42.33	

nw dmepsd.d10

Table 87. Length frequency of channel catfish collected during 3 nights of tandem (3 sets with 3 nets each) hoop net sampling at Island Lake (Peabody WMA) during October 2010.

Species	Inch class																	Total	
	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		25
Channel catfish	22	81	71	45	22	9	10	6	3	1	3	1	1	1	1			1	278

nw dlhn.d10

Table 88. Mean length (in) at capture for each age of channel catfish collected from Island Lake in November 2010.

	Age		
	1+	2+	3+
Mean length	10.9	12.4	13.6
No.	35	1	10
Smallest	8.8	12.4	11.8
Largest	14.7	12.4	14.8

nwdilcag.d10

Table 89. Length frequency and CPUE (fish/hr) of largemouth bass collected during 0.375 hour of 7.5-minute diurnal electrofishing runs at Audubon State Park Lake in April 2010.

	Inch class														Total	CPUE	Std. Error
	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
Largemouth bass	1	5	7	6	5	29	23	3	14	14	7	6	5	1	126	336.00	42.33

nw daupsd.d10

Figure 1. Angler Attitude Survey for Rough River Lake creel survey conducted 1 April – 30 October 2010.

ROUGH RIVER LAKE ANGLER ATTITUDE SURVEY 2010
N = 200

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 Rough River Lake (**check all that apply**)?
 Bass **71.5%** Crappie **66.5%** Hybrid Striped Bass **26.5%** Channel Catfish **13.0%** Flathead
 Catfish **7.0%** Other: Bluegill **2.5%** Anything **0.5%**
4. Which one species do you fish for most at Rough River Lake (**check only one**)? **N = 196**
 Bass **56.1%** Crappie **38.8%** Hybrid Striped Bass **1.5%** Channel Catfish **1.5%** Flathead
 Catfish **0%** Other: Bluegill **1.5%** Anything **0.5%**

-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 Rough River Lake? **N = 141**
 Very satisfied **29.8%** Somewhat satisfied **46.1%** Neutral **17.7%** Somewhat dissatisfied **5.7%**
 Very dissatisfied **0.7%** 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 = 9**
 Number of fish **44.4%** Size of fish **55.6%** Not happy with regulations **0%** Too many anglers **0%**

Crappie Anglers

6. In general, what level of satisfaction do you have with crappie fishing at Rough River Lake? **N = 122**
 Very satisfied **35.2%** Somewhat satisfied **45.1%** Neutral **14.8%** Somewhat dissatisfied **3.3%**
 Very dissatisfied **0.8%** No opinion **0.8%**
- 6a. If you responded with somewhat or very dissatisfied in question (6) – what is the single most important reason for your dissatisfaction? **N = 3**
 Number of fish **33.3%** Size of fish **66.7%** Not happy with regulations **0%** Too many anglers **0%**

Hybrid Striped Bass Anglers

7. In general, what level of satisfaction do you have with the hybrid striped bass fishing at Rough River Lake? **N = 45**
 Very satisfied **46.7%** Somewhat satisfied **37.8%** Neutral **11.1%** Somewhat dissatisfied **2.2%**
 Very dissatisfied **0%** No opinion **2.2%**
- 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 **0%** Not happy with regulations **0%** Too many anglers **0%**

Channel Catfish Anglers

1. In general, what level of satisfaction do you have with the channel catfish fishing at Rough River Lake? **N = 24**
 Very satisfied **50.0%** Somewhat satisfied **16.7%** Neutral **29.2%** Somewhat dissatisfied **4.2%**
 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 **0%** Size of fish **100%** Not happy with regulations **0%** Too many anglers **0%**

Flathead Catfish Anglers

2. In general, what level of satisfaction do you have with the flathead catfish fishing at Rough River Lake? **N = 11**
 Very satisfied **36.4%** Somewhat satisfied **18.2%** Neutral **36.4%** Somewhat dissatisfied **9.1%**
 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 = 1**
 Number of fish **100%** Size of fish **0%** Not happy with regulations **0%** Too many anglers **0%**

All Anglers

3. Would you support or oppose a reduction in the current statewide 30 fish daily crappie creel limit to 20 fish? **N = 186**
 Support **62.9%** Oppose **15.6%** No opinion **21.5%**

4. How many times do you fish Rough River Lake a year? **N = 182**
 First time **4.4%** 1 to 4 **15.9%** 5 to 10 **19.2%** More than 10 **60.4%**

5. Are you satisfied with the current size and creel limits on all sport fish at Rough River Lake? **N = 185**
 Yes **76.8%** No **23.2%**

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

	Size N = 10	Creel N = 10
Bass	12-14" 10.0%	14-17 10.0%
	12" 20.0%	3 10.0%
	14" 10.0%	4 10.0%
	15" 40.0%	5 60.0%
	16" 20.0%	6 10.0%

	Size N =	Creel N = 38
Crappie	10" 89.2%	15-20 2.6%
	12" 8.1%	15 5.3%
	Any 2.7%	20 86.8%
		30 2.6%
		45 2.6%

	Size N = 6	Creel N = 7
Hybrid Striped Bass	15" 83.3%	3 14.3%
	18" 16.7%	5 57.1%
		8 14.3%
		20 14.3%

	Size N = 3	Creel
Channel Catfish	8" 33.3%	
	12" 33.3%	
	20" 33.3%	

	Size N = 2	Creel N = 1
Flathead Catfish	12" 50.0%	2 100%
	25" 50.0%	

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 late April and results are shown in Tables 2-5. Total largemouth bass catch rate (134.83 fish/hr) was slightly higher than the 14 year average of 123.00 fish/hr. Largemouth bass accounted for 93% of the catch and spotted bass accounted for 7 % (CPUE=10.67 fish/hr). No smallmouth bass were collected in this year's spring sample.

Largemouth bass size structure indices (PSD=62 RSD₁₅=27) were similar to previous year averages. The spotted bass population continues to be low density (10.67 fish/hr), but high quality (PSD=80 and RSD₁₄=18). The smallmouth population statistics are unknown as samples historically have been low.

Fall diurnal black bass sampling in early October (Tables 6-7) indicated an average number (166.57 fish/hr) of young-of-the-year largemouth bass. However, the mean size for age-0 bass was 5.7 in; greatly exceeding the 9-year average of 4.0 in. Growth of early hatched (April spawned fish) age-0 largemouth bass was probably impacted by the high water levels from May through mid July. Though high, water levels were relatively stable throughout the spawn. The prolonged drawdown allowed young of the year access to forage and habitat. Age-0 largemouth catch rate of ≥ 5.0 in fish (105.00 fish/hr) was the highest in the past 9 years. Length-weight calculations were omitted due to poor sample size of larger bass, likely due to early sampling time.

Three of the five goals of the Barren River Lake strategic management plan 2010 (BRLSMP) were met: maintain a spring CPUE of ≥ 20.00 fish/hr for age-1 bass, maintain a spring CPUE of ≥ 33.00 fish/hr for 12.0-14.9 in bass and maintain a total CPUE of ≥ 135.00 fish/hr. Age data was not taken this year for bass, so the goal for mean length age-3 at capture was not included in the list of possible goals.

Crappie

Trap netting for crappie resulted in the collection of 745 total crappie (619 black crappie and 126 white crappie) in 93 net-nights (Tables 8-16). Most black crappie (52%) fell within the 8.0-9.0 in classes. Most white crappie (52%) fell within the 8.0-11.0 in classes. The crappie population remains dominated by black crappie (83 %). The assessment for both species of crappie was "Fair". The combined crappie assessment was "Fair" as it has been for many years. Black crappie reached harvestable size (9.0 in) in 2.8 years and 10.0 inches in 3.5 years (calculated from Von Bertalanffy equation, FAST 3.0) . White crappie reached harvestable size (9.0 in) in 1.9 years (calculated from Von Bertalanffy equation, FAST 3.0). The following length-weight equation for white crappie should be used with caution due to the small sample size (n=544, black crappie; n=83, white crappie).

$$\text{Black crappie } \text{Log}_{10}(\text{weight}) = -3.728 + 3.496 * \text{Log}_{10}(\text{length})$$

$$\text{White crappie } \text{Log}_{10}(\text{weight}) = -3.727 + 3.437 * \text{Log}_{10}(\text{length})$$

Four of the six objectives of the BRLSMP 2010 were met for crappie species: maintain a fall CPUE of ≥ 6.00 fish/net-night for all crappie excluding age-0, maintain a fall CPUE of ≥ 1.00 fish/net-night for age-0 crappie, maintain a fall CPUE of ≥ 3.00 fish/net-night for ≥ 8.0 in crappie and maintain a total fall crappie CPUE of 7.00 fish/net-night. The goal for maintaining a mean length age-2 at capture of 9.8 in was not reached due to the high percentage of black crappie. The goal of maintaining a fall CPUE of ≥ 4.00 fish /net-night for age 1 fish was not met this year due to the weak 2009 year classes of both black and white crappie.

White Bass / Hybrid Stripped Bass

Gill netting for white bass and hybrid striped bass was completed in early-November. Very low numbers of hybrids were collected; white bass population numbers continue to be very low. The low numbers of hybrids is non-typical. Hybrids will be sampled in 2011 using standard sampling protocol. Sampling results can be found in the Lake Fisheries Research Section annual performance report.

Barren River Lake Creel (10,000 acres)

Creel survey: Results of a roving, daytime creel survey are presented in Tables 17-24. Anglers made an estimated 42,171 trips and fished for 177,004 hours with the average trip approximating 4.19 hours. Black bass continued to be the most sought after fish accounting for 39% of effort followed by crappie (23%), catfish (15 %) and morone (10%).

Bass angler trips (16,683) decreased slightly from 2007, but hours fished (70,026) remained similar to 2007 (70,659). These statistics are interesting, since in 2007 the lake never reached summer pool and in 2010 the lake was 20 ft over pool for a better part of 2 months during prime bass fishing times of May and June.

Crappie angler trips were up (10,013) from the 2007 creel (7,029) and hours fished were almost 2 times (42,031) higher than the 2007 creel (19,196). Crappie harvest was also up from 10,014 fish in 2007 to 41,037 in 2010. Crappie catch was dominated by black crappie (53%). This does not coincide with fall trap-netting samples that were heavily dominated by black crappie (83%). This could be due to misidentification by anglers. Crappie fishing really picked up in the latter half of the year. (Table 19)

Catfish angler trips were up slightly in 2010 (3,169) from the 2007 creel (3,070), but hours fished increased from 8,384 hours in 2007 to 13,302 hours in 2010. Harvest number dropped greatly from 2,653 in 2007 to 494 in 2010. June and July continue to be the months of highest harvest (Table 20).

Angler attitude survey: Results of the angler attitude survey are presented in Figure 1. Similar to the 2007 attitude survey, anglers identified bass (49%) and crappie (31%) as species they fished for most. Catfish (12%) increased slightly from the 2007 creel. Angler satisfaction with bass, crappie, hybrid and catfish fisheries was overwhelmingly good with 77% or greater of responses falling in the "very satisfied to somewhat satisfied" categories.

Response of all anglers to the proposed crappie creel reduction to 20 fish per day was overwhelmingly supportive (60% support, 28% no opinion). Support for one catfish per day greater than 34.0 in was similarly supportive (56% support, 36% no opinion). Few anglers expressed dissatisfaction with current regulations. One noteworthy area was the number of fisherman that wanted an increase in the crappie size limit to 10.0 in and a decrease in the crappie creel limit to 20 fish per day.

Briggs Lake (18 acres)

Black Bass

Diurnal largemouth electrofishing samples were collected on April 19 (Tables 25-27). Largemouth catch rate (312.00 fish/hr) was just above the goal of 300.00 fish/hr in the Briggs strategic management plan (BRGSMP 2009). Although the PSD is only 15, this population parameter for largemouth bass is desired for accomplishing sunfish management goals set in the BRGSMP 2009.

Sunfish

The sunfish population was sampled by diurnal electrofishing on the May 6, 2010 (Tables 28-33). Bluegill CPUE for fish ≥ 6.0 in (206.40 fish/hr) greatly exceeded the BRGSMP goal of 100.00 fish/hr. Catch rate of ≥ 8.0 in bluegills (52.80 fish/hr) was the highest catch rate in the past 5 years. No bluegill age data was taken, so goals for growth were not included in the goals section. The other BRGSMP sunfish goal of maintaining a total CPUE of greater than 100.00 fish/hr of 6.0-in sunfish was also met.

Redear CPUE ≥ 8.0 in (17.60 fish/hr) was the only redeer goal of the BRGSMP 2009 management plan met. CPUE of ≥ 10.0 in reedar was 1.60 fish/hr which was just below the goal of 1.80 fish/hr. Numbers of 6.0-7.9 in reedar were down from the past 3 years, but catch rates of reedar ≥ 8.0 in remained stable. The decrease in 6.0-7.9 in fish could be due to sampling time as noted in previous years' samples.

Channel catfish

Catfish were sampled with 4 sets of tandem baited hoop nets with 3 days of soak time (Tables 34-35). The population density assessment was muddled by stocking of channel catfish in mid-August, 1-month prior to the sampling date. Although the sample was dominated by stock sized fish (9.0 – 10.0 in), seemingly good numbers of age-2+ fish were seen. Otolith age data (n=35) indicated channel catfish achieved 15.0 in by age-2+.

Spurlington Lake (25 acres)

Black Bass

Results of nocturnal largemouth bass electrofishing are shown in Tables 36-38. Catch rate for ≥ 20.0 in fish (4.00 fish/hr) was the second highest seen in the past 9 years. The bass population remains diverse (PSD=43). 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 12.0-14.9 in fish.

Sunfish

Results of bluegill and reedar diurnal sampling on May 19, 2010 are shown in Tables 39-43. One of two possible goals in the SPLSMP 2009 management plan was met this year: CPUE of bluegill ≥ 6.0 in (102.00 fish/hr). The catch rate of fish ≥ 8.0 in fell significantly. This could be due to sampling timing or water conditions.

Young reedar (CPUE 24.00 fish/hr) are up from last years samples (Table 40). This increase in the young reedar is a good sign that the initial stockings from 2007-2009 have led to an established population. Numbers of reedar larger than 6.0 in fell from last year's samples. Larger individuals likely spawned earlier and already moved to deeper water and were not susceptible to the gear, as larger reedar were noted during spring bass sampling. This has been observed in other district lakes as well.

Marion County Lake (25 acres)

Black Bass

Results of nocturnal largemouth bass electrofishing are shown in Tables 44-47. The catch rate of 470.86 fish/hr 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 fish/hr). The largemouth population continues to be dominated by fish < 12.0 in (PSD=4); however this fits the MCLSMP, as this lake is managed for sunfish.

Sunfish

Diurnal electrofishing results for bluegill and redear on May 10, 2010 are presented in Tables 48-53. One goal of the MCLSMP 2009 plan was met: maintain or exceed a spring CPUE of 5.00 fish/hr of ≥ 8.0 in bluegill. Increased aquatic vegetation coverage coupled with resulting increased water clarity could explain reduced catchability of sunfish and lower overall CPUE of diurnal electrofishing in clearer water. 125 tons of lime was applied to the lake in early 2011 in hopes of increasing alkalinity. A second round of grass carp were also added to the lake to help with controlling aquatic vegetation.

No goals of the MCLSMP were met for redear sunfish. Redear catch rates were down for all length groups.

Green River Lake (8,210 Acres)

Muskie

Unfavorable sampling conditions (clear water) limited muskie sampling to 3 sites (normally sample 7), reducing effort to 7.5 hours (half of normal effort). Overall, muskie length group catch rates were similar to historic averages (Tables 54-56); however, > 30.0 in and > 40.0 in length groups were notably lower than previous years and failed to meet management objectives. Difficulty of holding the larger fish (40.0-in plus) with the electrofishing gear combined with lower overall encounters (less room for error) make catch rates of this size group inherently more variable. The length-weight equation for muskie is:

$$\text{Log}_{10}(\text{weight}) = -4.51283 + 3.63068 \times \text{Log}(\text{length})$$

similar to previous years.

Black Bass

Nocturnal black bass sampling was not conducted in 2010 due to prolonged high water levels (10-15 ft above summer pool) during the month of May.

Fall YOY sampling (Tables 57-58) yielded higher than average overall CPUE (45.00 fish/hr), mean length (4.8 in) and CPUE ≥ 5.0 in (18.33 fish/hr) of age-0 largemouth bass. These indices suggest a moderate to strong 2010 year class. Age-0 spotted bass followed similar trends as largemouth, with higher numbers and larger-sized fish.

Crappie

Results from trap netting for white crappie are presented in Tables 59-62. The consecutive years of moderate year class strength from 2005 – 2008 are carrying the fishery. Crappie growth continues to suffer as 2010 was among the poorest on record for age-2+ fish (7.8 in). Thankfully, the 2009 year-class seems poor and will not compound growth problems further. Crappie population assessment remained “Fair” due to high CPUE’s of older year classes which eclipsed management objectives of 12.00 fish/nn (CPUE of $>$ age-0) and 7.00 f/nn (CPUE of ≥ 8.0 in fish). CPUE of age-0 (1.27 f/nn) and age-1 (0.67 f/nn) crappie were well below management objectives for those groups. Age-0 CPUE continues to be an inconsistent predictor of year class strength. The length-weight equation for white crappie is:

$$\text{Log}_{10}(\text{weight}) = -3.811551 + 3.4879 \times \text{Log}_{10}(\text{length})$$

Walleye/White bass

Results of the experimental gill net sampling for white bass and walleye are shown in Tables 63-66. White bass were collected for the first time since 2007 with 15 of the 16 fish collected being stocked fish (OTC marked). Overall walleye CPUE (4.44 f/nn) slid slightly from last year (6.38 f/nn) due to a slight dip in age-0 fish. All population parameters were similar to previous years. Walleye growth rate remains excellent with fish reaching

18.8 in by age-2+. The walleye population assessment remained "Good" as all management objectives were met. The length-weight equation for walleye is:

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

similar to previous years.

The recent establishment of alewives (first noted in 2004 in gill net by-catch) and their effect on white bass and walleye population dynamics remains unclear.

Shanty Hollow Lake (136 acres)

Black Bass

Nocturnal bass sampling results are shown in Tables 67-70. Overall CPUE of largemouth (277.00 fish/hr) was similar to previous years. Size structure index (PSD = 34) dipped slightly from the previous year (PSD = 42). Similar to previous years, the largemouth bass population assessment remained "Good". Management objectives for age-1 CPUE (20.00 fish/hr) and ≥ 20.0 -in CPUE (2.50 fish/hr) were not met. Recruitment of the good year classes of 2005 and 2006 to larger sizes (15.0-in plus) has been slow and likely linked to chronic low water levels from late-summer through fall.

Sunfish

Sunfish sampling results are shown in Tables 71-76. Bluegill CPUE (277.33 fish/hr) recovered slightly from the previous year's lower value (228.00 fish/hr) due to increased CPUE of smaller fish. Bluegill size structure remains poor (PSD = 14) and the bluegill population assessment stayed at a "Fair" rating. Non-age related management objectives that measure larger fish parameters were not met and were well below desired values.

The redear population remains low density (CPUE = 23.33 fish/hr) and with fair size structure (PSD = 31). The population failed to achieve the only assessable population objective (CPUE of ≥ 7.00 fish/hr for 8.0-in plus fish) at 2.00 fish/hr.

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.

Metcalf County Lake (22 acres)

Black Bass

Results of diurnal largemouth bass sampling are presented in Tables 77-79. The bass population remains lower density as overall bass CPUE was 186.00 fish/hr; similar to previous years. The size structure remains diverse (PSD = 35) and was similar to previous years. CPUE of larger bass (≥ 20.0 in) has consistently ranged from 6.00-8.00 fish/hr, well above any lake in the Southwest District.

Though not measured since 2002, condition of larger bass (15.0-in plus) historically has been excellent (2000 -2002; $Wr = 105$). The lake is highly productive and supports a substantial (bluegill 2007 CPUE = 1562.00 fish/hr) and varied (misc. sunfish, gizzard shad and trout) forage base.

Mill Creek Lake (109 acres)

Sunfish

Results of diurnal sunfish electrofishing are presented in Tables 80-86. Overall, the bluegill CPUE of 698.40 fish/hr was similar to the previous sample in 2005 (516.00 fish/hr); however, the current size structure is dominated by intermediate sized fish (PSD = 9). Bluegill growth was consistently slow throughout their life span as age-2 fish averaged 3.4 in and fish took 4.3 years to achieve 6.0 in.

The redear population is low density (16.80 fish/hr), but high quality (PSD = 95). No redear were collected in the 2005 sampling effort, further suggesting a low population density. The lake is not overly productive and will likely remain so (back up water supply lake for city of Tompkinsville).

Fagan Branch Lake (140 A)

Black Bass

Nocturnal bass electrofishing results are presented in Tables 87-90. Overall CPUE (328.00 fish/hr) remains similar to recent years. Since institution of a 12.0-15.0 in slot length limit in 2000, CPUE of larger fish (≥ 15.0 in) has improved slightly, but bass growth remains poor (4.5 years to achieve 12.0 in). However, the bass population assessment remains "Fair" despite slow growth. The lake's low productivity, and its obligation to remain so (back up water supply lake for city of Lebanon), combined with current angler attitude of catch and release, will likely continue to encumber bass growth and population improvements.

Sunfish

Nocturnal bluegill and redear electrofishing results are presented in Tables 91-100. Despite the lake's low productivity, it supports a good bluegill and excellent redear fishery. Overall bluegill CPUE was 1002.00 fish/hr; dramatically higher than previous years (200.00 – 300.00 fish/hr). Two to three-fold increases in smaller fish explain much of the difference from previous years. Size structure for both populations in 2010 was good (bluegill PSD = 33; redear PSD = 36). CPUE of larger bluegill (≥ 6.0 in) was exceptional (256.00 fish/hr) as was larger (≥ 8.0 in) redear (84.00 fish/hr). Growth of both species was slower at smaller sizes. Age-2 bluegill averaged 2.9 in and age-3 redear averaged 5.7 in. Growth rate seemed to increase at larger sizes as time to reach 6.0 in for bluegill was 3.8 years; redear achieved 8.0 inches in 4.6 years.

Table 1. Lake sampling conditions in the Southwestern Fisheries District in 2010.

Lake	Date	Species	Weather	Surface water temp.(F)	Conductivity (umhos)	Secchi (in.)	Comments
Barren River	28-Apr	Bass	Clear	64-66	210-280	12-72	8-ft below summer pool
	13-Oct	YOY bass	Sunny	69-73	190	36-38	0.7-ft below summer pool & stable
	18-Oct	YOY bass	Sunny	68	190	42	1.5 below summer pool
	28-Oct	Crappie	Clear	57-59	61-64	23	6.5-ft below summer pool & falling 0.4-ft. per day
	2-Nov	Morones	Calm				1-ft below summer pool & falling 0.3-ft. per day
Green River	27-Jan	Muskie	Partly sunny	44	90	6	6.5-ft above winter pool
	28-Jan	Muskie		44	90	12	6.5-ft above winter pool
	23-Feb	Muskie		38	80	22	2.5-ft above winter pool
	28 & 29	YOY bass		74-75	125-140	25-60	0.2-ft below summer pool
	15-Nov	Crappie & walleye		52-55		32-45	1-ft below summer pool & steady
Briggs	19-Apr	Bass	Clear	67	190	42	
	6-May	Bluegill & redear	Sunny	72		36	
	17-Sep	Channel catfish	Cloudy	77		24	
Marion Co.	20-Apr	Bass	Clear	66	110	132	
	10-May	Bluegill & redear	Partly cloudy	68	90	66	
Spurlington	20-Apr	Bass	Clear	62	160	36	
	19-May	Bluegill	Partly cloudy	67-68	120	30	
Shanty Hollow	21-Apr	Bass	Clear	68	120	52	
	13-May	Bluegill & redear	Partly cloudy	71	90	55	
Fagan Branch	29-Apr	Bass & sunfish	Clear	64		144	
	12-Oct	Channel catfish				150	
Mill Creek	18-May	Bluegill & redear	Cloudy	69	160	42	0.5-ft above normal
Metcalf Co.	29-Apr	Bass	Sunny	67		25	

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 April 28th, 2010.

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			
Peninsula	Smallmouth bass																		0			
	Spotted bass			1		1		4	2	10	7	3	1	5	2				36	24.00	9.17	
	Largemouth bass	1	1	5	12	15	10	6	2	7	14	9	16	14	8	7	3	1	1	132	88.00	14.74
Beaver Creek	Smallmouth bass																		0			
	Spotted bass																		0			
	Largemouth bass			13	11	10	10	5	22	50	25	29	28	9	17	12	8	2	1	252	168.00	16.17
Peter Creek	Smallmouth bass																		0			
	Spotted bass	1						1	1	1	2	8	2	3					19	12.67	4.37	
	Largemouth bass	3	1	12	13	23	12	8	10	14	15	13	16	14	7	9	9	2	1	182	121.33	31.18
Walnut Creek	Smallmouth bass																		0			
	Spotted bass	1						1	1		4	1	1						9	6.00	4.16	
	Largemouth bass			1	5	21	27	14	3	24	45	21	19	15	13	14	11	7	2	1	243	162.00
TOTAL	Smallmouth bass																		0			
	Spotted bass	2		1		2	2	5	3	16	16	6	1	8	2				64	10.67	3.56	
	Largemouth bass	4	3	35	57	75	46	22	58	116	75	70	75	50	46	39	27	7	4	809	134.83	12.83

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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
2010	29.00	4.23	40.33	6.30	36.67	4.36	28.83	2.26	0.67	0.28	134.83	12.83
Average	19.40		33.96		33.95		36.50		1.39		123.83	

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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 on 28 April, 2010. 95% confidence intervals are in parentheses.

Area	Species	No. >stock size	PSD (+ 95% CI)	RSD ^A (+ 95% CI)
Peninsula	Largemouth bass	98	74 (8)	35 (10)
	Spotted bass	35	80 (13)	23 (9)
	Smallmouth bass	*	*	*
Beaver Creek	Largemouth bass	218	60 (6)	22 (5)
	Spotted bass	*	*	*
	Smallmouth bass	*	*	*
Peter Creek	Largemouth bass	130	66 (8)	32 (8)
	Spotted bass	18	83 (17)	17 (17)
	Smallmouth bass	*	*	*
Walnut Creek	Largemouth bass	189	54 (7)	25 (6)
	Spotted bass	8	75 (32)	*
	Smallmouth bass	*	*	*
Total	Largemouth bass	635	62 (4)	27 (3)
	Spotted bass	61	80 (10)	18 (10)
	Smallmouth bass	*	*	*

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

* No fish of sufficient size were collected during sampling.

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Table 5. Population assessment of largemouth bass based on spring sampling at Barren River Lake from 2002-2010 (scoring based on statewide assessment).

Parameter	2002		2003		2004		2005		2006		2007		2008		2009		2010	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age-3 at capture	14.1	4	14.1	4	14.1	4	14.1	4	14.1	4	14.1	4	14.4	4	14.4	4	14.4	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	35.73	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	36.67	4
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	28.83	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	0.67	2
Instantaneous Mortality (z)													-0.62					
Annual Mortality (A)%													46.2					
Total Score	14		13		13		14		15		15		16		14		16	
Assessment Rating	Good		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 mid-October 2010.

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																				0			
	Spotted bass			1	5	3	12	4	4	1		1		1		1						33	22.00	4.16
	Largemouth bass			37	77	37	19	14	11	5	6	1	4	1	3	1		3				219	146.00	32.33
Beaver Creek	Smallmouth bass																							
	Spotted bass					1					1		1									5	3.33	1.76
	Largemouth bass	3	30	43	28	68	88	155	63	16	24	17	15	11	6	5	4	4	2	1		495	330.00	25.17
Peter Creek	Smallmouth bass																							
	Spotted bass	1	4	4	1			4	2	3		1	3	4	4							31	20.67	5.81
	Largemouth bass	4	63	37	27	75	61	37	14	17	7	10	7	6	8	2	1	3	1			380	253.33	38.86
Walnut Creek	Smallmouth bass																							
	Spotted bass			2																		3	2.00	1.15
	Largemouth bass	25	47	16	16	34	44	19	5	4	7	3	3	2		2						227	151.33	31.35
TOTAL	Smallmouth bass																					1	0.17	0.17
	Spotted bass	1	7	9	5	12	10	7	4	1	1	5	4	5	1							72	12.00	3.24
	Largemouth bass	32	177	173	108	196	274	130	40	51	32	32	22	17	14	6	10	5	2			1321	220.17	26.86

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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	35.73	5.18
2010	5.7	0.05	166.57	19.06	105.00	18.74		
Average	4.0		208.37		44.62		23.37	

^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 dbr1ag.D02 - D10

sw dbr1ry.D02 - D10

Table 8. Length frequency and CPUE (fish/net-night) of each inch class of white and black crappie collected by trap net (93 net-nights) at Barren River Lake in late-October and early November 2010.

Location	Species	Inch class												Total	CPUE	Std. error							
		2	3	4	5	6	7	8	9	10	11	12											
Beaver Creek	White crappie											1	10	13	13	58	1.21	0.23					
	Black crappie												47	5	4	76	88	134	118	14	1	487	10.15
Walnut Creek	White crappie											1	23	8	4	1	1	14	9	7	68	1.40	0.49
	Black crappie											6	19	12	17	52	18	8	132	2.57	0.57		
Total	White crappie											1	31	13	12	1	1	24	22	20	126	1.30	0.26
	Black crappie											6	66	5	4	88	105	186	136	22	1	619	6.48

sw dbr1ln.d10

Table 9. Proportional stock density (PSD) and relative stock density (RSD₁₀) of white and black crappie collected by trap nets (93 net-nights) at Barren River lake in late-October and early-November 2010. Numbers in parentheses represent 95% confidence intervals.

Location	Species	Number ≥ 5.0 in	PSD	RSD ₁₀
Barren River Lake	White crappie	81	83 (9)	52 (11)
	Black crappie	542	64 (4)	4 (1)

sw dbrltn.D10

Table 10. Black crappie assessment from trap netting at Barren River Lake from 1985-2010 (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
2010	5.65	2	1.44	1	0.83	1	3.60	2	8.7	2	8	F

* Age assessment data extrapolated from previous age data

sw dbrltn.D85 - D10

Table 11. White crappie assessment from trap netting at Baren River Lake from 1985 - 2010 (scoring based on statewide assessment)

White crappie												
Year	CPUE excluding age 0		CPUE age 1		CPUE age 0		CPUE >8.0 in		Mean length age 2 at capture		Total score	Rating
	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
2010	0.70	1	0.30	1	0.60	1	0.71	1	10.9	4	8	F

* Age Assessment data extrapolated from previous age data
sw dbrln.D85 - D10

Table 12. Population assessment for all crappie from Barren River trap net data collected from 2001-2010 (scoring based on statewide assessment).

Parameter	2006		2007		2008		2009		2010	
	Value	Score	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	6.35	2
Recruitment (CPUE age-1)	1.60	1	3.58	2	0.20	1	8.34	3	1.74	1
Recruitment (CPUE age-0)	0.60	1	0.96	1	1.61	1	0.37	1	1.43	1
Size Structure (CPUE \geq 8.0 in)	1.50	1	1.59	1	1.61	1	4.59	2	4.31	2
Growth (Mean length age-2 at capture)	10.2	4	8.6	2	9.8	4	9.1	3	8.9	2
Instantaneous Mortality (Z)	-1.586									
Annual Mortality (A)%	79.9									
Total Score:	8		8		8		11		8	
Assessment Rating:	Fair		Fair		Fair		Fair		Fair	

sw dbrtn.D06 - D09

Table 13. Mean back-calculated length (in) at each annulus of black crappie collected by trap netting and gill netting at Barren River Lake from late-October to mid-November 2010, including the range in length of black crappie at each age and the 95% confidence intervals.

Year-class	N	Age			
		1	2	3	4
2010	0				
2009	55	3.9			
2008	118	4.7	7.1		
2007	1	5.3	8.5	9.5	
2006	2	4.3	7.2	9.5	10.7
Total N	176				
Mean		4.4	7.2	9.5	10.7
Smallest		2.2	5.3	9.5	10.6
Largest		5.9	9.7	9.5	10.8
Std. Error		0.0	0.1	0.0	0.1
Low 95% CI		4.3	7.0	9.5	10.6
High 95% CI		4.5	7.3	9.5	10.8

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

sw_dbrlag.d10

Table 14. Age frequency and CPUE (fish/net-night) of black crappie collected during 93 net-nights at Barren River Lake during late-October to mid-November 2010.

Age	Inch class											Total	Percent	CPUE	Std. error	
	2	3	4	5	6	7	8	9	10	11						
0	6	66	5										77	12.0	0.83	0.22
1				4	88	33	11						136	22.0	1.44	0.27
2					72	175	136	21					404	65.0	4.25	0.74
3								1					1		0.01	
4									1				1		0.01	0.01
Total	6	66	5	4	88	105	186	136	22	1			619	100		
%	1	11	1	1	14	17	30	22	4							

2010 age file includes fish taken from white bass gill nets in 2010

sw_dbrltn.d10; sw_dbrlag.d10

Table 15. Mean back-calculated length (in) at each annulus of white crappie collected by trap-netting and gillnetting at Barren River Lake from late October to mid November 2010, including the range in length of black crappie at each age and the 95% confidence intervals.

Year-class	N	Age		
		1	2	3
2010	0			
2009	45	5.0		
2008	81	5.4	8.9	
2007	1	5.3	8.3	9.8
Total N	127			
Mean		5.2	8.9	9.8
Smallest		3.3	6.3	9.8
Largest		7.3	11.3	9.8
Std. Error		0.1	0.1	
Low 95% CI		5.1	8.7	
High 95% CI		5.4	9.1	

Otoliths were used to make age determinations. Intercept = 0.
sw dbriag.d10

Table 16. Age frequency and CPUE (fish/net-night) of white crappie collected during 93 net-nights at Barren River Lake during late-October to mid-November 2010.

Age	Inch class										Total	Percent	CPUE	Std. Error	
	2	3	4	5	6	7	8	9	10	11					
0	1	31	13	12								57	45.0	0.60	0.16
1					1	1	1	22	3			28	22.0	0.30	0.07
2								2	18	20		40	32.0	0.43	0.09
3									1			1		0.01	
Total	1	31	13	12	1	1	1	24	22	20		126	100		
%	1	25	10	10	1	1	1	19	17	16					

2010 age file includes fish taken from white bass gill nets in 2010
sw dbrltn.d10; sw dbriag.d10

Table 17. Fish harvest statistics derived from a creel survey at Baren River Lake from March 14th through October 31, 2010.

	Creel Survey Dates			
	3/14/2010-10/31/2010		4/1/2007-10/31/2007	
	2010		2007	
	Value	S.E.	Value	S.E.
<u>Fishing trips</u>				
Number of fishing trips	42,171	4.22	46,827	4.68
Average trip length (hours)	4.19		2.73	
<u>Fishing pressure</u>				
Total man-hours	177,004	3490.93	127,882	3789.30
<u>Catch/harvest</u>				
Number of fish caught	239,125	17116.11	107,257	10234.34
Number of fish harvested	59,500	5657.15	35,486	4050.88
Pounds of fish harvested	42,685		42,640	
<u>Harvest rates</u>				
Fish/hour	0.35		0.28	
Lb/hour	0.36		0.38	
Fish/acre	5.95		3.55	
Lb/acre	4.27		4.26	
<u>Catch rates</u>				
Fish/hour	1.36			
Fish/acre	23.91			
<u>Miscellaneous characteristics (%)</u>				
Male	88.26		88.94	
Female	11.74		11.06	
Resident	95.94		92.06	
Non-resident	4.06		7.94	
<u>Method (%)</u>				
Still fishing	47.41		28.39	
Casting	44.67		65.05	
Fly	0		0.25	
Trolling	6.74		6.09	
Jugging (Not trot lines or limb lines)	1.18		*	
Spider rigging	*		0.22	
<u>Mode (%)</u>				
Boat	88.54		90.5	
Bank	10.35		9.43	
Dock	1.11		0.07	

* Data not taken in creel

Table 18. Fish harvest statistics derived from a creel survey at Barren River Lake from March 14 to October 31, 2010.

	Flathead	Channel	Blue	Yellow				Smallmouth	Spotted	Largemouth
	catfish	catfish	catfish	Hybrid	White bass	Bass	bass	bass	bass	
No. caught	125	11,802	25	8,047	111	5,134	46,112	705	5,409	58,623
No. Harvested		894		3986.62		788	2,661	76.42	1178.57	6,677
% total # harvest		1.5		6.7		1.32	4.47	0.13	1.98	11.22
Lb harvested		1288.5		8117		136	403.6	129.9	1217.3	12939.4
% of total lb harvested		3.02		19.02		0.32	0.95	0.3	2.85	30.31
Mean length (in)		16.8		16.4		7.7	6.6	15.3	13.2	15.8
Mean weight (lb)		1.7		2.38		0.18	0.22	1.7	0.98	2.05
	Cattfish group		Morone Group		Panfish group		Black bass group			
No. of fishing trips for that species	3169.30		4322.13		1259.11		16683.63			
% of all trips	15.94		10.25		2.99		39.56			
Hours fishing for that species	13302.60		18141.43		5284.90		70026.76			
No. harvested fishing for that species	494.00		3673.00		1146.00		7443.00			
Lb harvested fishing for that species	658.60		7113.10		146.10		13266.70			
No./hour harvested for that species	0.03		0.28		0.24		0.08			
% success fishing for that species	3.98		19.73		7.69		12.64			

Table 18. Cont.

	White crappie	Black Crappie	Anything
No. caught	42,176	59,063	
No. Harvested	15,324	27603	
% total # harvest	25.75	46.39	
Lb harvested	5835	12469	
% of total lb harvested	13.67	29.21	
Mean length (in)	9.6	9.8	
Mean weight (lb)	0.4	0.5	
	Crappie Group		Anything
No. of fishing trips for that species	10013.97		6722.51
% of all trips	23.75		15.95
Hours fishing for that species	42031.96		28216.60
No. harvested fishing for that species	41037.00		
Lb harvested fishing for that species	17546.50		
No./hour harvested for that species	0.99		
% success fishing for that species	47.18		5.23

Table 19. Length distribution and species composition (released fish lengths were estimates) for each species of fish harvested at Barren River Lake from March 14 to October 31, 2010.

Species	Status	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		
Channel catfish	Harvest									25	75		124	50	124	199	149	50	25	25									
	Released				71			24	663	71	592	781	1372	1656	1396	1183	757	686	331	663	95	142	284	95	45				
Flathead catfish	Harvest																												
	Released					22	44				22	22									25	25	25	25	25	24			
White bass	Harvest																												
	Released																												
Yellow bass	Harvest					547	22	153	66																				
	Released	100		1909	628	1131	251	327																					
Hybrid striped bass	Harvest							27	54	80	375	535	375	749	348	482	294	187	107	134									
	Released	129		193	97	322	97	451	64	483	548	1354	64				97	32	32	32									
Bluegill	Harvest			647	1716	124		173																					
	Released			5755	27870	9339	487																						
Smallmouth bass	Harvest																												
	Released				75				25	25	75	100	99	57	29	142													
Spotted bass	Harvest								47	47	495	330	212	47															
	Released				74		25		297	124	1138	1113	396	519	49	396	99												
Largemouth bass	Harvest										151	100	1356	2510	1130	728	351	251											
	Released						1819	1389	3543	2681	10486	11851	9504	4431	1462	2552	1206	487	232	186	93	22							
White crappie	Harvest																												
	Released	158	23	294	1449	24246	597	43	21	21																			
Black crappie	Harvest																												
	Released	47	70	1007	2272	27353	466	111	22	89	22																		

Table 20. Monthly black bass angling success at Barren River Lake during the 2010 creel survey period.

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 caught/hour by bass anglers		Number harvested/hour by bass anglers	
		black bass	harvested		black bass anglers	bass anglers	by bass anglers	by bass anglers	by bass anglers	harvested	bass anglers	
March	3,298	374	491	1411	5924	2958	0.44	374	0.05			
April	2,268	40	362	844	3,546	2,200	0.43	27	0.005			
May	3,818	668	3,209	1,272	5,342	2,863	0.41	668	0.09			
June	11,434	1,575	3,209	2,522	10,586	10,814	0.87	1,456	0.12			
July	6,337	491	3,209	2,392	10,043	5,094	0.54	260	0.03			
August	3,819	362	3,209	1,388	5,825	3,422	0.54	290	0.05			
September	23,689	3,209	3,209	4,726	19,838	22,288	0.96	3,158	0.14			
October	10,070	1,209	1,209	2,124	8,918	8,939	0.76	1,210	0.10			
Total	64,736	7,932	7,932	16,683	70,026	58,578	0.72	7,443	0.09			

Table 21. Monthly crappie angling success at Barren River Lake during the 2010 creel survey period.

Month	Total number of crappie caught	Total number of crappie harvested		Number of crappie fishing trips	Hours fished by crappie anglers		Number caught by crappie anglers		Number caught/hour by crappie anglers		Number harvested/hour by crappie anglers	
		crappie	harvested		crappie anglers	crappie anglers	by crappie anglers	by crappie anglers	by crappie anglers	harvested	crappie anglers	
March	12580	4692	95	1411	5924	11594	2.20	4386	0.84			
April	6,407	2,950	190	987	4,144	6,257	2.00	2,814	0.91			
May	1,575	95	190	225	946	1,146	0.99	167	0.14			
June	1,336	190	190	683	2,869	9,291	2.72	4,399	1.29			
July	9,608	4,543	4,054	807	3,388	10,481	2.84	3,784	1.02			
August	11,060	4,054	4,054	2,748	11,537	31,459	2.82	12,685	1.14			
September	34,158	13,576	13,576	3,149	13,221	24,413	1.82	12,802	0.96			
October	24,512	12,821	12,821	10,013	42,031	94,641	2.26	41,037	0.99			
Total	101,239	42,926	42,926	10,013	42,031	94,641	2.26	41,037	0.99			

Table 22. Monthly catfish angling success at Barren River Lake during the 2010 creel survey period.

Month	Total number of catfish caught	Total number of catfish harvested	Number of catfish fishing trips	Hours fished by catfish anglers	Number caught by catfish anglers	Number caught/hour by catfish anglers	Number harvested by catfish anglers	Number harvested/hour by catfish anglers
March	136	136	75	317	136	0.28	136	0.28
April	136							
May	143		207	869				
June	2,721	740	394	1,655	1,050	0.67	358	0.23
July	4,138		736	3,090	3,010	0.52		
August	1,158	18	570	2,396	634	0.37		
September	1,273		536	2,251	967	0.55		
October	2,244		638	2,681	1,932	0.88		
Total	11,952	894	3,169	13,302	7,729	0.57	494	0.03

Table 23. Monthly morone angling success at Barren River Lake during the 2010 creel survey period.

Month	Total number of Morone caught	Total number of Morone harvested	Number of Morone fishing trips	Hours fished by Morone anglers	Number caught by Morone anglers	Number caught/hour by Morone anglers	Number harvested by Morone anglers	Number harvested/hour by Morone anglers
March	952							
April	68							
May	2,625	716	592	2,485	764	0.50	573	0.37
June	1,885	1,098	972	4,080	1,408	0.43	883	0.26
July	4,312	1,562	1,525	6,401	3,415	0.80	1,360	0.32
August	1,285	543	452	1,900	1,086	0.58	525	0.28
September	738	254	251	1,055	178	0.23		
October	1,424	565	326	1,372	606	0.60	332	0.33
Total	13,292	4,774	4,322	18,141	7,457	0.57	3,673	0.28

Table 24. Black bass catch and harvest statistics derived from a creel survey at Barren River Lake (10,000 acres) for each species of black bass.

	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		
Total number of bass	6,677	31841	10671	58623	1178.57	2647	1063	5408.7	76.42	274	228	704.98
% of black bass harvested by number	84.17			14.86				0.96				
Total weight of fish (lb)	75,783			5276.7				889.1				
% of bass harvested by weight	90.57			8.52				0.91				
Mean length (in)	15.79			13.17				15.33				
Mean weight (lb)	2.04			0.98				1.70				
Rate (fish/hour)	0.04			0.007				0.0004				

Table 25. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 0.5 hours (4- 0.125 hour runs) of nocturnal electrofishing at Briggs Lake on 19 April, 2010.

Species	Inch class																			Total	CPUE	Std err
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19						
Largemouth bass	3	5	3	6	48	37	19	14	6	7	3	1	1	1	1	2	156	312.00	24.22			

sw dbrgbb.D10

Table 26. Spring nocturnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Briggs Lake during late-April to early May 2000-2010.

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
2000	27.94	8.10	92.63	19.12	64.71	12.01	10.29	2.82	NA		196.60	35.97
2001	120.59	21.57	73.53	10.87	41.18	9.30	5.88	4.16	1.47	1.47	241.00	24.96
2002	27.45	10.38	109.80	8.55	39.22	7.07	21.57	5.19	NA		202.00	17.48
2003	28.85	13.82	175.00	39.02	19.23	4.97	26.92	4.97	NA		260.00	51.07
2004	11.54	4.97	117.30	3.68	51.92	10.59	7.69	3.14	1.92	1.92	196.00	20.26
2005	46.00	6.83	194.00	21.26	28.00	5.16	26.00	5.03	6.00	3.83	294.00	27.40
2006	56.00	4.38	171.20	9.67	25.60	4.66	11.20	5.43	3.20	1.96	264.00	12.13
2007	38.00	6.83	412.00	32.41	18.00	2.00	2.00	2.00	NA		470.00	31.39
2008	154.00	16.12	286.00	19.70	36.00	6.93	14.00	6.83	8.00	5.66	490.00	30.88
2009	108.00	21.41	168.00	16.59	44.80	12.29	6.40	2.99	1.60	1.60	328.00	16.8
2010	34.00	10.52	236.00	29.66	32.00	8.00	10.00	5.03	NA		312.00	24.2

sw dbrgbb.D00 - D10

Table 27. PSD and RSD₁₅ values obtained for largemouth bass collected during 0.5 hours (4 - 0.125-hour runs) of spring nocturnal electrofishing at Briggs Lake on April 19, 2010. 95% confidence intervals are in parentheses.

Species	No. >8.0 in	PSD (\pm 95% CI)	RSD ₁₅ (\pm 95% CI)
Largemouth bass	139	15 (6)	4 (3)

sw dbrgbb.D10

Table 28. Length frequency and CPUE (fish/hr) of bluegill and redear collected by diurnal electrofishing at Briggs Lake on 6 May, 2010.

Species	inch class										Total	CPUE	Std. error
	1	2	3	4	5	6	7	8	9	10			
Bluegill	2	11	5	27	27	36	60	30	3		201	321.60	159.31
Redear					6	5	5	3	7	1	27	43.20	19.86
Warmouth	2		3	6	16	11	2				40	64.00	18.42
Sunfish Total CPUE												428.80	

sw dbrgbg.D10

Table 29. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Briggs Lake from early-mid May 2005-2010. 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 (6.25)		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)
2010	20.80 (14.22)	94.40 (37.98)	153.60 (81.01)	52.80 (41.85)		321.60 (159.31)

sw dbrgbg.D05 - D10

Table 30. Spring electrofishing CPUE (fish/hr) for each length group of redear sunfish collected at Briggs Lake during early-mid May 2005-2010. 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	*	14.00 (8.87)	2.00 (2.00)	4.00 (4.00)	*	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	*	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)
2010	*	9.60 (3.92)	16.00 (7.16)	17.60 (9.60)	1.60 (1.60)	43.20 (19.86)

* No fish of sufficient size were collected during sampling.
sw dbrgbg.D05 - D10

Table 31. Proportional stock density (PSD) and relative stock density (RSD_g) of bluegill and redear collected by diurnal electrofishing at Briggs lake on 6 May, 2010. Numbers in parentheses represent 95% confidence intervals.

Species	N	PSD	RSD _g
Bluegill	188	69 (7)	18 (5)
Redear	27	59 (19)	30 (18)

sw dbrgbg.D10

Table 32. Bluegill population assessment for Briggs Lake 2006 - 2010 (scoring based on statewide assessment).

Parameter	Year									
	2006		2007		2008		2009		2010	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Grow th										
Mean length age-2 at capture	5.4	4	5.1	4	4.1	3	4.1	3		
Grow th										
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	206.40	
Size Structure										
CPUE ≥8.0 in	52.00	4	25.60	4	12.80	3	19.20	4	52.80	
Total Score:		16		16		13		13		
Assessment Rating:		Excellent		Excellent		Good		Good		
Instantaneous Mortality (z)	ND		-0.5298		ND		ND		ND	
Annual Mortality (A)%			41.1							

sw dbrgbg.D06 - D10

Table 33. Redear population assessment for Briggs Lake 2006 - 2010 (scoring based on statewide assessment).

Parameter	Year									
	2006		2007		2008		2009		2010	
	Value	Score	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 \geq 8.0 in	22.00	4	12.80	3	3.20	1	10.50	4	17.60	
Size Structure										
CPUE \geq 10.0 in	2.00	2	1.60	2	0.00	1	4.80	3	1.60	
Total Score:		14		13		10		15		
Assessment Rating:		Excellent		Good		Fair		Excellent		
Instantaneous Mortality (z)										
Annual Mortality (A)%										

swdbrgbg.D06 - D10

Table 34. Species composition, relative abundance, and CPUE (fish/set-night) of channel catfish collected in baited, tandem set hoop nets (4 net sets w/3-day soak time) at Briggs Lake from September 14 - 20, 2010.

Species	Inch class																Total	CPUE	Std err
	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21				
Channel catfish	1	3	21	18	9	1	1	4	12	7	1	1	1	1	1	81	20.25	6.96	

sw dbrgoc.d10

Table 35. Mean length (in) at capture for each age of channel catfish collected from Briggs Lake on September 17 and 20, 2010.

Channel Catfish	Age				
	1+	2+	3+	4+	5+
Mean Length	10.3	15.0	17.0		21.3
Total #	19	9	5		2
Smallest	7.7	13.8	15.6		21.2
Largest	12.6	16.2	19.0		21.4

Otoliths were used to make age determinations.

sw dbrlag.d10

Table 36. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 0.50 hours (4-0.125-hour runs) of nocturnal electrofishing at Spurlington Lake on 20 April, 2010.

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	23						
Largemouth bass	1	2	2	17	13	8	30	19	10	5	6	7	1	1	1	1	1	1	1	1	1	124	247.00	24.00		

swdspibb.D10

Table 37. 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	Std. error	CPUE	Std. error	Std. error	CPUE	Std. error	Std. error	CPUE	Std. error	Std. error	CPUE	Std. error	Std. error	CPUE	Std. error	Std. error
2002	21.60	3.90	14.10	14.10	174.50	22.10	35.30	3.40	2.94	2.94	2.94	2.94	2.94	2.94	384.00	32.80	32.80
2003	61.50	14.40	29.20	29.20	123.10	11.40	12.30	3.10	1.54	1.54	1.54	1.54	1.54	1.54	448.00	47.20	47.20
2004	28.90	6.60	40.60	40.60	109.60	10.60	19.20	5.00	1.92	1.92	1.92	1.92	1.92	1.92	372.00	39.80	39.80
2005	42.00	13.20	26.20	26.20	146.00	12.40	20.00	2.30	2.00	2.00	2.00	2.00	2.00	2.00	338.00	23.20	23.20
2006	30.40	11.70	26.90	26.90	137.60	22.70	28.80	7.40	4.80	4.80	3.20	3.20	3.20	3.20	364.80	19.70	19.70
2007	12.00	5.16	6.93	6.93	66.00	6.00	14.00	3.83	2.00	2.00	2.00	2.00	2.00	2.00	184.00	3.27	3.27
2008	46.00	20.75	26.00	26.00	164.00	15.49	32.00	7.30	2.00	2.00	2.00	2.00	2.00	2.00	392.00	46.65	46.65
2009	6.00	6.00	9.80	9.80	118.00	26.20	58.00	10.00	2.00	2.00	2.00	2.00	2.00	2.00	310.00	45.30	45.30
2010	10.00	7.60	20.66	20.66	68.00	12.44	34.00	6.00	4.00	4.00	2.30	2.30	2.30	2.30	247.00	24.00	24.00
Avg.	28.71		153.67		122.98		28.18		2.58	2.58					337.76		

swdspibb.D02 - D10

Table 38. PSD and RSD₁₅ values obtained for largemouth bass collected during 0.50 hours (4-0.125-hour runs) of spring nocturnal electrofishing at Spurlington Lake on 20 April, 2010. 95% confidence intervals are in parentheses.

Species	No. >8.0 in	PSD (+95% Ci)	RSD ₁₅ (+95% Ci)
Largemouth bass	119	43 (9)	14 (7)

swdpslbb.D10

Table 39. Length frequency and CPUE (fish/hr) of bluegill collected by diurnal electrofishing at Spurlington Lake on 19 May, 2010.

Species	Inch class									Total	CPUE	Std. error
	1	2	3	4	5	6	7	8	9			
Bluegill	30	125	138	67	29	26	24	1	440	880.0	195.7	
Redear	1	11	8	1	1	4	5	1	32	64.00	27.13	
Warmouth		4	3	8	17	5	1	38	76.00	5.16		

sw dsplbg.d10

Table 40. Diurnal spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Spurlington Lake from 2005-2010. 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 (46.72)	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 (92.78)	156.80 (30.21)	14.40 (7.76)			988.80 (119.60)
2010	310.00 (134.00)	468.00 (75.72)	100.00 (42.14)	2.00 (2.00)			880.00 (195.70)

sw dsplbg.D05 - D10

Table 41. Spring electrofishing CPUE (fish/hr) for each length group of redear sunfish collected at Spurlington Lake during early-mid May 2009-2010. 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)
2010	24.00 (12.65)	18.00 (10.52)	10.00 (5.03)	12.00 (5.16)	*	64.00 (27.13)

* No fish of sufficient size were collected during sampling.
sw dsplbg.D10

Table 42. Proportional stock density (PSD) and relative stock density (RSD_8) of bluegill and redear sunfish collected by diurnal electrofishing at Spurlington Lake on 19 May, 2010. Numbers in parentheses represent 95% confidence intervals.

Species	N	PSD	RSD_8
Bluegill	285	18 (4)	1 (1)
Redear	12	83 (22)	8 (16)

* No fish of sufficient size were collected during sampling.
sw dsplbg.d10

Table 43. Bluegill population assessments from 2003 - 2010 at Spurlington Lake (scoring based on statewide assessment).

Parameter	Year															
	2003		2004		2005		2006		2007		2008		2009		2010	
	Value	Score	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 \geq 6.0 in	58.70	3	70.00	3	66.00	3	60.00	2	54.00	2	134.00	4	171.20	3	102.00	
CPUE \geq 8.0 in	16.00	4	22.00	4	16.00	4	14.00	2	4.00	1	14.00	3	14.40	1	2.00	
Instantaneous mortality (z)	ND		ND		ND		ND		ND		-1.091		ND		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 dsplag.d08
 sw dsplbg.D03 - D10

Table 44. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 0.875 hours (7 runs; each 0.125 hours) of nocturnal electrofishing at Marion Co. Lake during 2010.

Species	Inch class																Total	CPUE	Std err
	3	4	5	6	7	8	9	10	11	12	13	14	15	16					
Largemouth bass	2	19	48	7	47	105	94	56	22	9	1		1	1	412	470.86	44.69		

sw dmclbb.d10

Table 45. Spring nocturnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Marion Co. Lake during late-April to early-May 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			194.10	42.00
2000	88.20	14.90	177.50	22.40	6.90	3.20	9.80	2.00			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			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
2010	140.57	24.12	316.57	22.21	11.43	4.89	2.29	2.29			470.86	44.69

sw dmcibb.D99 - D10

Table 46. PSD and RSD₁₅ values obtained for largemouth bass collected during 0.875 hours (7- 0.125 hour runs) of spring nocturnal electrofishing at Marion Co. Lake on 20 April, 2010. 95% confidence intervals are in parentheses.

Species	No. >8.0 in	PSD (+ 95% CI)	RSD ₁₅ (+ 95% CI)
Largemouth bass	289	4 (2)	1 (1)

sw dmcibb.D10

Table 47. Population assessment of largemouth bass based on nocturnal spring sampling at Marion County Lake from 2002-2010 (scoring based on statewide assessment).

Parameter	Year																	
	2002		2003		2004		2005		2006		2007		2008		2009		2010	
	Value	Score	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	11.43	1
Spring CPUE ≥15.0 in	3.00	1	8.00	2	8.00	2	9.14	2	38.86	4	12.00	2	16.00	2	11.00	2	2.29	1
Spring CPUE ≥20.0 in	0.00	1	3.43	3	5.33	4	1.14	1	0.00	1	1.00	1	3.43	3	4.00	4	0.00	
Instantaneous Mortality (z)	ND		ND		-0.9360		ND		ND		ND		ND		-1.458087			
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 dmc1bb.D02-D10

Table 48. Length frequency and CPUE (fish/hr) of each inch class of bluegill and redear collected by diurnal electrofishing (1.0 hrs., 8 runs, 450 seconds each) at Marion Co. Lake on 10 May, 2010.

Species	Inch class									Total CPUE	Std. error	
	1	2	3	4	5	6	7	8	9			
Bluegill	16	39	35	22	15	6	19	5	157	157.00	25.79	
Redear	2	5	1	8	11	8	12	11	4	62	62.00	12.54

sw dmc1bg.D10

Table 49. 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)
2010	55.00 (27.73)	72.00 (10.47)	25.00 (9.13)	5.00 (2.10)	157.00 (25.79)

sw dmclbg.D02 - D10

Table 50. 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)
2010	7.00 (7.00)	20.00 (6.05)	20.00 (6.93)	15.00 (2.80)		62.00 (12.54)

sw dmclbg.D02 - D10

Table 51. Proportional stock density (PSD) and relative stock density (RSD_g) of bluegill and redear collected by diurnal electrofishing at Marion Co. Lake on 10 May, 2010. Numbers in parentheses represent 95% confidence intervals

Species	N	PSD	RSD _g
Bluegill	102	29 (9)	5 (4)
Redear	54	50 (13)	7 (7)

sw dmclbg.D10

Table 52. Bluegill population assessments from 2002 - 2010 at Marion County Lake (scoring based on statewide assessment).

Parameter	Year																	
	2002	2003	2004	2005	2006	2007	2008	2009	2010									
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score								
Mean length age-2 at capture	4.2	2	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	3.7	3	4.41	2	4.41	2	4.41	2				
CPUE >6.0 in	94.86	3	124.00	4	36.00	2	67.00	3	29.33	2	42.00	2	141	4	69.43	3	30.00	2
CPUE ≥8.0 in	16.00	4	5.33	2	1	1	3.00	1	4.00	2	3.00	1	11	3	1.14	1	5.00	2
Instantaneous mortality (z)	-0.673712										-1.02706							
Annual mortality (A)	49										64.2							
Total Score:	12	11	8	9	9	7	11	8	8	8								
Assessment rating	Good	Good	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Fair	Fair	Fair

ND - no age data collected
 sw dmclag.d02 & sw dmclag.d07
 sw dmclbg.D02 - D10

Table 53. Redear population assessments from 2002 - 2010 at Marion County Lake (scoring based on statewide assessment).

Parameter	Year									
	2002	2003	2004	2005	2006	2007	2008	2009	2010	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age-3 at capture	7.0	4	7.0	4	7.0	4	7.0	4	7.8	4
Years to 8.0 in	3.71	4	3.71	4	3.71	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
CPUE $>$ 10.0 in	0.00	1	2.67	3	1.00	1	3.00	3	2.67	3
Instantaneous mortality (z)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Annual mortality (A)										
Total Score:	13	15	11	15	15	12	16	14	11	
Assessment rating	Good	Excellent	Good	Excellent	Excellent	Good	Excellent	Excellent	Good	

ND - no age data collected or data not applicable.
 sw dmclag.d02 & sw dmclag.d07
 sw dmclbg.D02 - D10

Table 54. Length frequency and CPUE (fish/hr) of muskellunge collected with diurnal electrofishing (7.5 hours; 30 runs; 0.25 hours each) during late-winter/early spring at Green River Lake in 2010.

	Inch class																																										
	11	12	13	14	15	16	17	22	24	25	26	27	28	29	31	33	34	35	36	37	38	39	43	Total	CPUE	Std err																	
Muskellunge	1	0	2	19	9	15	6	1	3	2	14	11	6	1	2	4	2	1	4	3	1	2	1	2	1	104	13.67	1.67															

sw dgrlmy.d10

Table 55. Muskellunge population assessment for Green River Lake diurnal late-winter/early spring electrofishing from 1990-2010 (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	10	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	18	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	16	G
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	15	G
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	13	G
2010	6.13	3	7.73	3	2.67	3	1.60	4	0.13	1	14	G

sw dgrlmy.d90 - d10

Table 56. Proportional stock density (PSD) and relative stock density (RSD_g) of muskellunge collected by diurnal electrofishing at Green River Lake from late January to late February 2010. Numbers in parentheses represent 95%

Species	N	PSD	RSD _g
Muskellunge	58	35 (12)	7 (7)

sw.dgrlmy.D10

Table 57. 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 28 and 29, 2010.

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 Hornles Bend	Spotted bass						2	2	6	5	3	4							22	14.67	4.67
	Largemouth bass	1	6	17	31	8	7	2	5	3	4	1	3						88	58.67	18.12
Ramp 1	Smallmouth bass		1		3	7	1	1			2	1							16	10.67	0.67
	Spotted bass	1	11	5	4	13	14	10	8	3	2								71	47.33	24.67
	Largemouth bass	7	50	23	8	2		3	4	1	1	1			1	1			102	68.00	12.06
Robinson Creek Arm Smith Ridge	Smallmouth bass																		1	0.67	0.67
	Spotted bass			20	4		9	10	8	5	4	3		1					64	42.67	11.79
	Largemouth bass	4	42	26	17	8	2	8	8	1		6	4	1	2	3	1		133	88.67	8.67
Lone Valley	Smallmouth bass				1	1	3												5	3.33	1.76
	Spotted bass	3	39	11	14	34	17	24	20	9	9	2	2	1					185	123.33	13.28
	Largemouth bass		3	7	5	1	2	2	1	1			3	2	1				28	18.67	2.67
TOTAL	Smallmouth bass	1		4	9	4	1				2	1							22	3.67	1.34
	Spotted bass	4	50	36	22	47	42	46	42	22	18	9	2	1	1				342	57.00	13.80
	Largemouth bass	8	63	89	70	28	17	9	17	12	7	2	10	7	3	2	5	2	351	58.50	9.17

swdgrlly.d10

Table 58. 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	3.9	0.07	32.67	9.70	5.33	1.16	7.25	1.58
2003	3.9	0.08	32.83	9.69	5.50	1.23	11.87	2.09
2004	5.0	0.07	60.83	8.97	28.00	3.62	65.33	7.66
2005	5.2	0.09	31.67	7.44	16.83	4.33	14.33	2.36
2006	4.3	0.13	13.50	3.41	3.67	1.20	3.83	1.0
2007	4.2	0.11	21.83	5.31	5.83	2.18	22.83	9.49
2008	4.8	0.11	23.67	5.75	11.50	3.56	7.17	1.78
2009	3.7	0.05	66.83	9.82	11.50	3.85	ND	
2010	4.8	0.07	45.00	8.07	18.33	4.86	NA	

^A Data collected by fall (Sept/October) diurnal electrofishing. Mean lengths were determined by otolith taken 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) nocturnal electrofishing.

sw dgrlbb.D02 - D09

sw dgrlag.D02 - D10

sw dgrlyy.D02 - D10

Table 59. Length frequency and CPUE (fish/net-night) for each inch class of crappie collected by trap net (57 net-nights) at Green River Lake from November 15-19, 2010 .

Species	Inch class												Total	CPUE	Std. error
	3	4	5	6	7	8	9	10	11	12	13	14			
White crappie	33	43	15	123	264	384	217	47	10	4	1	2	1143	19.05	2.78
Black crappie				1									1	0.02	0.02

sw dgrltn.d10

Table 60. 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 mid November 2010. Numbers in parentheses represent 95% confidence intervals.

Species	N	PSD	RSD_{10}
White crappie	1067	62 (3)	6 (1)

sw dgrltn.D10

Table 61. White crappie assessment from trap net samples at Green River Lake from 1986 - 2010 (scoring based on statewide assessment).

Year	White crappie												Mortality (z)	Instantaneous Annual (A)	Assessment	Rating				
	CPUE excluding age 0			CPUE age 1			CPUE age 0			CPUE >8.0 in at capture							Value	Assessment	Value	Assessment
	Value	Assessment	Rating	Value	Assessment	Rating	Value	Assessment	Rating	Value	Assessment	Rating								
1986	16.87	3	F	3.23	2	F	1.23	1	F	3.99	2	F	7.9	1	F	-0.911053	59.8	9	F	
1987	15.43	3	F	4.06	2	F	19.16	4	F	5.16	3	F	8.1	1	F	-1.118361	67.3	13	G	
1988	15.87	3	F	8.87	3	F	18.62	4	F	4.52	2	F	8.0	1	F	-0.854265	57.4	13	G	
1989	26.30	4	F	20.24	4	F	1.29	1	F	6.38	3	F	9.6	4	F	-1.022316	64	16	G	
1990	12.61	2	F	5.87	2	F	0.42	1	F	7.57	3	F	9.2	3	F	-0.924447	60.3	11	F	
1991	8.68	2	F	2.93	2	F	6.88	2	F	6.15	3	F	9.3	3	F	-0.565581	43.2	12	F	
1992	28.34	4	F	24.48	4	F	1.84	1	F	8.54	3	F	10.0	4	F	-0.9219538	70.4	16	G	
1993	24.81	4	F	6.99	3	F	1.22	1	F	15.53	4	F	9.0	2	F	-0.949191	61.3	14	G	
1994	8.65	2	F	2.47	1	F	11.78	3	F	6.08	3	F	9.3	3	F	-0.767229	53.6	12	F	
1995	16.18	3	F	11.12	3	F	13.22	3	F	10.74	3	F	10.0	4	F	-1.055474	65.2	16	G	
1996	13.36	3	F	6.51	2	F	3.17	2	F	5.96	2	F	9.2	3	F	-0.895818	59.2	12	F	
1997	14.08	3	F	3.94	2	F	1.89	1	F	8.11	3	F	8.7	2	F	-1.121453	67.4	11	F	
1998	9.21	2	F	2.48	1	F	3.78	2	F	8.01	3	F	9.3	3	F	-0.850455	57.3	11	F	
1999	7.38	2	F	5.21	2	F	0.99	1	F	2.86	1	F	9.9	4	F	ND		10	F	
2000	6.29	2	F	1.45	1	F	0.01	1	F	5.17	2	F	9.7	4	F	-0.824828	56.2	10	F	
2001	4.27	1	F	0.15	1	F	10.78	3	F	4.17	2	F	9.5	3	F	-1.09953	66.7	10	F	
2002	10.87	2	F	9.69	3	F	0.53	1	F	4.11	2	F	9.8	4	F	-0.759078	53.2	12	F	
2003	12.95	3	F	5.08	2	F	3.30	2	F	6.80	3	F	9.1	3	F	-1.075599	65.9	13	G	
2004	17.67	3	F	9.60	3	F	3.84	2	F	7.93	3	F	8.4	1	F	-1.53876	78.5	12	F	
2005*	13.82	3	F	3.00	2	F	1.70	1	F	8.00	3	F	8.4	1	F	ND		10	F	
2006	16.39	3	F	10.21	3	F	1.42	1	F	6.46	3	F	9.7	4	F	-1.090892	66.4	14	G	
2007*	15.90	3	F	10.45	3	F	4.39	2	F	6.66	3	F	9.1	3	F	ND		14	G	
2008	9.00	2	F	0.70	1	F	0.86	1	F	4.67	2	F	7.8	1	F	-0.728739	51.7	7	P	
2009	20.05	3	F	4.12	2	F	0.89	1	F	9.67	3	F	7.9	1	F	ND		10	F	
2010	17.78	3	F	0.67	1	F	1.27	1	F	11.08	4	F	7.8	1	F	-1.10117	66.8	10	F	

* Age assessment data extrapolated from previous years age data

sw dgltm.D86 - D10

sw dgrlag.d86-10

Table 62. Age frequency and CPUE (fish/net-night) of white crappie collected during 57 net-nights at Green River Lake during mid-November 2010.

Age	Inch class												Total	Percent	CPUE	Std. error	
	3	4	5	6	7	8	9	10	11	12	13	14					
0	33	43												76	7.0	1.27	0.32
1			15	25										40	4.0	0.67	0.20
2				73	135	128	28	1						364	32.0	6.07	0.95
3				16	51	89	78	15						248	22.0	4.13	0.65
4				9	11	79	61	16	4	1				182	16.0	3.03	0.49
5					62	79	45	15	4	3	1	1		209	18.0	3.48	0.54
6					6	10	6		1					22	2.0	0.36	0.06
7												1		1	0.0	0.01	0.01
8									1					1	0.0	0.01	0.01
Total	33	43	15	123	264	384	217	47	10	4	1	1		1143	100	19.05	2.78
%	3	4	1	11	23	34	19	4	1	0	0	0		100			

* 2010 age file includes fish taken from white bass gill nets in 2010
swdgrltn.d10; swdgrlag.d10

Table 63. Length frequency and CPUE (fish/net-night) for white bass and walleye collected by experimental gillnets (16 net-nights) during November 15-19 at Green River Lake, KY 2010.

Species	Inch class																	Total	CPUE	Std. error
	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
White bass	5	2	7	1					1									16	1.00	0.27
Walleye		2	6	5	1	1	4	4	8	4	9	9	2	11	3	1	1	71	4.44	0.87

sw dgrlgn.d10

Table 64. Age frequency and CPUE (fish/net-night) 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	3	4	1					12	11.0	0.72	0.25
4												1				3	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 65. Relative weight (Wr) for each length group of walleye collected by gill nets (16 net-nights) at Green River Lake from November 15-19, 2010. Standard errors are in parentheses.

	Length group		
	10.0-14.9 in	15.0-19.9 in	>20.0 in
Wr	93 (1)	96 (1)	98 (2)
N	14	32	16

sw dgrlgn.D10

Table 66. Walleye population assessment from experimental gillnetting at Green River Lake 1996-2008 (scoring based on statewide assessment).

Year	CPUE*		Mean length age-2+ at capture		CPUE >20.0 in		CPUE age 1		Mortality		Assessment	Rating
	Value	Assessment	Value	Assessment	Value	Assessment	Value	Assessment	Instantaneous mortality (z)	Annual mortality (A)		
1996	1.81	1	18.5	4	0.12	1	1.44	2	NA		8	F
1997	0.75	1	17.3	3	0.19	1	0.44	1	NA		6	F
1998	0.50	1	17.6	3	0.06	1	0.29	1	NA		6	F
1999	3.20	2	17.3	3	0.13	1	1.67	2	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		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		10	G
2004	1.13	1	16.4	2	0.00	1	0.75	1	NA		5	P
2005	0.63	1	17.8	3	0.13	1	0.50	1	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	4.06	3	19.6	4	1.13	3	2.31	3	-0.657	48.2	13	G
2010	3.56	2	18.8	4	1.00	3	1.69	3	-0.566	43.2	12	G

* minus age-0 fish

NA - catch data not amenable to mortality estimates

sw dgrlgn.d96-10

sw dgrlag.d96-10

Table 67. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass collected during 2.00 hours (8 runs; each 0.25 hours) of nocturnal electrofishing at Shanty Hollow Lake on 21 April, 2010.

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	4	12	12	15	9	23	80	95	132	92	42	15	13	2	3	2	2	2	1	554	277.00	15.34		

swdshlbb.D10

Table 68. 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												Total	CPUE	Std. error
	<8.0 in			8.0-11.9 in			12.0-14.9 in			>15.0 in					
CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2001	17.14	3.35	49.14	7.34	8.63	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	6.16	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	6.73	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	4.97	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	3.78	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	3.06	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	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	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	88.00	5.66	12.00	3.90	2.86	1.68	261.71	11.38		
2010	26.00	5.24	165.00	12.44	74.50	74.50	4.66	11.50	2.67	1.50	0.73	277.00	15.34		

swdshlbb.D00 - D10

Table 69. PSD and RSD₁₅ values from spring nocturnal electrofishing (2.00 hours; 8 runs; 0.25 hours each) for largemouth bass at Shanty Hollow Lake on April 21, 2010. 95% confidence intervals are in parentheses.

Species	No. >8.0 in	PSD (+ 95% CI)	RSD ₁₅ (+ 95% CI)
Largemouth bass	502	34 (4)	5 (2)

swdshlbb.D10

Table 70. Population assessment of largemouth bass based on nocturnal spring sampling at Shanty Hollow Lake from 2002-2010 (scoring based on statewide criteria).

Parameter	Year																	
	2002		2003		2004		2005		2006		2007		2008		2009		2010	
	Value	Score	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	11.9	4	11.9	4
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	14.00	1
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	74.50	4
Spring CPUE ≥15.0 in	16.00	2	32.00	4	24.00	3	16.00	2	11.33	2	8.50	2	5.50	2	12.00	2	11.50	2
Spring CPUE ≥20.0 in	1.14	2	8.00	4	3.43	3	1.33	2	5.33	4	4.00	4	1.00	2	2.86	3	1.50	2
Instantaneous Mortality (z)	ND		ND		-0.346		ND		ND		ND		ND		-0.68		ND	
Annual Mortality (A)%					29.3										49.4			
Total Score		13		17		14		14		15		11		13		15		13
Assessment Rating		Good		Good		Good		Good		Good		Fair		Good		Good		Good

ND = no age data collected
 sw dshlag.d04 & 09
 sw dshlbb.D02-D10

Table 71. 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, 2010.

Species	Inch class								Total	CPUE	Std. error
	1	2	3	4	5	6	7	8			
Bluegill	5	94	98	102	72	23	21	1	416	277.33	27.47
Redear					19	5	8	3	35	23.33	4.11

sw dshlbg.D10

Table 72. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Shanty Hollow Lake from 2001-2010. 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 (38.23)	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)
2010	66.00 (11.19)	181.33 (24.57)	29.33 (5.77)	0.67 (0.67)	277.33 (27.47)

sw dshlbg.D01 - D10

Table 73. Spring electrofishing CPUE (fish/hr) for each length group of redear sunfish collected at Shanty Hollow Lake from 2001 - 2010. 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	0.00	0.84 (0.84)	13.76 (5.31)	42.12 (8.69)	0	60.00 (8.29)
2002	0.00	3.33 (1.19)	6.67 (2.16)	6.67 (3.09)	0	16.67 (5.07)
2003	0.00	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)
2010	0.00	12.67 (3.40)	8.67 (2.30)	2.00 (1.44)	0	23.33 (4.11)

sw dshlbg.D01 - D10

Table 74. 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	317	14 (4)	0
Redear	35	31 (16)	0

sw dshlbg.D10

Table 75. Bluegill population assessments from 2002 - 2010 at Shanty Hollow Lake (scoring based on statewide assessment).

Parameter	Year																	
	2002	2003	2004	2005	2006	2007	2008	2009	2010									
	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	3.7	2	3.7	2				
Years to 6.0 in	2.63	4	2.63	4	2.63	4	2.63	4	2.63	4	2.70	4	2.70	4				
CPUE >6.0 in	132.00	4	111.33	4	157.14	4	125.54	4	111.34	4	108.92	4	28.67	2	30.00	2		
CPUE >8.0 in	10.67	3	5.33	2	0.00	0	1.23	2	12.67	3	0.00	0	0.00	0	0.67	1		
Instantaneous mortality (z)	1.014		ND	ND	ND	ND	ND	ND	ND	ND	0.753065	ND	ND	ND	ND	ND		
Annual mortality (A)	63.8										52.9							
Total Score:		14		13		11		13		14		13		12		8		9
Assessment rating		Excellent		Good		Good		Good		Excellent		Good		Good		Fair		Fair

ND - no age data collected
 sw dshlag.d02 & 08
 sw dshlbg.D02 - D10

Table 76. Redear population assessments from 2002 - 2010 at Shanty Hollow Lake (scoring based on statewide assessment).

Parameter	Year											
	2002	2003	2004	2005	2006	2007	2008	2009	2010			
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age-3 at capture	7.2	4	7.2	4	7.2	4	7.2	4	7.2	4	7.8	4
Years to 8.0 in	3.92	4	3.92	4	3.92	4	3.92	4	3.92	4	3.66	4
CPUE >8.0 in	6.67	2	10.67	3	9.85	2	3.69	1	8.67	2	2.91	1
CPUE >10.0 in	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Instantaneous mortality (z)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Annual mortality (A)												
Total Score:	10	11	10	9	10	9	10	11	10	10	10	10
Assessment rating	Fair	Good	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Fair	Fair

ND - no age data collected or data applicable.

sw dshlag.d02 & 08

sw dshlbg.D02 - D10

Table 77. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 0.5 hour (4 runs; each 0.125 hours) of diurnal electrofishing at Metcalfe Co. Lake on April 29, 2010.

Species	Inch class																				Total	CPUE	Std err
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20						
Largemouth bass	3	7	6	19	13	10	8	2	7	2	2	4	5	2	3	93	186.00	13.61					

sw dmetbb.d10

Table 78. Spring nocturnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Metcalfe Co. Lake during late-April or early May since 2001.

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	CPUE	Std. error	CPUE	Std. error
2001	50.00	NA	98.00	NA	28.00	NA	NA	28.00	NA	28.00	NA	6.00	NA	204.00	NA
2002	80.54	NA	84.53	NA	5.99	NA	NA	54.59	NA	5.99	NA	5.99	NA	144.00	NA
2004	24.00	NA	64.00	NA	24.00	NA	NA	32.00	NA	32.00	NA	8.00	NA	144.00	NA
2006	10.00	2.00	76.00	12.00	26.00	5.03	26.00	30.00	6.00	30.00	6.00	6.00	3.83	142.00	12.38
2010	32.00	3.27	100.00	9.52	18.00	8.25	18.00	36.00	5.16	36.00	5.16	6.00	3.83	186.00	13.61

sw dmetbb.D01 - D10

NA - SE not applicable as run times were not same as 2006 & 2010.

Table 79. PSD and RSD₁₅ values obtained for largemouth bass collected during 0.50 hours (4 - 0.125-hour runs) of spring diurnal electrofishing at Metcalfe Co. Lake on 29 April, 2010. 95% confidence intervals are in parentheses.

Species	No. >8.0 in	PSD (\pm 95% CI)	RSD ₁₅ (\pm 95% CI)
Largemouth bass	77	35 (11)	23 (9)

sw dmetbb.D10

Table 80. Length frequency and CPUE (fish/hr) of bluegill and redear collected by diurnal electrofishing (1.25 hours; 10 runs; 450 seconds each) at Mill Creek Lake (Monrone Co.) on 18 May, 2010.

Species	Inch class										Total	CPUE	Std. error
	1	2	3	4	5	6	7	8	9	10			
Bluegill	11	82	224	319	167	42	28				873	698.40	76.09
Redear					1	3	6	9	2	21	16.80	9.65	

sw drmlbg.D10

Table 81. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Mill Creek Lake from 2005-2010. 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	76.80 (32.01)	350.40 (53.39)	88.80 (20.73)	0.00	516.00 (72.83)
2010	74.40 (20.10)	568.00 (75.62)	56.00 (11.12)	0.00	698.40 (76.09)

SWDMILBG.D05 & D10

Table 82. Spring electrofishing CPUE (fish/hr) for each inch group of redear collected at Mill Creek Lake from 2005-2010. 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	0.00	0.00	0.00	0.00	0.00
2010	0.00	0.00	3.20 (1.77)	13.60 (9.54)	1.60 (1.07)	16.80 (9.65)

SWDMILBG.D05 & D10

Table 83. Proportional stock density (PSD) and relative stock density (RSD_8) of bluegill and redear collected by diurnal electrofishing at Mill Creek Lake on 18 May, 2010. Numbers in parentheses represent 95% confidence intervals

Species	N	PSD	RSD_8
Bluegill	780	9 (2)	0
Redear	16	95 (10)	52 (22)

sw dmlbg.D10

Table 84. Mean back-calculated length (in) at each annulus of bluegill collected by diurnal electrofishing at Mill Creek Lake 18 May, 2010, including the range in length at each age and the 95% confidence interval.

Year class	N	Age					
		1	2	3	4	5	6
2009	7	2.3					
2008	25	2.0	3.4				
2007	12	2.4	3.8	4.9			
2006	12	2.1	3.7	4.8	5.7		
2005	8	2.4	4.0	5.2	6.1	6.9	
2004	9	2.1	3.7	5.1	6.0	6.6	7.1
Mean		2.2	3.6	5.0	5.9	6.7	7.1
Smallest		1.1	2.4	3.4	4.5	5.5	6.3
Largest		3.2	4.6	6.1	7.4	7.5	7.5
Std. Error		0.1	0.1	0.1	0.2	0.1	0.1
Low 95% CI		2.0	3.5	4.8	5.7	6.5	6.9
High 95% CI		2.3	3.8	5.1	6.1	6.9	7.3

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

SWDMILAG.D10

Table 85. Age frequency and CPUE (fish/hr) of bluegill collected during diurnal electrofishing at Mill Creek Lake on 18 May, 2010.

Age	Inch class							Total	Percent	CPUE	Std. error
	1	2	3	4	5	6	7				
1	11	48						59	6.8	47.20	10.48
2		34	224	58				316	36.2	252.80	28.57
3				261	46			307	35.2	245.60	39.59
4					121	14	2	138	15.8	110.40	16.91
5						23	7	30	3.4	24.00	5.08
6							5	23	2.6	18.40	4.26
Total	11	82	224	319	167	42	28	873	100.0	698.40	76.09
%	1	9	26	37	19	5	3	100			

sw dmiibg.D10 sw dmiifag.D10

Table 86. Bluegill population assessments from 2005 and 2010 at Mill Creek Lake (scoring based on statewide assessment).

Parameter	2005		2010	
	Value	Score	Value	Score
Mean length age-2 at capture	ND		3.6	2
Years to 6.0 in	ND		4.3	2
CPUE \geq 6.0 in	88.80	4	56.00	3
CPUE \geq 8.0 in	0.00	0	0.00	0
Instantaneous mortality (z)	ND		-0.75661	
Annual mortality (A)			53.1	
Total Score:				7
Assessment rating				Fair

ND - no age data collected
 sw dmlag.d10
 sw dmlbg.D05 - D10

Table 87. Black bass relative abundance and CPUE (fish/hr) collected during 1.25 hours (5 runs; each 0.25 hours) of nocturnal electrofishing at Fagan Branch Reservoir on April 29, 2010.

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	2		14	47	38	27	53	57	54	52	30	19	12	1	1	1	1		1				410	328.00	20.00
Spotted bass															1	1							2	1.60	0.98
Smallmouth bass								1	1														2	1.60	1.60

sw dlcibb.d10

Table 88. Spring nocturnal electrofishing CPUE (fish/hr) of each length group of largemouth bass collected at Fagan Branch Reservoir during late-April to early May from 1997 - 2010.

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		
1997	17.60	6.01	239.20	20.21	24.80	5.57	0.00		0.00	NA	281.60	30.90
1999	2.67	1.33	149.33	14.03	17.33	1.33	1.33	0.84	0.67	0.67	170.67	13.69
2000	10.00	3.83	88.00	9.41	64.00	13.82	0.67	0.67	0.00	NA	162.67	18.64
2001	23.33	4.31	34.00	3.83	110.67	8.11	2.67	1.33	0.00	NA	170.67	7.64
2002	16.00	5.64	50.46	9.15	99.69	5.95	8.00	3.20	0.00	NA	174.15	12.92
2005	105.60	19.21	173.60	19.70	76.80	4.63	15.20	2.94	0.00	NA	371.20	39.14
2007	84.80	18.22	202.40	4.49	72.80	5.57	8.00	3.58	0.80	0.80	368.00	24.27
2010	80.80	15.46	152.80	8.98	80.80	5.99	13.60	3.49	0.80	0.80	328.00	20.00

sw dlcibb.D97 - D10

Table 89. PSD and RSD₁₅ values for largemouth bass collected during 1.25 hours (5 runs; each 0.125 hours) of nocturnal electrofishing at Fagan Branch Reservoir on 29 April, 2010. 95% confidence intervals are in parentheses.

Species	No. ≥ 8.0 in	PSD ($\pm 95\%$ CI)	RSD ₁₅ ($\pm 95\%$ CI)
Largemouth bass	309	38 (5)	6 (3)

sw dlicbb.D10

Table 90. Population assessment of largemouth bass based on nocturnal spring sampling at Fagan Branch Reservoir from 1997-2010. Years in bold type are post 12.0-15.0 inch slot length limit (instituted in 2002).

Parameter	1997		1999		2000		2001		2002		2005		2007		2010	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age-3 at capture	11.5	3	11.5	3	11.5	3	11.5	3	11.5	3	11.5	3	10.6	2	10.6	2
Spring CPUE age-1	0.00	0.00	2.67	1	4.67	1	17.33	2	16.00	2	44.00	3	20.80	2	12.80	1
Spring CPUE 12.0-14.9 in	24.80	2.00	17.33	1	64.00	4	110.67	4	100.57	4	76.80	4	72.80	4	80.80	4
Spring CPUE ≥ 15.0 in	0.00	0.00	1.33	1	0.67	1	2.67	1	8.57	2	15.20	2	8.00	2	13.60	2
Spring CPUE ≥ 20.0 in	0.00	0.00	0.67	1	0.00	0	0.00	0	0.00	0	0.00	0	0.80	1	0.80	1
Instantaneous Mortality (z)	ND		ND		0.361		ND		ND		ND		0.629		ND	
Annual Mortality (A)%					30.3								46.7			
Total Score	5	5	7	9	9	11	11	12	12	12	12	11	11	11	10	10
Assessment Rating	Poor	Poor	Poor	Fair	Fair	Fair	Fair	Good	Good	Good	Good	Fair	Fair	Fair	Fair	Fair

ND = no age data collected

sw dliclag.d00 & d07

sw dlicbb.D97-D10

Table 91. Length frequency and CPUE (fish/hr) of bluegill and redear collected by nocturnal electrofishing (0.5 hours; 4 runs; 450 seconds each) at Fagan Branch Reservoir on 29 April, 2010.

Species	Inch class											Total CPUE	Std. error	
	1	2	3	4	5	6	7	8	9	10	11			
Bluegill	6	104	117	71	75	78	43	7				501	1002.00	95.97
Redear	7	7	29	13	7	13	6	1	1	84	168.00	40.27		

sw.dlcibg.D10

Table 92. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Fagan Branch Reservoir from 1997 - 2010. 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	
1997	7.20 (1.96)	31.20 (9.41)	108.80 (12.03)	11.20 (3.44)	158.40 (8.29)
1999	5.33 2.23	20.00 (8.33)	46.00 (9.62)	4.00 (2.07)	75.33 (14.03)
2000	16.67 6.48	32.00 (8.26)	47.33 (6.40)	6.67 (2.23)	102.67 (10.77)
2001	99.1 (46.05)	102.1 (48.89)	105.11 (32.70)	22.52 (9.52)	328.83 (97.86)
2005	74.32 (18.89)	198.20 (30.55)	42.79 (11.85)	42.79 (11.85)	319.82 (37.60)
2007	76.00 (11.55)	50.00 (20.75)	78.00 (24.08)	36.00 (20.78)	240.20 (47.78)
2010	220.00 (47.61)	526.00 (63.36)	242.00 (39.65)	14.00 (8.25)	1002.00 (95.97)

SWDLCIBG.D01 - D10

Table 93. Spring electrofishing CPUE (fish/hr) for each length group of redear sunfish collected at Fagan Branch Reservoir from 1997 -2010. 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	
1997	0.00	2.40 (1.60)	25.60 (6.76)	12.80 (4.63)	0.00	40.80 (9.99)
1999	1.33 (1.33)	1.33 (1.33)	10.00 (3.06)	8.00 (2.53)	4.00 (1.46)	20.67 (5.41)
2000	0.00	0.00	1.33 (0.84)	4.67 (1.23)	1.33 (1.33)	6.00 (0.89)
2001	0.00	3.00 (1.00)	27.03 (6.58)	9.01 (2.33)	3.00 (1.90)	39.04 (9.21)
2005	0.00	24.77 (9.99)	58.56 (16.65)	31.53 (9.38)	2.25 (2.25)	114.86 (22.18)
2007	12.00 (12.00)	40.00 (16.97)	36.00 (20.00)	114.00 (43.00)	16.00 (8.64)	202.00 (69.54)
2010	0.00	86.00 (18.29)	40.00 (19.60)	42.00 (7.57)	4.00 (2.31)	168.00 (40.27)

SWDLCLBG.D97 - D10

Table 94. Proportional stock density (PSD) and relative stock density (RSD₈) of bluegill and redear collected by nocturnal electrofishing at Fagan Branch Reservoir on 29 April, 2010. Numbers in parentheses represent 95% confidence intervals

Species	N	PSD	RSD ₈
Bluegill	391	33 (5)	2 (1)
Redear	84	36 (11)	10 (7)

sw dlclbg.D10

Table 95. Mean back-calculated length (in) at each annulus of bluegill collected by nocturnal electrofishing at Fagan Branch Reservoir on 29 April, 2010, 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	8	1.7	2.9							
2007	22	1.5	2.8	4.0						
2006	29	1.7	3.2	4.7	6.2					
2005	11	1.7	2.9	4.3	5.9	7.0				
2004	1	2.1	2.8	3.6	5.1	6.8	8.0			
2003	1	1.6	2.9	4.1	5.7	6.6	7.3	7.7		
2002	1	1.3	2.3	3.4	4.9	5.9	6.5	7.0	7.3	
Mean		1.6	3.0	4.3	6.0	6.9	7.3	7.3	7.3	
Smallest		0.9	1.9	2.5	3.5	5.9	6.5	7.0	7.3	
Largest		3.1	5.5	7.0	8.1	8.2	8.0	7.7	7.3	
Std. Error		0.1	0.1	0.1	0.2	0.2	0.4	0.4		
Low 95% CI		1.5	2.8	5.6	5.7	6.5	6.4	6.7		
High 95% CI		1.7	3.1	6.0	6.3	7.3	8.1	8.0		

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

SWDLCLAG.D10

Table 96. Mean back-calculated length (in) at each annulus of redeal collected by nocturnal electrofishing at Fagan Branch Reservoir on 29 April, 2010, including the range in length at each age and the 95% confidence interval.

Year class	N	Age						
		1	2	3	4	5	6	7
2008	8	2.4	3.6					
2007	18	2.9	4.5	5.7				
2006	16	2.5	4.6	6.0	7.2			
2005	12	3.2	5.2	7.2	8.1	8.9		
2004	3	2.6	5.1	6.4	8.0	8.6	9.2	
2003	2	3.2	5.1	6.8	8.0	9.0	9.9	10.8
Mean		2.8	4.6	6.2	7.6	8.9	9.4	10.8
Smallest		1.0	1.6	2.3	3.1	7.7	8.6	10.5
Largest		3.8	6.4	8.3	9.4	10.2	10.2	11.0
Std. Error		0.1	0.1	0.1	0.2	0.2	0.3	0.3
Low 95% CI		2.6	4.4	5.9	7.3	8.5	8.9	10.3
High 95% CI		2.9	4.8	6.5	8.0	9.2	9.9	11.2

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

Table 97. Age frequency and CPUE (fish/hr) of bluegill collected during nocturnal electrofishing at Fagan Branch Reservoir on 29 April, 2010.

Age	inch class								Total	Percent	CPUE	Std. error
	1	2	3	4	5	6	7	8				
2	6	69	11		7				93	19.0	186.00	31.88
3		35	96	43	20	3			197	39.0	394.00	48.04
4			11	28	48	47	22	2	157	31.0	314.00	43.39
5						31	12	2	46	9.0	92.00	12.84
6								2	2	0.0	5.00	2.75
7								3	3	1.0	6.00	1.97
8								3	3	1.0	6.00	1.97
Total	6	104	117	71	75	78	43	7	501	100.0	1002.00	95.97
%	1	21	23	14	15	16	9	1	100			

sw d1c1bg.D10 sw d1c1ag.D10

Table 98. Age frequency and CPUE (fish/hr) of redear collected during nocturnal electrofishing at Fagan Branch Reservoir on 29 April, 2010.

Age	inch class											Total	Percent	CPUE	Std. error
	3	4	5	6	7	8	9	10	11						
2	6	2										8	10.0	4.00	2.31
3		5	29	7								40	48.0	179.40	48.58
4	1			7	6	5						19	22.0	85.60	16.71
5					1	7	4					12	14.0	25.80	7.09
6							1	2				3	4.0	11.27	3.23
7									1	1		2	2.0	8.60	2.36
Total	7	7	29	13	7	13	6	1	1	1	84	100.0	168.00	40.27	
%	8	8	35	15	8	15	7	1	1	1	100				

sw dw fdbg.D09 sw dw fdaag.D09

Table 99. Bluegill population assessments from 1997 - 2010 at Fagan Branch Reservoir (scoring based on statewide assessment).

Parameter	Year													
	1997		1999		2000		2001		2005		2007		2010	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age-2 at capture													2.9	1
Years to 6.0 in													3.8	3
CPUE >6.0 in	120.00	4	50.00	3	54.00	3	127.63	4	47.30	2	114.00	4	256.00	4
CPUE >8.0 in	11.20	3	4.00	1	6.67	2	22.52	4	4.50	1	36.00	4	14.00	3
Instantaneous mortality (z)	ND		ND		ND		ND		ND		ND		ND	-1.0266
Annual mortality (A)													64.2	
Total Score:														11
Assessment rating														Good

ND - no age data collected
sw/diclag.d10
sw/dicibg.D02 - D10

Table 100. Redear population assessments from 1997 - 2010 at Fagan Branch Reservoir (scoring based on statewide assessment).

Parameter	Year													
	1997		1999		2000		2001		2005		2007		2010	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Mean length age-3 at capture													5.7	2
Years to 8.0 in													4.6	3
CPUE _{≥8.0 in}	25.60	4	10.00	3	1.33	1	27.03	4	58.56	4	36.00	4	40.00	4
CPUE _{≥10.0 in}	0.00	0	4.00	3	1.33	1	3.00	2	2.25	0	16.00	4	4.00	3
Instantaneous mortality (z)	ND		ND		ND		ND		ND		ND		-0.783729	
Annual mortality (A)													54.3	
Total Score:														12
Assessment rating														Good

ND - no age data collected or data applicable.
 sw dlcltag.d10
 sw dlcltag.D97 - D10

BARREN RIVER LAKE ANGLER ATTITUDE SURVEY 2010 (n=314)

1. Have you been surveyed this year? Yes - stop survey No – continue
2. Name _____ and Zip Code _____ (Optional)
3. How many times do you fish Barren River Lake a year?
First time (4.1%) 1 to 4 (10.8%) 5 to 10 (11.5%) More than 10 (62.7%)
4. Which species of fish do you fish for at Barren River Lake (check all that apply)?
Bass (54.8%) Crappie (49.7%) Hybrid Striped Bass (23.2%) White Bass (1.9%) Channel Catfish (28.7%)
Flathead Catfish (6.4%) Bluegill (3.5%)
5. Which one species do you fish for most at Barren River Lake (check only one)?
Bass (48.6%) Crappie (30.7%) Hybrid Striped Bass (7.1%) White Bass (0%) Channel Catfish (11.4%)
Flathead Catfish (0.4%) Anything (0.4%) Bluegill (1.4%)

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

Bass Anglers (n=159)

6. What level of satisfaction do you have with bass fishing at Barren River Lake?
Very satisfied (56.6%) Somewhat satisfied (36.5%) Neutral (4.4%) Somewhat dissatisfied (1.9%) Very dissatisfied (0%) No opinion (0.6%)
- 6a. If you responded with somewhat or very dissatisfied in question (5) – what is the single most important reason for your dissatisfaction?
Number of fish (37.5%) Size of fish (0%) Not happy with regulations (0%) Too many boaters (12.5%) Too many tournaments (12.5%)
Water level (37.5%)

Catfish Anglers (n=79)

7. What level of satisfaction do you have with the catfish fishing at Barren River Lake?
Very satisfied (62%) Somewhat satisfied (26.6%) Neutral (6.3%) Somewhat dissatisfied (1.3%) Very dissatisfied (2.5%) No opinion (1.3%)
- 7a. If you responded with somewhat or very dissatisfied in question (6) – what is the single most important reason for your dissatisfaction?
Number of fish (50%) Size of fish (50%)

Crappie Anglers (n=145)

8. What level of satisfaction do you have with the crappie fishing at Barren River Lake?
Very satisfied (35.2%) Somewhat satisfied (42.1%) Neutral (10.3%) Somewhat dissatisfied (8.3%) Very dissatisfied (2.1%)
No opinion (2.1%)

- 8a. If you responded with somewhat or very dissatisfied in question (7) – what is the single most important reason for your dissatisfaction?
 Number of fish (30%) Size of fish (40%) 10 inch size limit (5.0%) Enforcement of regulation (5.0%) High water (5.0%)
 Water level Fluctuations (10%)

Hybrid Striped Bass Anglers (n=62)

8. What level of satisfaction do you have with the hybrid striped bass fishing at Barren River Lake?
 Very satisfied (59.7%) Somewhat satisfied (19.4%) Neutral (9.7%) Somewhat dissatisfied (4.8%) Very dissatisfied (1.6%)
 No opinion (4.8%)
- 8a. If you responded with somewhat or very dissatisfied in question (8) – what is the single most important reason for your dissatisfaction?
 Number of fish (50%) Too many boaters (50%)

All Anglers

1. Would you support or oppose a reduction in the current statewide 30 fish daily crappie creel limit to 20 fish?
 Support (n=180 60.2%) Oppose (n=34 11.4%) No opinion (n=85 28.4%)
2. 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 28 inches as in the past but could keep only 1 catfish greater than 28 inches per day?
 Support (n=168 56.4%) Oppose (n=23 7.7%) No opinion (n=107 35.9%)
3. Are you **satisfied with the current fishing** regulations in all sportfish at Barren River Lake? Yes (n=193 73.4%) No (n=70 26.6%)

If **NO**:

- 11a. Which species are you dissatisfied with and what size and creel limits would you prefer?

Bass Size Limits (n=3) 10 inch (33.3%)
 12 inch (33.3%)
 18.5 inch Smallmouth

Bass Creel limits(n=1) 5 Fish (100%)

Crappie Size limits(n=64) 8 inch (3.1%)
 10 inch (96.9%)

Crappie Creel limits(n=55) 0 fish (1.8%)
 15 fish (14.5%)
 20 fish (67.3%)
 25 fish (5.5%)
 30 fish (10.9%)

Are you aware that KDFWR prints a fish attractor map for Barren River Lake? (n=296) Yes (64.2%) No (35.8%) if yes go to 13a.

12a. Do ever you use this map?(n=214) Yes (50%) No (50%)

CENTRAL FISHERIES DISTRICT
Project 1: Lake and Tailwater Fishery Surveys

FINDINGS

Lake sampling conditions for 2010 are summarized in Table 1.

Taylorville Lake (3,050 acres)

Spring diurnal electrofishing was completed in April 2010 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). Numbers of bass collected in 2010 were higher than numbers collected in past years (Tables 2-3). Catch rate of 8.0–11.9 in largemouth bass (36.27 fish/hr) was higher than 2009 (32.93 fish/hr), and equal to the 15-year average (36.29 fish/hr). The catch rate for bass 12.0–14.9 in (49.73 fish/hr) was significantly higher than both last year's catch rate (22.27 fish/hr) and the 15-year average (31.45 fish/hr). Catch rate for bass ≥ 15.0 in was 16.40 fish/hr, which was higher than last year's catch rate (13.60 fish/hr), but lower than the 15-year average (17.15 fish/hr) for these harvestable-size fish. The Ashes and Jack's Creek area of Taylorville Lake had the highest catch rate for largemouth bass in 2010. The PSD for largemouth bass increased to 65 from 52 in 2009 (Table 4). However, the RSD_{15} value decreased from 20 in 2009 to 16 in 2010. Growth rates indicated most bass are reaching harvestable size (15.0 in) between ages 3 and 4 (Table 5). This is a substantial increase compared to the growth rate to harvestable size from the last age and growth study (2006) which showed largemouth bass reaching harvestable size between age 4 and 5. Largemouth bass age frequency (Tables 6 and 7) continued to show high numbers of age 2 and 3 bass (mostly 8.0–14.0 in), with a distinct decline beginning after age 6. Very few bass were present beyond age 6. The largemouth bass population assessment score, based on spring electrofishing data, increased from 11 ("Fair") in 2009 to 16 ("Good") in 2010 (Table 8). Length frequency, relative weight (W_r), and age 0 and age 1 year class strength of largemouth bass were collected by electrofishing in September at Taylorville Lake (Tables 9–11). Average body weights for largemouth bass were acceptable, with bass 12.0–14.9 in having the highest weight ratio (Table 10). The year class strength model indicated an average recruitment for young-of-the-year largemouth bass in 2010. Catch rates of age-0 largemouth bass significantly declined from 2009, which was one of the highest catch rates of age-0 largemouth bass recorded. However, catch rates of age-0 largemouth bass (45.73 fish/hr) was almost equal to the 10-year average of 44.01 fish/hr. Even though catch rates of age-0 largemouth bass were average, fingerling (4.0–4.5 in) largemouth bass were stocked in September at a rate of 5 fish/acre, totaling 15,271 (left pectoral clip). Largemouth bass fingerlings have been stocked almost annually since 2000 at rates ranging from 5 fish/acre to 10 fish/acre and from 1985 to 1992 at various rates. The need for stocking and the numbers stocked in reservoirs are based (since 2004) on results of the age 0 year class strength sampled in early September and the predicted age 1 year class strength the following spring.

Trap netting efforts for crappie (Table 12) resulted in the collection of 67 white crappie and 179 black crappie. Crappie were sampled with trap nets during 48 net-nights. Age and growth determinations were completed using otoliths (Tables 14 and 17). Age studies indicated that the majority of white and black crappie reached 9.0 in between age 1 and 2. The crappie population assessment scores (Tables 16 and 19) were 7 and 6 ("Poor") for both white and black crappie, respectively. This is a decline for both species from the "Fair" assessments over the past several years. 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 (10.1 fish/acre) white crappie (2.7 in) were stocked in 2009 and 35,985 (11.7 fish/acre) white crappie (2.5–4.7 in) were stocked in 2010 in Taylorville Lake in the fall. These stocked crappie made up 58% of the white crappie sampled in the fall of 2010. Average weights of white and black crappie in the fall of 2010 were acceptable at Taylorville Lake (Table 20). See the Black Bass Investigation (F-40) Annual Performance Report for further information concerning the crappie stockings at Taylorville Lake.

Fall gill netting for hybrid striped bass and white bass was conducted in October 2010 (Tables 21–29). A total of 51 hybrid striped bass were collected in 2010 compared to 112 in 2009. Hybrid striped bass were captured in 12 net-nights (4 nets for 3 nights) for a CPUE of 4.25 (± 1.35) fish/net-night. The hybrid striped bass population has exhibited notable fluctuations since 1990. The density of hybrid striped bass in Taylorville Lake appeared 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 fish/acre (1.4 to 2.0 in) for the last 13 years. Age and growth studies were completed for hybrid striped bass using otoliths (Tables 22 and 23). Additionally, hybrid striped bass were differentiated from white bass due to being marked with oxytetracycline (OTC) at the fish hatchery. Studies indicate hybrid striped bass reach harvestable size (15.0 in) between age 2 and 3, typical growth at Taylorsville Lake. The relative weight (Wr) index for hybrid striped bass shows below average body weight for hybrid striped bass. The population assessment for hybrid striped bass was rated at "Fair", the same as 2009 and 2008. A total of 62,902 (20.6 fish/acre; OTC) hybrid striped bass (1.5-1.9 in) were stocked in Taylorsville Lake in 2010.

Data for white bass collected during fall 2010 gillnetting studies is presented in Tables 21 and 26-29. White bass comprised about 80% of the *Morones* sampled, compared to 34% in 2009, 69% in 2008 and 39% in 2007. Age and growth studies indicated white bass reach 12.0 in between age 2 and 3. Relative weight values revealed acceptable body weights, with good weights for small fish and increasing body condition for larger, older fish (Table 28). The white bass population assessment rated "Good", compared to "Poor" in 2009 (Table 29).

See the Black Bass Investigation (F-40) Annual Performance Report for channel catfish and blue catfish sampling data. A total of 23,500 (7.7 fish/acre) blue catfish (8.0-14.0 in) were stocked in Taylorsville Lake in 2010.

Herrington Lake (2,410 acres)

Diurnal electrofishing studies were completed in April 2010 to monitor the black bass population. Upper, middle, and lower sections were sampled for a total of 7.5 hours (2.5 hours per section). Species composition, relative abundance, and CPUE of black bass collected in the spring are presented in Table 30. Largemouth bass dominated the black bass fishery, with spotted bass comprising 18% of the bass sampled. No smallmouth bass were collected in 2010. The catch rate of <8.0 in largemouth bass (41.47 fish/hr) was significantly higher than last year (5.25 fish/hr) and the 15-year average (31.99 fish/hr) catch rates. Additionally, numbers of bass 8.0-11.9 in (34.00 fish/hr) were substantially higher than last year (9.38 fish/hr) but below the 15-year average (41.42 fish/hr). Numbers of 12.0-14.9 in (28.63 fish/hr) and ≥ 15.0 in (25.07 fish/hr) largemouth bass increased from last year and were greater than the 15-year averages (28.43 fish/hr and 20.30 fish/hr), respectively (Table 31). The PSD for largemouth bass was 61 compared to 73 in 2009 and 56 in 2008. The RSD₁₅ was 29 compared to 30 in 2009 and 24 in 2008 (Table 32). The population assessment based on spring electrofishing data indicated a "Good" population (Table 33). Fall electrofishing evaluated largemouth bass relative weight index and index of year class strength (Tables 34-36). Average body weights for largemouth bass were acceptable, with bass 8.0-11.9 in continuing to have the highest weight ratio (Table 35). The year class strength model for Herrington Lake indicated below average recruitment for young-of-year largemouth bass in 2010. CPUE of age-0 bass (22.00 fish/hr) decreased from last year (109.8 fish/hr), while their mean length increased (Table 36). Age-0 CPUE was below the lake average (32.55 fish/hr); therefore, largemouth bass were stocked in October. Fingerling (4.0-4.5 in) largemouth bass were stocked in October at a rate of 16.6 fish/acre, totaling 40,060 fish (left pectoral clip).

Diurnal electrofishing studies were completed in March 2010 to monitor the crappie population. Upper, middle, and lower lake sections were sampled for a total of 4.5 hours (1.5 hours per section). This year, a total of 225 crappie were collected, compared to 99 in 2009, 108 in 2008, 81 in 2007, 84 in 2006, and 367 in 2005 (Table 37). Catch was dominated by black crappie in the middle and lower sections, while white crappie dominated the upper section of the lake. Age and growth studies of white crappie indicated they reach 9.0 in by age 2, and 11.0 in by age 3 (Table 39). Age frequency of white crappie showed that their populations were dominated by age-1 and age-2 fish (Table 40). A population assessment was developed for spring electrofishing of white and black crappie at Herrington Lake. The population assessment for white crappie indicated a "Good" population for 2010 (Table 41). Age and growth studies also showed that black crappie reached 9.0 in between age 2 and age 3 (Table 42). Age-2 fish dominated the black crappie sample (Table 43) indicating a good spawn in 2008. The population assessment for black crappie indicated a "Fair" population for 2010 (Table 44), the same as last year.

Gill netting for hybrid striped bass and white bass was completed in October 2010. During the 15 net-night sampling period, 114 hybrid striped bass and 132 white bass were collected (Table 45). Otoliths were taken from both species for age and growth determinations. Results of these studies indicated excellent growth rates (Tables 46-47 and 49-50). Hybrid striped bass reached 15.0 in between age 1 and 2 (Table 46), as they have historically. Of the

hybrid striped bass sampled, 96% were age 1+ or younger (Table 47). The population assessment for hybrid striped bass indicated a "Good" population, up from a "Fair" assessment last year (Table 48). White bass age and growth determinations showed they reach 9.0 in by age 1 and 12.0 in by age 2 (Table 49). Like hybrid striped bass, 86% of white bass were age 1+ or younger (Table 50). The white bass population assessment indicated a "Good" population, also up from a "Fair" assessment rating from last year (Table 51). Herrington Lake was stocked with 50,224 (20.8 fish/acre; 1.3-1.5 in) hybrid striped bass in June 2010.

A roving daytime angler creel survey was conducted at Herrington Lake from mid March through October. The last creel survey conducted at this lake was in 2004. Table 52 provides descriptive statistical parameters of the lake fishery during the present survey and the last 2 surveys (2004 and 1996). The number of fishing trips in 2010 (11,692) dropped slightly from 2004 (12,878). Accordingly, fishing pressure (man-hours) and number of fish caught continued to decline over time. While numbers and pounds of fish harvested increased, catch rates (fish/hr and fish/acre) have declined over time. Other parameters such as gender, residency, method and mode were similar to surveys completed in past years.

Numbers of largemouth bass caught in 2010 increased by over 4,000 from numbers seen in 2004 (Tables 53 and 54), while numbers of largemouth bass harvested decreased by 25%. Mean length of largemouth bass harvested decreased from 14.2 inches in 2004 to 13.5 inches in 2010. The number of fishing trips for black bass in 2010 was 4,207, an increase from 3,005 trips in 2004. Black bass continued to be the most sought-after group fished for in Herrington Lake. Catch rate of bass by bass fishermen increased from 0.35 fish/hr in 2004 to 0.90 fish/hr in 2010. Bass angler success rate (14.7%) was essentially the same as 2004 (11.9%). Largemouth bass continued to dominate the black bass population with occasional catches of smallmouth bass and spotted bass. Black bass catch, harvest and monthly angling success are shown in Tables 55 and 56.

The *Morone* group (hybrid striped bass and white bass) was the second most sought-after group at Herrington Lake in 2010. The number of hybrid striped bass (HSB) caught decreased slightly from 7,958 fish in 2004 to 7,309 in 2010. However, the number of hybrid striped bass harvested increased from 3,059 in 2004 to 4,408 in 2010. The number of white bass (WB) caught increased slightly with 4,528 caught in 2004 (2,395 harvested) and 5,321 caught in 2010 (3,082 harvested). Pounds of HSB harvested in 2010 totaled 6,415 lbs (2.66 lbs/acre), whereas in 2004 it was 2,654 lbs (1.10 lbs/acre). Pounds of WB harvested in 2010 totaled 1,708 lbs (0.71 lbs/acre) while in 2004 it was 915 lbs (0.38 lbs/acre). Mean length of HSB harvested in 2010 was 14.2 in while in 2004 it was 13.0. Mean length of WB harvested in 2010 was 11.0 in, with 9.6 in being the average in 2004. The number of trips for *Morones* decreased slightly from 2,404 trips in 2004 to 2,102 trips in 2010. Hours spent fishing for these fish also slightly decreased from 13,620 hrs (5.65 hrs/acre) in 2004 to 10,368 hrs (4.30 hrs/acre) in 2010. Harvest rate for *Morone* fishermen increased from 0.31 fish/hr in 2004 to 0.52 fish/hr in 2010. Success rate for these anglers increased from 19% in 2004 to 56% in 2010. *Morone* catch, harvest and monthly angling success are shown in Tables 57 and 58.

Numbers of crappie caught decreased from 8,458 fish caught in 2004 to 3,172 in 2010. Additionally, the number of crappie harvested declined from 6,002 fish in 2004 to 3,045 in 2010. Mean length of crappie harvested was 10.0 in, an increase from 9.4 inches in 2004. Crappie are the third most sought-after group fished for in Herrington Lake. The number of fishing trips for crappie essentially remained the same from 1,599 in 2004 to 1,506 in 2010. Harvest rate by crappie anglers decreased from 0.66 fish/hr to 0.48 fish/hr. Percent success of crappie anglers decreased from 53% in 2004 to 48% in 2010. White crappie represented 38% of the crappie caught (68% in 2004) and 40% of the crappie harvested (63% in 2004). Crappie catch, harvest and monthly angling success are shown in Tables 59 and 60.

Panfish (bluegill) were the fourth most sought after fish group at Herrington Lake in 2010. The number of panfish caught in 2010 (20,883 fish) significantly declined from the number of panfish caught in 2004 (46,267 fish). Pounds harvested in 2010 were less than that seen in 2004, declining from 2,008 lbs (0.83 lbs/acre) in 2004 to 1,679 lbs (0.70 lbs/acre) in 2010. The average length of bluegill harvested was 5.5 in, an inch less than the average size caught in 2004 (6.5 in). Trips for panfish decreased from 1,961 trips in 2004 to 1,498 trips in 2010. The harvest rate for panfish was 1.50 fish/hr (1.10 fish/hr in 2004). The percentage of successful panfish anglers was 77% while in 2004 it was 46%. Panfish catch, harvest and monthly angling success are shown in Tables 61 and 62.

The fifth most sought-after group was the catfish with 771 trips by catfish anglers compared to 1,011 trips in 2004. Catfish numbers caught declined from those seen in 2004. Channel catfish contributed 78% of the catfish caught, compared to 58% in 2004. Pounds of catfish harvested increased from 2,680 lbs in 2004 to 5,407 lbs in 2010. Pounds of flathead catfish harvested by catfish anglers increased from 1,542 lbs in 2004 to 1,941 in 2010. Mean length of channel catfish harvested by catfish anglers was 13.2 in (17.2 in 2004) while that of flathead catfish was 15.5 in (20.1 inches in 2004). Harvest rate by catfish anglers increased from 0.14 fish/hr to 0.52 fish/hr over the same period. Success rate for catfish anglers increased from 30% in 2004 to 77% in 2010. Catfish catch, harvest and monthly angling success are shown in Tables 63 and 64.

An angler attitude survey was conducted at Herrington Lake during the creel survey. Surveys were completed in the field by the creel clerk. A total of 130 surveys were completed by anglers (171 surveys in 2004). The attitude survey reflected the sharp decrease in anglers seeking largemouth bass, and the increase in preference for crappie. The majority of anglers expressed an increase in satisfaction for their species of preference from the 2004 survey. The majority of anglers (86%) are satisfied with the current regulations on Herrington Lake.

Guist Creek Lake (317 acres)

Spring electrofishing studies were completed for length frequency, CPUE, age frequency and population assessment for largemouth bass in April 2010 (Table 65). Total largemouth bass catch rate (all sizes) increased from the last year (Table 66). The PSD for largemouth bass was 74 compared to 70 in 2009 and 85 in 2008 (Table 67). The RSD₁₅ was 44 compared to 46 in 2009 and 54 in 2008. Over 45% of the bass collected were ≥ 13.0 in, whereas 27% were ≥ 16.0 in, and 12% were ≥ 18.0 in. The population assessment gave a rating of "Good", the same as the last five years (Table 68). Fall sampling was conducted for relative weight and index for year class strength at age 0 and age 1 (Tables 69–71). Relative weights indicated very good body condition for bass, especially for bass over 12.0 in. Mean length of age-0 largemouth bass (4.9 in) increased from last year (3.7 in); however, their catch rate decreased from 2009 (51.33 fish/hr to 41.33 fish/hr). The year class strength model indicated below average recruitment for young-of-year largemouth bass in 2010. Therefore, fingerling (3.9 in) largemouth bass were stocked in October at a rate of 11.5 fish/acre, totaling 3,640 (left pectoral clip).

Gill netting was completed in November for hybrid striped bass (Table 72). Four nets were fished for two nights (8 net-nights) in similar sites as in past years. A total of 32 hybrid striped bass were captured compared to 26 in 2009. Age and growth studies were completed using otoliths. Calculations indicated hybrid striped bass continued to reach 15.0 in by age 2, and 20.0 in by age 3 (Table 73). Relative weights of these fish indicated hybrid striped bass were significantly below average in weight for their size (Table 75). The population assessment indicated a rating of "Poor", a decline from the "Fair" rating in 2009 (Table 76). Guist Creek Lake was stocked with 19,838 (62.6 fish/acre; 1.6 in) hybrid striped bass in June 2010.

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. Guist Creek Lake was stocked with 3,167 (10.0 fish/acre; 7.5-17.0 in) channel catfish in July 2010.

A population estimate of largemouth bass ≥ 8.0 in was conducted on Guist Creek Lake in April 2010. During routine spring sampling, a total of 307 largemouth bass were marked with a hole punch to the soft dorsal fin. A couple of weeks later, district personnel sampled the lake to check for marked fish. Of the 284 largemouth bass that were caught, a total of 50 were marked. Using the Peterson mark-recapture estimator with the Chapman modification equation, Guist Creek Lake was calculated to have 1,744 largemouth bass (6.0 fish/acre; 90% CI 337).

Beaver Lake (158 acres)

Beaver Lake was sampled for largemouth bass in April 2010 (Table 77). The CPUE for all sizes was 238.22 fish/hr compared to 249.00 fish/hr in 2009 and 317.50 fish/hr in 2008 (Table 78). Catch rates for bass < 8.0 in significantly increased, the highest since 2006. Numbers of bass in other length groups (8.0 - 11.9 in, 12.0-14.9 in, and ≥ 15.0 in) decreased from last year. Thick aquatic vegetation continues to hamper spring electrofishing sampling. The PSD and RSD₁₅ for largemouth bass respectively, were 38 and 2, compared to 38 and 1 in 2009 and 25 and 3 in 2008 (Table 79). Growth rates indicated that the bass population at Beaver Lake is severely stunted. Bass were reaching harvestable size (15.0 in) in approximately 6 years (Table 80 and 81). This was a major decline in growth rates because the growth from the last age and growth study (2006) showed largemouth bass reaching harvestable size between ages 4 and 5. Most bass collected (87%) were less than age 5 (Table 81). The population assessment

score indicated a "Good" bass population (Table 83), compared to "Fair" in 2009. Fall electrofishing was conducted for relative weights and the index of age 0 year class strength of largemouth bass at Beaver Lake (Tables 84 and 85). The relative weight index reflected below-average weights for all three length groups, possibly due to crowding and impacts from dense aquatic vegetation. Mean length and catch rate of age 0-bass decreased in 2010 (Table 86). The catch rate of age-0 bass was well below the lake average (102.7 fish/hr). However, due to the severely stunted bass population, bass were not stocked in 2010. Finally, no shad were observed at Beaver Lake in 2010.

Bluegill and redear sunfish were sampled in May 2010 for CPUE, PSD, age and growth, and age frequency (Tables 87-92). Length frequency results showed the majority of bluegill are in the 3.0-4.0 in range, with most redear sunfish between 6.0 and 9.0 in (Table 87). The PSD for bluegill dropped to 17 compared to 41 in 2009 and 37 in 2008. The RSD₃ was 3 compared to 2 in 2009 and 3 in 2008. Redear sunfish PSD and RSD₉, respectively, were 60 and 17 (Table 88). CPUE for bluegill ≥ 8.0 in was 4.40 fish/hr, higher than last year, while the catch rate for 6.0-7.9 in bluegill was significantly lower than last year (Table 89). Age and growth studies indicated bluegill reached 6.0 in by age 3 and 8.0 in between age 7 and 8 (Table 90). The population assessment for bluegill indicated a "Fair" population rating, the same as the last several years (Table 93). The high density of smaller bluegill may be attributed to lack of predation due to thick aquatic vascular plant growth. The catch rate of redear sunfish ≥ 8.0 in was 33.60 fish/hr compared to 29.60 fish/hr in 2009 (Table 94). Overall, catch rates for all sizes were slightly higher than last year, except for the slight decrease in < 3.0 in and 3.0-5.9 in catch rates. Age and growth studies continued to show redear sunfish reaching 6.0 in between age 2 and 3, and 8.0 at age 4 (Table 95). Three redear sunfish ≥ 10.0 in were collected in 2010, the first time since 2002. Age frequency (Table 96) indicated a good number of redear sunfish through age 6 in the fishery. Redear sunfish numbers have increased since the gizzard shad and grass carp removal, which resulted in an increase in aquatic vegetation. The population assessment indicated a "Good" redear sunfish fishery (Table 98). Relative weight data for bluegill and redear sunfish continued to show average weights for all length groups (Table 99). 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. One application of an aquatic herbicide (Aquathol Super K, Dipotassium salt of endothall) was made to submerged aquatic vascular plants around the fishing pier and embayments to maintain fishing and boating access on April 9th. No liquid fertilizer applications have been made since 2001.

A population estimate of largemouth bass ≥ 8.0 in was conducted on Beaver Lake in April 2010. During routine spring sampling, a total of 199 largemouth bass were marked with a hole punch to the soft dorsal fin. A couple of weeks later, district personnel sampled the lake to check for marked fish. Of the 466 largemouth bass that were caught, a total of 23 were marked. Using the Peterson mark-recapture estimator with the Chapman modification equation, Beaver Lake was calculated to have 4,032 largemouth bass (26.0 fish/acre; 90% CI 1,268).

Boltz Lake (92 acres)

Spring electrofishing for largemouth bass length frequency, CPUE, PSD, age frequency and population assessment was done in April 2010 (Table 100). Results indicated an increase in bass numbers from last year (Table 101). Growth rates indicated most bass are reaching harvestable size (12.0 in) between age 3 and 4 (Table 103). Most bass (88%) were age 5 or younger (≤ 15.0 in, Table 104). The population assessment indicated a "Good" bass population, the same as last year's rating (Table 106). Electrofishing for largemouth bass relative weight and YOY data was conducted in September (Tables 107-109). Relative weights indicated average condition for largemouth bass (Table 108). Fall sampling indicated below average numbers of age 0 bass, (36.00 fish/hr; average= 49.10 fish/hr); however, the average size increased from 2009 (Table 109). Currently, Boltz Lake does not contain a population of gizzard shad.

Spring electrofishing for bluegill was conducted in May 2010 (Tables 110). Catch rates for all sizes of bluegill, except 3.0-5.9 in, increased in 2010 (Table 112). Age and growth data indicated bluegill reached 6.0 in between age 2 and age 3, an improvement from 2009 (Table 113). The majority (86%) of bluegill collected was age 1 through age 3 (Table 114). The population assessment for bluegill indicated a "Good" population present, an improvement from last year's "Fair" rating. (Table 116).

A total of 70 common carp were removed from Boltz Lake in June. The average weight of removed common carp was 8.73 lbs. Therefore, it was estimated that 611 lbs of common carp were removed from Boltz Lake in 2010.

Boltz Lake has been a blue catfish study lake (Black Bass Research Project) since 1998. Boltz Lake was stocked with 920 (10.0 fish/acre; 6.5-12.0 in) blue catfish in September 2010.

Bullock Pen Lake (134 acres)

Bullock Pen Lake was electrofished in April 2010 for largemouth bass length frequency, CPUE, age frequency and population assessment (Table 117). Overall, the bass catch rate (132.25 fish/hr) was lower than last year's catch rate (147.50 fish/hr), and lower than the 15 year average (136.44 fish/hr) (Table 118). The PSD for largemouth bass was 73 and RSD_{15} was 45 in 2010 (Table 119). The 2010 population assessment for largemouth bass indicated a "Fair" population present, a decline from last year's "Good" rating (Table 120). Electrofishing was conducted in September to determine the relative weights and YOY year class strength for largemouth bass (Table 121). Relative weights indicated excellent body condition for bass, particularly larger fish (Table 122). CPUE for both age-0 and age-0 ≥ 5.0 in increased from last year (Table 123). Age-0 CPUE (42.67 fish/hr) was significantly greater than the lake average (19.74 fish/hr); therefore, largemouth bass were not stocked into Bullock Pen Lake in 2010. 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 1,340 (10.0 fish/acre; 6.5-12.0 in) blue catfish in July 2010.

Corinth Lake (96 acres)

Corinth Lake was electrofished in April 2010 to collect largemouth bass length frequency, CPUE, PSD, age frequency and population assessment information (Table 124). The catch rate for largemouth bass decreased from last year for all length groups of largemouth bass, except for < 8.0 in largemouth bass (Table 125). The PSD for largemouth bass was 33, slightly lower than the last two years value of 35 (Table 126). The RSD_{15} increased from 22 in 2009 to 23 in 2010. The population assessment for largemouth bass was rated "Good", the same as 2009 (Table 127). Fall electrofishing for largemouth bass was conducted to determine year class strength and relative weight (Tables 128). Relative weights of largemouth bass continue to be below average (Table 129). Largemouth bass mean length at age 0 and catch rates of all age 0 sizes significantly increased from last year (Table 130). Age-0 CPUE (140.00 fish/hr) was significantly greater than the lake average (85.54 fish/hr), therefore, largemouth bass were not stocked into Corinth Lake in 2010.

Electrofishing for bluegill and redear sunfish was completed in May 2010 to obtain length frequency, CPUE, age and growth, age frequency and population assessment data (Table 131). Most bluegill were 4.0-6.0 in (Table 131). The bluegill PSD was 30 compared to 52 in 2009 (Table 132). Collection of larger bluegill (6.0 to 7.9 in) showed a significant decline from the previous 3 years (Table 133). Age and growth studies showed that bluegill reach 6.0 in between age 3 and 4 (Table 134). The population assessment indicated a "Fair" population, identical to the last six years (Table 137). Redear sunfish numbers and quality decreased in 2010, with most fish between 6.0 and 8.0 in. Redear sunfish PSD was 58 compared to 85 in 2009. Catch rate for redear sunfish ≥ 8.0 in declined from 38.00 fish/hr in 2009 to 12.00 fish/hr in 2010 (Table 138). No ≥ 10.0 in redear sunfish were collected in 2010. Age and growth studies show redear sunfish reaching 8.0 in between age 3 and 4 (Table 139). The population assessment for redear sunfish continued to be rated "Good" (Table 142). Relative weights for bluegill and redear sunfish were collected in the fall. Relative weights indicated average body condition for bluegill and redear sunfish, except that body condition of 6.0-7.9 in bluegill was poor (Table 143).

Channel catfish were sampled in October using tandem hoop nets at Corinth Lake in 2010. Length frequency results for channel catfish showed a good size distribution between 8.0-17.0 in (Table 144). The largest channel catfish sampled was 17.9 in. The PSD and RSD_{24} for channel catfish were 1 and 0, respectively (Table 145). Age and growth studies showed channel catfish reached 12.0 in between age 2 and 3, and 15.0 in between 5 and 6 years (Table 146). Relative weights indicated average condition for channel catfish (Table 148).

A daytime roving creel survey was conducted at Corinth Lake in 2010. The last creel survey was completed in 2002. In 2010, fishing trips totaled 2,620 (Table 149), which was slightly higher than the trips in 2002 (2,481 trips). Overall, catch and harvest rates were lower in 2010 than rates seen in 2002. Largemouth bass catch rates

declined from 7,211 (75.12 f/a) in 2002 to 2,747 (28.62 f/a) in 2010, however, harvest in 2010 (130 fish; 1.35 f/a) was higher than in 2002 (60; 0.62 f/a) (Table 150). Crappie harvest increased from 134 (0.40 f/a) in 2002 to 727 (7.57 f/a) in 2010, whereas, panfish harvest decreased from 11,944 (124.41 f/a) in 2002 to 3,557 (37.06 f/a) in 2010. However, catfish harvest did not change much from 2002, 309 (3.22 f/a) in 2002 to 346 (3.61 f/a) in 2010. Length distribution of harvested and released fish is shown in Table 151. Black bass harvest, release, and monthly angling success are shown in Tables 152 and 153. Crappie harvest, release and monthly angling success are shown in Tables 154 and 155. Channel catfish harvest, release and monthly angling success are presented in Tables 156 and 157. Panfish harvest, release and monthly angling success are presented in Tables 158 and 159. An angler attitude survey was conducted and was based on 330 surveys. According to this survey, bluegill were sought after the most (63.0%), and the majority of angler's time was spent fishing for them (40.3%). Overall, the majority of anglers were satisfied with bass, crappie, catfish, and panfish fishing on Corinth Lake in 2010.

Elmer Davis Lake (149 acres)

Elmer Davis Lake was sampled for largemouth bass in April 2010. Length frequency, CPUE, PSD, age and growth, age frequency and population assessment data were collected (Table 160). Catch rates of largemouth bass were similar to last year for all sizes except <8.0 in largemouth bass that decreased by 45.00 fish/hr (Table 161). Numbers of bass in the protected slot (12.0-15.0 in) and bass ≥ 15.0 in were essentially the same as last year. The PSD for largemouth bass was 39 compared to 35 in 2009 (Table 162). The RSD_{15} was 10 compared to 9 in 2009. Population assessment data indicated a "Good" population, the same as last year (Table 163). Fall electrofishing for relative weights and year class strength of largemouth bass was completed in September 2010 (Table 164). Relative weights continued to indicate below average body condition (Table 165) as would be expected in a bass-crowded population. Studies indicated that numbers of age 0 bass in the fall of 2010 were the same as 2009; therefore, largemouth bass were not stocked into Elmer Davis Lake (Table 166).

Electrofishing for length frequency, CPUE, age and growth, age frequency and population assessment was conducted for bluegill and redear sunfish in May 2010 (Table 167). Overall bluegill catch rates increased in 2010; however, catch rates declined for bluegill ≥ 6.0 in (Tables 169). The PSD value for bluegill was 17 compared to 38 in 2009 (Table 168). The RSD_8 decreased to 0 compared to 1 in 2009. Age and growth studies on bluegill showed that they reached 6.0 in between age 2 and 3 (Table 170). Most bluegill (95%) were age 3 and less (Table 171). The population assessment for bluegill was found to be "Fair", the same as last year (Table 173). Overall catch rates of redear sunfish increased from 2009 (Table 174). The PSD for redear sunfish was 51 compared to 42 last year. The RSD_9 was 11 compared to 8 in 2009 (Table 168). Age and growth studies indicated good growth rates with redear sunfish reaching 6.0 in between age 1 and 2, 8.0 in between age 2 and 3, and 10.0 in between age 5 and 6 (Table 175). The redear sunfish population assessment indicated a "Good" population, the same as last year (Table 178). Relative weight results for bluegill indicated very good body condition, while the index for redear sunfish indicated excellent body condition (Table 179). This year's sampling of bluegill and redear sunfish may have been impacted by excessive growth of aquatic vegetation (mainly *Potamogeton crispus*) at Elmer Davis Lake. Gizzard shad removal efforts were conducted 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.

Kincaid Lake (183 acres)

Spring electrofishing studies were conducted in April 2010 for PSD, length frequency, age frequency and CPUE for largemouth bass (Table 180). Total catch rate decreased from 265.50 fish/hr in 2009 to 217.50 fish/hr in 2010 (Table 181). The largemouth bass PSD and RSD_{15} , respectively, were 64 (71 in 2009) and 34 (43 in 2009) in 2010 (Table 182). The population assessment indicated a "Good" bass population, the same as the past ten years (Table 183). Fall electrofishing for relative weight and index of year class strength at age 0 was conducted in September (Table 184). Relative weights of all largemouth bass length groups were about average (Table 185). CPUE for both age-0 and age-0 ≥ 5.0 in increased from last year (Table 186). Age-0 CPUE (53.33 fish/hr) was significantly greater than the lake average (35.36 fish/hr), therefore, largemouth bass were not stocked into Kincaid Lake in 2010. Kincaid Lake has hosted a population of gizzard shad for decades.

Channel catfish were sampled in October using tandem hoop nets at Kincaid Lake in 2010. Length frequency results for channel catfish showed a good size distribution between 6.0-23.0 in (Table 187). The PSD and

RSD₂₄ for channel catfish were 16 and 0, compared to 36 and 3 in 2009 (Table 188). Relative weights indicated average condition for channel catfish (Table 189).

A population estimate of largemouth bass ≥ 8.0 in was conducted on Kincaid Lake in April 2010. During routine spring sampling, a total of 385 largemouth bass were marked with a hole punch to the soft dorsal fin. A couple of weeks later, district personnel sampled the lake to check for marked fish. Of the 426 largemouth bass that were caught, a total of 92 were marked. Using the Peterson mark-recapture estimator with the Chapman modification equation, Kincaid Lake was calculated to have 1,783 largemouth bass (10.0 fish/acre; 90% CI 236).

McNeely Lake (51 acres)

McNeely Lake was electrofished for largemouth bass population analysis in April 2010. Data for length frequency, CPUE, PSD, age frequency and population assessment were collected (Table 190). Overall, catch rates for all sizes of largemouth bass continued to decrease in 2010 (Table 191). Largemouth bass PSD was 24, lower than last year, and the RSD₁₅ slightly increased from 11 last year to 12 in 2010 (Table 192). The population assessment dropped to "Fair" in 2010 from "Good" in 2009 (Table 193). Electrofishing for largemouth bass in September 2010 was completed to collect relative weight and the index of year class strength at age 0 (Table 194). Relative weights increased in 2010 to an average body condition for largemouth bass (Table 195). CPUE for both age-0 and age $0 \geq 5.0$ in increased from last year (Table 196). Age 0 CPUE (169.60 fish/hr) was significantly greater than the lake average (113.73 fish/hr), therefore, largemouth bass were not stocked into McNeely Lake in 2010. Currently, McNeely Lake does not contain a population of gizzard shad.

Bluegill and redear sunfish were sampled in May 2010 for length frequency, CPUE, age and growth, age frequency and population assessment (Table 197). Catch rates for bluegill ≥ 6.0 in decreased from 2009 (Table 199). The bluegill PSD was 48 compared to 60 in 2009 (Table 198). RSD₈ was 0 in 2010, compared to 0.2 in 2009. Age and growth studies on bluegill showed that they reach 6.0 in between age 2 and 3 (Table 200). The majority (85%) of bluegill collected were age 1 to age 3 (Table 201). The population assessment for bluegill continues to be "Good" (Table 203). Catch rates for redear sunfish declined significantly from 2009 (Table 204). The PSD for redear sunfish was 41 compared to 66 last year, and the RSD₉ decreased to 7 from 23 (Table 198). Age and growth studies indicated good growth rates with redear sunfish reaching 6.0 in between age 1 and 2, 8.0 in between age 2 and 3, and 10.0 in between age 5 and 6 (Table 205). The redear sunfish fishery was rated "Good", a decline from "Excellent" in 2009 (Table 208). Relative weight data for bluegill and redear sunfish were collected in the fall (Table 209). Good body condition was exhibited by redear sunfish and bluegill during the fall of 2010.

Williamstown Lake

Williamstown Lake was electrofished for largemouth bass population analysis in May 2010. Data for length frequency, CPUE, PSD, age frequency and population assessment were collected (Table 210). Overall, catch rates for all sizes of largemouth bass increased slightly from 2009 (Table 211). Largemouth bass PSD and RSD₁₅ was 56 and 16, respectively (Table 212). The population assessment was "Fair" in 2010, the same as 2009 (Table 213). Electrofishing for largemouth bass in October 2010 was conducted to collect relative weight and the index of year class strength at age 0 (Table 214). The relative weights indicated average body condition for largemouth bass (Table 215). Year class strength indices significantly increased from last year (Table 216).

Simpson Lake

Relative abundance and CPUE of largemouth bass collected in the spring are shown in Table 217. All sizes of largemouth bass were represented with good numbers of bass above the 15.0-in size limit. Largemouth bass up to 21.0 in. were collected. Catch rate of largemouth bass essentially remained the same as last year with a catch rate of 112.00 fish/hr in 2010 and 113.50 fish/hr in 2009. Fall electrofishing for length frequency and CPUE of largemouth bass was completed (Table 218).

Lincoln Homestead Lake

Length frequency, relative abundance, and CPUE of fish collected by electrofishing at Lincoln Homestead Lake in May 2010 are shown in Table 219. Studies show largemouth bass from 4.0 to 17.0 inches in fair numbers. Bluegill over 7.0 in were collected.

Doe Run Lake

Length frequency, relative abundance and CPUE of fish collected by electrofishing at Doe Run Lake (Kenton Co.) in April 2010 are shown in Table 220. 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 221).

General Butler State Park

Length frequency and CPUE of largemouth bass collected in April 2010 at General Butler State Lake are presented in Table 222. Largemouth bass were present in fair numbers. Fall electrofishing for length frequency and CPUE of largemouth bass and bluegill was completed (Table 223).

Leary Lake

Species composition, length frequency, and CPUE of fishes collected from Leary Lake in May 2010 are presented in Table 224. This Lloyd WMA lake (3a) receives heavy fishing pressure. Studies show largemouth bass from 2.0 to 13.0 inches in fair numbers. These results are similar to last year's results. Bluegill greater than 8.0 in were collected.

Willisburg Lake

Relative abundance and CPUE of largemouth bass collected in the spring are shown in Table 225. All sizes of largemouth bass were represented with good numbers of bass above the 12.0-in size limit. Largemouth bass up to 20.0 in were collected. Catch rate of largemouth bass decreased from 131.00 fish/hr in 2009 to 114.00 fish/hr in 2010. Fall electrofishing for length frequency and CPUE of largemouth bass was completed (Table 226).

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

Water body	Species	Date	Time (24hr)	Gear	Weather	Water temp. F	Water level	Secchi (in)	Conditions	Pertinent sampling comments
Herrington	Crappie	3/19	1000	shock			719.4		good	good sample
		3/23	1000	shock					good	good sample
		3/24	1000	shock					fair	good sample
Taylorsville	Crappie	3/25	1000	shock	cloudy / windy	55U	545.7	8	good	fair sample; murky water conditions
		3/25	1000	shock				12 V	good	good sample
		3/30	1000	shock				18 B	good	good sample
Kincaid	LMB	4/8	2030	shock	partly clear	64	normal	18 A	good	good sample
		4/20	2030	shock				27	good	good sample
McNeely	LMB	4/6	1000	shock	sunny/windy	64	normal	64	good	good sample
Bullock Pan	LMB	4/6	2000	shock	clear / warm	63	normal	24	good	good sample
General Buller	LMB	4/7	+	shock	mostly cloudy / breezy	66	normal		good	good sample
Sympson	LMB	4/13	1000	shock	sunny	68	normal	24	good	good sample
Guist Creek	LMB	4/14	0900	shock	sunny/ calm	65	normal	38	good	good samples
		4/20	1100	shock	sunny/breezy	64	normal	15	good	
Beaver	LMB	4/15	0930	shock	sunny/light breeze	67	normal	96	good	good sample
		4/28	1100	shock	sunny/windy	62	high	36	good	fair sample due post frontal conditions
Boltz	LMB	4/15	2000	shock	clear / warm	67	normal	72	good	good sample
Elmer Davis	LMB	4/18	1100	shock	sunny/windy	66	normal	42	good	good sample
Taylorsville	LMB	4/19	1000	shock	cloudy	65 B	548	30 B	good	good sample at all three sites
		1000	shock					24 V	good	
Corinth	LMB	4/20	1000	shock	cloudy	65 A	546	30 A	good	
		4/20	2030	shock	cloudy / rain	68	normal	36	good	good sample
Herrington	LMB	4/20	1000	shock	cloudy / light rain	65 M	419.9	36 M	good	good sample
		4/21	1000	shock	mostly sunny	68 U		24 U	good	Lake was very low but stable.
Doe Run	LMB	4/22	1000	shock	partly cloudy / windy	66 L		108 L	good	good sample
		1000	shock					26	good	
Williamstown	LMB	5/10	1100	shock	cloudy / breezy	66	low - winter pool	24	good	good sample
Wiltsburg	LMB	5/11	1000	shock	cloudy / windy	65	normal	18	good	good sample
Leary	LMB/BG	5/17	1000	shock	Overcast - light rain		normal	48	good	good sample
Lincoln Homestead	LMB	5/20	1300	shock	overcast / cool	68	normal		fair	fair sample; limited sampling area due to fisherman
		5/21	1000	shock	Overcast / rain	66	normal	12	good	good sample
Corinth	BG/RESF	5/27	1000	shock	mostly sunny / breezy	62	normal	52	good	good sample
Beaver	BG/RESF	5/27	1000	shock	partly cloudy	61	normal	54	good	fair sample; not many sunfish on nest
Elmer Davis	BG/RESF	6/1	1000	shock	partly cloudy/light breeze and hot	61	normal	33	good	good sample; vegetation present
McNeely	BG/RESF	6/3	1000	shock		62	normal		good	good sample
Taylorsville	LMB	9/13	1000	shock	sunny	76 A		22 A	good	good sample
		9/14	1100	shock	sunny	76V		22 V		V = Van Buren Area, B = Big Beech and A = Ashoc Creeks
		9/14	1000	shock	sunny	77 L		78 L	good	good samples
Herrington	LMB	9/15	1100	shock	Sunny	77 U	727	30 U	good	9/15 - lower section, 9/16 - mid section, 9/16 - upper section
Guist Creek	LMB	9/16	1030	shock	Mostly sunny	77U			good	good sample
Beaver	LMB/BG/RESF	9/20	1000	shock	calm / sunny	79	below normal	35	good	good sample

Table 1 (cont).

Water body	Species	Date	Time (24hr)	Gear	Weather	Water temp. F	Water level	Secchi (ft)	Conditions	Pertinent sampling comments
Boltz	LMB/BG/RESF	9/20	1100	shock	sunny / clear skies	75	normal	24	good	good sample;
Corinth	LMB/BG/RESF	9/22	1000	shock	sunny	77	normal		good	good sample
McNeely	LMB/BG/RESF	9/20	1030	shock	sunny / warm	74	low	18	good	good sample
Bullock Pen	LMB	9/21	1100	shock	sunny and warm	74	low	30	good	good sample
Kincaid	LMB	9/21	1100	shock		75	1.0 ft below normal	42	good	good sample
Elmer Davis	LMB/BG/RESF	9/22	1000	shock	Sunny / windy	78	normal	36	good	good sample
General Butler	LMB/BG	9/22	1030	shock	sunny / warm / windy	79	slight below normal	21	good	good sample
Williamstown	LMB	9/23	1000	shock	sunny, hot	76	2.5 ft below normal	35	good	good sample
Willisburg	LMB	9/24	1000	shock	sunny / hot	76	6 ft below normal	16	good	good sample
Corinth	Channel catfish	9/27	1000	hoop net	cloudy	70	below normal		good	good sample
Sympson	LMB	9/28	1000	shock	cloudy / breezy / cool	74	below normal		good	good sample
Doe Run	LMB/BG	9/28	1100	shock	partly sunny	69	normal	39	good	good sample
Kincaid	Channel catfish	10/7	1100	hoop net	sunny / warm	63	1.5 ft below normal		good	good sample
Guist Creek	Morones	10/12 10/13	1000 1000	gillnet	sunny / breezy mostly cloudy	65	normal		good	good sample
Herrington	Morones	10/19 10/20 10/21	1000 1000 1000	gillnet	rain / cold rain / cold cloudy	738.3 737.6 737.5		100	good	good sample
Taylorville	Morones/ Crappie	10/26 10/27 10/28 10/29	1000 1000 1000 1000	gillnet trammel	mostly sunny sunny sunny sunny	60	547.57 547.21 547.25 547.34	20	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 2010; 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				
Van Buren																						
Largemouth bass Ashes Creek	4	7	14	10	6	8	10	36	38	32	43	28	13	6	4	1						
Largemouth bass Big Beech Creek	17	38	36	66	50	19	8	34	20	48	78	39	22	12	10	5	1	2	2	505		
Largemouth bass	6	7	14	10	6	8	10	36	38	32	43	28	13	6	4	2				345		
Natural	27	52	66	114	84	33	28	103	91	114	165	90	52	30	23	11	4	2	1089	145.20 (12.48)		
2008 Stocked						2	5	8	2										17	2.27 (0.67)		
2007 stocked									1	2	1	1							5	0.67 (0.32)		
Total																						
Largemouth bass	27	52	66	114	84	35	33	111	93	115	167	91	53	30	23	11	4	2	1111	148.13(12.41)		

Dataset = cfdpstvl.d10

Table 3. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Taylorsville Lake from 1984-2010; 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)	96.90 (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)
2010	45.73 (8.30)	36.27 (2.68)	49.73 (5.06)	16.40 (1.83)	0.27 (0.18)	148.13 (12.41)

Dataset = cfdpstvl.d10 -- .d84

Table 4. PSD and RSD₁₅ values obtained for largemouth bass from spring electrofishing samples in each area of Taylorsville Lake in 2010; confidence intervals are in parentheses.

Area	Species	No. ≥8.0 in	PSD	RSD ₁₅
Big Beech	Largemouth bass	250	60 (± 6)	18 (± 5)
Ashes Creek	Largemouth bass	298	73 (± 5)	17 (± 4)
Van Buren	Largemouth bass	220	58 (± 7)	11 (± 4)
Total	Largemouth bass	768	65 (± 3)	16 (± 3)

Dataset = cfdpstvl.d10

Table 5. Mean back calculated lengths (in) at each annulus for otoliths from largemouth bass collected from Taylorsville Lake in 2010.

Year	No.	Age									
		1	2	3	4	5	6	7	8	9	10
2009	59	6.0									
2008	28	6.7	10.4								
2007	32	5.8	10.5	13.1							
2006	6	6.2	10.4	13.3	15.4						
2005	11	6.9	11.5	14.2	15.9	17.0					
2004	4	6.6	11.3	13.8	16.0	17.1	17.9				
2003	1	8.9	13.5	15.3	16.7	18.2	19.2	19.9			
2001	2	7.0	11.2	13.4	15.2	16.8	17.4	17.9	18.3	18.7	
2000	1	7.2	11.0	13.8	16.1	17.6	18.8	19.3	19.8	20.4	20.9
Mean	144	6.2	10.7	13.4	15.8	17.1	18.1	18.7	18.8	19.3	20.9
Smallest		3.5	7.0	9.4	14.4	15.7	16.5	17.5	17.9	18.2	20.9
Largest		9.3	13.5	15.7	17.4	18.7	19.2	19.9	19.8	20.4	20.9
Std Error		0.1	0.1	0.2	0.2	0.2	0.4	0.5	0.5	0.6	
95% ConLo		6.0	10.4	13.1	15.5	16.7	17.4	17.7	17.8	18.0	
95% ConHi		6.5	10.9	13.8	16.1	17.5	18.8	19.8	19.9	20.5	

Intercept value = 0.00
Dataset = cfdagtlv.d10

Table 6. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 7.5 hours of electrofishing at Taylorsville Lake during April 2010. 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					20
1	27	52	66	114	84	22	7												371	33	49.53	8.69
2						13	23	111	51	26									224	20	29.80	1.95
3							3		42	77	167	80	15						384	35	51.20	4.33
4										13		11	15	12					51	5	6.84	0.60
5													23	12	17	6			57	5	7.66	0.92
6														6	6	4	1		17	2	2.23	0.37
7																	1		1	0	0.18	0.10
8																			0	0	0.00	0.00
9																2	1		3	0	0.42	0.12
10																		2	2	0	0.27	0.18
Total	27	52	66	114	84	35	33	111	93	115	167	91	53	30	23	11	4	2	1111	100	148.13	12.41
%	2	5	6	10	8	3	3	10	8	10	15	8	5	3	2	1	0	0	100			

Dataset = cfdagtlv.d10 and cfdpstvl.d10

Table 7. Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from Taylorsville Lake from 2000-2010.

Age	Year										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	14.10	20.50	34.80	21.20	14.90	38.30	17.50	10.30	12.18	14.62	49.53
2	12.40	26.70	16.70	46.10	19.80	27.80	36.70	27.70	25.05	25.47	29.80
3	17.70	24.80	13.10	26.30	33.40	27.30	21.30	37.20	33.02	25.84	51.20
4	10.80	12.50	6.20	12.60	16.60	29.00	6.70	8.40	11.22	6.57	6.84
5	7.70	16.60	3.60	5.90	6.10	13.00	10.60	9.50	13.31	9.25	7.66
6	6.90	9.70	1.40	2.90	3.50	4.30	3.30	3.30	4.86	2.56	2.23
7	4.50	4.80	0.70	0.70	0.80	1.90	0.40	0.40	0.49	0.22	0.18
8	1.50	1.70	0.40	0.50	0.60	1.00	0.00	0.00			0.00
9	0.90	1.50	1.60	1.30	1.30	3.10	0.10	0.30		0.13	0.42
10	0.20	0.30									0.27
11	0.50	0.20									
12	0.30	0.30									

Table 8. Population assessment for largemouth bass collected during spring electrofishing at Taylorsville Lake from 2000-2010 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE >15.0 in	Spring CPUE >20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2010	Value	13.1	49.53	49.73	16.40	0.27	0.574	43.7	16	Good
	Score	4	3	4	3	2				
2009	Value	12.9	14.60	22.30	13.60	0.13	0.536	41.5	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 9. 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 2010; 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				
Van Buren																			
Largemouth bass		29	25	10	11	22	12	3	4	6	3	7	1					133	84.00 (8.13)
Ashes Creek																			
Largemouth bass	6	32	26	10	32	20	12	16	7	5	9	9	5					189	126.00 (20.15)
Big Beech Creek																			
Largemouth bass	1	14	34	21	17	23	19	9	6	6	4	7	15	4	3			183	122.00 (8.56)
Total																			
Largemouth bass	7	75	85	41	60	65	43	28	17	17	16	23	21	4	3			505	110.67 (8.63)

Dataset = cfdwrtvl.d10

Table 10. Numbers of fish and the relative weight (Wr) for each length group of largemouth bass collected at Taylorsville Lake on 13 and 14 September 2010. 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	41	93 (1)	16	102 (4)	1	109 (0)	58	96 (2)
	Ashes	55	92 (1)	23	95 (3)	5	99 (3)	83	94 (1)
	Big Beech	57	89 (1)	17	94 (2)	22	92 (2)	96	90 (1)
	Total	153	91 (1)	56	97(2)	28	94 (2)	237	93 (1)

Dataset = cfdwrtvl.d10

Table 11. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Taylorsville Lake.

Year class	Area	Age 0		Age 0		Age 0 ≥5.0 in		Age 1 (Natural)	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2001	Total	4.6	1.3	63.60	11.70	13.30	1.00	34.80	4.30
2002	Total	5.3	0.1	29.10	4.80	18.70	3.50	21.20	2.80
2003	Total	5.4	0.1	32.20	5.40	19.10	3.40	14.90	2.50
2004	Total	4.4	0.1	50.00	6.20	15.10	3.60	38.30	6.20
2005	Total	4.9	0.1	31.80	4.20	15.30	2.50	17.50	3.80
2006	Total	4.9	0.1	54.70	4.90	25.80	2.90	10.30	2.00
2007	Total	4.4	0.1	22.40	3.20	6.70	1.80	12.18	2.61
2008	Total	5.5	0.1	20.89	3.91	16.67	3.46	14.62	3.12
2009	Total	4.9	0.1	90.22	14.46	39.78	6.48	49.53	8.69
2010	Total	5.2	0.1	45.15	4.90	27.66	3.28		

Dataset = cfdwrtvl.d10

Table 12. Length distribution and CPUE (fish/net-night) of each species of crappie collected at Taylorsville Lake in 48 net-nights during October 2010.

Species	Inch class									Total	CPUE	Std. error
	2	3	4	5	6	7	8	9	10			
White crappie												
natural			12	10			2	2	2	28	0.58	0.23
2009						5	4	5		14	0.29	0.12
2010	13	12								25	0.52	0.22
Total	13	12	12	10		5	6	7	2	67	1.40	0.36
Black crappie		8	13	3	5	88	50	9	3	179	3.73	0.84

Dataset = cfdntvl.d10

Table 13. PSD and RSD₁₀ values calculated for crappie collected at Taylorsville Lake in 48 net-nights during October 2010.

Species	No. ≥ 5.0 in	PSD	RSD ₁₀
White crappie	30	50 (± 18)	7 (± 9)
Black crappie	158	39 (± 8)	2 (± 2)

Dataset = cfdntnvl.d10

Table 14. Mean back calculated lengths (in) at each annulus for otoliths from white crappie trap netted at Taylorsville Lake in 2010.

Year class	No.	Age		
		1	2	3
2009	17	4.5		
2008	1	5.0	9.5	
2007	2	5.1	6.5	7.2
Mean	20	4.6	7.5	7.2
Smallest		3.3	6.4	7.1
Largest		6.7	9.5	7.3
Std Error		0.2	1.0	0.1
95% ConLo		4.2	5.5	7.0
95% ConHi		4.9	9.5	7.3

Intercept value = 0.00
Dataset = cfdagtnvl.d10

Table 15. Age frequency and CPUE (fish/net-night) per inch class of white crappie trap netted for 48 net-nights at Taylorsville Lake in 2010.

Age	Inch class									Total	%	CPUE	Std err
	2	3	4	5	6	7	8	9	10				
0+	13	12	12	10						47	70	0.98	0.29
1+						5	6	6		17	25	0.35	0.13
2+									1	1	1	0.02	0.01
3+								1	1	2	3	0.04	0.02
Total	13	12	12	10		5	6	7	2	67	100	1.40	0.36
(%)	19	18	18	15		7	9	10	3	100			

Dataset = cfdntnvl.d10 and cfdagtnvl.d10

CPUE of ≥ 8.0 in white crappie = 0.31 ± 0.10 fish/nn; ≥ 10.0 in = 0.04 ± 0.03 fish/nn

Table 16. Population assessment for white crappie collected during fall trap netting at Taylorsville Lake from 2000-2010 (scoring based on statewide assessment). An asterisk represents years where no age-2 white crappie were sampled.

Year		CPUE age-1 and older	Mean length age-2 at capture	CPUE \geq 8.0 in	CPUE age-1+	CPUE age-0+	Total score	Assessment rating
2010	Value	0.42	9.5	0.31	0.35	0.98	7	Poor
	Score	1	3	1	1	1		
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		

*Age data not collected

Table 17. Mean back calculated lengths (in) at each annulus for otoliths from black crappie trap netted at Taylorsville Lake in 2010.

Year class	No.	Age		
		1	2	3
2009	76	5.0		
2008	6	4.5	8.4	
2007	1	4.8	6.3	7.2
Mean	83	4.9	8.1	7.2
Smallest		3.5	6.3	7.2
Largest		6.6	9.2	7.2
Std Error		0.1	0.4	
95% ConLo		4.8	7.2	
95% ConHi		5.1	8.9	

Intercept value = 0.00
Dataset = cfdagtv1.d10

Table 18. Age frequency and CPUE (fish/net-night) per inch class of black crappie trap netted for 48 net-nights at Taylorsville Lake in 2010.

Age	Inch class								Total	% CPUE	Std Err	
	3	4	5	6	7	8	9	10				
0+	8	13	3						24	13	0.50	0.15
1+				5	88	50	5		148	83	3.08	0.84
2+							4	2	6	3	0.13	0.04
3+								1	1	1	0.02	0.01
Total	8	13	3	5	88	50	9	3	179	100	3.73	0.84
%	4	7	2	3	49	28	5	2	100			

Dataset = cfdntnvl.d10 and cfdagtl.d10

CPUE of ≥ 8.0 in black crappie = 1.29 ± 0.29 fish/net-night; ≥ 10.0 in = 0.06 ± 0.04 fish/net-night

Table 19. Population assessment for black crappie collected during fall trap netting at Taylorsville Lake from 2000-2010 (scoring based on statewide assessment). An asterisk represents years where no age-2 black crappie were sampled.

Year		CPUE age-1 and older	Mean length age-2 at capture	CPUE ≥ 8.0 in	CPUE age-1+	CPUE age-0+	Total score	Assessment rating
2010	Value	3.23	8.4	1.29	3.08	0.50		
	Score	1	1	1	2	1	6	Poor
2009	Value	0.23	9.8*	0.13	0.21	0.42		
	Score	1	4	1	1	1	8	Fair
2008	Value	0.56	9.8	0.54	0.16	0.42		
	Score	1	4	1	1	1	8	Fair
2007	Value	1.73	9.2	0.96	1.42	0.02		
	Score	1	3	1	1	1	7	Poor
2006	Value	3.33	9.5	3.29	0.13	0.48		
	Score	1	3	2	1	1	8	Fair
2005	Value	5.79	9.0	4.48	1.33	0.04		
	Score	2	2	2	1	1	8	Fair
2004	Value	12.04	9.3	1.17	11.73	1.17		
	Score	3	3	1	3	1	11	Fair
2003	Value	1.31	10.3	1.06	0.97	1.25		
	Score	1	4	1	1	1	8	Fair
2002	Value	2.24	10.2	1.63	1.75	0.14		
	Score	1	4	1	1	1	8	Fair
2001	Value	1.79	10.1	1.48	1.51	0.13		
	Score	1	4	1	1	1	8	Fair
2000	Value	0.79	9.6	0.73	0.45	0.15		
	Score	1	4	1	1	1	8	Fair

* Age data not collected

Table 20. Number of fish and the relative weight (Wr) for each length group of crappie at Taylorsville Lake in October 2010.

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	15	87 (1)	13	98 (2)	2	96 (11)	30	92 (2)
Black crappie	Total	49	90 (2)	46	89 (1)	3	93 (7)	98	90 (1)

Dataset = cfdntnvl.d10

Table 21. Length distribution and CPUE (fish/net-night) of white bass and hybrid striped bass collected during 12 net-nights of gill netting in Taylorsville Lake in October 2010; numbers in parentheses are standard errors.

Species	Inch class												Total	CPUE		
	6	7	8	9	10	11	12	13	14	15	16	17			18	
White bass	2	62	24	14	31	48	12	6	3						202	16.83 (5.92)
Hybrid striped bass			5	3	2	8	13	5	3	5	2	3	2		51	4.25 (1.35)

Dataset = cfdgntvl.d10

Table 22. Mean back calculated lengths (in) at each annulus for otoliths from hybrid striped bass gill netted at Taylorsville Lake in 2010.

Year class	Age	
	1	2
2009	No. 32	7.8
2008	No. 11	8.3
		14.5
Mean	43	7.9
Smallest		5.0
Largest		13.6
Std Error		0.3
95% ConLo		7.3
95% ConHi		8.5

Intercept Value = 0.00

Dataset = cfdagtlv.d10

Table 23. Age frequency and CPUE (fish/net-night) per inch class of hybrid striped bass gill netted for 12 net-nights at Taylorsville Lake in 2010.

Age	Inch class												Total	% CPUE	Std Err		
	8	9	10	11	12	13	14	15	16	17	18						
0+	5	1												6	11	0.48	0.14
1+	2	2	2	8	13	5	3	1						34	67	2.85	1.09
2+								4	2	3	2			11	22	0.92	0.35
Total	5	3	2	8	13	5	3	5	2	3	2	51	100	4.25	1.35		
%	10	6	4	16	25	10	6	10	4	6	4	100					

Dataset = cfdagtlv.d10 and cfdgntvl.d10

Table 24. Number of fish and the relative weight (Wr) for each length group of hybrid striped bass collected at Taylorsville Lake in October 2010.

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	18	86 (1)	21	83 (2)	12	85 (4)	51	85 (1)

Dataset = cfdgntvl.d10

Table 25. Population assessment for hybrid striped bass collected during fall gill netting at Taylorsville Lake from 2000-2010 (scoring based on statewide assessment).

Year		CPUE (excluding age 0)	Mean length age-2+ at capture	CPUE ≥15.0 in	CPUE age 1+	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2010	Value	3.75	16.7	1.00	2.85	-	-	6	Fair
	Score	1	2	1	2				
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 26. Mean back calculated lengths (in) at each annulus for otoliths from white bass gill netted at Taylorsville Lake in 2010.

Year class	No.	Age		
		1	2	3
2009	83	7.6		
2008	35	7.8	10.9	
2007	2	6.8	10.2	11.9
Mean	120	7.7	10.8	11.9
Smallest		3.7	9.6	10.8
Largest		11.0	12.9	13.0
Std Error		0.1	0.2	1.1
95% ConLo		7.4	10.5	9.8
95% ConHi		7.9	11.1	14.1

Intercept Value = 0.00

Dataset = cfdagtl.d10

Table 27. Age frequency and CPUE (fish/net-night) per inch class of white bass gill netted for 12 net-nights at Taylorsville Lake in 2010.

Age	Inch class									Total	%	CPUE	STD ERR
	6	7	8	9	10	11	12	13	14				
0+	2	59	9							70	34	5.81	1.97
1+		3	15	14	30	30	1			93	46	7.78	2.57
2+					1	17	11	5	3	37	18	3.08	1.47
3+						1		1		2	1	0.17	0.08
Total	2	62	24	14	31	48	12	6	3	202	100	16.83	5.92
%	1	31	12	7	15	24	6	3	1	100			

Dataset = cfdagtlv.d10 and cfdgntvl.d10

Table 28. Number of fish and the relative weight (Wr) for each length group of white bass collected at Taylorsville Lake in October 2010.

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	88	91 (1)	93	93 (1)	21	97 (1)	202	92 (1)

Dataset = cfdgntvl.d10

Table 29. Population assessment for white bass collected during fall gill netting at Taylorsville Lake from 2000-2010 (scoring based on statewide assessment).

Year		CPUE (excluding age 0)	Mean length age-2+ at capture	CPUE ≥12.0 in	CPUE age 1+	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2010	Value	11.00	12.1	1.75	7.78	1.920	85.3		
	Score	3	3	1	3			10	Good
2009	Value	1.30	NS	0.10	1.10	1.030	64.3		
	Score	1	0	1	1			3	Poor
2008	Value	2.00	12.1	0.30	1.60	1.157	68.6		
	Score	1	3	1	1			6	Fair
2007	Value	6.40	11.7	0.80	4.60	1.102	66.8		
	Score	2	2	1	2			7	Fair
2006	Value	4.30	11.7	0.80	3.00	1.040	64.6		
	Score	1	2	1	2			6	Fair
2005	Value	5.00	11.6	1.20	1.80	1.054	65.2		
	Score	2	2	1	1			6	Fair
2004	Value	8.60	11.4	0.10	7.30	2.030	86.9		
	Score	2	2	1	3			8	Fair
2003	Value	6.90	11.7	2.00	3.50	0.944	61.1		
	Score	2	2	1	2			7	Fair
2002	Value	5.90	11.8	1.30	2.60	1.113	67.1		
	Score	2	2	1	2			7	Fair
2001	Value	23.50	12.1	6.80	14.90	0.971	62.1		
	Score	4	3	3	4			14	Excellent
2000	Value	20.80	12.2	8.10	7.40	0.766	53.5		
	Score	4	3	3	3			13	Good

Table 30. 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 2010; numbers in parentheses are standard errors.

Location/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			
Upper																							
Largemouth bass	6	1	5	38	46	45	25	12	25	27	26	24	18	20	3	7	7	7	1	336	134.40 (9.32)		
Spotted bass				1		1	2	1	7	4	1									17	6.80 (1.47)		
Middle																							
Largemouth bass	1	5	3	18	62	73	41	18	29	29	17	45	45	26	17	10	10	7	3	459	183.60 (13.23)		
Spotted bass				3	6	5	6	16	32	20	3		1							92	36.80 (6.58)		
Lower																							
Largemouth bass	1	2	1	6	22	21	8	4	8	11	7	11	13	9	17	13	16	1	3	174	69.60 (4.81)		
Spotted bass			1	3	14	11	13	13	20	16	13	3	1							108	43.20 (6.36)		
Total																							
Largemouth bass	2	13	5	29	122	140	94	47	49	65	51	82	82	53	54	26	33	15	6	1	969	129.20 (10.23)	
Spotted bass			1	3	18	17	19	21	37	55	37	7	2							217	28.93 (4.19)		

Dataset = cfdpsher.d10

Table 31. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Herrington Lake from 1994-2010; 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)	69.07 (6.65)	40.40 (3.90)	21.60 (2.40)	1.07 (0.33)	174.27 (14.27)
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)
2010	41.47 (4.40)	34.00 (4.43)	28.67 (3.18)	25.07 (2.30)	0.93 (0.31)	129.20 (10.23)

Dataset = cfdpsher.d10 - .d94

Table 32. PSD and RSD₁₅ values obtained for largemouth bass from spring electrofishing samples in each area of Herrington Lake in 2010; confidence intervals are in parentheses.

Area	Species	No. ≥8.0 in	PSD	RSD ₁₅
Lower	Largemouth bass	121	74 (± 8)	49 (± 9)
Middle	Largemouth bass	297	61 (± 6)	25 (± 5)
Upper	Largemouth bass	240	55 (± 6)	23 (± 5)
Total	Largemouth bass	658	61 (± 4)	29 (± 3)

Dataset = cfdpsher.d10

Table 33. Population assessment for largemouth bass collected during spring electrofishing at Herrington Lake from 2000-2010 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE >15.0 in	Spring CPUE >20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2010	Value	13.7*	49.64	28.67	25.07	0.93	0.349	29.5%	16	Good
	Score	4	3	3	4	2				
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				

* Age data not collected

Table 34. Length distribution and CPUE (fish/hr) of black bass collected in 4.5 hours of 15-minute electrofishing runs for black bass in Herrington Lake in September 2010; 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		
Lower																					
Largemouth bass	2	5	3	15	20	10	11	12	4	4	4	3	1	3					1	98	65.33 (17.94)
Spotted bass		1	1	1			2	2	3	3	2									15	10.00 (4.59)
Middle																					
Largemouth bass	2	2	6	7	4	4	2	1	3		2	3	2	2	1			1	1	43	28.67 (3.33)
Spotted bass		1	1	1		5	2		4	5	3	1	2							25	16.67(6.65)
Upper																					
Largemouth bass				3	9	11	4	10	9	12	8	5	4	10	3	2	1	1	1	93	62.00 (11.63)
Spotted bass							2			1	4	1	1							9	6.00 (1.37)
Total																					
Largemouth bass	4	7	9	25	33	25	17	23	16	16	14	11	7	15	4	2	2	2	2	234	52.00(7.87)
Spotted bass		2	2	2		5	6	2	7	9	9	2	3							49	10.89 (2.78)

Dataset = cfdwrher.d10

Table 35. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Herrington Lake on 15 and 16 September 2010. 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	31	88 (1)	8	82 (4)	4	102 (3)	43	88 (1)
	Middle	6	98 (4)	7	93 (2)	5	78 (12)	18	90 (4)
	Upper	35	95 (3)	17	92 (2)	18	92 (3)	70	94 (2)
	Total	72	92 (2)	32	90 (2)	27	91 (3)	131	91 (1)

Dataset = cfdwrher.d10

Table 36. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Herrington Lake.

Year class	Area	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2001	Total	4.5	0.1	18.30	2.90	5.90	0.90	16.70	2.20
2002	Total	4.6	0.2	9.80	2.00	4.90	1.20	20.90	4.30
2003	Total	4.6	0.1	51.10	6.00	27.30	5.30	33.50	6.00
2004	Total	4.9	0.1	15.60	3.00	9.00	2.10	72.10	9.50
2005	Total	5.3	0.1	24.20	5.10	16.90	4.50	25.10	4.90
2006	Total	4.8	0.1	40.90	5.80	20.40	4.30	96.50	11.60
2007	Total	5.1	0.1	8.00	2.50	5.30	1.90	34.57	3.00
2008	Total	5.1	0.1	25.78	4.94	13.78	3.69	6.20	1.22
2009	Total	4.7	0.1	109.78	16.16	55.11	15.45	49.64	5.37
2010	Total	5.8	0.1	22.00	3.38	17.56	3.28		

Table 37. Species composition, relative abundance, and CPUE (fish/hr) of crappie collected in 4.5 hours of 15-minute electrofishing runs in Herrington Lake, March 2010; numbers in parentheses are standard errors.

Location/Species	Inch class													Total	CPUE
	2	3	4	5	6	7	8	9	10	11	12	13	14		
Upper															
White crappie	6	33	13	1	1		9	8	8	11	3	5		98	65.33 (17.52)
Black crappie		4				1	1		1					7	0.00 (0.00)
Middle															
White crappie						1	5	7	3	2				21	14.00 (10.16)
Black crappie					7	22	11	8	2				1	51	34.00 (17.58)
Lower															
White crappie								2			1			3	2.00 (1.37)
Black crappie					3	7	15	8	4	2	4	2		45	30.00 (12.34)
Total															
White crappie	6	33	13	1	1	1	14	17	11	14	6	5		122	27.11 (9.21)
Black crappie		4			10	30	27	16	7	2	4	2	1	103	22.89 (7.44)

Dataset = cfdpsher.d10

Table 38. PSD and RSD₁₀ values calculated for crappie collected at Herrington Lake in electrofished during March 2010.

Species	No. ≥ 5.0 in	PSD	RSD ₁₀
White crappie	70	96(± 5)	51 (± 12)
Black crappie	99	60 (± 10)	16 (± 7)

Dataset = cfdpsher.d10

Table 39. Mean back calculated lengths (in.) at each annulus for otoliths from white crappie electrofished at Herrington Lake in 2010.

Year class	No.	Age						
		1	2	3	4	5	6	7
2009	26	3.7						
2008	37	4.5	9.1					
2007	19	4.2	9.0	11.1				
2006	8	4.3	9.3	11.2	12.6			
2005	1	4.5	9.2	10.4	11.2	11.8		
2003	2	4.2	8.0	10.1	11.0	11.9	12.6	13.3
Mean	93	4.2	9.0	11.0	12.2	11.9	12.6	13.3
Smallest		2.6	5.9	10.0	11.0	11.8	12.4	12.9
Largest		7.2	11.0	11.9	13.4	12.0	12.8	13.7
Std Error		0.1	0.1	0.2	0.3	0.1	0.2	0.4
95% ConLo		4.0	8.9	10.8	11.7	11.7	12.3	12.5
95% ConHi		4.3	9.2	11.2	12.7	12.0	12.9	14.1

Intercept value = 0.00

Dataset = cfdagher.d10

Table 40. Age frequency and CPUE (fish/hr) per inch class of white crappie electrofished at Herrington Lake in 2010.

Age	Inch class												Total	%	CPUE	STD ERR	
	2	3	4	5	6	7	8	9	10	11	12	13					
1	6	33	13		1									53	43	11.78	4.85
2				1		1	14	17	4	1				38	31	8.43	3.43
3									7	11				18	15	4.04	1.39
4										1	5	3		9	8	2.06	0.74
5										1				1	1	0.21	0.07
6														0	0	0.00	0.00
7											1	2		3	2	0.59	0.26
Total	6	33	13	1	1	1	14	17	11	14	6	5		68	100	27.11	9.21
(%)	5	27	11	1	1	1	11	14	9	11	5	4		100			

Dataset = cfdpsher.d10 and cfdagher.d10

CPUE of ≥ 8.0 in White crappie = 14.89 ± 5.45 fish/hr; ≥ 10.0 in = 8.00 ± 2.67 fish/hr

Table 41. Population assessment for white crappie collected during spring electrofishing at Herrington Lake from 2003-2010 (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
2010	Value	27.11	9.1	14.89	8.00	8.43		
	Score	3	3	2	3	2	13	Good
2009	Value	17.00	9.1	17.00	9.50	7.60		
	Score	2	3	2	4	2	13	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 42. Mean back calculated lengths (in.) at each annulus for otoliths from black crappie electrofished at Herrington Lake in 2010.

Year class	No.	Age						
		1	2	3	4	5	6	7
2009	4	3.5						
2008	74	4.1	8.1					
2007	7	5.4	10.2	12.0				
2006	2	4.5	9.2	11.0	12.3			
2003	2	5.3	9.3	11.0	12.2	12.8	13.3	13.8
Mean	85	4.3	8.3	11.6	12.2	12.8	13.3	13.8
Smallest		2.7	6.0	10.0	11.6	12.4	12.8	13.3
Largest		7.9	11.6	13.2	12.8	13.3	13.7	14.2
Std Error		0.1	0.1	0.3	0.3	0.5	0.4	0.4
95% ConLo		4.0	8.0	11.0	11.7	11.9	12.4	12.9
95% ConHi		4.5	8.6	12.3	12.8	13.8	14.1	14.6

Intercept value = 0.00
Dataset = cfdagher.d10

Table 43. Age frequency and CPUE (fish/hr) per inch class of black crappie collected during 4.0 hours of electrofishing at Herrington Lake in 2010.

Age	Inch class										Total	CPUE		Std Err	
	3	6	7	8	9	10	11	12	13	14		%	CPUE		
1	4											4	4	0.89	0.52
2		10	30	27	16	5	1					89	86	19.70	7.06
3						2	1	2	1			7	7	1.50	0.69
4								2				2	2	0.36	0.21
5												0	0	0.00	0.00
6												0	0	0.00	0.00
6									1	1		2	2	0.44	0.30
Total	4	10	30	27	16	7	2	4	2	1	103	100	22.89	7.44	
%	4	10	29	26	16	7	2	4	2	1	100				

Dataset = cfdpsher.d10 and cfdagher.d10

CPUE of ≥ 8.0 in black crappie = 13.11 ± 5.45 fish/hr; ≥ 10.0 in = 3.56 ± 1.44 fish/hr

Table 44. Population assessment for black crappie collected during spring electrofishing at Herrington Lake from 2003-2010 (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
2010	Value	22.89	8.1	13.11	3.56	19.70		
	Score	2	1	2	1	2	8	Fair
2009	Value	7.80	9.1	7.50	4.50	3.10		
	Score	1	3	1	2	1	8	Fair
2008	Value	8.20	9.5	8.20	4.00	5.00		
	Score	1	4	1	2	1	9	Fair
2007	Value	11.10	9.4	10.20	4.40	8.70		
	Score	2	4	2	2	2	12	Good
2006	Value	7.10	9.2	6.70	5.80	1.00		
	Score	1	3	1	2	1	8	Fair
2005	Value	47.30	8.9	39.30	13.80	45.00		
	Score	4	3	4	4	4	19	Excellent
2004	Value	6.70	9.0	6.10	5.20	1.30		
	Score	1	1	1	2	1	8	Fair
2003	Value	3.00	8.0	2.20	1.70	1.00		
	Score	1	1	1	1	1	5	Poor

Table 45. Length distribution and CPUE (fish/net-night) of white bass and hybrid striped bass collected during 15 net-nights of gill netting in Herrington Lake in October 2010: 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	23		
White bass	2	12	1	6	51	37	15	7		1								132	8.80 (1.98)
Hybrid striped bass		2	4	26	3		3	6	40	22	3	1		1	1	1	1	114	7.60 (1.96)

Dataset = cfdgnher.d10

Table 46. Mean back calculated lengths (in.) at each annulus for otoliths from hybrid striped bass gill netted at Herrington Lake in 2010.

Year class	No.	Age				
		1	2	3	4	5
2009	71	11.6				
2008	3	13.4	18.2			
2007	1	13.7	17.8	20.6		
2005	1	14.5	18.4	21.0	22.6	23.2
Mean	76	11.7	18.1	20.8	22.6	23.2
Smallest		7.1	17.1	20.6	22.6	23.2
Largest		14.5	19.2	21.0	22.6	23.2
Std Error		0.2	0.3	0.2		
95% ConLo		11.4	17.5	20.4		
95% ConHi		12.0	18.8	21.2		

Intercept Value = 0.00
 Dataset = cfdagher.d10

Table 47. Age frequency and CPUE (fish/net-night) per inch class of hybrid striped bass gill netted for 15 net-nights at Herrington Lake in 2010.

Age	Inch class															Total	%	CPUE	Std Err	
	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22					23
0+	2	4	26	3													35	31	2.33	0.81
1+						3	6	40	22	3							74	65	4.93	1.57
2+											1		1	1			3	3	0.20	0.11
3+															1		1	1	0.07	0.07
4+																	0	0	0.00	0.00
5+															1		1	1	0.07	0.07
Total	2	4	26	3	0	3	6	40	22	3	1	0	1	1	1	1	114	100	7.60	1.96
%	2	4	23	3	0	3	6	40	22	3	1	0	1	1	1	1	100			

Dataset = cfdagher.d10 and cfdgnher.d10

Table 48. Population assessment for hybrid striped bass collected during fall gill netting at Herrington Lake from 2000-2010 (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
2010	Value	5.27	20.0	4.67	4.93	1.211	70.2	10	Good
	Score	2	4	2	2				
2009	Value	2.70	19.3	2.70	2.10	1.109	66.3	8	Fair
	Score	1	4	2	1				
2008	Value	6.00	20.2	6.00	3.60	0.912	59.8	11	Good
	Score	2	4	3	2				
2007	Value	6.20	20.6	4.90	5.30	1.122	67.4	11	Good
	Score	2	4	2	3				
2006	Value	1.30	21.4	1.30	4.00	0.633	46.9	8	Fair
	Score	1	4	1	2				
2005	Value	0.40	19.5	0.40	0.30	NA	NA	7	Fair
	Score	1	4	1	1				
2004	Value	4.60	20.8	2.20	0.10	NA	NA	7	Fair
	Score	1	4	1	1				
2003	Value	2.50	19.8	2.90	1.10	0.601	45.2	8	Fair
	Score	1	4	2	1				
2002	Value	3.10	20.8	7.00	3.60	0.770	53.7	11	Good
	Score	1	4	3	2				
2001	Value	8.20	20.1	4.70	0.80	NA	NA	8	Fair
	Score	2	4	2	1				
2000	Value	4.70	18.9	8.90	5.50	1.282	72.3	12	Good
	Score	1	4	3	3				

Table 49. Mean back calculated lengths (in.) at each annulus for otoliths from white bass gill netted at Herrington Lake in 2010.

Year class	No.	Age				
		1	2	3	4	5
2009	91	8.9				
2008	23	9.1	12.4			
2007	2	9.6	11.7	12.7		
2005	1	10.3	13.3	14.9	15.5	16.1
Mean	117	8.9	12.4	13.4	15.5	16.1
Smallest		6.0	11.6	12.7	15.5	16.1
Largest		10.6	13.3	14.9	15.5	16.1
Std Error		0.1	0.1	0.7		
95% ConLo		8.8	12.2	12.1		
95% ConHi		9.1	12.5	14.8		

Intercept Value = 0.00

Dataset = cfdagher.d10

Table 50. Age frequency and CPUE (fish/net-night) per inch class of white bass gill netted for 15 net-nights at Herrington Lake in 2010.

Age	Inch class										Total	%	CPUE	Std Err
	7	8	9	10	11	12	13	14	15	16				
0+	2	12									14	11	0.93	0.41
1+			1	6	51	34	1				93	70	6.20	1.79
2+						3	12	7			22	17	1.47	0.32
3+							2				2	1	0.13	0.05
4+											0	0	0.00	0.00
5+										1	1	1	0.07	0.07
Total	2	12	1	6	51	37	15	7		1	132	100	8.80	1.98
%	2	9	1	5	39	28	11	5		1	100			

Dataset = cfdagher.d10 and cfdgnher.d10

Table 51. Population assessment for white bass collected during fall gill netting at Herrington Lake from 2000-2010 (scoring based on statewide assessment).

Year		CPUE (excluding age 0)	Mean length age-2+ at capture	CPUE ≥ 12.0 in	CPUE age 1+	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2010	Value	7.87	13.6	4.00	6.20	1.351	74.1	11	Good
	Score	2	4	2	3				
2009	Value	3.40	13.1	2.30	2.67	0.900	59.3	8	Fair
	Score	2	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 52. Fishery statistics derived from a daytime creel survey at Herrington Lake (2,410 acres) during 16 March through 31 October 2010.

	2010		2004		1996	
	(3/16 to 10/31)		(3/7 to 10/31)		(3/3 to 11/02)	
Fishing Trips						
No. of fishing trips (per acre)	11,692	(4.85)	12,878	(5.34)	60,557	(25.13)
Fishing Pressure						
Total man-hours (S.E.) ^a	57,680	(1,455.05)	72,958	(1,861)	202,422	(12,227.53)
Man-hours/acre	23.93		30.27		83.99	
Catch / Harvest						
No. of fish caught (S.E.)	57,910	(5,351.89)	79,836	(8,260)	259,639	(25,875.61)
No. of fish harvested (S.E.)	33,396	(3,444.98)	27,343	(3,532)	120,406	(11,915.95)
Lb of fish harvested	18,903		13,606		57,629	
Harvest Rates						
Fish/hour	0.58		0.37		0.59	
Lb/hour	0.53		0.45		0.28	
Fish/acre	13.86		11.35		49.96	
Lb/acre	7.84		5.65		23.91	
Catch Rates						
Fish/hour	0.99		1.10		1.28	
Fish/acre	24.03		33.13		107.73	
Miscellaneous Characteristics						
Male	89.66		88.23		87.09	
Female	10.34		11.77		12.91	
Resident	98.37		98.06		94.13	
Non-resident	1.63		1.94		5.87	
Method (%)						
Still fishing	58.07		41.40		54.29	
Casting	33.45		50.81		40.74	
Fly	0.35		0.16		0.98	
Trolling	8.01		7.63		3.69	
Jugging	0.12					
Mode (%)						
Boat	77.00		90.16		84.04	
Bank	15.21		5.48		10.54	
Dock	7.78		4.35		5.42	

^a S.E. = Standard Error

Table 53. Fish harvest derived from a creel survey on Herrington Lake (2,410 acres) from 16 March to 31 October 2010.

	Black bass group	Largemouth bass	Spotted bass	Crappie group	White crappie	Black crappie	Catfish group	Channel catfish	Flathead catfish	Morone group	Hybrid striped bass	White bass
No. caught (per acre)	14,735.59 (6.11)	14,139.75 (5.87)	595.84 (0.25)	3,172.44 (1.32)	1,207.50 (0.50)	1,964.94 (0.82)	5,998.55 (2.49)	4,665.33 (1.94)	1,333.22 (0.55)	12,629.51 (5.24)	7,308.85 (3.03)	5,320.65 (2.21)
No. harvested (per acre)	1,533.94 (0.64)	1,236.10 (0.51)	297.84 (0.12)	3,044.53 (1.26)	1,207.50 (0.50)	1,837.03 (0.76)	5,724.64 (2.38)	4,391.42 (1.82)	1,333.22 (0.55)	7,490.00 (3.11)	4,408.20 (1.83)	3,081.81 (1.28)
% of total no. harvested	4.59	3.70	0.89	9.12	3.62	5.50	17.14	13.15	3.99	22.43	13.20	9.23
Lb. harvested (per acre)	1,727.2 (0.72)	1,524.3 (0.63)	202.9 (0.08)	1,539.8 (0.64)	483.7 (0.20)	1,056.1 (0.44)	5,407.1 (2.24)	3,465.9 (1.44)	1,941.2 (0.81)	8,123.3 (3.37)	6,414.9 (2.66)	1,708.4 (0.71)
% of total lb. harvested	9.14	8.06	1.07	8.15	2.56	5.59	28.60	18.34	10.27	42.97	33.94	9.04
Mean length (in)		13.5	11.4		10.0	10.1		13.2	15.6		14.2	11.0
Mean weight (lb)		1.23	0.66		0.46	0.56		0.75	1.50		1.44	0.60
No. of fishing trips for that species	3,004.62			1,506.04			770.70			2,101.71		
% of all trips	25.70			12.88			6.59			17.98		
Hours fished for that species (per acre)	14,822.79 (6.15)			7,429.82 (3.08)			3,802.16 (1.58)			10,368.44 (4.30)		
No. harvested fishing for that species	1,304			3,005			2,611			6,253		
Lb. harvested fishing for that species	1,531.3			1,499.3			2,740.1			7,295.4		
No./hour harvested fishing for that species	0.080			0.484			0.517			0.518		
% success fishing for that species	14.68			47.57			76.79			56.25		

Table 53 (cont). Fish harvest derived from a creel survey on Herrington Lake (2,410 acres) from 16 March to 31 October 2010.

	Panfish group	Bluegill	Drum	Carp	Gar	Anything
No. caught (per acre)	20,883.06 (8.67)	20,883.06 (8.67)	397.78 (0.17)	16.61 (0.01)	76.19 (0.03)	
No. harvested (per acre)	15,340.73 (6.37)	15,340.73 (6.37)	246.00 (0.10)	16.311 (0.01)		
% of total no. harvested	45.94	45.94	0.74	0.05		
Lb harvested (per acre)	1,679.3 (0.70)	1,679.3 (0.70)	364.0 (0.15)	62.4 (0.03)		
% of total lb harvested	8.88	8.88	1.93	0.33		
Mean length (in)		5.5	15.2	20.0		
Mean weight (lb)		0.11	1.49	3.76		
No. of fishing trips for that species	1,498.09					2,810.67
% of all trips	12.8					24.04
Hours fished for that species (per acre)	7,390.58 (3.07)					13,865.96 (5.75)
No. harvested fishing for that species	9,706					
Lb harvested fishing for that species	1,071.6					
No./hour harvested fishing for that species	1.496					
% success fishing for that species	77.39					50.73

Table 55. Black bass catch and harvest statistics derived from a creel survey at Herrington Lake (2,410 acres) for black bass caught and released by all anglers from 16 March to 31 October 2010.

	Largemouth bass				Spotted bass			
	Catch and Release		Catch and Release		Catch and Release			
	Harvest	12.0 – 14.9 in	≥15.0 in	Total	Harvest	12.0 – 14.9 in	≥15.0 in	Total
Total no of bass	1,236	4,488	1,073.58	14,140	298	43	596	
% of black bass harvested by no.	80.6				19.4			
Total weight of fish (lbs)	1,524	5,856	1,403	11,850	203	19	341	
% of black bass harvest by weight	88.3				11.7			
Mean length	13.5				11.4			
Mean weight	1.23				0.66			
Rate (fish/h)	0.021				0.004			

Table 56. Monthly black bass angling success at Herrington Lake during the 2010 creel survey.

Month	Total no. of black bass caught by all anglers		Total no. of black bass harvested by anglers		No. of fishing trips for black bass		Hours fished by black bass anglers		Black bass caught by black bass anglers		Black bass caught/hr by black bass anglers		Black bass harvested/hr by black bass anglers	
	anglers	black bass	anglers	black bass	trips	trips	anglers	black bass	anglers	black bass	anglers	black bass	anglers	black bass
March	1,846	235	495.85	2,446.20	1,812	0.62	201	0.07						
April	3,810	142	698.19	3,444.42	3,587	1.07	142	0.04						
May	1,437	90	299.26	1,476.34	1,406	1.07	90	0.07						
June	3,733	483	499.40	2,463.69	3,632	1.25	432	0.15						
July	439	146	173.41	855.51	293	0.59	-	-						
August	449	-	155.51	767.20	432	0.59	-	-						
September	1,300	132	322.75	1,592.23	1,234	0.71	132	0.08						
October	1,723	307	360.24	1,777.21	1,723	0.77	307	0.14						
Total	14,736	1,534	3,004.62	14,822.79	14,119	0.90	1,304	0.08						
Mean														

t = < 0.01

Table 57. Temperate bass (*Morones*) catch and harvest statistics derived from a creel survey at Herrington Lake (2,410 acres) from 16 March to 31 October 2010.

	Hybrid striped bass		White bass	
	Harvest	Catch and Release	Harvest	Catch and Release
	12.0 - 14.9 in	≥15.0 in	12.0 - 14.9 in	≥15.0 in
Total no of <i>Morones</i>	4,408	530	3,082	0
% of <i>Morones</i> harvested by no.	58.9%		41.1%	
Total weight of fish (lbs)	6,414	499	1,708	0
% of <i>Morones</i> harvest by weight	79.0%		21.0%	
Mean length	14.2		11.0	
Mean weight	1.44		0.60	
Rate (fish/h)	0.083		0.049	
		Total		Total
		898	245	17,808
		7,309	0	

Table 58. Monthly *Morone* angling success at Herrington Lake during the 2010 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	<i>Morones</i> caught by anglers	<i>Morones</i> caught/hr by <i>Morone</i> anglers	<i>Morones</i> harvested by <i>Morone</i> anglers	<i>Morones</i> harvested/hr by <i>Morone</i> anglers
			<i>Morones</i>	<i>Morones</i>					
March	1,107	537	-	-	-	-	-	-	-
April	3,607	1,966	1,520	2,498.89	2,249	0.75	1,520	0.51	
May	658	509	330	590.54	450	0.67	330	0.49	
June	3,962	1,702	1,625	2,309.71	3,428	1.22	1,625	0.58	
July	1,025	1,025	1,025	1,711.02	1,025	0.60	1,025	0.60	
August	880	598	598	1,918.00	880	0.43	598	0.30	
September	658	494	494	460.91	543	0.80	494	0.72	
October	732	661	661	698.19	732	0.93	661	0.84	
Total	12,630	7,490	6,253	10,368.44	9,307	0.76	6,253	0.52	
Mean									

Table 59. Crappie catch and harvest statistics derived from a creel survey at Herrington Lake (2,410 acres) for crappie caught and released by all anglers from 16 March to 31 October 2010.

	White crappie				Black crappie			
	Harvest	Catch and Release <9.0 in	Catch and Release ≥9.0 in	Total	Harvest	Catch and Release <9.0 in	Catch and Release ≥9.0 in	Total
Total no of crappie	1,208			1,208	1,837	1,274	23	9,287
% of crappie harvested by no.	39.7			60.3				
Total weight of fish (lbs)	484			484	1,056	238	12	4,981
% of crappie harvest by weight	31.4			68.6				
Mean length	10.0			10.1				
Mean weight	0.46			0.56				
Rate (fish/hr)	0.021			0.031				

Table 60. Monthly crappie angling success at Herrington Lake during the 2010 creel survey.

Month	Total no. of crappie caught by all anglers		Total no. of crappie harvested by all anglers	No. of fishing trips for crappie	Hours fished by crappie anglers	Crappie caught/hr by crappie anglers		Crappie harvested by crappie anglers	Crappie harvested/hr by crappie anglers
	crappie anglers	crappie anglers				Crappie caught/hr by crappie anglers	Crappie harvested/hr by crappie anglers		
March	604	537	537	386	1,902.60	604	0.41	537	0.36
April	1,277	1,216	1,216	479	2,363.81	1,176	0.54	1,176	0.54
May	120	120	120	40	196.85	120	0.67	120	0.67
June	25	25	25	62	307.96	25	0.17	25	0.17
July	-	-	-	-	-	-	-	-	-
August	-	-	-	-	-	-	-	-	-
September	132	132	132	51	251.41	132	0.50	132	0.50
October	1,015	1,015	1,015	463	2,284.98	1,015	0.49	1,015	0.49
Total	3,172	3,045	3,045	1,506	7,429.82	3,072	0.49	3,005	0.48
Mean									

Table 61. Panfish catch and harvest statistics derived from a creel survey at Herrington Lake (2,410 acres) for panfish caught and released by all anglers from 16 March to 31 October 2010.

	Bluegill		
	Harvest	Catch and Release	
		6.0-9.9 in	≥10.0 in
Total no	15,341	518	72
Total			20,883
% of panfish harvested by no.	100.0		
Total weight of fish (lbs)	1,679	28	5.1
% of panfish harvest by weight	100.0		
Mean length	5.5		
Mean weight	0.11		
Rate (fish/h)	0.273		

Table 62. Monthly panfish angling success at Herrington Lake during the 2010 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	
	panfish anglers	panfish anglers				panfish anglers	panfish anglers		
March	134	134	134	18	90.60	134	1.333	134	1.333
April	1,966	1,074	1,074	68	337.69	709	2.917	304	1.250
May	4,130	2,993	2,993	299	1,476.34	3,292	2.651	2,424	1.952
June	6,552	3,606	3,606	359	1,770.77	3,734	2.492	1,905	1.271
July	2,074	2,074	2,074	186	916.62	707	0.795	707	0.795
August	2,541	2,375	2,375	222	1,096.00	1,827	1.833	1,827	1.833
September	1,810	1,810	1,810	229	1,131.32	1,579	1.466	1,579	1.466
October	1,676	1,275	1,275	116	571.25	1,227	2.600	826	1.750
Total	20,883	15,341	15,341	1,498	7,390.58	13,209	1.960	9,706	1.496
Mean									

Table 63. Catfish catch and harvest statistics derived from a creel survey at Herrington Lake (2,410 acres) for catfish caught and released by all anglers from 16 March to 31 October 2010.

	Channel catfish Catch and Release		Flathead catfish Catch and Release		Total	Harvest	Total	Harvest	Total
	Harvest	12.0-14.9 in ≥15.0 in	12.0-14.9 in ≥15.0 in	12.0-14.9 in ≥15.0 in					
Total no of catfish	4,391	82	0	0	4,665	1,333	4,665	1,333	12,154
% of catfish harvested by no.	76.7%					23.3%			
Total weight of fish (lbs)	3,466	22	0	0	3,540	1,941	3,540	1,941	19,235
% of catfish harvest by weight	64.1%					35.9%			
Mean length	13.2					15.5			
Mean weight	0.75					1.50			
Rate (fish/h)	0.073					0.025			

Table 64. Monthly catfish angling success at Herrington Lake during the 2010 creel survey.

Month	Total no. of catfish		No. of fishing trips for catfish	Hours fished by catfish anglers	Catfish caught by catfish anglers		Catfish caught/hr by catfish anglers		Catfish harvested by catfish anglers		Catfish harvested/hr by catfish anglers
	by all anglers	harvested by all anglers			catfish	anglers	catfish	anglers	catfish	anglers	
March	134	101	18	90.60	67	67	0.80	0.80	67	67	0.80
April	203	142	-	-	-	-	-	-	-	-	-
May	1,796	1,616	319	1,574.76	1,347	1,347	0.56	0.56	1,197	1,197	0.50
June	1,092	1,092	94	461.94	203	203	0.34	0.34	203	203	0.34
July	878	878	50	244.43	171	171	0.67	0.67	171	171	0.67
August	615	615	111	548.00	266	266	0.34	0.34	266	266	0.34
September	691	691	127	628.51	330	330	0.58	0.58	330	330	0.58
October	590	590	51	253.89	377	377	1.23	1.23	377	377	1.23
Total	5,999	5,725	771	3,802.13	2,761	2,761	0.54	0.54	2,611	2,611	0.52
Mean											

HERRINGTON LAKE ANGLER ATTITUDE SURVEY 2010

(based on 130 surveys)

1. Have you been surveyed this year? Yes - stop survey No – continue
2. Name _____ and Phone number _____ (Optional)
3. Which species of fish do you fish for at Herrington Lake (**check all that apply**)?
Crappie **63.1%** Bass **43.8%** Hybrid Striped Bass **21.5%** White Bass **20.8%** Channel Catfish **9.2%** Flathead Catfish **7.7%**
Bluegill **3.1%**
4. Which one species do you fish for most at Herrington Lake (**check only one**)?
Crappie **50.0%** Bass **36.4%** Channel Catfish **5.1%** Hybrid Striped Bass **4.2%** Bluegill **2.5%** Flathead Catfish **1.7%**

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

Bass Anglers (57 responses)

5. In general, what level of satisfaction do you have with bass fishing at Herrington Lake?
Very satisfied **17.5%** Somewhat satisfied **73.7%** Neutral **8.8%** Somewhat dissatisfied **0.0%** Very dissatisfied **0.0%**
No opinion **0.0%**

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

None

Crappie Anglers (81 responses)

6. In general, what level of satisfaction do you have with the crappie fishing at Herrington Lake?
Very satisfied **4.9%** Somewhat satisfied **70.4%** Neutral **11.1%** Somewhat dissatisfied **11.1%** Very dissatisfied **2.5%**

6a. If you responded with somewhat or very dissatisfied in question (10) – what is the single most important reason for your dissatisfaction?

Number of fish **100.0%**

Hybrid Striped Bass Anglers (27 responses)

7. In general, what level of satisfaction do you have with the bluegill fishing at Herrington Lake?
Very satisfied **3.7%** Somewhat satisfied **48.1%** Neutral **40.7%** Somewhat dissatisfied **7.4%** 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?

Number of fish **100.0%**

White Bass Anglers (27 responses)

8. In general, what level of satisfaction do you have with the white bass fishing at Herrington Lake?
Very satisfied **0.0%** Somewhat satisfied **25.9%** Neutral **48.1%** Somewhat dissatisfied **25.9%** Very dissatisfied **0.0%**
No opinion **0.0%**

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 **100.0%**

Channel catfish Anglers (11 responses)

9. In general, what level of satisfaction do you have with the channel catfish fishing at Herrington Lake?
Very satisfied **9.1%** Somewhat satisfied **81.8%** Neutral **0.0%** Somewhat dissatisfied **9.1%** Very dissatisfied **0.0%**
No opinion **0.0%**

9a. If you responded with somewhat or very dissatisfied in question (12) – what is the single most important reason for your dissatisfaction?

Size of fish 100.0%

Flathead Catfish Anglers (10 responses)

10. In general, what level of satisfaction do you have with the flathead catfish fishing at Herrington Lake?

Very satisfied 0.0% Somewhat satisfied 90.0% Neutral 10.0% Somewhat dissatisfied 0.0% Very dissatisfied 0.0%

10a. If you responded with somewhat or very dissatisfied in question (6) – what is the single most important reason for your dissatisfaction?

None

All Anglers

11. Would you support or oppose a reduction in the current statewide 30 fish daily crappie creel limit to 20 fish?
Support 96.8% Oppose 2.4% No opinion 0.8%

12. How many times do you fish Herrington Lake a year?

First Time 4.1% 1 to 4 36.6% 5 to 10 45.5% More than 10 13.8%

13. Are you satisfied with the current size and creel limits on all sport fish at Herrington Lake?

Yes 86.0% No 14.0%

Table 65. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected in 6.0 hours of 15-minute electrofishing runs in Guist Creek Lake, April 2010; 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	3	65	95	20	24	74	67	31	20	34	51	61	46	52	61	69	56	28	14	3	1	875	145.83 (8.43)	

Dataset = cfdpsgcl.d10

Table 66. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Guist Creek Lake from 1992-2010 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)
2010	46.83 (4.07)	25.33 (2.57)	26.33 (2.86)	47.33 (4.59)	3.00 (0.77)	145.83 (8.43)

Dataset = cfdpsgcl.d10 - d92

Table 67. PSD and RSD₁₅ values obtained for largemouth bass from spring electrofishing samples in Guist Creek Lake in 2010; confidence intervals are in parentheses.

Species	PSD		RSD ₁₅
	No. >8.0 in	74 (± 4)	
Largemouth bass	594	74 (± 4)	44 (± 4)

Dataset = cfdpsgcl.d10

Table 68. Population assessment for largemouth bass collected during spring electrofishing at Guist Creek Lake from 2000-2010 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE >15.0 in	Spring CPUE >20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2010	Value	11.0*	31.50	26.33	47.33	3.00	0.267	23.5	14	Good
	Score	3	2	2	4	3				
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				

* Age data not collected

Table 69. 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 2010: 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	2	32	25	25	46	21	18	13	8	8	6	8	12	5	4	2	3		1	239	159.33 (12.19)

Dataset = cfdwrgcl.d10

Table 70. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Guist Creek Lake on 16 September 2010. Standard errors are in parentheses.

Species	Area	Length group						Total	
		8.0–11.9 in		12.0–14.9 in		≥15.0 in		No.	Wr
		No.	Wr	No.	Wr	No.	Wr		
Largemouth bass	Total	60	90 (1)	21	97 (1)	27	102 (2)	108	94 (1)

Dataset = cfdwrgcl.d10

Table 71. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Guist Creek Lake.

Year class	Area	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2000	Total	3.6	0.1	19.50	4.00	0.00		25.70	5.30
2001	Total	3.9	0.1	65.30	14.00	1.00	0.50	23.80	6.70
2002	Total	4.7	0.1	47.30	7.60	19.30	2.80	16.30	3.30
2003	Total	4.0	0.1	30.70	8.20	6.00	2.00	22.10	4.80
2004	Total	4.0	0.1	40.70	6.00	0.70	0.70	21.40	4.20
2005	Total	4.5	0.1	24.50	4.40	5.00	2.00	15.20	4.50
2006	Total	3.9	0.1	50.70	8.50	10.00	4.20	15.50	2.20
2007	Total	3.8	0.2	12.70	4.20	2.70	1.70	8.13	1.99
2008	Total	3.2	0.1	139.33	23.58	0.67	0.67	6.67	2.38
2009	Total	3.7	0.1	51.33	9.77	0.67	0.67	31.50	3.13
2010	Total	4.9	0.1	41.33	4.22	18.67	1.98		

Table 72. Length distribution and CPUE (fish/net-night) of hybrid striped bass collected during 8 net-nights of gill netting in Guist Creek Lake in November 2010; numbers in parentheses are standard errors.

Species	Inch class											Total	CPUE	
	8	9	10	11	12	13	21	22	23	24	25			26
Hybrid striped bass	1	6	12	3	1	1	1	1	3	1	1	1	32	4.00 (2.05)

Dataset = cfdgngcl.d10

Table 73. Mean back calculated lengths (in) at each annulus for otoliths from hybrid striped bass gill netted at Guist Creek Lake in 2010.

Year class	No.	Age						
		1	2	3	4	5	6	7
2009	21	6.4						
2008	1	7.4	9.9					
2007	5	8.1	16.2	20.5				
2005	1	9.3	18.8	20.9	23.3	25.0		
2004	1	10.5	16.9	20.5	22.9	24.3	26.3	
2003	1	8.1	15.4	19.3	21.3	23.0	23.7	24.2
Mean	30	7.0	15.8	20.4	22.5	24.1	25.0	24.2
Smallest		5.2	9.9	19.3	21.3	23.0	23.7	24.2
Largest		10.5	18.8	21.2	23.3	25.0	26.3	24.2
Std Error		0.2	0.8	0.2	0.6	0.6	1.3	
95% ConLo		6.6	14.2	20.0	21.3	23.0	22.4	
95% ConHi		7.5	17.4	20.8	23.8	25.2	27.6	

Intercept Value = 0.00
 Dataset = cfdaggcl.d10

Table 74. Age frequency and CPUE (fish/nn) per inch class of hybrid striped bass gill netted for 8 net-nights at Guist Creek Lake in 2010.

Age	Inch class												Total	%	CPUE	STD ERR
	8	9	10	11	12	13	21	22	23	24	25	26				
1+	1	6	12	3	1								23	72	2.88	1.92
2+						1							1	3	0.13	0.13
3+							1	1	3				5	16	0.63	0.26
4+													0	0	0.00	0.00
5+											1		1	3	0.13	0.13
6+												1	1	3	0.13	0.13
7+									1				1	3	0.13	0.13
Total	1	6	12	3	1	1	1	1	3	1	1	1	32	100	4.00	2.05
%	3	19	38	9	3	3	3	3	9	3	3	3	100			

Dataset = cfdaggcl.d10 and cfdgngcl.d10

Table 75. Number of fish and the relative weight (Wr) for each length group of hybrid striped bass collected at Guist Creek Lake in November 2010.

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	22	74 (1)	2	89 (4)	8	88 (3)	32	79 (2)

Dataset = cfdgngcl.d10

Table 76. Population assessment for hybrid striped bass collected during fall gill netting at Guist Creek Lake from 2000-2010 (scoring based on statewide assessment).

Year		CPUE (excluding age 0)	Mean length age-2+ at capture	CPUE ≥15.0 in	CPUE age 1+	Total score	Assessment rating
2010	Value	1.13	13.2	1.00	2.88		
	Score	1	1	1	2	5	Poor
2009	Value	2.00	18.5	2.00	1.30		
	Score	1	4	1	1	7	Fair
2008	Value	0.90	16.8	0.80	0.10		
	Score	1	3	1	1	5	Poor
2007	Value	8.80	18.4	8.30	0.50		
	Score	2	4	3	1	10	Good
2006	Value	3.40	17.1	3.10	0.30		
	Score	1	3	2	1	7	Fair
2005	Value	3.30	14.9	2.90	0.30		
	Score	1	1	2	1	5	Poor
2004	Value	3.60	17.4	2.50	0.90		
	Score	1	3	2	1	7	Fair
2003	Value	3.50	18.0	3.30	0.30		
	Score	1	4	2	1	8	Fair
2002	Value	4.30	17.2	3.50	0.80		
	Score	1	3	2	1	7	Fair
2001	Value	2.30	17.1	1.50	0.80		
	Score	1	3	1	1	6	Fair
2000	Value	15.60	17.2	9.00	6.40		
	Score	3	3	3	3	12	Good

Table 77. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 4.50 hours of 15-minute electrofishing runs in Beaver Lake, April 2010; 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	6	84	132	94	29	9	47	130	263	164	73	28	8	2	0	1	1	1	1072	238.22 (14.25)

Dataset = cfdpsbvr.d10

Table 78. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Beaver Lake from 1992-2010; 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)	136.40 (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)	96.50 (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)
2010	76.67 (6.84)	99.78 (8.51)	58.89 (4.53)	2.89 (0.71)	0.22 (0.22)	238.22 (14.25)

Dataset = cfdpsbvr.d10 - .d92

Table 79. PSD and RSD₁₅ values obtained for largemouth bass from spring electrofishing samples in Beaver Lake in 2010; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD ₁₅
Largemouth bass	727	38 (± 4)	2 (± 1)

Dataset = cfdpsbvr.d10

Table 80. Mean back calculated lengths (in.) at each annulus for otoliths from largemouth bass collected from Beaver Lake in 2010.

Year	No.	Age													
		1	2	3	4	5	6	7	8	9	10	11			
2009	41	5.6													
2008	12	4.8	9.0												
2007	20	6.3	9.1	10.7											
2006	1	6.5	10.0	11.5	12.2										
2005	13	6.4	9.3	11.3	12.5	13.2									
2004	3	5.4	9.1	11.0	12.3	13.1	13.6								
2003	7	5.6	8.8	10.6	11.4	12.3	13.1	13.6							
2002	3	6.1	8.4	10.0	11.0	11.6	12.1	12.6	12.9						
2001	1	6.9	10.0	11.4	12.5	12.9	13.2	13.6	13.8	14.1					
1999	1	3.7	6.6	7.9	9.2	10.1	10.4	10.8	11.1	11.5	11.9	12.1			
Mean	102	5.7	9.1	10.8	12.0	12.7	12.8	13.1	12.8	12.8	11.9	12.1			
Smallest		3.2	6.6	7.9	9.2	10.1	10.4	10.8	11.1	11.5	11.9	12.1			
Largest		8.6	11.0	12.2	13.5	14.3	14.5	15.1	13.8	14.1	11.9	12.1			
Std Error		0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.5	1.3					
95% ConLo		5.5	8.9	10.5	11.6	12.3	12.3	12.5	11.9	10.2					
95% ConHi		6.0	9.3	11.1	12.3	13.1	13.1	13.7	13.6	15.4					

Intercept value = 0.00
Dataset = cfdagbvr.d10

Table 81. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 4.50 hours of electrofishing at Beaver Lake during April 2010. 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	6	84	132	94	29														345	32	76.67	6.84
2						8	38	14											60	6	13.23	1.83
3						2	9	116	210	33									370	34	82.15	6.41
4										16									16	2	3.64	0.27
5									53	49	20	20							142	13	31.49	2.35
6										20				2		1			23	2	5.09	0.76
7										33	20	4	8						65	6	14.38	1.36
8										16	13							1	31	3	6.82	0.54
9													4				1		5	0	1.10	0.29
10																			0	0	0.00	0.00
11											16								16	2	3.64	0.27
Total	6	84	132	94	29	9	47	130	263	164	73	28	8	2	0	1	1	1	1072	100	238.22	14.25
%	1	1	0	1	3	11	14	13	21	21	10	3	0	1	0	0	0	0	100			

Dataset = cfdpsbvr.d10 and cfdagbvr.d10 (bass ages for >15 inches were from cfdagbvr.d07)

Table 82 Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from Beaver Lake from 1999-2010.

Age	Year			
	2001	2003	2007	2010
1	47.80	133.20	2.00	76.67
2	149.00	68.80	58.40	13.23
3	14.40	29.80	55.20	82.15
4	14.30	64.40	90.60	3.64
5	15.30	5.60	33.90	31.49
6	15.60	0.00	9.30	5.09
7	4.80	3.50	5.10	14.38
8	2.60	5.30	3.60	6.82
9	5.70	0.50	1.00	1.10
10	1.40	0.00	0.00	0.00
11	0.50	0.50	0.00	3.64
12	2.20	0.50	0.00	0.00

Table 83 Population assessment for largemouth bass collected during spring electrofishing at Beaver Lake from 2000-2010 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE >15.0 in	Spring CPUE >20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2010	Value	10.7	76.67	58.89	2.89	0.22	0.293	25.4	12	Good
	Score	2	4	4	1	1				
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	2	2	4	2	3				
2007	Value	10.3	2.00	42.50	10.00	3.00	0.622	46.3	11	Fair
	Score	2	1	3	2	3				
2006	Value	10.7*	108.30	40.00	10.00	2.50	0.683	49.5	14	Good
	Score	2	4	3	2	3				
2005	Value	10.7*	38.70	42.00	15.00	4.50	0.725	51.6	13	Good
	Score	2	2	3	2	4				
2004	Value	10.7*	97.60	48.00	17.00	2.00	0.694	50.0	15	Good
	Score	2	4	3	3	3				
2003	Value	10.7	133.20	20.00	18.00	2.00	0.540	41.7	14	Good
	Score	2	4	2	3	3				
2002	Value	11.7*	35.40	16.00	32.00	2.50	0.401	33.0	14	Good
	Score	2	3	1	4	3				
2001	Value	11.7	47.80	25.50	39.00	4.00	0.416	34.0	17	Excellent
	Score	2	4	2	4	4				
2000	Value	10.7*	31.50	30.00	24.50	3.00	*	*	12	Good
	Score	2	2	2	3	3				

* Age data not collected

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 2010; numbers in parentheses are standard errors.

Species	Inch class															Total	CPUE
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
Largemouth bass	5	23	23	7	6	6	36	27	17	35	53	32	4	2	1	277	184.67 (29.94)

Dataset = cfdwrivr.d10

Table 85. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Beaver Lake on 20 September 2010. 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	92	83 (1)	56	80 (2)	3	82 (2)	151	81 (1)

Dataset = cfdwrbvr.d10

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	76.67	6.84
2010	Total	4.0	0.1	38.67	14.11	4.67	2.17		

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 2010; numbers in parentheses are standard errors.

Species	Inch class										Total	CPUE
	1	2	3	4	5	6	7	8	9	10		
Bluegill	7	82	170	134	33	13	48	11			498	199.20 (17.54)
Redear sunfish		1	5	20	29	32	37	49	32	3	208	83.20 (10.53)

Dataset = cfdpsbvr.d10

Table 88. PSD and RSD values calculated for sunfish collected during 2.50 hours of electrofishing at Beaver Lake during May 2010. Fish were collected in 7.5-minute runs.

Species	No. \geq stock size	PSD	RSD ^a
Bluegill	409	17 (\pm 4)	3 (\pm 2)
Redear sunfish	202	60 (\pm 7)	17 (\pm 5)

^aBluegill = RSD₈; Redear = RSD₉
 Dataset = cfdpsbvr.d10

Table 89. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from Beaver Lake from 1992-2010; numbers in parentheses are standard errors.

Year	Length group				Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	\geq 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)
2010	35.60 (8.18)	134.80 (10.61)	24.40 (5.85)	4.40 (1.48)	199.20 (17.54)

Dataset = cfdpsbvr.d10 - .d92

Table 90. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from Beaver Lake in 2010.

Year class	No.	Age								
		1	2	3	4	5	6	7	8	9
2009	19	2.7								
2008	26	2.0	4.5							
2007	14	2.3	3.8	6.3						
2006	7	2.1	4.2	5.9	7.3					
2005	3	2.0	3.8	5.9	7.0	7.8				
2004	2	2.3	4.0	6.1	6.9	7.5	8.0			
2003	2	2.0	4.0	5.2	6.4	6.9	7.2	7.7		
2002	1	2.7	4.4	5.4	6.7	7.1	7.5	7.8	8.1	
2001	1	1.9	4.6	5.5	6.1	6.7	7.2	7.7	7.9	8.3
Mean	75	2.3	4.2	6.0	7.0	7.3	7.5	7.7	8.0	8.3
Smallest		1.2	2.6	4.9	5.9	6.7	7.2	7.5	7.9	8.3
Largest		4.0	6.0	7.8	7.9	8.1	8.3	7.8	8.1	8.3
Std Error		0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	
95% ConLo		2.1	4.0	5.8	6.7	7.0	7.2	7.5	7.8	
95% ConHi		2.4	4.4	6.3	7.3	7.7	7.9	7.8	8.2	

Intercept value = 0.00
 Dataset = cfdagbvr.d10

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 2010. Fish were collected in 7.5-minute runs.

Age	Inch class								Total	%	CPUE	Std Err
	1	2	3	4	5	6	7	8				
1	7	82	85						174	35	69.60	10.73
2			85	134	21				240	48	96.00	7.61
3					12	12	8		32	6	12.62	2.74
4						1	24		25	5	10.18	2.46
5							4	4	8	2	3.36	0.77
6							4	2	6	1	2.48	0.54
7							8		8	2	3.20	0.78
8								2	2	0	0.88	0.30
9								2	2	0	0.88	0.30
Total	7	82	170	134	33	13	48	11	498	100	199.20	17.54
%	1	16	34	27	7	3	10	2	100			

Dataset = cfdagbvr.d10 and cfdpsbvr.d10

Table 92. Electrofishing catch rate (fish/hr) of each age of bluegill collected from Beaver Lake from 2001-2010.

Age	Year									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	44.80	10.20	31.10	31.70	13.60	6.90	10.70	63.80	25.33	69.60
2	167.70	70.40	100.10	102.20	63.20	45.10	22.40	103.29	55.81	96.00
3	140.00	201.70	26.40	17.90	62.00	33.80	29.30	18.53	16.54	12.62
4		49.50	119.60	50.60	37.80	36.20	27.50	11.44	10.16	10.18
5		1.80	26.80	79.90	32.30	11.90	3.70	10.45	8.16	3.36
6				15.30	15.80	0.90	7.40	7.79	2.53	2.48
7						10.30	0.30	3.09	0.53	3.20
8							1.10	1.95	0.00	0.88
9								3.66	0.53	0.88

Table 93. Population assessment for bluegill collected during spring electrofishing at Beaver Lake from 2001-2010 (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
2010	Value	4.5	3-3+	28.80	4.40	0.594	44.8	9	Fair
	Score	3	3	2	1				
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
	Score	3	4	4	0				

Table 94. Electrofishing CPUE (fish/hr) for each length group of redear sunfish collected from Beaver Lake from 1992-2010; 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)
2010	0.40 (0.40)	21.60 (3.90)	27.60 (4.40)	33.60 (6.95)	1.20 (0.88)	83.20 (10.53)

Dataset = cfdpsbvr.d10 - .d92

Table 95. Mean back calculated lengths (in.) at each annulus for otoliths from redear sunfish collected from Beaver Lake in 2010.

Year	No.	Age						
		1	2	3	4	5	6	7
2009	5	3.1						
2008	23	2.2	5.3					
2007	15	2.7	4.4	7.5				
2006	6	2.6	5.1	6.6	8.5			
2005	3	2.7	4.7	6.8	8.0	9.2		
2004	7	2.8	4.4	6.3	7.7	8.5	9.3	
2003	3	2.6	4.5	6.3	7.6	8.5	9.1	9.7
Mean	62	2.5	4.9	7.0	8.0	8.7	9.3	9.7
Smallest		1.9	3.5	5.8	7.3	8.1	8.7	9.4
Largest		3.5	6.6	8.1	8.8	9.7	9.8	10.1
Std Error		0.1	0.1	0.1	0.1	0.1	0.1	0.2
95% ConLo		2.4	4.7	6.7	7.8	8.4	9.1	9.4
95% ConHi		2.6	5.1	7.2	8.2	8.9	9.5	10.1

Intercept value = 0.00

Dataset = cfdagbvr.d10

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 2010. Fish were collected in 7.5-minute runs.

Age	Inch class									Total	%	CPUE	STD
	2	3	4	5	6	7	8	9	10				ERR
1	1	5								6	3	2.41	1.18
2			20	29	27					76	36	30.27	4.31
3					5	34	20			59	28	23.43	3.76
4						3	25			28	13	11.15	2.39
5							5	6		11	5	4.29	0.93
6								20		20	10	8.15	1.97
7								6	3	9	4	3.53	0.89
Total	1	5	20	29	32	37	49	32	3	208	100	83.80	10.53
%	0	2	10	14	15	18	24	15	1	100			

Dataset = cfdagbvr.d10 and cfdpsbvr.d10

Table 97. Electrofishing catch rate (fish/hr) of each age of redear sunfish collected from Beaver Lake from 2000-2010.

Age	Year									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	11.40	0.30	2.40	8.80	0.00	0.40	16.30	11.54	1.47	2.41
2	48.60	37.90	18.30	28.50	23.60	27.30	44.20	11.86	26.33	30.27
3	4.50	61.70	37.80	14.00	97.10	41.10	48.40	23.18	13.59	23.43
4	4.50	30.80	58.30	57.50	9.90	71.80	21.80	21.68	8.18	11.15
5	4.00	2.90			54.10	0.00	0.70	37.44	21.59	4.29
6		0.80			5.00	14.00	0.20	61.45	8.24	8.15
7						9.90		1.75	1.40	3.53
8								5.09		

Table 98. Population assessment for redear sunfish collected during spring electrofishing at Beaver Lake from 2001-2010 (scoring based on statewide assessment).

Year		Mean length age-3+ at capture	Years to 8.0 in	CPUE ≥8.0 in	CPUE ≥10.0 in	Total score	Assessment rating
2010	Value	7.5	4-4+	33.60	1.20	12	Good
	Score	4	3	4	1		
2009	Value	6.7	4-4+	29.60	0.00	11	Good
	Score	4	3	4	0		
2008	Value	6.3	4-4+	90.40	0.00	10	Fair
	Score	3	3	4	0		
2007	Value	6.3	4-4+	32.40	0.00	10	Fair
	Score	3	3	4	0		
2006	Value	5.7	4-4+	35.70	0.00	9	Fair
	Score	2	3	4	0		
2005	Value	6.4	4-4+	62.40	0.00	10	Fair
	Score	3	3	4	0		
2004	Value	6.6*	4-4+*	26.40	0.00	11	Good
	Score	4	3	4	0		
2003	Value	6.6	4-4+	7.20	0.00	9	Fair
	Score	4	3	2	0		
2002	Value	6.4*	3-3+*	7.20	0.80	10	Fair
	Score	3	4	2	1		
2001	Value	6.4	3-3+	8.50	0.50	10	Fair
	Score	3	4	2	1		

Table 99. Number of fish and the relative weight (Wr) for each length group of bluegill and redear sunfish collected at Beaver Lake on 20 September and 1 October, 2010. 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				118	88 (1)
	76	90 (1)	51	86 (1)	1	86				
Redear sunfish	1.0–3.9 in		4.0–6.9 in		7.0–9.0 in		≥9.0 in		97	96 (1)
	0		57	97 (1)	30	96 (1)	10	93 (3)		

Dataset = cfdwrivr.d10

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 2010; 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	2	20	11	16	32	39	18	22	23	28	27	10	19	8	5	2	7	7	1	297	148.50 (10.70)

Dataset = cfdpsbol.d10

Table 101. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Boltz Lake from 1991-2010; 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)
2010	50.50 (5.63)	51.00 (4.88)	32.50 (4.37)	24.50 (2.44)	4.00 (1.31)	148.50 (10.70)

Dataset = cfdpsbol.d10 - .d91

Table 102. PSD and RSD₁₅ values obtained for largemouth bass from spring electrofishing samples in Boltz Lake in 2010; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD ₁₅
Largemouth bass	216	53 (± 7)	23 (± 7)

Dataset = cfdpsbol.d10

Table 103. Mean back calculated lengths (in.) at each annulus for otoliths from largemouth bass collected from Boltz Lake in 2010.

Year	No.	Age														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2009	17	5.1														
2008	32	4.3	7.4													
2007	18	5.3	8.4	10.3												
2006	23	5.5	8.8	10.8	12.1											
2005	12	5.7	9.6	12.0	13.5	14.5										
2004	2	6.3	9.9	12.3	14.1	15.1	15.9									
2003	2	5.7	8.9	11.8	14.0	15.7	16.4	17.0								
2002	1	6.6	8.9	12.0	14.6	15.9	16.4	17.2	17.6							
1999	2	8.3	10.6	12.3	13.0	14.5	15.6	16.6	17.6	18.2	18.6	18.9				
1998	1	8.5	12.7	14.1	15.5	16.5	17.3	18.0	18.6	18.9	19.3	20.1	20.5			
1997	1	5.2	9.9	11.5	12.6	13.4	14.7	15.7	16.1	16.4	16.9	17.1	17.4	17.6		
1996	1	5.4	8.7	11.4	12.7	13.4	15.0	15.8	16.5	16.9	17.4	17.7	18.1	19.0	19.4	
1995	1	8.1	11.2	13.0	14.8	15.7	16.8	17.7	18.2	18.7	19.3	19.7	20.3	20.8	20.9	21.1
Mean	113	5.2	8.5	11.1	12.9	14.8	16.0	16.9	17.4	17.9	18.4	18.7	19.1	19.1	20.2	21.1
Smallest		3.1	5.6	7.6	9.5	12.6	14.7	15.7	16.1	16.4	16.9	17.1	17.4	17.6	19.4	21.1
Largest		8.6	12.7	14.1	15.5	16.8	17.4	18.0	18.6	18.9	19.3	20.1	20.5	20.8	20.9	21.1
Std Error		0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.8	0.9	0.8	
95% ConLo		5.0	8.2	10.8	12.5	14.3	15.4	16.3	16.8	17.1	17.5	17.8	17.5	17.3	18.7	
95% ConHi		5.4	8.7	11.4	13.3	15.2	16.6	17.5	18.1	18.7	19.2	19.6	20.6	20.9	21.7	

Intercept value = 0.00

Dataset = cfdagbvr.d10

Table 104. Age frequency and CPUE (fish/hr) per inch class of largemouth bass collected during 2.00 hours of electrofishing at Boltz Lake during April 2010. 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	2	20	9	3																	33	11	16.73	3.58	
2			2	13	32	24	5														77	26	38.66	3.14	
3					15	11	15	10	3												54	18	26.92	2.31	
4						2	7	13	22	20	2										66	22	32.91	4.36	
5									3	7	8	16									33	11	16.69	2.23	
6											3	4									7	2	3.58	0.49	
7												4				1					5	2	2.50	0.82	
8																3					3	1	1.25	0.75	
9																					0	0	0.00	0.00	
10																					0	0	0.00	0.00	
11																	1	4			5	2	2.25	0.70	
12																			7		7	2	3.50	0.91	
13																3					3	1	1.25	0.75	
14																			4		4	1	1.75	0.59	
15																					1	1	0	0.50	0.50
Total	2	20	11	16	32	39	18	22	23	28	27	10	19	8	5	2	7	7	1	297	100	148.50	10.70		
%	1	7	4	5	11	13	6	7	8	9	9	3	6	3	2	1	2	2	0	100					

Dataset = cfdagbol.d10 and cfdpsbol.d10

Table 105. Electrofishing catch rate (fish/hr) of each age of largemouth bass collected from Boltz Lake from 2000-2010.

Age	Year					
	2000	2001	2002	2003	2006	2010
1	55.00	0.80	0.80	0.00	7.00	16.73
2	52.60	29.60	11.20	16.10	28.70	38.66
3	50.80	115.30	101.80	23.80	22.90	26.92
4	115.00	81.60	27.20	47.00	14.30	32.91
5	132.00	42.30	18.80	16.50	1.20	16.69
6	62.20	55.30	18.10	15.40	6.30	3.58
7	5.20	41.90	23.00	20.90	5.00	2.50
8	1.60	10.10	12.00	8.20	3.50	1.25
9	0.80	3.20	7.00	2.60	3.50	0.00
10				0.80	1.50	0.00
11					0.50	2.25
12						3.50
13						1.25
14						1.75
15						0.50

Table 106. Population assessment for largemouth bass collected during spring electrofishing at Boltz Lake from 2000-2010 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2010	Value	10.3	16.73	32.50	24.50	4.00	0.290	25.2	13	Good
	Score	2	2	2	3	4				
2009	Value	10.3*	3.50	22.00	29.50	4.00	0.235	21.0	12	Good
	Score	2	1	2	3	4				
2008	Value	10.3*	4.00	18.50	17.50	4.00	0.336	28.6	11	Fair
	Score	2	1	1	3	4				
2007	Value	10.3*	20.50	17.00	20.00	1.00	0.340	28.8	10	Fair
	Score	2	2	1	3	2				
2006	Value	10.3	7.00	17.00	18.00	1.00	0.358	30.1	9	Fair
	Score	2	1	1	3	2				
2005	Value	10.6*	15.50	21.00	20.00	0.00	0.447	36.1	8	Fair
	Score	2	1	2	3	0				
2004	Value	10.6*	51.00	19.50	25.50	2.00	0.348	29.4	12	Good
	Score	2	3	1	3	3				
2003	Value	10.6	0.00	61.30	40.00	0.00	0.377	31.4	10	Fair
	Score	2	0	4	4	0				
2002	Value	10.7	0.80	67.20	45.60	0.80	0.334	28.4	12	Good
	Score	2	1	4	4	3				
2001	Value	9.0	0.80	133.60	9.60	0.00	0.349	29.5	8	Fair
	Score	1	1	4	2	0				
2000	Value	10.4	55.00	226.40	8.80	0.80	0.550	42.3	12	Good
	Score	2	3	4	2	1				

* Age data not collected

Table 107. 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 2010: 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	6	21	22	9	20	17	10	10	9	7	7	5	1	4	1		2		1	152	101.33 (5.33)
Dataset = cfdwrbol.d10																					

Table 108. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Boltz Lake on 20 September 2010. 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	46	85 (2)	19	94 (2)	9	95 (3)	74	89 (1)

Dataset = cfdwrbol.d10

Table 109. 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)	16.73	(3.58)
2010	54	4.9	(0.11)	36.00	(5.84)	18.00	(5.24)		

*Only includes wild largemouth bass CPUE for age-1 year class, stocked largemouth bass were marked by fin clip and removed from dataset.

Table 110. 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 2010; numbers in parentheses are standard errors.

Species	Inch class						Total	CPUE
	2	3	4	5	6	7		
Bluegill	92	68	23	15	94	32	324	259.20 (32.16)

Dataset = cfdpsbol.d10

Table 111. PSD and RSD₈ values calculated for bluegill collected during 1.25 hour of electrofishing at Boltz Lake during May 2010. Fish were collected in 7.5-minute runs.

Species	No. ≥ 3.0 in	PSD	RSD ₈
Bluegill	232	54 (± 6)	0 (± 0)

Dataset = cfdpsbol.d10

Table 112. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from Boltz Lake from 1992-2010; 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)
2010	73.60 (18.70)	84.80 (15.37)	100.80 (23.56)		259.20 (32.16)

Dataset = cfdpsbol.d10

Table 113. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from Boltz Lake in 2010.

Year	No.	Age				
		1	2	3	4	5
2009	20	2.9				
2008	11	2.6	4.5			
2007	15	2.9	4.8	5.9		
2006	9	2.8	4.7	6.2	6.9	
2005	4	3.2	5.4	6.3	6.9	7.3
Mean	59	2.8	4.7	6.1	6.9	7.3
Smallest		1.6	3.8	5.0	5.7	7.0
Largest		4.1	5.8	7.0	7.5	7.5
Std Error		0.1	0.1	0.1	0.1	0.1
95% ConLo		2.7	4.6	5.8	6.6	7.1
95% ConHi		3.0	4.9	6.3	7.2	7.6

Intercept value = 0.00

Dataset = cfdagbvr.d10

Table 114. Age frequency and CPUE (fish/hr) per inch class of bluegill collected during 1.25 hours of electrofishing at Boltz Lake during May 2010. Fish were collected in 7.5-minute runs.

Age	Inch class						Total	%	CPUE	Std
	2	3	4	5	6	7				Err
1	92	68					160	49	128.00	28.52
2			21	3			23	7	18.74	2.80
3			2	11	81	2	96	30	76.99	16.68
4				1	13	20	34	11	27.59	7.11
5						10	10	3	7.88	2.72
Total	92	68	23	15	94	32	324	100	259.20	32.16
%	28	21	7	5	29	10	100			

Dataset = cfdagbol.d10 and cfdpsbol.d10

Table 115. Electrofishing catch rate (fish/hr) of each age of bluegill collected from Boltz Lake from 2001-2010.

Age	Year									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	10.0	165.6	207.7	321.7	154.8	537.0	267.0	240.58	5.60	128.00
2	373.20	173.8	197.8	186.6	156.4	41.8	66.7	200.75	155.04	18.74
3	51.0	238.7	81.2	48.0	27.4	16.1	34.2	49.36	22.56	76.99
4	2.7	7.5	94.8	24.3	6.5	32.4		4.88	24.16	27.59
5	0.8	2.2		8.7	3.3	6.7		7.55	4.32	7.88
6					4.0	1.0		4.08	4.32	

Table 116. Population assessment for bluegill collected during spring electrofishing at Boltz Lake from 2000-2010 (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
2010	Value	4.5	2-2+	100.80	0.00	*	*		
	Score	3	4	4	0			11	Good
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 117. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 4.0 hours of 15-minute electrofishing runs in Bullock Pen Lake, April 2010; 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
Largemouth bass	6	14	7	54	51	31	17	30	29	41	33	39	52	52	27	29	10	6	1	529	132.25 (13.90)

Dataset = cfdpsbpl.d10

Table 118. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Bullock Pen Lake from 1991-2010; 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)
2010	33.00 (7.05)	26.75 (3.74)	28.25 (3.36)	44.25 (6.21)	1.75 (0.63)	132.25 (13.90)

Dataset = cfdpsbpl.d10 - .d91

Table 119. PSD and RSD₁₅ values obtained for largemouth bass from spring electrofishing samples in Bullock Pen Lake in 2010; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD ₁₅
Largemouth bass	397	73 (± 4)	45 (± 5)

Dataset = cfdpsbpl.d10

Table 120 Population assessment for largemouth bass collected during spring electrofishing at Bullock Pen Lake from 2000-2010 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE >20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2010	Value	10.2*	6.40	28.25	44.25	1.75	0.254	22.4	11	Fair
	Score	2	1	2	4	2				
2009	Value	10.2*	0.80	42.50	54.00	7.50	0.223	20.0	14	Good
	Score	2	1	3	4	4				
2008	Value	10.2*	2.10	75.00	62.50	1.50	0.269	23.6	13	Good
	Score	2	1	4	4	2				
2007	Value	10.2*	3.40	32.00	44.00	0.50	0.294	25.4	10	Fair
	Score	2	1	2	4	1				
2006	Value	10.2	2.50	25.50	62.50	1.00	0.238	21.2	11	Fair
	Score	2	1	2	4	2				
2005	Value	10.7*	1.30	38.00	63.00	3.50	0.183	16.7	13	Good
	Score	2	1	3	4	3				
2004	Value	10.7*	0.00	45.00	57.50	2.50	0.265	23.3	12	Good
	Score	2	0	3	4	3				
2003	Value	10.7	1.80	32.50	56.50	0.50	0.323	27.6	10	Fair
	Score	2	1	2	4	1				
2002	Value	10.9	0.50	41.50	54.50	1.50	0.375	31.2	13	Good
	Score	3	1	3	4	2				
2001	Value	10.0	0.00	38.50	66.00	2.50	0.174	16.0	11	Fair
	Score	1	0	3	4	3				
2000	Value	9.3	6.80	21.00	42.40	0.50	0.186	17.0	9	Fair
	Score	1	1	2	4	1				

* Age data not collected

Table 121. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for black bass in Bullock Pen Lake in September 2010: 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	13	21	21	27	33	9	22	19	13	12	20	16	28	27	15	12	9	3	1	321	214.00 (15.34)		

Dataset = cfdwrpbpl.d10

Table 122. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Bullock Pen Lake on 21 September 2010. Standard errors are in parentheses.

Species	Area	Length group						Total	
		8.0-11.9 in		12.0-14.9 in		≥15.0 in			
		No.	Wr	No.	Wr	No.	Wr	No.	Wr
Largemouth bass	Total	63	90 (1)	48	94 (1)	95	102 (1)	206	97 (1)

Dataset = cfdwrtpi.d10

Table 123. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Bullock Pen Lake.

Year class	Area	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
1997	Total	3.6	(0.1)	34.00	(11.90)	0.70	(0.70)	3.00	(1.70)
1998	Total	3.5	(0.1)	28.00	(8.40)	1.30	(1.30)	4.00	(0.90)
1999	Total	3.7	(0.1)	30.00	(6.10)	2.00	(1.40)	6.80	(2.60)
2000	Total	3.8	(0.3)	6.30	(1.50)	0.00		0.00	
2001	Total	3.6	(0.2)	12.00	(2.70)	1.30	(0.80)	0.50	(0.50)
2002	Total	3.1	(0.1)	17.30	(4.60)	0.00		1.80	(0.70)
2003	Total	3.3	(0.1)	22.00	(8.10)	0.00		0.00	
2004	Total	4.1	(0.2)	16.00	(3.70)	4.00	(1.50)	*	
2005	Total	3.5	(0.1)	28.00	(8.10)	2.00	(0.90)	2.50	(1.30)
2006	Total	4.2	(0.2)	4.00	(1.50)	0.00		3.40	(1.10)
2007	Total	4.1	(0.2)	6.70	(2.00)	0.70	(0.70)	2.10	(1.13)
2008	Total	4.1	(0.2)	20.67	(5.60)	5.33	(1.69)	0.80	(0.52)
2009	Total	4.5	(0.4)	8.67	(2.40)	4.67	(1.91)	3.70	(1.41)
2010	Total	4.8	(0.1)	42.67	(8.04)	20.00	(3.72)		

*1 Largemouth bass were stocked, and were not able to be distinguished from the wild age-1 largemouth bass

Table 124. 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 2010; 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				
Largemouth bass	1	36	6	18	94	47	38	20	15	5	6	6	6	5	9	10	6	4	8	334	167.00 (13.64)

Dataset = cfdpscor.d10

Table 125. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Corinth Lake from 1992-2010; 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)	
2010	77.50 (7.01)	60.00 (8.28)	8.50 (1.59)	21.00 (4.94)	4.00 (1.31)	167.00 (13.64)	

Dataset = cfdpscor.d10 - .d92

Table 126. PSD and RSD₁₅ values obtained for largemouth bass from spring electrofishing samples in Corinth Lake in 2010; confidence intervals are in parentheses.

Species	No. ≥ 8.0 in	PSD	RSD ₁₅
Largemouth bass	179	33 (± 7)	23 (± 6)

Dataset = cfdpscor.d10

Table 127. Population assessment for largemouth bass collected during spring electrofishing at Corinth Lake from 2000-2010 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE >20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2010	Value	11.1*	46.17	8.50	21.00	4.00	0.423	34.5	14	Good
	Score	3	3	1	3	4				
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*	11.11	29.00	34.50	1.50	0.454	36.5	11	Fair
	Score	2	1	2	4	2				
2005	Value	10.1*	32.44	72.00	20.50	2.50	0.756	53.1	14	Good
	Score	2	2	4	3	3				
2004	Value	10.1*	21.06	40.00	5.00	1.00	0.871	58.1	10	Fair
	Score	2	2	3	1	2				
2003	Value	10.1*	54.30	23.30	6.00	0.70	0.77	54.0	9	Fair
	Score	2	3	2	1	1				
2002	Value	10.1	35.30	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				

* Age data not collected

Table 128. 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 22 September 2010: 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		
Largemouth bass	1	8	100	101	10	13	34	34	15	16	11	2	1	3	2	2	2	355	236.67 (16.11)

Dataset = cfdwrcor.d10

Table 129. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Corinth Lake on 22 September 2010. 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	78	85 (1)	29	86 (1)	10	95 (3)	117	86 (1)

Dataset = cfdwrcor.d10

Table 130. 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	21.06	5.10
2004	Total	4.0	0.1	74.00	6.20	2.70	1.30	32.44	4.20
2005	Total	4.4	0.1	41.30	2.70	4.70	1.20	11.11	2.70
2006	Total	4.9	0.1	176.50	15.20	78.00	9.940	86.67	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	39.67	3.30
2010	Total	5.9	0.04	140.00	9.91	134.00	8.18		

Table 131. Species composition, relative abundance, and CPUE (fish/hr) of bluegill and redear sunfish collected in 3.50 hours of 7.5-minute electrofishing runs in Corinth Lake, May 2010; numbers in parentheses are standard errors.

Species	Inch class									Total	CPUE
	1	2	3	4	5	6	7	8	9		
Bluegill	2	31	153	162	128	185	8			669	191.14 (15.54)
Redear sunfish		3	7	7	11	35	31	38	4	136	38.86 (4.97)

Dataset = cfdpscor.d10

Table 132. PSD and RSD values calculated for sunfish collected during 3.50 hours of electrofishing at Corinth Lake during May 2010. Fish were collected in 7.5-minute runs.

Species	No. \geq stock size	PSD	RSD ^a
Bluegill	636	30 (\pm 4)	0 (\pm 0)
Redear sunfish	126	58 (\pm 9)	3 (\pm 3)

^aBluegill = RSD₈; Redear = RSD₉
Dataset = cfdpscor.d10

Table 133. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from Corinth Lake from 1992-2010; numbers in parentheses are standard errors.

Year	Length group				Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	\geq 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)
2010	9.43 (2.57)	126.57 (11.13)	55.14 (6.85)	0.00	191.14 (15.54)

Dataset = cfdpscor.d10

Table 134. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from Corinth Lake in 2010.

Year	No.	Age							
		1	2	3	4	5	6	7	8
2009	11	2.4							
2008	18	2.1	4.0						
2007	9	2.3	4.4	5.6					
2006	13	2.2	4.2	5.5	6.2				
2005	7	2.5	4.7	5.9	6.6	7.0			
2002	1	1.9	4.0	5.6	5.9	6.4	6.7	7.1	7.4
Mean	59	2.3	4.2	5.6	6.3	6.9	6.7	7.1	7.4
Smallest		1.1	3.2	4.7	5.2	6.1	6.7	7.1	7.4
Largest		3.5	5.2	6.3	7.1	7.3	6.7	7.1	7.4
Std Error		0.1	0.1	0.1	0.1	0.1			
95% ConLo		2.1	4.1	5.5	6.1	6.6			
95% ConHi		2.4	4.4	5.8	6.6	7.2			

Intercept value = 0.00

Dataset = cfdagcor.d10

Table 135. Age frequency and CPUE (fish/hr) per inch class of bluegill collected during 3.50 hours of electrofishing at Corinth Lake during May 2010. Fish were collected in 7.5-minute runs.

Age	Inch class							Total	%	CPUE	Std Err
	1	2	3	4	5	6	7				
1	2	31	19					52	8	14.89	2.89
2			134	149				282	42	80.68	7.90
3				43	85	34		132	20	37.85	4.03
4					43	135	2	179	27	51.14	5.46
5						17	5	22	3	6.33	1.02
6								0	0	0.00	0.00
7								0	0	0.00	0.00
8							1	1	0	0.25	0.11
Total	2	31	153	162	128	185	8	669	100	191.14	15.54
%	0	5	23	24	19	28	1	100			

Dataset = cfdagcor.d10 and cfdpscor.d10

Table 136. Electrofishing catch rate (fish/hr) of each age of bluegill collected from Corinth Lake from 2000-2010.

Age	Year									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	11.50	2.40	14.20	23.30	12.00	47.70	29.50	8.12	47.42	14.89
2	167.50	108.40	153.80	142.00	200.80	168.30	123.60	149.70	68.32	80.68
3	140.90	71.80	47.80	33.60	98.30	27.20	22.40	45.38	88.27	37.85
4	1.50	16.60	22.10	20.60	34.20	40.40	74.30	24.16	114.30	51.14
5	3.90		33.20	34.20	11.50	0.70	10.20	39.44	4.65	6.33
6								24.00	4.65	0.00
7										0.00
8										0.25

Table 137. Population assessment for bluegill collected during spring electrofishing at Corinth Lake from 2000-2010 (scoring based on statewide assessment).

Year		Mean length age-2+ at capture	Years to 6.0 in	CPUE ≥6.0 in	CPUE ≥8.0 in	Total score	Assessment rating
2010	Value	4.0	3-3+	55.14	0.00	8	Fair
	Score	2	3	3	0		
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 138. Electrofishing CPUE (fish/hr) for each length group of redear sunfish collected from Corinth Lake from 1992-2010; 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)
2010	0.86 (0.48)	7.14 (1.45)	18.86 (2.97)	12.00 (2.49)	0.00 (0.00)	38.86 (4.97)

Dataset = cfdpscor.d10

Table 139. Mean back calculated lengths (in.) at each annulus for otoliths from redear sunfish collected from Corinth Lake in 2010.

Year	No.	Age						
		1	2	3	4	5	6	7
2009	12	3.3						
2008	22	2.7	5.4					
2007	9	3.0	5.8	7.1				
2006	12	3.0	5.8	7.3	8.0			
2005	1	3.8	6.5	7.9	8.8	9.5		
2004	1	2.3	5.6	7.2	8.2	8.7	9.0	
2003	1	2.4	5.2	7.0	7.6	8.5	9.1	9.5
Mean	58	3.0	5.6	7.2	8.1	8.9	9.1	9.0
Smallest		1.6	3.1	6.1	6.9	8.5	9.0	9.0
Largest		4.1	6.6	8.0	8.8	9.5	9.1	9.0
Std Error		0.1	0.1	0.1	0.1	0.3	0.1	
95% ConLo		2.8	5.4	7.0	7.8	8.3	8.9	
95% ConHi		3.1	5.8	7.4	8.3	9.5	9.2	

Intercept value = 0.00

Dataset = cfdagcor.d10

Table 140. Age frequency and CPUE (fish/hr) per inch class of redear sunfish collected during 3.50 hours of electrofishing at Corinth Lake during May 2010. Fish were collected in 7.5-minute runs.

Age	Inch class								Total	%	CPUE	Std Err
	2	3	4	5	6	7	8	9				
1	3	5	2						11	8	3.08	0.97
2		2	5	11	25				42	31	11.92	1.63
3					7	27	3		37	27	10.58	1.91
4					4	4	35		42	31	12.14	2.40
5								1	1	1	0.38	0.18
6								1	1	1	0.38	0.18
7								1	1	1	0.38	0.18
Total	3	7	7	11	35	31	38	4	136	100	38.86	4.97
%	2	5	5	8	26	23	28	3	100			

Dataset = cfdagcor.d10 and cfdpscor.d10

Table 141. Electrofishing catch rate (fish/hr) of each age of redear sunfish collected from Corinth Lake from 2002-2010.

Age	Year									
	2002	2003	2004	2005	2006	2007	2008	2009	2010	
1	0.8	2.2	2.8	5.2	1.2	5.20	39.14	14.64	3.08	
2	7.2	10.0	14.3	41.9	17.7	10.31	7.42	68.67	11.92	
3	50.7	26.5	25.1	40.8	51.1	17.41	7.74	2.62	10.58	
4	32.3	12.1	7.7	7.3	10.8	27.70	15.13	7.02	12.14	
5				3.2		3.37	2.17	11.77	0.38	
6								0.88	0.38	
7									0.38	
8										
9										
10	1.8	0.7	0.5							

Table 142. Population assessment for redear sunfish collected during spring electrofishing at Corinth Lake from 2001-2010 (scoring based on statewide assessment).

Year		Mean length age-3+ at capture	Years to 8.0 in	CPUE ≥8.0 in	CPUE ≥10.0 in	Total score	Assessment rating
2010	Value	7.1	3-3+	12.00	0.00	11	Good
	Score	4	4	3	0		
2009	Value	7.7	3-3+	38.00	0.40	13	Good
	Score	4	4	4	1		
2008	Value	8.0	3-3+	27.60	0.00	12	Good
	Score	4	4	4	0		
2007	Value	7.6	3-3+	21.20	0.00	12	Good
	Score	4	4	4	0		
2006	Value	7.3	3-3+*	7.60	0.40	11	Good
	Score	4	4	2	1		
2005	Value	7.6	3-3+	31.20	3.20	14	Excellent
	Score	4	4	4	2		
2004	Value	9.1*	2-2+	19.20	14.40	16	Excellent
	Score	4	4	4	4		
2003	Value	9.1*	2-2+	28.40	24.90	16	Excellent
	Score	4	4	4	4		
2002	Value	9.1	2-2+	82.40	52.00	16	Excellent
	Score	4	4	4	4		

* Age data not collected

Table 143. Number of fish and the relative weight (Wr) for each length group of bluegill and redear sunfish collected at Corinth Lake on 22 September and 6 October, 2010. 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				124	89 (2)
	76	96 (3)	48	77 (1)						
Redear sunfish	1.0-3.9 in		4.0-6.9 in		7.0-9.0 in		≥9.0 in		101	92 (1)
	4	87 (14)	56	93 (1)	37	93 (1)	4	82 (2)		

Dataset = cfdwrcor.d10

Table 144. Length composition, relative abundance, and CPUE (fish/set-night) of channel catfish at Corinth Lake. Channel catfish were collected using baited, tandem hoop nets (72 hours soak time) that were set on 27 September 2010. 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
	8	9	10	11	12	13	14	15	16	17		
Channel catfish	1	19	97	98	40	12	6	3	1	1	278	92.67 (46.78)

Dataset = cfdhncor.d10

Table 145. PSD and RSD₂₄ values obtained for channel catfish from tandem hoop net samples in Corinth Lake in 2010; confidence intervals are in parentheses.

Species	No. >stock size	PSD	RSD ₂₄
Channel catfish	161	1 (± 0.5)	0 (± 0)

Dataset = cfhncor.d10

Table 146. Mean length at capture of channel catfish sampled from Corinth Lake in 2010.

	Age				
	1+	2+	3+	4+	5+
Number of fish	24	10	14	8	1
Mean length (in.)	10.5	12.8	13.3	14.4	17.9
Std error	(0.2)	(0.3)	(0.3)	(0.5)	(-)
Smallest (in.)	8.7	11.3	11.4	11.5	17.9
Largest (in.)	12.3	13.8	15.0	16.0	17.9

Table 147. Age frequency and CPUE (fish/hr) per inch class of channel catfish collected during a 72 hour set of tandem hoop nets at Corinth Lake during September 2010. Fish were collected using baited, tandem hoop nets (72 hours soak time) that were set on 27 September 2010.

Age	Inch class												Total	% CPUE	Std Err		
	8	9	10	11	12	13	14	15	16	17	18	19					
1+	1	19	97	59	9									185	66	61.56	33.04
2+				20	13	5								38	14	12.80	5.77
3+				10	18	5	3	2						37	13	12.37	5.62
4+				10		1	3	2	1					17	6	5.61	2.46
5+										1				1	0	0.33	0.33
Total	1	19	97	98	40	12	6	3	1	1	278	100	92.67	46.78			
%	0	7	35	35	14	4	2	1	0	0	100						

Dataset = cfhncor.d10 and cfdagcor.d10

Table 148. Number of fish and the relative weight (Wr) for each length group of channel catfish collected at Corinth Lake in September 2010. Standard errors are in parentheses.

Species	Area	Length group						Total	
		11.0-15.9 in		16.0-23.9 in		≥ 24.0 in			
Channel catfish	Total	No.	Wr	No.	Wr	No.	Wr	No.	Wr
		59	92 (1)	2	96 (2)	0		61	92 (1)

Dataset = cfhncor.d10 and cfdagcor.d10

Table 149. Fishery statistics derived from a daytime creel survey at Corinth Lake (96 acres) during 17 March through 31 October 2010.

	2010		2002	
	(3/17 to 10/31)		(4/1 to 6/30)	
Fishing Trips				
No. of fishing trips (per acre)	2,620	(27.29)	2,481	(25.84)
Fishing Pressure				
Total man-hours (S.E.) ^a	10,054	(461.70)	10,063	(413.78)
Man-hours/acre	104.73		104.83	
Catch / Harvest				
No. of fish caught (S.E.)	18,492	(2879.73)	23,610	(2,519.63)
No. of fish harvested (S.E.)	4,760	(1,111.87)	12,802	(1,806.54)
Lb of fish harvested	1,228		2,647	
Harvest Rates				
Fish/hour	0.48		1.31	
Lb/hour	0.27		0.73	
Fish/acre	49.58		133.25	
Lb/acre	12.79		27.58	
Catch Rates				
Fish/hour	1.87		2.40	
Fish/acre	192.62		245.94	
Miscellaneous Characteristics				
Male	83.7		89.8	
Female	16.3		10.2	
Resident	95.7		99.1	
Non-resident	4.3		0.9	
Method (%)				
Still fishing	71.7		69.8	
Casting	26.1		29.3	
Fly	1.9		0.9	
Trolling	0.3			
Mode (%)				
Boat	77.6		82.1	
Bank	12.1		10.7	
Dock	10.3		7.2	

^a S.E. = Standard Error

Table 150. Fish harvest derived from a creel survey on Corinth Lake (96 acres) from 17 March to 31 October 2010.

	Black bass group	Largemouth bass	Crappie group	Black crappie	White crappie	Catfish group	Channel catfish	Bullhead catfish	Panfish group	Bluegill	Redear sunfish	Wamouth	Carp	Anything
No. caught (per acre)	2,747.21 (28.62)	2,747.21 (28.62)	1,161.92 (12.10)	1,095.75 (11.41)	66.77 (0.69)	2,422.58 (25.24)	2,415.88 (25.17)	6.71 (0.07)	12,153.31 (126.60)	11,563.60 (120.45)	575.01 (5.99)	14.70 (0.15)	6.71 (0.07)	
No. harvested (per acre)	129.74 (1.35)	129.74 (1.35)	726.67 (7.57)	660.50 (6.88)	66.17 (0.69)	346.22 (3.61)	346.22 (3.61)		3,557.15 (37.05)	3,244.45 (33.80)	312.70 (3.26)			
% of total no. harvested	2.73	2.73	15.27	13.88	1.39	7.27	7.27		74.73	68.16	6.57			
Lb harvested (per acre)	145.6 (1.52)	145.6 (1.52)	287.4 (2.99)	258.5 (2.69)	28.9 (0.30)	274.6 (2.86)	274.6 (2.86)		520.1 (5.42)	427.7 (4.46)	92.4 (0.96)			
% of total lb harvested	11.86	11.86	23.41	21.06	2.35	22.37	22.37		42.36	34.84	7.53			
Mean length (in)		12.8		9.5	9.9		14.1			6.0	7.5			
Mean weight (lb)		1.07		0.48	0.44		0.96			0.14	0.30			
No. of fishing trips for that species	646.44		84.31			258.34			1,011.24					619.42
% of all trips	24.68		3.22			9.86			38.60					23.64
Hours fished for that species (per acre)	2,480.92 (25.84)		323.55 (3.37)			991.47 (10.33)			3,880.96 (40.43)					2,377.23 (24.76)
No. harvested fishing for that species	95		513			171			3,321					
Lb harvested fishing for that species	112.4		194.6			126.3			487.5					
No./hour harvested fishing for that species	0.036		1.516			0.233			0.866					
% success fishing for that species	8.50		73.68			24.07			33.20					11.03

Table 151. Length distribution (length of released fish are estimated) for each species of fish harvested at Corinth Lake (96 acres) from 17 March to 31 October 2010.

	Inch class																					
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	22	24	27
Largemouth bass																						
Harvested											53	46	15		8		8					
Released					243	210	352	352	751	472	54	41	41	34	14	14	7	7	20	14	5	
Black crappie																						
Harvested					7	198	95	15	147	169	15	14										
Released			7	102	123	22	123	7	36		7			8								
White crappie																						
Harvested								15	44	7												
Bluegill																						
Harvested	34		135	889	1,420	545	182	34	5													
Released	7	237	3,100	4,251	575	149																
Redear sunfish																						
Harvested					63	113	88	44		5												
Released			6	90	83	64	6	13														
Warmouth																						
Released			7	8																		
Carp																						7
Released																						
Channel catfish																						
Harvested											123	87	101	7	7	7	7					14
Released			7	7	64	50	311	205	212	892	220	34	14	20	14	7	13					

Table 152. Black bass catch and harvest statistics derived from a creel survey at Corinth Lake (96 acres) for black bass caught and released by all anglers from 17 March to 31 October 2010.

	Largemouth bass		
	Harvest	Catch and Release	
		12.0-14.9 in	≥15.0 in
Total no of bass	129.74	136	101.0
% of black bass harvested by no.	100.0		
Total weight of fish (lbs)	145.6	261	196.6
% of black bass harvest by weight	100.0		
Mean length	12.8		
Mean weight	1.07		
Rate (fish/hr)	0.012		
			Total
			2,747.21
			1,472.4

Table 153. Monthly black bass angling success at Corinth Lake during the 2010 creel survey.

Month	Total no. of black bass caught by all anglers	Total no. of black bass harvested by anglers	No. of fishing trips for black bass	Hours fished by black bass anglers	Black bass caught by black bass anglers	Black bass caught/hr by black bass anglers	Black bass harvested by black bass anglers	Black bass harvested/hr by black bass anglers
March	107.50	21.50	26.14	100.34	22	0.286	-	-
April	448.04	-	88.28	338.79	315	0.677	-	-
May	965.91	87.20	136.25	522.92	516	0.720	74	0.103
June	107.64	6.33	64.23	246.52	63	0.278	6	0.028
July	360.25	14.70	178.57	685.32	287	0.497	15	0.025
August	303.83	-	63.26	242.77	249	1.306	-	-
September	363.97	-	64.02	245.68	286	0.917	-	-
October	90.05	-	25.69	98.59	70	0.714	-	-
Total	2,747.21	129.74	646.44	2,480.92	1,809	0.690	95	0.036
Mean								

t = < 0.01

Table 154. Crappie catch and harvest statistics derived from a creel survey at Corinth Lake (96 acres) for crappie caught and released by all anglers from 17 March to 31 October 2010.

	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	660.50	377	58.25	1,095.75	66.17	66.17	66.17	66.17
% of crappie harvested by no.	90.89				9.11			
Total weight of fish (lbs)	258.5	67	9.9	335.4	28.9			28.9
% of crappie harvest by weight	89.94				10.06			
Mean length	9.5				9.9			
Mean weight	0.48				0.44			
Rate (fish/hr)	0.062				0.006			

t = < 0.01

Table 155. Monthly crappie angling success at Corinth Lake during the 2010 creel survey.

Month	Total no. of crappie caught by all anglers		Total no. of crappie harvested by all anglers		No. of fishing trips for crappie	Hours fished by crappie anglers	Crappie caught by anglers		Crappie harvested by anglers	
	all anglers	crappie anglers	all anglers	crappie anglers			Crappie caught by anglers	Crappie caught/hr by anglers	Crappie harvested by anglers	Crappie harvested/hr by anglers
March	172.01	129.00	26.14	100.34	172	100.34	1.33	129	1.00	
April	154.24	88.14	4.20	16.13	22	16.13	1.20	22	1.20	
May	529.91	328.68	15.14	58.10	262	58.10	3.00	262	3.00	
June	37.99	-	-	-	-	-	-	-	-	
July	124.99	73.52	9.92	38.07	109	38.07	1.045	100	0.955	
August	23.37	7.79	-	-	565	-	1.604	513	1.516	
September	10.40	-	-	-	-	-	-	-	-	
October	109.01	99.53	28.90	110.91	109	110.91	1.045	100	0.955	
Total	1,161.92	726.67	84.31	323.55	565	323.55	1.604	513	1.516	
Mean										

Table 158. Panfish catch and harvest statistics derived from a creel survey at Corinth Lake (96 acres) for panfish caught and released by all anglers from 17 March to 31 October 2010.

	Bluegill		Redear sunfish		Warmouth					
	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	Harvest	6.0-9.9 in ≥10.0 in				
Total no	3,244.45	724.14	0.0	11,563.60	312.70	166.32	0.0	575.01	Total	14.70
% of panfish harvested by no.	91.2			8.8						
Total weight of fish (lbs)	427.7	48.2	0.0	984.9	92.4	26.8	0.0	135.2		0.9
% of panfish harvest by weight	82.2			17.8						
Mean length	6.0			7.5						
Mean weight	0.14			0.30						
Rate (fish/hr)	0.333			0.035						

Table 159. Monthly panfish angling success at Corinth Lake during the 2010 creel survey.

Month	Total no. of panfish caught by all anglers		No. of fishing trips for panfish	Hours fished by panfish anglers		Panfish caught by panfish anglers		Panfish caught/hr by panfish anglers		Panfish harvested by panfish anglers	
	panfish caught by all anglers	panfish harvested by all anglers		by panfish anglers	by panfish anglers	panfish caught by panfish anglers	panfish caught by panfish anglers	panfish harvested by panfish anglers	panfish harvested by panfish anglers		
March	86.00	21.50	34.86	133.78	22	0.154	235	0.438			
April	1,241.30	235.04	126.11	483.98	1,160	2.164	1,160	1.472			
May	3,521.56	1,281.18	268.72	1,031.31	3,099	3.932	893	1.306			
June	2,051.51	924.44	184.67	708.74	1,912	2.796	478	0.714			
July	2,286.52	492.59	138.89	533.03	1,786	2.670	319	0.837			
August	1,635.99	366.15	88.56	339.87	927	2.429	98	0.217			
September	1,055.52	98.79	124.47	477.71	1,039	2.286	138	0.644			
October	274.90	137.45	44.95	172.53	257	1.200	3,321	0.866			
Total	12,153.31	3,557.15	1,011.24	3,880.96	10,202	2.665					
Mean											

CORINTH LAKE ANGLER ATTITUDE SURVEY 2010

(Based on 330 surveys)

13 Which species of fish do you fish for at Corinth Lake (check all that apply)?
Bass 44.8% Crappie 26.1% Bluegill 63.0% Redear sunfish 31.2% Channel catfish 34.5%

13 Which one species do you fish for most at Corinth Lake (check only one)?
Bass 28.9% Crappie 8.6% Bluegill 40.3% Redear sunfish 8.3% Channel catfish 14.0%

Bass Anglers

13 What level of satisfaction do you have with bass fishing at Corinth Lake?

Very satisfied 7.6% Somewhat satisfied 43.8% Neutral 30.6% Somewhat dissatisfied 17.4% Very dissatisfied 0.0%
No opinion 0.7%

3a. If you responded with somewhat or very dissatisfied in question (5) – what is the single most important reason for your dissatisfaction?

Number of fish 80.0% Size of fish 20.0%

Crappie Anglers

13 What level of satisfaction do you have with the crappie fishing at Corinth Lake?

Very satisfied 8.1% Somewhat satisfied 32.6% Neutral 40.7% Somewhat dissatisfied 18.6% Very dissatisfied 0.0%
No opinion 0.0%

4a. If you responded with somewhat or very dissatisfied in question (6) – what is the single most important reason for your dissatisfaction?

Number of fish 62.5% Size of fish 37.5%

Bluegill Anglers

13 What level of satisfaction do you have with the bluegill fishing at Corinth Lake?

Very satisfied 16.0% Somewhat satisfied 43.5% Neutral 22.5% Somewhat dissatisfied 18.0% 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?

Size of fish 82.9% Number of fish 17.1%

Redear sunfish Anglers

13 What level of satisfaction do you have with the redear sunfish fishing at Corinth Lake?

Very satisfied 12.1% Somewhat satisfied 47.5% Neutral 20.2% Somewhat dissatisfied 19.2% Very dissatisfied 1.0%
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 66.7% Size of fish 33.3%

Catfish Anglers

13 What level of satisfaction do you have with the catfish fishing at Corinth Lake?

Very satisfied 11.0% Somewhat satisfied 50.5% Neutral 26.6% Somewhat dissatisfied 11.9% Very dissatisfied 0.0% No opinion 0.0%

7a. If you responded with somewhat or very dissatisfied in question (9) – what is the single most important reason for your dissatisfaction?

Size of fish 76.9% Number of fish 23.1%

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

Support 51.1% Oppose 21.8% No Opinion 27.1%

13 How many times do you fish Corinth Lake a year?

First Time 15.3% 1 to 4 33.0% 5 to 10 28.0% More than 10 23.7%

13 Are you satisfied with the current size and creel limits on all sport fish at Corinth Lake?

Yes 92.5% No 7.5%

Table 160. 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 2010; 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	6	23	24	5	24	65	53	107	70	68	58	17	14	7	10	6	5	2	4	568	284.00 (33.52)

Dataset = cfdpselm.d10

Table 161. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Elmer Davis Lake from 1996-2010; 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)
2010	41.00 (5.00)	147.50 (17.85)	71.50 (12.27)	24.00 (5.01)	3.00 (1.25)	284.00 (33.52)

Dataset = cfdpselm.d10 -- .d96

Table 162. PSD and RSD₁₅ values obtained for largemouth bass from spring electrofishing samples in Elmer Davis Lake in 2010; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD ₁₅
Largemouth bass	486	39 (± 4)	10 (± 3)

Dataset = cfdpselm.d10

Table 163. Population assessment for largemouth bass collected during spring electrofishing at Eimer Davis Lake from 2000-2010 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2010	Value	9.8*	29.00	71.50	24.00	3.00	0.394	32.6	13	Good
	Score	1	2	4	3	3				
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				

* Age data not collected

Table 164. 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 2010; 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	21		
Largemouth bass	16	94	44	9	20	56	25	40	42	35	17	10	4	3	3	1	2	1	422	281.33 (10.82)	

Dataset = cfdwre1m.d10

Table 165. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Elmer Davis Lake on 22 September 2010. 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	106	85 (1)	52	87 (1)	14	92 (2)	172	86 (1)

Dataset = cfdwreim.d10

Table 166. 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 ≥5.0 in			Age 1		
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE
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)	29.00	(5.33)	
2010	Total	4.7	(0.1)	108.00	(14.12)	34.67	(3.21)			

Table 167. Species composition, relative abundance, and CPUE (fish/hr) of bluegill and redear sunfish collected in 2.50 hours of 7.5-minute electrofishing runs in Elmer Davis Lake, May 2010; numbers in parentheses are standard errors.

Species	Inch class										Total	CPUE
	1	2	3	4	5	6	7	8	9	10		
Bluegill	21	108	142	136	39	36	32				513	205.20 (23.39)
Redear sunfish	3	5	2	1	44	15	24	7	2	103	41.20 (4.72)	

Dataset = cfdpseim.d10

Table 168. PSD and RSD values calculated for sunfish collected during 2.50 hours of electrofishing at Elmer Davis Lake during May 2010. Fish were collected in 7.5-minute runs.

Species	No. \geq stock size	PSD	RSD ^a
Bluegill	384	17 (\pm 4)	0 (\pm 0)
Redear sunfish	95	51 (\pm 10)	11 (\pm 6)

^aBluegill = RSD₈; Redear = RSD₉
Dataset = cfdpselm.d10

Table 169. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from Elmer Davis Lake from 1994-2010; numbers in parentheses are standard errors.

Year	Length group				Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	\geq 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)
2010	51.60 (12.75)	126.80 (16.16)	26.80 (4.07)	0.00 (0.00)	205.20 (23.39)

Dataset = cfdpselm.d10

Table 170. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from Elmer Davis Lake in 2010.

Year	No.	Age					
		1	2	3	4	5	6
2009	11	2.6					
2008	29	1.9	4.3				
2007	14	2.7	4.6	6.6			
2006	7	2.1	4.3	5.9	7.2		
2005	1	2.2	3.9	5.9	6.6	7.2	
2004	1	3.2	5.8	6.6	7.1	7.6	8.0
Mean	63	2.3	4.4	6.4	7.1	7.4	8.0
Smallest		1.1	2.7	5.0	6.5	7.2	8.0
Largest		4.5	6.2	7.8	8.1	7.6	8.0
Std Error		0.1	0.1	0.1	0.2	0.2	
95% ConLo		2.1	4.2	6.1	6.8	7.0	
95% ConHi		2.4	4.6	6.7	7.5	7.8	

Intercept value = 0.00

Dataset = cfdagelm.d10

Table 171. Age frequency and CPUE (fish/hr) per inch class of bluegill collected during 2.50 hours of electrofishing at Elmer Davis Lake during May 2010. Fish were collected in 7.5-minute runs.

Age	Inch class								Total	% CPUE	Std Err	
	1	2	3	4	5	6	7	8				
1	21	108	26						155	30	61.93	13.28
2			116	136	27				279	54	111.79	14.08
3					12	26	17		54	11	21.73	2.96
4						10	11		22	4	8.62	1.30
5							3		3	1	1.13	0.24
Total	21	108	142	136	39	36	31		513	100	205.20	23.39
%	4	21	28	27	8	7	6		100			

Dataset = cfdagelm.d10 and cfdpselm.d10

Table 172. Electrofishing catch rate (fish/hr) of each age of bluegill collected from Elmer Davis Lake from 2001-2010.

Age	Year										
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
1	2.60	35.80	21.20	43.10	21.20	237.80	2.50	61.91	11.73	61.93	
2	45.40	69.40	75.90	95.00	97.20	41.60	82.10	76.36	47.31	111.79	
3	212.90	20.00	34.60	45.40	47.40	26.90	24.40	69.15	19.31	21.73	
4	7.60	246.30	21.30	29.60	12.20	19.80	18.30	16.98	23.51	8.62	
5		14.20	107.80	7.80	6.00	9.90	8.00	3.16		1.13	
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 173. Population assessment for bluegill collected during spring electrofishing at Elmer Davis Lake from 2001-2010 (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
2010	Value	4.3	2-2+	26.80	0.00	1.471	77.0		
	Score	2	4	2	0			8	Fair
2009	Value	4.4	2-2+	34.90	1.10	*	*		
	Score	2	4	2	1			9	Fair
2008	Value	4.1	2-2+	65.60	6.80	0.748	52.7		
	Score	2	4	3	2			11	Good
2007	Value	4.1	2-2+	52.00	9.20	0.718	51.2		
	Score	2	4	3	3			12	Good
2006	Value	5.1	2-2+	58.40	16.00	0.464	37.1		
	Score	4	4	3	4			15	Excellent
2005	Value	4.2	2-2+	68.00	8.80	0.729	51.7		
	Score	2	4	3	3			12	Good
2004	Value	4.3	2-2+	128.00	8.80	*	*		
	Score	2	4	4	3			13	Good
2003	Value	4.5	2-2+	153.60	2.40	*	*		
	Score	3	4	4	2			13	Good
2002	Value	4.5	2-2+	273.60	0.80	*	*		
	Score	3	4	4	2			13	Good
2001	Value	4.2	2-2+	157.50	0.50	*	*		
	Score	2	4	4	2			12	Good

Table 174. Electrofishing CPUE (fish/hr) for each length group of redear sunfish collected from Elmer Davis Lake from 1994-2010; 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)
2010	1.20 (0.88)	3.20 (1.35)	23.60 (2.69)	13.20 (2.92)	0.80 (0.55)	41.20 (4.72)

Dataset = cfdpselm.d10

Table 175. Mean back calculated lengths (in.) at each annulus for otoliths from redear sunfish collected from Elmer Davis Lake in 2010.

Year	No.	Age							
		1	2	3	4	5	6	7	8
2009	6	3.2							
2008	18	2.9	6.6						
2007	13	3.3	6.2	8.4					
2006	4	2.9	6.8	8.1	9.1				
2005	1	3.8	6.6	8.0	8.7	9.5			
2003	1	2.7	6.6	8.3	9.3	10.0	10.2	10.5	
2002	1	2.5	5.2	7.8	8.8	9.5	10.0	10.5	10.8
Mean	44	3.1	6.5	8.3	9.0	9.6	10.1	10.5	10.8
Smallest		2.4	5.2	7.8	8.7	9.5	10.0	10.5	10.8
Largest		4.0	7.4	9.2	9.3	10.0	10.2	10.5	10.8
Std Error		0.1	0.1	0.1	0.1	0.2	0.1	0.0	
95% ConLo		2.9	6.3	8.1	8.9	9.3	9.8	10.5	
95% ConHi		3.2	6.6	8.5	9.2	10.0	10.4	10.5	

Intercept value = 0.00

Dataset = cfdagem.d10

Table 176. Age frequency and CPUE (fish/hr) per inch class of redear sunfish collected during 2.50 hours of electrofishing at Elmer Davis Lake during May 2010. Fish were collected in 7.5-minute runs.

Age	Inch class									Total	%	CPUE	Std Err
	2	3	4	5	6	7	8	9	10				
1	3	5								8	8	3.20	1.22
2			2	1	44	9				56	54	22.23	2.55
3						6	24	2		32	31	12.97	2.70
4								4		4	4	1.60	0.83
5								1		1	1	0.40	0.21
6										0	0	0.00	0.00
7									1	1	1	0.40	0.28
8									1	1	1	0.40	0.28
Total	3	5	2	1	44	15	24	7	2	103	100	41.20	4.72
%	3	5	2	1	43	15	23	7	2	100			

Dataset = cfdagem.d10 and cfdpselm.d10

Table 177. Electrofishing catch rate (fish/hr) of each age of redear sunfish collected from Elmer Davis Lake from 2001-2010.

Age	Year									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	0.00	0.00	7.20	7.20	0.00	16.00	0.40	6.80	1.07	3.20
2	0.50	1.60	34.40	78.80	61.30	4.80	20.20	45.12	20.44	22.23
3	13.50	8.74	4.10	8.70	53.60	23.40	6.70	17.52	7.52	12.97
4	7.90	3.58	13.50	8.50	10.10	7.00	6.70	1.03	0.57	1.60
5	5.60	14.48			1.00		1.70	1.40	0.00	0.40
6	0.50	0.40			2.80			0.93	0.67	0.00
7									1.20	0.40
8										0.40

Table 178. Population assessment for redear sunfish collected during spring electrofishing at Elmer Davis Lake from 2001-2010 (scoring based on statewide assessment).

Year		Mean length age-3+ at capture	Years to 8.0 in	CPUE ≥8.0 in	CPUE ≥10.0 in	Total score	Assessment rating
2010	Value	8.4	2-2+	13.20	1.20	12	Good
	Score	4	4	3	1		
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		

* Age data not collected

Table 179. Number of fish and the relative weight (Wr) for each length group of bluegill and redear sunfish collected at Elmer Davis Lake on 22 September and 6 October 2010. 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	
	76	113 (5)	36	96 (2)	0		112	108 (4)
Redear sunfish	4.0–6.9 in		7.0–8.9 in		≥9.0 in		Total	
	45	119 (9)	26	112 (2)	7	112 (2)	78	116 (5)

Dataset = cfdwreim.d10

Table 180. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected in 4.0 hours of 15-minute electrofishing runs in Kincaid Lake, April 2010; 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			
Spotted bass								2	1		4	3											10	2.50 (1.09)	
Largemouth bass	2	2		2	19	34	41	72	92	83	65	89	92	55	52	63	43	33	16	11	3	1	870	217.50 (9.27)	

Dataset = cfdpskin.d10

Table 181. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Kincaid Lake from 1992-2010; 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)
2010	14.75 (1.89)	72.00 (4.862)	61.50 (5.20)	69.25 (4.27)	7.75 (1.44)	217.50 (9.27)

Dataset = cfdpskin.d10 - .d92

Table 182. PSD and RSD₁₅ values obtained for largemouth bass from spring electrofishing samples in Kincaid Lake in 2010; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD ₁₅
Largemouth bass	811	64 (± 3)	34 (± 3)

Dataset = cfdpskin.d10

Table 183. Population assessment for largemouth bass collected during spring electrofishing at Kincaid Lake from 2000-2010 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2010	Value	9.9*	1.33	61.50	69.25	7.75	0.308	26.5		
	Score	1	1	4	4	4			14	Good
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	1.50	36.50	70.00	6.50	0.288	25.0		
	Score	1	1	3	4	4			13	Good

Table 184. Length distribution and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of 15-minute electrofishing runs for largemouth bass in Kincaid Lake in September 2010; 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	13	21	25	18	14	35	12	21	19	23	27	16	18	12	7	6	2	8	2	1	300	200.00 (26.87)
Dataset = cfdwrkin.d10																						

Table 185. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Kincaid Lake on 21 September 2010. Standard errors are in parentheses.

Species	Area	Length group						Total	
		8.0–11.9 in		12.0–14.9 in		≥15.0 in		No.	Wr
		No.	Wr	No.	Wr	No.	Wr		
Largemouth bass	Total	75	91 (1)	59	92 (1)	38	95 (2)	172	92 (1)

Dataset = cfdwrkin.d10

Table 186. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at 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		1.33	(0.46)
2009	80	4.2	(0.1)	53.33	(11.99)	14.00	(3.39)		

Dataset = cfdwrkin.d10

Table 187. 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 04 October 2010. 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		
	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			22	23
Channel catfish	2	13	49	115	104	47	16	11	9	9	7	4	1	3	1		1	1	393	131.00 (53.54)

Dataset = cfdhkin.d10

Table 188. PSD and RSD₂₄ values obtained for channel catfish from tandem hoop net samples in Kincaid Lake in 2010; confidence intervals are in parentheses.

Species	No. \geq stock size	PSD	RSD ₂₄
Channel catfish	110	16 (\pm 7)	0 (\pm 0)

Dataset = cfdhnkin.d10

Table 189. Number of fish and the relative weight (Wr) for each length group of channel catfish collected at Kincaid Lake in October 2010. 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	64	89 (1)	18	96 (3)	0		82	91 (1)

Dataset = cfdhnkin.d10

Table 190. 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 2010; 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	2	24	10	3	35	43	37	36	23	11	7	4	5	6	5	3	0	1	1	256	170.67 (12.84)

Dataset = cfdpsmcl.d10

Table 191. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from McNeely Lake from 1996-2010; 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)
2010	49.33 (2.23)	92.67 (11.52)	14.67 (1.98)	14.00 (3.54)	1.33 (0.84)	170.67 (12.84)

Dataset = cfdpsmcl.d10

Table 192. PSD and RSD₁₅ values obtained for largemouth bass from spring electrofishing samples in McNeely Lake in 2010; confidence intervals are in parentheses.

Species	No. ≥8.0 in	PSD	RSD ₁₅
Largemouth bass	182	24 (± 6)	12 (± 5)

Dataset = cfdpsmcl.d10

Table 193. Population assessment for largemouth bass collected during spring electrofishing at McNeely Lake from 2000-2010 (scoring based on statewide assessment).

Year	Mean length age-3 at capture	Spring CPUE age-1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2010	Value 11.4* Score 3	50.84 3	14.67 1	14.00 2	1.33 2	0.531	41.2	11	Fair
2009	Value 11.4* Score 3	67.80 3	28.00 2	12.00 2	1.30 2	0.566	43.2	12	Good
2008	Value 11.4 Score 3	130.00 4	58.70 4	20.70 3	1.30 2	0.527	40.9	16	Good
2007	Value 11.0* Score 3	5.30 1	46.70 3	40.00 4	1.30 2	0.423	34.5	13	Good
2006	Value 11.0* Score 3	50.70 3	37.30 3	24.00 3	1.30 2	0.387	32.1	14	Good
2005	Value 11.0* Score 3	12.70 1	46.00 3	30.00 4	1.30 2	0.390	32.3	13	Good
2004	Value 11.0 Score 3	24.70 2	23.30 2	28.00 3	2.70 3	0.319	27.3	13	Good
2003	Value 9.8* Score 1	20.00 2	56.00 4	27.30 3	1.30 2	0.392	32.5	12	Good
2002	Value 9.8* Score 1	23.30 2	43.30 3	9.30 2	0.00 0	0.378	31.5	8	Fair
2001	Value 9.8 Score 1	70.00 3	99.30 4	31.30 4	2.70 3	0.392	32.4	15	Good
2000	Value 10.4* Score 2	40.70 2	104.70 4	20.70 3	4.00 4			15	Good

* Age data not collected

Table 194. 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 2010; 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	79	108	33	10	36	49	57	33	15	11	3	4	2	4	6	3	1	454	363.20 (16.80)

Dataset = cfdwmcl.d10

Table 195. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at McNeely Lake on 20 September 2010. 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	175	89 (1)	28	93 (2)	20	96 (2)	223	90 (1)

Dataset = cfdwrmcl.d10

Table 196. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at McNeely Lake.

Year class	Area	Age 0		Age 0		Age 0 ≥5.0 in		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2000	Total	3.8	(0.1)	87.30	(16.10)	10.00	(2.30)	70.00	(9.40)
2001	Total	4.1	(0.9)	20.70	(1.60)	2.00	(1.40)	23.30	(2.40)
2002	Total	4.7	(0.1)	24.00	(5.80)	10.70	(3.80)	20.00	(2.50)
2003	Total	4.1	(0.1)	56.00	(14.00)	7.00	(1.90)	24.70	(3.50)
2004	Total	4.0	(0.1)	49.00	(2.40)	3.50	(0.90)	12.70	(2.40)
2005	Total	4.7	(0.1)	193.30	(17.20)	88.00	(12.10)	50.70	(7.20)
2006	Total	4.5	(0.1)	108.70	(23.30)	33.30	(5.70)	5.30	(1.70)
2007	Total	5.2	(0.04)	174.40	(49.00)	116.00	(28.30)	130.00	(6.66)
2008	Total	4.6	(0.1)	300.00	(34.53)	97.60	(16.62)	67.83	(11.67)
2009	Total	4.5	(0.04)	68.00	(5.66)	11.33	(1.23)	50.84	(2.15)
2010	Total	5.2	(0.04)	169.60	(15.10)	106.40	(12.17)		

Table 197. 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 2010; numbers in parentheses are standard errors.

Species	Inch class										Total	CPUE
	1	2	3	4	5	6	7	8	9	10		
Bluegill	2	7	18	48	64	78	42				259	207.20 (27.62)
Redear sunfish			2	7	3	14	6	8	2	1	43	34.40 (6.43)

Dataset = cfdpsmcl.d10

Table 198. PSD and RSD values calculated for sunfish collected during 1.25 hours of electrofishing at McNeely Lake during May 2010. Fish were collected in 7.5-minute runs.

Species	No. \geq stock size	PSD	RSD ^a
Bluegill	250	48 (\pm 6)	0
Redear sunfish	41	41 (\pm 15)	7 (\pm 8)

^aBluegill = RSD₈; Redear = RSD₉
Dataset = cfdpsmcl.d10

Table 199. Electrofishing CPUE (fish/hr) for each length group of bluegill collected from McNeely Lake from 1994-2010; numbers in parentheses are standard errors.

Year	Length group				Total
	<3.0 in	3.0-5.9 in	6.0-7.9 in	\geq 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)
2010	7.20 (2.22)	104.00 (17.53)	96.00 (12.28)	0.00	207.20 (27.62)

Dataset = cfdpsmcl.d10

Table 200. Mean back calculated lengths (in.) at each annulus for otoliths from bluegill collected from McNeely Lake in 2010.

Year	No.	Age					
		1	2	3	4	5	6
2009	10	2.8					
2008	19	2.2	4.4				
2007	15	2.8	4.8	6.3			
2006	3	3.0	5.0	6.3	7.0		
2005	1	3.1	4.9	6.2	6.6	6.9	
2004	1	1.9	4.4	5.6	6.8	6.9	7.0
Mean	49	2.6	4.6	6.3	6.9	6.9	7.0
Smallest		1.5	3.5	5.4	6.6	6.9	7.0
Largest		3.9	6.5	7.2	7.5	6.9	7.0
Std Error		0.1	0.1	0.1	0.2	0.0	
95% ConLo		2.4	4.4	6.0	6.5	6.9	
95% ConHi		2.7	4.8	6.5	7.2	6.9	

Intercept value = 0.00

Dataset = cfdagelm.d10

Table 201. Age frequency and CPUE (fish/hr) per inch class of bluegill collected during 1.25 hours of electrofishing at McNeely Lake during May 2010. Fish were collected in 7.5-minute runs.

Age	Inch class							Total	%	CPUE	Std Err
	1	2	3	4	5	6	7				
1	2	7	9					18	7	14.40	4.74
2			9	48	32	6		955	37	76.00	12.90
3					32	54	21	107	41	85.60	9.07
4						12	14	26	10	20.80	2.75
5						6		6	6	4.80	0.67
6							7	7	7	5.60	0.95
Total	2	7	18	48	64	78	42	259	100	207.20	27.62
%	1	3	7	19	25	30	16	100			

Dataset = cfdagmcl.d10 and cfdpsmcl.d10

Table 202. Electrofishing catch rate (fish/hr) of each age of bluegill collected from McNeely Lake from 2001-2010.

Age	Year									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	131.70	53.60	27.40	5.50	29.10	82.40	10.40	175.94	19.76	14.40
2	76.00	244.70	39.20	79.30	103.30	110.80	128.70	88.02	107.80	76.00
3	142.10	128.00	96.60	108.30	79.40	33.60	71.10	150.44	178.84	85.60
4	40.20	186.10	9.50	64.90	111.40	22.80	20.50	17.78	17.42	20.80
5	37.20	14.90	0.50		31.80	38.10	7.30	29.96	33.24	4.80
6		32.60	0.50			5.40		0.00	0.00	5.60
7			0.90	2.00			3.60	0.00	0.00	
8	0.80							26.67	26.93	

Table 203. Population assessment for bluegill collected during spring electrofishing at McNeely Lake from 2001-2010 (scoring based on statewide assessment).

Year	Mean length age-2 at capture	Years to 6.0 in	CPUE ≥6.0 in	CPUE ≥8.0 in	Instantaneous mortality (z)	Annual mortality (AM)	Total score	Assessment rating
2010	Value 4.7 Score 3	2-2+* 4	96.00 4	0.00 0	0.610	46.0	11	Good
2009	Value 4.9* Score 3	2-2+* 4	226.40 4	0.80 2	0.763	53.4	13	Good
2008	Value 4.9 Score 3	2-2+ 4	206.40 4	0.00 0			11	Good
2007	Value 4.8 Score 3	2-2+ 4	118.40 4	0.00 0	0.963	61.8	11	Good
2006	Value 5.1 Score 4	3-3+ 3	101.00 4	0.00 0	0.597	45.0	11	Good
2005	Value 4.0 Score 2	3-3+ 3	174.00 4	0.00 0			9	Fair
2004	Value 3.9 Score 2	3-3+ 3	74.40 3	0.00 0	1.111	67.1	8	Fair
2003	Value 3.9 Score 2	3-3+ 3	30.40 2	0.00 0	1.117	67.3	7	Fair
2002	Value 4.2 Score 2	2-2+ 4	336.00 4	0.80 2			12	Good
2001	Value 4.8 Score 3	2-2+ 4	202.40 4	1.60 2	0.926	60.4	13	Good

* Age data not collected

Table 204. Electrofishing CPUE (fish/hr) for each length group of redear sunfish collected from McNeely Lake from 1998-2010; 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)
2010	0.00	9.60 (4.10)	16.00 (4.13)	8.80 (3.26)	0.80 (0.80)	34.40 (6.43)

Dataset = cfdpsmcl.d10

Table 205. Mean back calculated lengths (in.) at each annulus for otoliths from redear sunfish collected from McNeely Lake in 2010.

Year	No.	Age					
		1	2	3	4	5	6
2009	7	3.8					
2008	17	3.1	6.1				
2007	6	3.7	6.5	8.1			
2006	3	3.6	7.1	8.2	8.7		
2005	1	4.5	7.2	8.7	9.3	9.5	
2004	1	3.0	7.5	8.6	9.5	9.9	10.1
Mean	35	3.4	6.4	8.2	9.0	9.7	10.1
Smallest		1.9	4.3	7.2	8.2	9.5	10.1
Largest		4.5	7.5	8.7	9.5	9.9	10.1
Std Error		0.1	0.1	0.1	0.2	0.2	
95% ConLo		3.2	6.2	8.0	8.5	9.3	
95% ConHi		3.6	6.7	8.5	9.4	10.0	

Intercept value = 0.00

Dataset = cfdagelm.d10

Table 206. Age frequency and CPUE (fish/hr) per inch class of redear sunfish collected during 1.25 hours of electrofishing at McNeely Lake during May 2010. Fish were collected in 7.5-minute runs.

Age	Inch class								Total	%	CPUE	Std Err
	3	4	5	6	7	8	9	10				
1	2	6							8	18	6.08	3.38
2		1	3	14	5				23	54	18.56	3.72
3					1	6			7	17	5.76	2.16
4						2	1		3	7	2.40	0.83
5							1		1	2	0.80	0.53
6								1	1	2	0.80	0.80
Total	2	7	3	14	6	8	2	1	43	100	34.40	6.43
%	5	16	7	33	14	19	5	2	100			

Dataset = cfdagmcl.d10 and cfdpsmcl.d10

Table 207. Electrofishing catch rate (fish/hr) of each age of redear sunfish collected from McNeely Lake from 2001-2010.

Age	Year								
	2001	2003	2004	2005	2006	2007	2008	2009	2010
1	0.00	3.60	0.80	1.00	14.00	0.00	26.40	1.60	6.08
2	8.80	8.80	15.20	39.30	15.90	28.30	40.80	58.40	18.56
3	7.40	16.40	39.20	20.60	18.50	7.80	27.30	18.55	5.76
4	8.60			7.40	3.60	2.20	5.98	13.45	2.40
5	5.60			4.00			1.12	4.00	0.80
6				2.70			1.60	2.40	0.80
7									
8	1.60								

Table 208. Population assessment for redear sunfish collected during spring electrofishing at McNeely Lake from 2001-2010 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Years to 8.0 in	CPUE ≥8.0 in	CPUE ≥10.0 in	Total score	Assessment rating
2010	Value	8.1	2-2+*	8.80	0.80	11	Good
	Score	4	4	2	1		
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 209. Number of fish and the relative weight (Wr) for each length group of bluegill and redear sunfish collected at McNeely Lake on 20 September 2010. 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	
	106	107 (3)	57	87 (1)			163	100 (2)
Redear sunfish	4.0–6.9 in		7.0–8.9 in		≥9.0 in		Total	
	56	105 (1)	15	97 (2)	4	90 (3)	76	102 (1)

Dataset = cfdwrmcl.d10

Table 210. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 3.00 hours of 15-minute electrofishing runs in Williamstown Lake, May 2010; numbers in parentheses are standard errors.

Species	Inch class																		Total	CPUE
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18			
Largemouth bass	1	7	10	5	4	19	37	21	14	13	25	29	23	15	9	6	2	240	80.00 (10.13)	

Dataset = cfdpswil.d10

Table 211. Electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from Williamstown Lake from 2007-2010; 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	
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)	80.00 (10.11)
2010	15.33 (3.48)	28.33 (4.42)	25.67 (2.85)	10.67 (1.42)	80.00 (10.13)

Dataset = cfdpswil.d10 - d07

Table 212. PSD and RSD₁₅ values obtained for largemouth bass from spring electrofishing samples in Williamstown Lake in 2010; confidence intervals are in parentheses.

Species	No. \geq 8.0 in	PSD	RSD ₁₅
Largemouth bass	194	56 (\pm 7)	16 (\pm 5)

Dataset = cfdpswil.d10

Table 213. Population assessment for largemouth bass collected during spring electrofishing at Williamstown Lake from 2008-2010 (scoring based on statewide assessment).

Year	Value Score	Mean length age-3 at capture	Spring CPUE				Total score	Assessment rating
			age-1	12.0-14.9 in	\geq 15.0 in	\geq 20.0 in		
2010	11.6*	4	9.00	25.67	10.67	0.00	9	Fair
2009	11.6*	4	24.50	16.00	12.00	0.00	9	Fair
2008	11.6	4	12.50	29.00	7.00	0.50	10	Fair

* Age data not collected

Table 214. 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 2010; 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			
Largemouth bass	4	23	23	9	15	6	6	11	15	4	3	4	3	3	4	1	1	135	90.00 (11.90)	

Dataset = cfdwrwil.d10

Table 215. Number of fish and the relative weight (Wr) for each length group of largemouth bass collected at Williamstown Lake on 23 September 2010. 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	38	91 (1)	11	97 (1)	12	94 (3)	61	93 (1)

Dataset = cfdwrwil.d10

Table 216. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall in electrofishing samples at Williamstown Lake.

Year class	Area	Age 0			Age 0 ≥5.0 in			Age 1		
		Mean length	Std. error	CPUE	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2007	Total	4.7	(0.3)	7.33	(1.61)	2.67	(1.33)	12.50	(3.58)	
2008	Total	4.7	(0.2)	24.67	(6.06)	12.00	(3.27)	24.50	(4.81)	
2009	Total	4.1	(0.2)	2.67	(0.84)	0.00		9.00	(3.16)	
2010	Total	5.1	(0.1)	39.33	(11.66)	21.33	(5.33)			

Table 217. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.00 hours of electrofishing in Symphon Lake, April 2010; 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	4	2	3	4	2	5	16	17	16	11	8	11	21	27	38	21	13	3	1	1	224	112.00 (12.33)	

Dataset = cfdpssym.d10

Table 218. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 1.50 hours of electrofishing in Symphon Lake, September 2010; numbers in parentheses are standard errors.

Species	Inch class																		Total	CPUE
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18			
Largemouth bass	1	95	77	38	18	27	31	21	12	6	8	5	6	3	8	11	4	371	247.33 (19.58)	

Dataset = cfdwrsym.d10

Table 219. Species composition, relative abundance, and CPUE (fish/hr) of fish collected in 0.47 hours of electrofishing in Lincoln Homestead Lake, May 2010.

Species	Inch class																	Total	CPUE
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17			
Bluegill	7	5	32	24	27	8											103	221.00 (71.00)	
Redear sunfish			1				1	1									3	6.50 (1.50)	
Largemouth bass			5	7	3	4	3	5	9	5	8	7	3	1	1	1	61	134.00 (14.00)	

Dataset = cfdpslhl.d10

Table 220. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass and bluegill collected in 0.75 hours of electrofishing in Doe Run Lake, April 2010; 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			
Bluegill																					51	68.00 (32.74)
Largemouth bass			2	6	2	2	3	11	6	10	8	3	1	3	2	7	4	4	2	1	77	102.67(7.06)

Dataset = cfdpsdoe.d10

Table 221. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass and bluegill collected in 1.50 hours of electrofishing in Doe Run Lake, September 2010; 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	21		
Bluegill	1	30	3	31	65	33																163	93.14 (16.35)
Largemouth bass	1	8	16	13	7	9	16	13	4	11	9	5	3	1	2	2						121	69.14 (17.67)

Dataset = cfdwrdoe.d10

Table 222. Length frequency, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 0.75 hours of 15-minute electrofishing runs in General Butler State Park Lake, April 2010; 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				
Largemouth bass	2	4	11	1		5	17	11	4	2	4	4	2	4	2	1	68	90.67 (14.85)			

Dataset = cfdpsgbs.d10

Table 223. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass and bluegill collected in 1.00 hours of electrofishing in General Butler State Park Lake, September 2010; 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			
Bluegill	4	6	35	118	76	19															258	258.00 (49.54)
Largemouth bass			3	23	25	4	8	16	7	8	12	3	4	1	1						116	116.00 (13.95)

Dataset = cfdwrgbs.d10

Table 224. Species composition, relative abundance, and CPUE (fish/hr) of fish collected in 0.35 hours of electrofishing in Leary Lake, May 2010.

Species	Inch class													Total	CPUE
	2	3	4	5	6	7	8	9	10	11	12	13			
Bluegill			11	7	6	3	16	3						46	131.43
Largemouth bass	1		2	2	2	1	4	24	16	12	16	3	81	231.43	

Dataset = cfdpslry.d10

Table 225. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 2.00 hours of electrofishing in Willisburg Lake, May 2010; 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	15	9	13	6	3	25	32	34	24	15	8	4	7	11	6	7	7	1	228	114.00 (7.25)	

Dataset = cfdpswlb.d10

Table 226. Species composition, relative abundance, and CPUE (fish/hr) of largemouth bass collected in 1.50 hours of electrofishing in Willisburg Lake, September 2010; 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				
Largemouth bass	17	24	32	50	29	13	20	26	34	16	9	8	9	4	5	3	1	300	200.00 (27.56)		

Dataset = cfdpswlb.d10

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 during 15-18 March for a total of 18 hours (36 - 30 minute runs) within all sections of the lake. A total of 272 (15.11 fish/hr) muskellunge were captured (including observed young of year fish) ranging in size from 11.0 to 45.0 in (Table 2). In the upper section, 57 muskie (9.50 fish/hr) were captured or observed, in the middle section, 73 muskie (12.17 fish/hr) were captured or observed and in the lower section, 142 muskie (23.67 fish/hr) were captured or observed (Table 2). Relative weights (W_r) were calculated by length groups from 2003 to 2010 and show fairly consistent W_r values through that time period (Table 3). Based on the mean W_r value for the past eight years, declines were observed, though inconsequential at present, in those fish in the ≤ 20 and 20.0 - 30.0 inch groups (Table 3). The overall assessment values determined for muskellunge in 2010 remained at a value of 16 ("Good") which is the second highest value since 1995 (Table 4). The assessment for muskellunge on Cave Run Lake includes observations of age-1 fish but no other observations. Management objectives for catches of age 1 fish (>2.40 fish/hr), ≥ 20.0 in fish (>3.35 fish/hr), ≥ 30.0 in fish (>2.54 fish/hr), ≥ 36.0 in fish (>1.20 fish/hr) and ≥ 40.0 in fish (>0.42 fish/hr) were all met in 2009 (Table 13).

Beginning in 2010 a new 36.0-in minimum size limit regulation was imposed on muskellunge in Cave Run Lake as well as Buckhorn and Green River lakes. As a result, a research study evaluating the 36.0-in size limit on all three lakes began during 2010. Also as a result of this study, sampling efforts on Cave Run Lake were conducted approximately two weeks earlier than sampling efforts during the last ten years. Muskie stocked during 2010 had their left pectoral fin clipped.

Black Bass Sampling (Spring)

For a second year in a row spring black bass sampling was attempted on Cave Run Lake, but high water at this time prevented a quality sample from being obtained. In spite of the lack of sampling during 2010 and 2009, the population assessment of largemouth bass is shown in Table 5. Management objectives for largemouth bass could not be determined for 2010 or 2009.

Black Bass Sampling (Fall)

Black bass were sampled on 20 - 22 September for a total of 6 hours (2 hours per section; 12 - 30 minute runs). In 2010, 1,385 black bass were captured; of these 878 (146.33 fish/hr) were largemouth bass, 487 (81.17 fish/hr) were spotted bass and 20 (3.33 fish/hr) were smallmouth bass (Table 6). The majority of the largemouth bass captured came from the upper section of the lake (516 fish; 258.00 fish/hr) while the majority of the spotted bass (260 fish; 130.00 fish/hr) and smallmouth bass (11 fish; 5.50 fish/hr) came from the middle section of the lake (Table 6). Relative weight (W_r) values showed the highest condition in the middle section for largemouth bass ≥ 15.0 in, but were higher in the upper and lower sections for the 8.0 - 11.9 in fish and the 12.0 - 14.9 in fish, respectively (Table 7). For spotted bass the W_r values were highest in the middle section for all fish captured, and for smallmouth bass were highest in the middle section for all fish captured (Table 7). Indices of year class strength revealed age 0 (91.67 fish/hr) and age 0 ≥ 5.0 in (24.67 fish/hr) densities were sufficient enough that largemouth bass stocking was not warranted in 2010 (Table 8).

Crappie Trap Netting

During 01 - 05 November, trap nets were set for crappie in the upper portion of the lake. Fifteen nets were set for a total of 60 net-nights (nn) in 2010. A total of 400 crappie were netted; of these, white crappie

made up the majority of the catch (370 fish; 6.17 fish/nn), while only 30 (0.50 fish/nn) black crappie were captured (Table 9). The PSD for white crappie was 38 and for black crappie was 29 while the RSD₁₀ for white crappie was 13 and for black crappie was 7 (Table 10). In 2010, those fish that were young-of-year, age 1, and age 2 comprised 90.5% of the total catch (Table 11). The overall assessment for white crappie in 2010 rated the population as “Poor” (Table 12). Based on crappie angler attitudes and comments received during the last several years, the population assessment value obtained on Cave Run Lake may be more reflective of sampling limitations and environmental conditions at the time of sampling rather than an indication of total population status. Only two of four management objectives were met during 2010 for white crappie; CPUE of age-0 (>1.88 fish/nn) and CPUE \geq 8.0 in (1.00 fish/nn) (Table 13).

Vegetation Sampling

On 05 – 06 July, Cave Run Lake was sampled for aquatic vegetation. Procedures for this sample were modified from the Long Term Resource Monitoring Program Vegetation component (Yin, et. Al, 2000). The sampling included 99 sites that had a water depth of 10 feet or less; of these 99 sites, 90 were randomly chosen and 9 were fixed sites. The randomly chosen sites were subdivided so that 30 sites were in each section of the lake, and all portions of the lake with a water depth of 10 feet or less had an equal chance of being picked. Fixed sites located around the boat ramps were added to the program as a way to better monitor for invasive aquatic vegetation. 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 99 sites picked only 97 were sampled (31 in the lower, 31 in the middle and 35 in the upper) of those 97 sites 48.4% were unvegetated, 30.9% had some form of submersed aquatic vegetation, 18.6% had emergent vegetation and 11.3% had algae (Table 15). There were no observations of non-rooted floating vegetation or rooted floating vegetation. Both the lower and upper sections of the lake were dominated by unvegetated sites (48.4% and 54.3%, respectively), while the middle section was dominated by both unvegetated sites and submersed vegetation sites (35.5%; Table 15). Overall there were 16 different plant species observed; of these only 4 were submersed aquatic vegetation, 1 was algae and the remainder was forms of emergent vegetation (Table 16). Overall the most frequent vegetation type was unvegetated sites followed by curly pondweed (*Potamogeton crispus*) and chara (*Chara* spp.; Table 16). For the lower section there were 8 different types of plants observed. The most common type was unvegetated sites followed by curly pondweed then eurasian watermilfoil (*Myriophyllum spicatum*; Table 16). In the middle section, 13 different types of plants were observed. The most common types were a tie between unvegetated sites and curly pondweed sites followed by chara (Table 16). For the upper section there were 11 different types of plants observed. The most common was unvegetated followed by smart weeds (*Polygonum* spp.), and a tie between eurasian watermilfoil, eastern sycamore (*Plantanus occidentalis*) and common buttonbush (*Cephalanthus occidentalis*; Table 16). Overall, on average, plant coverage on vegetated sites was 25%; with the highest densities in the middle unit and the lowest in the upper unit (Table 17). When looked at on an individual plant basis (including the combination of sites with both eurasian watermilfoil and curly pondweed), sites with just curly pondweed were the most dense while sites with eurasian watermilfoil or spiny naiad (*Najas marina*) were the least dense (Table 17).

When compared to the previous years' samples, there were many more unvegetated sites observed in the 2010 sample and this is most likely due to the extended periods of high water in the early part of the year. For 24 days in May, the lake was at least 5 feet above summer pool levels. Considering the densities seen in 2010, it appears that eurasian watermilfoil and spiny naiad may be affected by early season high water or turbidity while curly pondweed is not. Further examination of the natural histories of these plants may show curly pondweed as a late season grower and the others as early season growers lending credence to these observations. The only observed invasive species continues to be eurasian watermilfoil and the dominant submersed aquatic plant continues to be curly pondweed. Anecdotally, the drought experienced in the later part of the summer aided the growth of vegetation especially in the lower and middle sections of the lake. These observations were not included in this vegetation survey as the sampling period was much earlier than this growth.

Miscellaneous

In the winter of 2010, around 250 recycled Christmas trees were used to refresh (3 sites) and create (3 sites) 6 fish attractors sites in the lake with assistance from Minor Clark Fish Hatchery staff as well as USFS personnel. During the fall, 2,811 muskellunge which averaged 12.5 in were stocked into the lake.

Grayson Lake (1,512a)

Black Bass Sampling (Spring)

High water at the time of spring black bass sampling prevented a quality sample from being obtained. In spite of the lack of sampling during 2010, the population assessment for largemouth bass is shown in Table 18. Management objectives for largemouth bass could not be determined for 2010.

Black Bass Sampling (Fall)

On 13 – 15 September, Grayson Lake was nocturnally sampled for black bass species for a total of 4.5 hours (3- 30-minute runs in each section). In total, 943 fish were captured across all 3 sections. Only largemouth bass and spotted bass were collected and the sample was dominated by largemouth bass (73% of the catch; Table 19). Largemouth bass showed a fairly consistent spread across all the lake sections while spotted bass were highest in the lower section and declined steadily to the upper section (Table 19). Relative weights showed an increase for largemouth bass ≥ 15.0 in, declined for those in the 12.0 to 14.9 in range and remained steady for all length groups of spotted bass (Table 20). Examination of the year class strength of largemouth bass showed a dramatic increase in the catches of both age-0 fish and age-0 fish ≥ 5.0 in when compared to the mean; these results were used to determine that Grayson Lake did not need to receive supplemental stockings of YOY largemouth bass in 2010 (Table 21).

Crappie Fall Electrofishing

On 20 October, Grayson Lake was diurnally electrofished for black and white crappie population characteristics. The upper section of the lake continues to be the only section examined. In total, 442 fish were captured in 3.0 hours of sampling. Of these, the majority was white crappie (415 fish or 94%; Table 22). This catch almost doubled the total catch of 2009 (2010: 442 fish, 2009: 217 fish), and demonstrates that capture of crappie within Grayson Lake continues to be extremely variable from year to year. In spite of the increase in catches, the PSD and RSD₁₀ remained consistent for white crappie (Table 23).

Otoliths were removed from a subsample of both black (27 fish) and white (67 fish) crappie for determination of age characteristics in 2010. Back calculated growth of white crappie showed that on average they reach 8.0 in by their 4th year (Table 24); while black crappie take an extra year, reaching 8.0 in in their 5th year (Table 25). When these growth rates are applied to the complete catches of white crappie, 71% of our total catch is between 6.0 and 7.0 in or between the ages of 2 and 3 (Table 26). For black crappie, 74% of the catch was between 6.0 and 8.0 in or between the ages of 2 and 4 (Table 27).

The overall assessment for white crappie in Grayson Lake (based on *lake specific* assessment) showed an increase from 10 to 12, but remained “Fair” (Table 28). The scoring of the parameter of age-0 CPUE most likely prevented a further increase from 2009. Management objectives for catches of greater than age-1 fish (≥ 87.00 fish/hr) and catches of greater than 8.0 in fish (≥ 20.00 fish/hr) were met in 2010, but objectives for catches of age-1 (≥ 23.00 fish/hr) and age-0 (≥ 9.00 fish/hr) fishes were not met.

Vegetation Sampling

On 10 August, Grayson 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 49 sites that had a water depth of 10 feet or less; of these 49 sites, 45 were randomly chosen and 4 were fixed sites. The randomly chosen sites were subdivided so that 15 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. Fixed sites were located around the boat ramps and were included in the program as a way to better monitor for invasive aquatic vegetation. The sampling protocol divided the types of plants observed into ecological categories based on the plant type. Table 29 shows examples of those vegetation types. Of the 49 sites picked, only 48 were sampled (15 in the lower, 17 in the middle and 16 in the upper). Of those 48 sites, 50.0% were unvegetated, 35.4% had emergent vegetation, 18.8% had algae and 4.2% had some form of submersed aquatic vegetation (Table 30). There were no observations of non-rooted floating vegetation or rooted floating vegetation. Both the middle and upper sections of the lake were dominated by unvegetated sites (47.1% and 68.8%, respectively), while the lower section was dominated by algae (46.7%; Table 30). Overall there were 26 different plant species observed; of these, only 2 were submersed aquatic vegetation, 1 was algae and the remainder was forms of emergent

vegetation (Table 31). Overall, the most frequent vegetation type was unvegetated sites followed by chara (*Chara* spp.), clover (*Lespedeza* spp.) and common button bush (*Cephalanthus occidentalis*; Table 31). For the lower section there were 14 different types of plants observed. The most common type was chara followed by unvegetated sites and then clover (Table 31). In the middle section 14 different types of plants were observed. The most common types were unvegetated sites followed by clover and button bush (Table 31). For the upper section, there were 12 different types of plants observed. The most common was unvegetated followed by common button bush and a tie between water willow (*Justicia americana*) and stinging nettle (*Urtica dioica*; Table 31).

Miscellaneous

In 2010, 15,407 hybrid striped bass were stocked into Grayson Lake with an average length of 2.2 in. We continue to observe these fish within our nocturnal largemouth bass electrofishing. In the fall of 2011, netting of these fish will begin to assess the population.

Lake Carnico (114a)

Black Bass Electrofishing (Spring)

On 05 May, the shoreline of Lake Carnico (Nicholas County) was nocturnally electrofished for black bass. A total of 130 (143 in 2009, 54 in 2008, 292 in 2007) largemouth bass were captured ranging in size from 2.0 to 20.0 in long (Table 32). Largemouth bass age frequency is found in Table 33. Population assessments (Table 34) again rated Lake Carnico as a "Fair" largemouth bass fishery. Catch rates by length group are 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, the shoreline of Lake Carnico was diurnally electrofished for sunfish species. A total of 1,324 fishes were captured; 1,026 were bluegill, 15 were redear sunfish and 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). Age and growth for bluegill can be found in Table 40. Age frequencies indicated those bluegill age 1 and age 2 comprised 82% of the total sample and ranged in length from 2.0-4.0 in (Table 41). Age and growth along with age frequency for redear sunfish can be found in Tables 42 and 43, respectively. The overall assessment for the bluegill population remained classified as "Fair" (Table 44).

Black Bass Electrofishing (Fall)

On 30 September, the shoreline of Lake Carnico was nocturnally electrofished for black bass. In total, 137 largemouth bass were sampled ranging in size from 2.0 in to 21.0 in (Table 45). Relative weight values (Table 46) remained relatively the same except for those fish in the ≥ 15.0 in range which again increased to 98 from past values of 92 in 2009, 79 in 2008, and 91 in 2007.

Miscellaneous

The lake received a supplemental stocking of 500 remedial bass during October 2010.

Clear Creek Lake (40a)

Black bass electrofishing (Spring)

Could not sample the lake due to an over abundance of aquatic vegetation.

Bluegill/redear sunfish electrofishing

On 27 May, the shoreline of Clear Creek Lake (Bath Co.) was diurnally electrofished (4- 7.5-minutes runs) for bluegill and redear sunfish. A total of 690 (206 in 2009, 281 in 2008, 112 in 2007, and 351 in 2006) bluegill and 318 (234 in 2009, 127 in 2008, 130 in 2007, and 94 in 2006) redear sunfish were collected (Table 47). Table 48 shows the CPUE for each length group of bluegill and redear sunfish collected. Age-

1 and age-2 fish represented 96% (84% in 2009) of the total bluegill catch and ranged in size from 1.0 to 4.9 in long (Table 49). Age-2 and age-3 fish accounted for 95% of the total redear sunfish catch (Table 50). The PSD value for bluegill fell below the desirable range (Table 51). The population assessment rated the bluegill fishery as "Poor" (Table 52). This population has been rated "Good" since 2006 and has been in decline since the aquatic vegetation (Eurasian watermilfoil) has increased. The population assessment rated the redear sunfish fishery as "Poor" (Table 53).

Black bass electrofishing (Fall)

Could not sample the lake due to an over-abundance of aquatic vegetation.

Greenbo Lake (181a)

Black bass electrofishing (Spring)

The shoreline of Greenbo Lake (Greenup Co.) was nocturnally electrofished on 29 April. A total of 336 largemouth bass were collected resulting in a CPUE of 224.00 fish/hr (Table 54). Of the total numbers of largemouth bass collected (336), only 7 stocked fish were found, comprising 2.0% of the catch (Table 55). This was also the case during 2009 where only 7 stocked fish were captured (925 were stocked in the fall of 2007 and 2,715 were stocked in 2008). Catch rates for largemouth bass by length group can be found in Table 56. For comparison purposes, low catch rates experienced in 2008 may be attributed to a malfunctioning electrofishing boat. 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 fish/hr, actual = 45.33 fish/hr), ≥ 15.0 in bass (objective = 10.00 fish/hr, actual = 13.33 fish/hr), ≥ 20.0 in bass (objective = 2.00 fish/hr, actual = 2.00 fish/hr). Largemouth bass PSD remained within the desired range with a value in 2010 of 40 (2009 = 53, 2008 = 51, 2007 = 46, 2006 = 51, 2005 = 41; Table 57). The age frequency for largemouth bass is shown in Table 58. Electrofishing catch rates for each age of largemouth bass from 2000 through 2010 are shown in Table 59. The population assessment rated the bass fishery as "Fair" (Table 60).

Bluegill/redear sunfish electrofishing (Spring)

Daytime electrofishing for bluegill and redear sunfish was conducted on 25 May. A total of 1,238 bluegill and 35 redear sunfish were collected (Table 61). Of the total number of bluegill collected, 1001 were ≤ 3.0 in. Catch rates by length group of bluegill and redear sunfish can be found in Table 62. Bluegill PSD was 34 which showed a dramatic increase from 2009 (17), 2008 (19), 2007 (22) and 2006 (26; Table 63). Age frequency for bluegill is shown in Table 64. The population assessment rated the bluegill fishery as "Excellent" (Table 65). Only 35 redear sunfish (ranging in size from 1.0-12.0 in) were sampled in 2010 compared to 5 in 2009, 19 in 2008 and 30 in 2007. Too few redear sunfish were collected to make an accurate population assessment. From 2003-2005, 181,500 1.0-in redear sunfish were stocked into the lake.

Black bass electrofishing (Fall)

On 16 September, the shoreline of Greenbo Lake was nocturnally electrofished for largemouth bass relative weights and length frequencies. A total of 196 largemouth bass were collected in 1.5 hours of electrofishing (6-15 minute runs; Table 66). Relative weight values compared to past years can be found in Table 67. Largemouth bass indices of year class strength at age 0 and age 1 are found in Table 68. Due to these indices, Greenbo Lake was stocked with 2,724 YOY largemouth bass that averaged 4.9 inches in length in the fall of 2010. Poor spawning success during 2008 and 2007 also warranted the supplemental stocking of 3.0-5.0 in bass (2,715 in 2008 and 925 in 2007).

Channel Catfish Tandem Hoop Net

From 18-21 October, three tandem hoop nets sets (3-hoop nets per set) were placed in the lake to sample the channel catfish population. The nets were set at depths ranging from 7-14 feet and yielded a total of 18 channel catfish which ranged in size from 8.0-22.0 in (Table 69). Otoliths were used for age determination

on 16 of the 18 fish. The majority of those were 1+ year old (83%; ranging in size from 8.0 to 10.0 in); however, one 2+ year old fish (14.0 in class), one 4+ year old fish (19.0 in class) and one 7+ year old fish (22.0 in class) were also captured.

Creel Survey

A creel survey was conducted at Greenbo Lake from 05 March – 31 October. This survey consisted mainly of a fixed access point survey with a period approximating an hour where the clerk interviewed anglers from a boat after the count period was completed. A total of 7,575 fishing trips and 23,532 angler hours were logged during 2010 which was down significantly from the last time a creel was run during 1990 (27,344 trips and 123,491 angler hours; Table 70). Likewise the catch and harvest rates were lower than that recorded from the 1990 creel survey (data from 1990 was included not so much for comparison but for prosperity sake). The majority of the anglers were males, “still” fishing followed by “casting” from the bank. Table 71 shows the majority of fishing trips were made for rainbow trout (37.52%), followed by black bass (18.90%), panfish (18.01% and “anything” (15.53%). The most successful anglers were those fishing for crappie (53.33%), rainbow trout (38.04%) and panfish (24.22%; Table 71). Black bass anglers were the least successful of all anglers at 6.87% success. Of the 831 largemouth bass caught over the legal size limit of 12.0 in, 309 (37%) were harvested (Table 72). The majority of the largemouth bass were caught in June followed by May and April (Table 73) while the majority of the rainbow trout (87%) were caught in March (Table 74). Monthly angling success values for panfish and channel catfish can be found in Tables 75 and 76 respectively.

Angler Attitude Survey

In conjunction with the creel survey anglers were asked several additional questions (Table 77). Anglers were only asked these questions once during the year. Findings from this questionnaire revealed that the majority of the anglers fished for largemouth bass (40.0%), sunfish (38.7%) followed by rainbow trout (30.6%) and channel catfish (18.2%). Of the bass anglers, only 40.4% were very or somewhat satisfied with bass fishing at the lake, however 47.5% were neutral leaving only 12.1% of the anglers who were either somewhat, very dissatisfied, or had no opinion. The majority of those unsatisfied were unhappy with the size number of the fish they caught (100%). Of the sunfish anglers 50.0% were either somewhat or very satisfied and 3.2% were somewhat or very dissatisfied. The majority of the anglers (98.1%) were satisfied with the current regulations on Greenbo Lake.

Miscellaneous

Grass carp are still being observed and one was collected during routine sampling in the spring. The grass carp were stocked in 1989. During the year, 4,255 channel catfish and 15,000 rainbow trout were stocked.

Mill Creek Lake (41a)

Black bass electrofishing (Spring)

On 28 April, the shoreline of Mill Creek Lake (Powell/Wolfe Co.) was nocturnally electrofished (1 hour; 4-15-minute runs) for black bass species. In total, 161 largemouth bass were captured ranging in size from 2.0 to 20.0 in (Table 78). This showed a marked increase from the 2009 sample of 117 fish and in fact was only second in total sample to 2006 when 182 total fish were captured (Table 79). Increases were observed in the fish less than 8.0 in and 8.0 – 12.0 in (Table 79). PSD and RSD₁₅ values remained relatively unchanged as they have for the last several years (Table 80). The overall assessment was down from 2009 to a 10 and is rated as “Fair” (Table 81). Management objectives for catches of fish greater than 15.0 in (≥ 5.00 fish/hr) and greater than 20.0 in (≥ 1.00 fish/hr) were both met this year, but the objectives for catches of age-1 fish (≥ 15.00 fish/hr) and fish between 12.0 and 14.9 in (≥ 20.00 fish/hr) were not met (Table 90).

Sunfish electrofishing

On 26 May, Mill Creek Lake was diurnally electrofished (1 hour; 4-15-minute runs) for sunfish species. The majority of this sample was bluegill (453 fish), followed by green sunfish (87 fish), longear sunfish (69 fish) and hybrid sunfish (1 fish) for a total of 610 fishes (Table 82). While the overall catch has dropped from 2009, this could be attributed to the drop in the bluegill less than 3.0 in, which show incredible variability over the years (Table 83). Both PSD and RSD₃ values have increased since 2009 (Table 84).

Otoliths were removed from a subsample of 90 bluegill in order to determine growth rates. Back calculated growths of those fish aged showed that on average bluegill reach 8.0 in by their 4th or 5th year (quickest to 8.0 in was 3 years and longest was 5; Table 85). As is typical of a normal bluegill population, the majority of the fish were below 3.0 in and 1 to 2 years old (Table 86). In terms of the assessment, the mean length at age-2 dropped almost 0.5 in since the last time sunfish were aged; however, this did not affect the scoring of this category. The number of years to reach 6.0 in did not change since the last time the sunfish were aged. The overall assessment has increased from 2007 – 2009 to a score of 10, but remains rated as “Fair” (Table 87). Management objectives for catches of bluegill greater than 8.0 in (≥ 5.00 fish/hr) were met, but objectives for catches of bluegill greater than 6.0 in (≥ 40.00 fish/hr) were not met (Table 90).

Black bass electrofishing (Fall)

On 28 September, Mill Creek Lake was nocturnally electrofished (1 hour; 4- 15-minute runs) for assessment of relative weights of black bass. Overall, 145 largemouth bass were sampled ranging in size from 2.0 – 18.0 in (Table 88). The relative weights have remained relatively unchanged since 2007 (Table 89).

Miscellaneous

Mill Creek was again stocked with 5,500 rainbow trout and around 1,000 channel catfish. Aquatic vegetation was observed in high densities during the fall black bass sampling. While small amounts of this vegetation would no doubt be beneficial to the fisheries of this lake, the extreme clarity of the lake may allow it to expand beyond the realm of benefit. The vegetation will continue to be monitored while conducting our routine sampling.

Lake Reba (76a)

Black bass electrofishing (Spring)

On 26 April, the shoreline of Lake Reba (Madison Co.) was nocturnally electrofished (1.5 hours; 6- 15-minute runs) for black bass population assessment. In total, 369 largemouth bass were captured ranging in size from 2.0 – 20.0 in (Table 91). Of these fish, 56 were stocked in either 2008 or 2009 as part of the largemouth bass stocking initiative representing 15% of the total catch. These fish fell into 2 very distinct age categories with 50 being age-1 fish ranging in size from 4.0 – 5.0 in and 6 being age-2 fish ranging in size from 8.0 – 9.0 in (Table 92). It is unknown if age-1 stocked fish were more prevalent due to natural reasons or the increased stocking rate implemented in 2009. Most likely it is due to the increased stocking rate as only 9 age-1 fish were captured in 2009. Overall, the 2010 catch rates were down around 150.00 fish/hr from the 2009 sample but these drops were not outside the average observed from 1999 – 2009 (Table 93). PSD and RSD₁₅ were relatively unchanged and did not differ from the 2000 – 2009 mean (Table 94). Otoliths were collected from a subsample of 100 largemouth bass for determination of age and growth characteristics. Back calculated growths indicated that on average, largemouth bass in Lake Reba reach 12.0 in by their 4th year, but as early as their 3rd year (Table 95). Age frequency showed that the majority of the fish (around 75%) fall within 6.0 to 12.0 in and 2 to 4 years old (Table 96). The parameters of the assessment affected by the age and growth characteristics were fairly consistent with the last time aging was conducted. The overall assessment dropped one point but remained classified as “Good” (Table 97). Management objectives for catches of 12.0 – 14.9 in (≥ 40.00 fish/hr) and greater than 20.0 in (≥ 0.50 fish/hr) fish were met in 2010, but objectives for catches of age-1 (≥ 125.00 fish/hr) and ≥ 15.0 in (≥ 11.00 fish/hr) fish were not met (Table 108).

Sunfish electrofishing

On 03 June, the lake was diurnally electrofished (1.2 hours; 10- 7.5-minute runs) for assessment of the sunfish populations. In total, 1439 fish were captured. This sample was dominated by bluegill (1139 fish) followed by redear sunfish (181 fish), warmouth (89 fish), green sunfish (20 fish) and hybrid sunfish (10 fish; Table 98). The catch of bluegill increased from the sample collected in 2009, especially in the 3.0 – 5.9 in length group (Table 99). With these increases in the smaller sized fish, there was a drop observed in the PSD values, but this drop is still not outside the confidence interval ranges for previous years (Table 100). Furthermore, not enough larger sized fish were sampled to calculate an RSD₈ value again this year. The population assessment remained stationary at a value of 7 which is classified as “Fair” (Table 101).

The catch rates of redear sunfish took a major drop in 2010 when compared to 2009; however, these catch rates appear to be variable throughout the years (Table 102). With a major drop in the smaller sized fish, this had the effect of increasing the PSD but not outside the range of the 95% confidence intervals (Table 103). The population assessment for redear sunfish within Lake Reba increased a point to 5 but is still classified as "Poor" (Table 104). The major detriment to the assessment values for bluegill and redear sunfish is the catch rates of the larger fish (≥ 8.0 in for bluegill and ≥ 10.0 in for redear sunfish) which has never been higher than 0 since the lake was restructured. Management objectives for catches of greater than 6.0 in (≥ 75.00 fish/hr) and greater than 8.0 in (≥ 1.00 fish/hr) bluegill were not met (Table 108).

Black bass electrofishing (Fall)

On 23 September, the lake was nocturnally electrofished (1.5 hours; 6- 15-minute runs) for assessment of the age-0 class strength and relative weights. Overall, 431 largemouth bass were sampled ranging in size from 2.0 – 19.0 in (Table 105). Relative weights were unchanged (Table 106) as were the indices of year class strength (Table 107). Because the indices were unchanged, the lake was once again stocked with 1,224 YOY largemouth bass that averaged 4.9 inches in length in the fall of 2010.

Miscellaneous

Lake Reba was stocked with around 300 grass carp in the spring and spraying of the lake continued for the entire summer in order to control the overabundance of aquatic vegetation and algae within the lake.

Rebel Trace Lake (19a)

Black bass electrofishing (Spring)

Could not sample the lake due to an over abundance of aquatic vegetation.

Bluegill/redear sunfish electrofishing

On 02 June, Rebel Trace Lake (Menifee Co.) was diurnally electrofished for sunfish. Length frequency of sunfish collected is found in Table 109 and CPUE for selected length groups of bluegill and redear sunfish are presented in Table 110. The most notable increase in CPUE was for those fish in the 6.0 – 7.9 and ≥ 8.0 in length groups. The bluegill PSD value of 37 (13 in 2009 and 5 in 2008) ascended into the desirable range (Table 111). Age frequencies are found for bluegill and redear sunfish in Tables 112 and 113, respectively. The population assessment rated the bluegill fishery as "Good" (Table 114) and the redear sunfish fishery as "Good" (Table 115).

Black bass electrofishing (Fall)

For the fourth consecutive year, fall sampling for largemouth bass could not be accomplished due to the extensive coverage of aquatic vegetation. Eurasian watermilfoil was the dominant species during 2007-2009, however during 2010, watermilfoil densities decreased measurably and watershield had increased in abundance. Approximately 75 surplus grass carp from Minor Clark Fish Hatchery have been stocked (2007-2008) in attempts to remedy the watermilfoil situation. Whether the disappearance of the watermilfoil can be attributed to grass carp or high water experienced during the spring is unknown. 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)

High water and heavy turbidity during the spring prevented a sample of Smoky Valley Lake at its traditional time. Fish were sampled concurrently with the spring sunfish sample on 02 June. Not doubt, any differences observed were most likely due to this difference in sampling time. In total, 113 largemouth bass ranging in size from 3.0 – 17.0 in were sampled (Table 116). Catches by length group and PSD values

both show drops over previous years' samples (Table 117 and Table 118, respectively). Fish were collected this year, in spite of the difference in sampling time, so we could obtain age and growth information in order to continue to assess the current "No Minimum Size Limit" regulation. Otoliths were collected from a subsample of 86 largemouth bass. Back calculated lengths show no change from the 2007 aging of the largemouth bass. It still takes 6 years for a largemouth bass to reach 12.0 in (Table 119). It takes almost 2 years longer to reach 12.0 in and the mean length at age-3 is 2.0 in smaller than largemouth bass at Lake Reba. Age frequencies show that the production of fish is still good, but the growth to larger sizes is slow (Table 120). Comparatively, a 5 year old fish at Lake Reba is 15.0+ in long; while at Smoky Valley is 11.0 in. The overall assessment of the largemouth fishery at Smoky Valley is "Poor" (Table 121). Management objectives for catches of age-1 fish (≥ 30.00 fish/hr) were met in 2010, but objectives for catches of 12.0 – 14.9 in (≥ 50.00 fish/hr), ≥ 15.0 in (≥ 2.00 fish/hr) and ≥ 20.0 in (≥ 1.00 fish/hr) fish were not met (Table 128).

Sunfish electrofishing

On 02 June, Smoky Valley Lake was diurnally electrofished (56.67 minutes; 3- 15-minute runs and 1- 11.67-minute run) for sunfish species. In total, 465 fishes were collected. This population was dominated by bluegill (384 fish), followed by green sunfish (59 fish), longear sunfish (19 fish) and hybrid sunfish (3 fish; Table 122). Catches by length group for bluegill overall were pretty steady when compared to previous years (Table 123). When examined by individual length groups, there were some increases observed in the less than 3.0 in and the 6.0 to 7.9 in groups and a decrease in the 3.0 to 5.9 in group, but none of these changes were statistically significant. PSD and RSD₈ appear to remain unchanged and excluding the high value in 2008 appear to be within the limits of all previous years (Table 124). The overall assessment remained as "Fair" (Table 125). Management objectives for catches of bluegill ≥ 6.0 in (≥ 40.00 fish/hr) and ≥ 8.0 in (≥ 2.00 fish/hr) were not met in 2010 (Table 128).

Black bass electrofishing (Fall)

On 27 September, the lake was nocturnally electrofished (1.0 hour; 4- 15-minute runs) for black bass. In total, 257 largemouth bass were captured ranging in size from 2.0 to 14.0 in (Table 126). Relative weight indices were down from previous years to 81 and 82 for the 8.0 to 11.9 in and 12.0 to 14.9 in length groups, respectively (Table 127). Management objectives for relative weights (> 90.0) were not met for any of the length groups (8.0 – 11.9 in, 12.0 – 14.9 in and ≥ 15.0 in; Table 127).

Lake Wilgreen (169a)

Black bass electrofishing (Spring)

On the 27 April, the shoreline of Lake Wilgreen (Madison Co.) was nocturnally electrofished (1.5 hours; 6- 15-minute runs) for black bass. In total, 340 largemouth bass ranging in size from 2.0 to 22.0 in were captured (Table 129). This catch was not significantly different from the 2009 sample but was dramatically lower than the 10 year mean (1999 – 2009; Table 130). This trend was echoed in the fish less than 8.0 in and the 8.0 to 11.9 in fish, was less dramatic in the fish between 12.0 and 14.9 in and did not occur in the fish over 15.0 and 20.0 in (Table 130). PSD and RSD₁₅ did not show any deviation over the last 3 years (2008 – 2010) but were drastically higher than the mean of the last several years (Table 131). The overall assessment for Lake Wilgreen in 2010 was "Good" (Table 132). However, the decline of the catches of the smaller size ranges of fish could be the result of the increases in the population size of the gizzard shad and could be cause for concern with the largemouth bass fishery moving forward. Management objectives for catches of fish ≥ 15.0 in (≥ 10.00 fish/hr) and ≥ 20.0 in (≥ 1.00 fish/hr) were met in 2010, but were not met for catches of age-1 fish (≥ 30.00 fish/hr), and fish in the 12.0 to 14.9 in (≥ 75.00 fish/hr) range (Table 139).

Sunfish electrofishing

On 08 June, the lake was diurnally electrofished (1.25 hours; 10- 7.5-minute runs) for sunfish species. In total, 767 fish were captured. The majority of the fish were bluegill (606) followed by green sunfish (114), redear sunfish (38) and warmouth (9; Table 133). Overall catches of bluegill and redear sunfish were down in all length groups from the mean (2002 – 2009) with the exception of the bluegill in the 3.0 to 5.9 in length group (Table 134). PSD and RSD values for both species were also down in 2010 (Table 135).

Overall the assessment for bluegill in 2010 was down from "Good" to "Fair" (Table 136). Declines in the populations of bluegill and redear sunfish are most likely the result of direct competition with gizzard shad. Management objectives for the catches of ≥ 6.0 in (≥ 90.00 fish/hr) and ≥ 8.0 in (≥ 1.00 fish/hr) bluegill were not met in 2010 (Table 139)

Black bass electrofishing (Fall)

On 27 September, the lake was nocturnally electrofished (1.5 hours; 6- 15-minute runs) for black bass species. In total, 645 largemouth bass were captured ranging in size from 3.0 to 19.0 in (Table 137). Relative weights for fish over 15.0 in remain in the acceptable range, but are on the lower end of acceptable for fish between 12.0 and 14.9 in and are below acceptable for smaller sunfish (Table 138). Most likely, the high weights are the result of increased forage for the larger sized bass and the low weights for the smaller fish are the result of the increased competition in those smaller classes due to a decline in suitable sized forage for those sized fish. Management objectives for relative weights (> 90.0) for the ≥ 15.0 in and 12.0 to 14.9 in ranges were both met in 2010, but for the fish between 8.0 and 11.9 in, the goal was not met (Table 139).

Miscellaneous

Lake Wilgreen was stocked with 300 larger sized blue catfish again in 2010. This lake was added to the regular stocking list for the 2011 season. Electrofishing for these fish was attempted in 2010 with little success. It will be continued in 2011 for further evaluation of the population.

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	<i>did not sample because of high water</i>								
Grayson Lake	LMB	<i>did not sample because of high water</i>								
Grayson Lake	LMB	<i>did not sample because of high water</i>								
Grayson Lake	LMB	9/13	2015	shock	clear/calm	74.80	644.94	18	good	murky; cond: 181.1; upper section
Grayson Lake	LMB	9/14	2010	shock	prt. Cloudy	77.10	644.91	39	good	cond: 160.6; middle section
Grayson Lake	LMB	9/15	2000	shock	clear/warm	78.40	644.88	60	good	cond: 137.4; lower section
Grayson Lake	WC/BC	10/20	935	shock	clear/calm	51.08		36	good	cond: 171; upper lake only
Lake Carnico	LMB	5/7	2100	shock	clear/cool	67.30	slightly up	12 to 60	good	cond: 222
Lake Carnico	BG/RE	6/3	920	shock	cloudy/rain	76.28	normal	54	good	cond: 224
Lake Carnico	LMB	10/1	2000	shock	P-cloudy	67.30	slightly up	54	good	cond: 221
Clear Creek	LMB	5/14	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 (24hr)	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	BG/RE	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 Wiggreen	LMB	4/28	2050	shock	overcast	68.50	normal	30	good	cond: 521
Lake Wiggreen	BG/RE	6/9	1000	shock	clear/hot	77.18	normal	36	good	cond: 310
Lake Wiggreen	LMB	9/28	2005	shock	cool/clear	71.60	normal	30	good	cond: 361.5
Normal Summer										
Normal Summer										

* cond = conductivity in µS/cm

Table 2. Relative abundance and CPUE (fish/hr) of muskellunge collected in the upper, middle and lower sections (includes ≤20.0 in observed but not collected) during 6 hours (18 hours total) of 30 minute runs in each area of Cave Run Lake (15, 16, 18 March 2010).

Species	Inch class																		Total	CPUE	error	Std										
	11	12	13	14	15	16	20	21	22	23	24	25	26	27	28	29	30	31					32	33	34	35	36	37	38	39	40	41
Muskellunge Upper	2	4	16	11			2	2	6	1	4	2	1				4	1	1					1	1	1	1	1				57
Muskellunge Middle	3	6	10	5	1		3	2	5	4	4	2		1	1	2	1	3	5	2	3	2	4	1	1	1			2		73	
Muskellunge Lower	1	4	17	43	12	3	1	5	6	5	7	3	1		1	2	2	6	2	3	7	5	1	2	1	2	1		2	142		
Total	3	11	39	64	17	4	1	10	10	16	12	7	5	1	1	3	7	4	8	5	5	12	5	3	4	1	1	2	2	272		

nedmuscr.d10

Table 3. Number of fish and mean relative weight (W_r) values for length groups of muskellunge collected across all lake units in Cave Run Lake from 2003 to present. Standard errors are in parentheses.

Year	Length group																		Total
	≤20.0 in			20.1 - 30.0 in			30.1 - 38.0 in			≥ 38.1 in			N	W _r	(se)	N	W _r	(se)	
2010	19	79	(1)	64	92	(1)	52	94	(2)	18	90	(1)							153
2009	12	88	(4)	11	97	(1)	36	93	(1)	23	93	(1)	82	93	(1)				
2008	27	76	(1)	40	114	(17)	48	94	(1)	11	89	(1)	126	96	(6)				
2007	35	84	(1)	9	102	(4)	18	95	(3)	14	92	(2)	76	90	(1)				
2006	17	75	(1)	13	88	(2)	26	89	(1)	13	87	(1)	69	85	(1)				
2005	26	81	(4)	23	91	(1)	38	89	(1)	22	85	(2)	109	87	(1)				
2004	10	79	(2)	10	90	(3)	32	87	(1)	15	80	(1)	67	85	(1)				
2003	22	82	(3)	16	96	(3)	33	92	(2)	9	87	(2)	80	90	(1)				

nedmuscr.d10-d03

Table 4. Muskellunge assessment for Cave Run Lake spring electrofishing from 1995 to present (scoring based on statewide assessment).

Year	Value	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
2010	Score	7.67	7.44	3.89	1.94	0.56	16	Good
	Score	3	3	3	4	3		
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.d95-10; nedMS2cr.d08; nedMK1cr.d07

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	Value Score	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								
2010*	Value Score										
2009*	Value Score										
2008	Value Score	12.4 3	24.88 2	8.33 1	3.50 1	0.50 2	9	Fair	0.786	54.40%	
2007	Value Score	12.4 3	66.50 4	19.90 2	7.90 2	0.33 2	13	Good	0.703	51.00%	
2006	Value Score	12.4 3	49.20 3	14.70 1	10.20 2	0.17 1	10	Fair	0.799	55.00%	
2005	Value Score	12.4 3	43.00 3	14.70 1	7.25 2	0.67 2	11	Fair	0.897	59.00%	
2004	Value Score	12.4 3	28.1 2	26.00 3	14.70 3	0.33 2	13	Good	0.846	57.00%	
2003	Value Score	12.4 3	39.80 3	24.80 2	20.20 4	0.75 2	14	Good			
2002*	Value Score										
2001	Value Score	10.7 1	15.10 1	27.60 3	12.60 3	0.25 2	10	Fair			
2000	Value Score	10.3 1	35.50 2	26.80 3	9.00 2	0.42 2	10	Fair			
1999	Value Score	11.0 1	50.20 4	21.60 2	8.60 2	0.00 0	9	Fair			
1998	Value Score	10.7 1	10.80 1	20.60 2	6.90 2	0.00 0	6	p			
1997	Value Score	10.8 1	23.80 1	24.60 2	4.40 2	0.08 1	7	Fair			
1996	Value Score	11.1 2	50.80 4	15.20 2	4.00 1	0.00 0	9	Fair			

* = 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 20 - 22 September, 2010.

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			
Lower																					
Smallmouth bass			2		1	3	2	2		1								9	4.50	1.26	
Spotted bass	37		34	11	25	38	24	19	13	6	3	1						211	105.50	36.72	
Largemouth bass	1	5	30	34	7	6	19	20	4	11	5	6	1	4	1	1		155	77.50	33.69	
Middle																					
Smallmouth bass						2	7	1		1								11	5.50	2.06	
Spotted bass	14	105	23	6	16	33	28	23	7	3	2							260	130.00	25.60	
Largemouth bass	3	32	38	24	7	21	30	16	16	11	3	1	2	2	1			207	103.50	20.16	
Upper																					
Spotted bass	1	5	2	1			2	1	3	1								16	8.00	2.58	
Largemouth bass	7	153	171	33	24	4	11	28	25	27	15	7	5	4	1	1		516	258.00	45.67	
Total																					
Smallmouth bass			2		1	5	7	3		2								20	3.33	1.02	
Spotted bass	1	56	141	35	31	54	59	48	39	14	6	3						487	81.17	20.86	
Largemouth bass	8	161	233	105	55	17	51	78	45	54	31	16	7	10	3	3	1	878	146.33	30.13	

nedwrsr.d10

Table 7. Number of fish and mean relative weight (W_r) for length groups of black bass collected in Cave Run Lake sampled by nocturnal electrofishing. Standard errors are in parentheses.

Species	Area	Length group					
		8.0-11.9 in		12.0-14.9 in		≥15.0 in	
		No.	W_r (se)	No.	W_r (se)	No.	W_r (se)
Largemouth bass	Lower	54	83 (1)	12	84 (2)	6	89 (3)
	Middle	83	83 (1)	15	81 (3)	5	93 (6)
	Upper	91	84 (1)	27	83 (2)	6	89 (2)
	Total	228	84 (1)	54	83 (1)	17	90 (3)
Spotted bass		7.0-10.9 in		11.0-13.9 in		≥14.0 in	
		No.	W_r (se)	No.	W_r (se)	No.	W_r (se)
	Lower	94	91 (1)	10	86 (2)		
	Middle	100	99 (1)	12	98 (3)		
Upper	6	85 (2)	1	93			
Total	200	95 (1)	23	93 (2)			
Smallmouth bass		7.0-10.9 in		11.0-13.9 in		≥14.0 in	
		No.	W_r (se)	No.	W_r (se)	No.	W_r (se)
	Lower	5	80 (4)	1	71		
	Middle	10	93 (2)	1	66		
Total	15	89 (2)	2	68 (3)			

nedwrsr.d10

Table 8. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall while nocturnal electrofishing at Cave Run Lake.

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.
2010	Total	4.5	0.04	91.67	27.71	24.67	4.22			
2009	Total	4.6	0.04	70.17	12.16	26.33	4.10	*	*	
2008	Total	4.6	0.04	76.50	28.15	26.33	8.13	*	*	
2007	Total	4.7	0.06	50.50	19.00	20.30	7.70	24.88	5.86	
2006	Total	4.8	0.05	68.50	26.20	31.50	13.10	66.50	7.10	
2005	Total	4.1	0.07	51.50	19.40	10.80	3.50	49.20	9.90	
2004	Total	5.3	0.06	86.00	26.30	53.50	14.00	63.40	9.90	
2003	Total	4.7	0.04	70.70	19.00	23.50	6.40	28.10	3.00	

* No data collected, water too high to sample

nedwrsr.d10 - 03; nedpsdr.d08 - d04

nedaagr.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 60 net-nights during 01 - 05 November 2010.

Species	Inch class													Std. error	
	2	3	4	5	6	7	8	9	10	11	12	13	Total		CPUE
White crappie	1	136	16	29	44	61	47	7	9	14	5	1	370	6.17	0.79
Black crappie	1	2	3	5	11	2	4			1	1		30	0.50	0.10

neditncr.d10

Table 10. PSD and RSD₁₀ values for crappie collected in trap nets on Cave Run Lake; 95% confidence limits are in parentheses.

Species	No. fish		
	≥ stock size	PSD (± 95%)	RSD ₁₀ (± 95%)
White crappie	217	38 (± 7)	13 (± 5)
Black crappie	27	30 (± 18)	7 (± 7)

neditncr.d10

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	13	14				
0+	136	16											152	41	2.53	0.57
1+			26	26									53	14	0.88	0.18
2+			3	18	61	42	5						128	35	2.14	0.28
3+					5	2	7	5					18	5	0.31	0.06
4+							2	5					7	2	0.12	0.03
5+									3	3			3	1	0.04	0.02
6+									5	3	7		7	2	0.12	0.03
Total	136	16	29	44	61	47	7	9	14	5			368	100		
%	37	4	8	12	17	13	2	2	4	1			100			

neditncr.d10, nedaagr.d07

Table 12. Population assessment of white crappie based on samples collected at Cave Run Lake in 2010 compared to previous years (scoring based on lake-specific assessment).

Year	Overall CPUE				Mean length		Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
	excluding age-0	Fall CPUE age-1	Fall CPUE age-0	Fall CPUE ≥ 8.0 in	age-2 at capture	age-2 at capture				
2010	Value 3.60	0.88	2.53	1.38	7.7	7.7	5	Poor	-1.220	70.50%
	Score 1	1	1	1	1	1				
2009	Value 106.38	59.18	56.00	3.25	7.7	7.7	15	Good	-1.490	77.50%
	Score 4	4	4	2	1	1				
2008	Value 2.01	0.64	1.30	0.56	7.7	7.7	5	Poor	0.588	45.50%
	Score 1	1	1	1	1	1				
2007	Value 2.80	0.74	0.55	0.60	7.7	7.7	5	Poor	1.410	75.50%
	Score 1	1	1	1	1	1				
2006	Value 6.89	5.14	3.75	0.65	7.9	7.9	8	Fair	0.951	66.30%
	Score 2	2	2	1	1	1				
2005	Value 2.20	0.70	1.70	0.90	7.9	7.9	5	Poor	0.572	43.60%
	Score 1	1	1	1	1	1				
2004	Value 9.30	4.20	6.40	3.00	7.9	7.9	10	Fair	0.762	53.30%
	Score 2	2	3	2	1	1				
2003	Value 1.60	0.22	0.11	0.70	7.8	7.8	5	Poor	0.391	32.30%
	Score 1	1	1	1	1	1				
2002	Value 4.39	1.09	0.56	0.79	7.3	7.3	5	Poor		
	Score 1	1	1	1	1	1				
2001	Value 1.70	0.60	0.05	0.35	6.9	6.9	5	Poor		
	Score 1	1	1	1	1	1				

neditncr.d01-10; nedaagcr.d01,02,03,04,07

Table 13. Management objective results for 2010 at Cave Run Lake that can be determined through routine sampling compared to previous years.

	2010		2009		2008	
	Result	Met	Result	Met	Result	Met
Muskellunge						
Objective 1 > 2.40 fish/hr age 1	7.67	Yes	4.67	Yes	2.72	Yes
Objective 2 > 3.35 fish/hr ≥ 20.0 in	3.89	Yes	3.89	Yes	5.50	Yes
Objective 3 > 2.54 fish/hr ≥ 30.0 in	3.89	Yes	3.28	Yes	3.28	Yes
Objective 4 > 1.20 fish/hr ≥ 36.0 in	1.94	Yes	1.67	Yes	1.28	Yes
Objective 5 > 0.42 fish/hr ≥ 40.0 in	0.56	Yes	0.67	Yes	0.28	No
Largemouth Bass						
Objective 1 > 39.38 fish/hr age 1	*	*	*	*	24.88	No
Objective 2 > 21.18 fish/hr 11.0 - 12.0 in	*	*	*	*	32.67	Yes
Objective 3 > 15.74 fish/hr 13.0 - 15.9 in	*	*	*	*	29.33	Yes
Objective 4 > 5.67 fish/hr ≥ 16.0 in	*	*	*	*	10.50	Yes
Objective 5 > 0.27 fish/hr ≥ 20.0 in	*	*	*	*	0.50	Yes
Crappie (only white crappie used)						
Objective 1 > 3.69 fish/mn ≥ age 1	3.60	No	106.40	Yes	2.01	No
Objective 2 > 1.18 fish/mn age 1	0.88	No	59.18	Yes	0.64	No
Objective 3 > 1.88 fish/mn age 0	2.53	Yes	56.00	Yes	1.30	No
Objective 4 > 1.00 fish/mn ≥ 8.0 in	1.38	Yes	3.25	Yes	0.56	No
White Bass						
Objective 1 > 11.80 fish/mn ≥ age 1	**	**	**	**	9.00	No
Objective 2 > 5.76 fish/mn age 1	**	**	**	**	2.25	No
Objective 3 > 6.32 fish/mn ≥ 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 at Cave Run Lake, 2010.

	Overall		Lower		Middle		Upper	
	N	Percent of sites	N	Percent of sites	N	Percent of sites	N	Percent of sites
Submergent Vegetation	30	30.93	12	38.71	11	35.48	7	20.00
Unvegetated	45	46.39	15	48.39	11	35.48	19	54.29
Emergent Vegetation	18	18.56	2	6.45	7	22.58	9	25.71
Algae	11	11.34	3	9.68	5	16.13	3	8.57

Table 16. Frequency of occurrence of vegetation found in Cave Run Lake during Summer 2010 vegetation sampling.

Scientific Name	Species Common Name	Overall			Upper N=35
		N=97	Lower N=31	Middle N=31	
<i>Potamogeton crispus</i>	Unvegetated	44	15	11	18
<i>Chara</i> spp.	Curly Pondweed	20	8	11	1
<i>Myriophyllum spicatum</i>	Chara	15	4	8	3
<i>Polygonum</i> spp.	Milfoil	12	5	2	5
<i>Plantanus occidentalis</i>	Smartweed	12		5	7
<i>Cephalanthus occidentalis</i>	Sycamore	9		4	5
<i>Acer</i> spp.	Button Bush	7		2	5
<i>Justicia americana</i>	Maple	5		3	2
<i>Najas marina</i>	Water Willow	5		4	1
<i>Liquidambar styraciflua</i>	Spiny Naiad	3	1	2	
<i>Potamogeton nodosus</i>	Sweet Gum	3	2	1	
<i>Fraxinus</i> spp.	American Pondweed	2		1	1
<i>Toxicodendron radicans</i>	Ash	2		1	1
<i>Asclepias</i> spp.	Poison Ivy	2	1		1
<i>Rosa multiflora</i>	Milkweed	1	1		
<i>Eriophyllum</i> spp	Multiflora Rose	1		1	
	Sunflower	1	1		

Table 17. Densities of submersed aquatic vegetation (on a percentage scale) across the lake, for the lower portion, middle portion and upper portions. Interpretation of the abbreviations for the vegetation types are found below the table.

	All	C	M	N	A	CM
Overall	25.4	38.0	20.8	20.0	22.6	29.4
Lower	20.4	40.8	20.0	20.0	0.0	30.4
Middle	24.4	37.6	20.0	20.0	20.0	28.8
Upper	16.8	20.0	22.0	0.0	25.0	21.0

C=Curly Pondweed

M=Eurasian Watermilfoil

N=Spiny Naiad

A=American Pondweed

CM=Curly Pondweed and Eurasian Watermilfoil

Table 18. Population assessment of largemouth bass based on samples collected at Grayson Lake from 1996-2010 (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								
2010*	Score									
2009	Value	11.6	19.93	17.00	12.67	0.83	10	Fair	-0.361	30.30%
	Score	2	1	2	3	2				
2008	Value	11.6	21.30	11.50	3.67	0.33	7	Poor	-0.445	35.90%
	Score	2	1	1	1	2				
2007	Value	10.7	45.90	16.00	5.00	0.17	9	Fair	-0.538	41.60%
	Score	1	3	2	2	1				
2006	Value	10.7	17.30	23.67	5.33	0.30	8	Fair	-5.350	41.50%
	Score	1	1	2	2	2				
2005	Value	10.7	46.80	25.11	2.89	0.20	10	Fair	-0.731	51.90%
	Score	1	3	3	1	2				
2004	Value	10.7	40.40	12.89	2.89	0.33	8	Fair		
	Score	1	3	1	1	2				
2003	Value	10.7	125.23	6.33	2.17	0.67	9	Fair		
	Score	1	4	1	1	2				
2002	Value	10.7	127.20	4.83	3.00	0.83	9	Fair		
	Score	1	4	1	1	2				
2001	Value	10.7	218.11	6.67	2.22	0.22	9	Fair		
	Score	1	4	1	1	2				
2000	Value	10.5	130.80	13.44	6.67	0.33	10	Fair		
	Score	1	4	1	2	2				
1999	Value	10.7	167.02	24.11	4.56	0.22	11	Fair		
	Score	1	4	2	2	2				
1998	Value	10.4	145.57	20.20	4.62	0.17	10	Fair		
	Score	1	4	2	2	1				
1997	Value	10.8	87.60	19.90	3.10	0.59	10	Fair		
	Score	1	4	2	1	2				
1996	Value	10.7	56.13	13.20	3.20	0.30	9	Fair		
	Score	1	4	1	1	2				

nedpsdgl.d96-d09; nedaaggl.d03.d08

* = Lake was not sampled due to high water

Table 20. 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	43	79 (1)	15	75 (2)	2	92 (4)
	Middle	75	86 (3)	9	81 (2)		
	Upper	56	80 (1)	7	76 (2)	1	88 (-)
	Total	174	81 (1)	31	77 (1)	3	90 (3)

Species	Area	7.0-10.9 in		11.0-13.9 in	
		No.	W_r (se)	No.	W_r (se)
		Spotted bass	Lower	46	85 (2)
Middle	28		90 (2)	1	81 (-)
Upper	3		93 (4)	1	94 (-)
Total	77		87 (1)	14	88 (2)

nedwrsogl.d10

Table 21. 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 0		Age 0 ≥ 5.0 in		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2010	Total	4.8	0.04	98.22	17.32	42	6.91		
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

* No sample collected due to high water
nedwrsogl.d10 - d03; nedpsdgl.d09 - d04
nedaaggl.d03, d08

Table 22. Length frequency and CPUE (fish/hr) for each species of crappie collected at Grayson Lake while electrofishing 3.0 hours (12- 15-minute runs) 20 October 2010.

Species	Inch class											Total	CPUE	Std. error
	3	4	5	6	7	8	9	10	11	12	13			
White crappie	2		45	136	158	38	19	11	4	1	1	415	138.33	16.12
Black crappie			5	7	7	6	2					27	9.00	3.23

nedcwrgl.d10

Table 23. PSD and RSD₁₀ values for crappie collected while electrofishing Grayson Lake; 95% confidence limits are in parentheses.

	No. \geq 5.0 in	PSD (\pm 95%)	RSD ₁₀ (\pm 95%)
White crappie	413	18 (\pm 4)	4 (\pm 2)
Black crappie	27	30 (\pm 18)	

nedcwrgl.d10

Table 24. Mean back-calculated lengths (in) at each annulus for white crappie collected from Grayson Lake, including size range at each age and 95% confidence intervals.

Year	No.	Age								
		1	2	3	4	5	6	7	8	9
2010	0									
2009	10	3.1								
2008	7	3.4	5.1							
2007	22	3.6	5.5	6.6						
2006	6	3.3	5.3	6.8	7.8					
2005	12	3.7	5.6	7.1	8.1	8.9				
2004	9	4	6.4	7.5	8.4	9.1	9.7			
2003	0									
2002	0									
2001	1	4	6.1	7.2	8.3	9.7	10.6	11.7	12.5	13.2
Mean		3.6	5.6	6.9	8.1	9	9.8	11.7	12.5	13.2
Smallest		2.6	4.2	5.3	5.8	6.4	8.7	11.7	12.5	13.2
Largest		4.6	6.9	8.1	9.3	10.3	10.6	11.7	12.5	13.2
Number		67	57	50	28	22	10	1	1	1
Std Error		0.1	0.1	0.1	0.2	0.2	0.2			
95% CI (\pm)		0.10	0.15	0.20	0.35	0.40	0.40			

Otoliths were used for age determination; Intercept = 0
nedaaggl.d10

Table 25. Mean back-calculated lengths (in) at each annulus for black crappie collected from Grayson Lake, including size range at each age and 95% confidence intervals.

Year	No.	Age					
		1	2	3	4	5	6
2010	0						
2009	6	3.3					
2008	4	3.1	4.7				
2007	13	3.5	5.4	6.5			
2006	2	3.6	5.5	6.4	7.3		
2005	1	3.7	5.4	7.4	7.9	8.2	
2004	1	3.3	5.7	7.1	8.1	8.5	8.8
Mean		3.4	5.3	6.6	7.6	8.3	8.8
Smallest		2.6	3.5	5.6	7.1	8.2	8.8
Largest		4.3	6.5	7.8	8.1	8.5	8.8
Number		27	21	17	4	2	1
Std Error		0.1	0.1	0.2	0.2	0.2	
95% CI (\pm)		0.10	0.30	0.30	0.45	0.30	

Otoliths were used for age determination; Intercept = 0
nedaaggl.d10

Table 26. Age frequency and CPUE (fish/hr) of white crappie collected while electrofishing at Grayson Lake.

Age	Inch class									Total	%	CPUE	Std error
	3	5	6	7	8	9	10	11	13				
0+	2									2	0	0.67	0.67
1+		41								41	10	13.5	3.74
2+		5	57	13						74	18	24.78	2.25
3+			57	132	24	4				216	52	71.96	7.03
4+			11	13	5	6				35	8	11.65	1.24
5+			11		10	6	6	1		34	8	11.21	1.58
6+						4	5	3		12	3	3.90	1.03
9+									1	1	0	0.33	0.33
Total	2	45	136	158	38	19	11	4	1	414	100		
%	0	11	33	38	9	5	3	1	0	100			

nedaaggl.d10; nedwrsgl.d10

Table 27. Age frequency and CPUE (fish/hr) of black crappie collected while electrofishing at Grayson Lake.

Age	Inch class					Total	%	CPUE	Std error
	5	6	7	8	9				
1+	4	1	1			6	22	1.98	1.18
2+	1	2	1			4	15	1.37	0.54
3+		4	5	2	1	12	46	4.11	1.42
4+				2		2	9	0.80	0.42
5+				1		1	4	0.40	0.21
6+					1	1	4	0.33	0.22
Total	5	7	7	6	2	27	100		
%	19	26	26	22	7	100			

nedaaggl.d10; nedwrsgl.d10

Table 28. Population assessment for white crappie based on samples collected during the fall at Grayson Lake from 2005-2010 (scoring based on *lake-specific* assessment).

Year		Mean length age 2 at capture	CPUE age 0	CPUE age 1	CPUE ≥age 1	CPUE ≥8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2010	Value	6.6	0.67	13.50	124.00	24.67	12	Fair	-0.425	34.60%
	Score	1	1	3	4	3				
2009	Value	6.4	0.50	16.80	69.30	10.30	10	Fair	-0.384	56.60%
	Score	1	1	3	3	2				
2008	Value	6.4	1.70	27.60	104.60	16.00	12	Fair	-0.754	53.00%
	Score	1	1	4	4	2				
2007	Value	5.6	0.30	1.30	21.60	6.00	5	Poor	-0.900	59.30%
	Score	1	1	1	1	1				
2006	Value	5.6	39.60	83.30	228.80	42.40	17	Excellent	-1.185	69.40%
	Score	1	4	4	4	4				
2005	Value	5.1	1.30	9.90	41.30	16.70	8	Fair	-0.233	20.80%
	Score	1	1	2	2	2				

nedcwrgl.d05-d10; nedaaggl.d05, d06, d08, d10

Table 29. 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, Eursian 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 30. Frequency of occurrence and percentages of plant types in Grayson Lake vegetation survey.

	Overall		Lower		Middle		Upper	
	N	Percent of Sites	N	Percent of Sites	N	Percent of Sites	N	Percent of Sites
Unvegetated	24	50.00	5	33.30	8	47.10	11	68.80
Emergent Vegetation	17	35.40	5	33.30	7	41.20	5	31.30
Algae	9	18.80	7	46.70	2	11.80		
Submergent Vegetation	2	4.20	2	13.30				

Table 31. Frequency of occurrence of vegetation found in Grayson Lake during Summer 2010 vegetation sampling.

Species		Overall	Lower	Middle	Upper
Scientific Name	Common Name	N=48	N=15	N=17	N=16
	Unvegetated	24	5	8	11
<i>Chara</i> spp.	Chara	9	7	2	
<i>Lespedeza</i> spp.	Clover	8	3	5	
<i>Cephalanthus occidentalis</i>	Button Bush	7	2	3	2
Poaceae	Grasses	4	1	2	1
<i>Toxicodendron radicans</i>	Poision Ivy	4	2	1	1
<i>Ulmus</i> spp.	Elm	3	1	2	
<i>Fraxinus</i> spp.	Ash	2		2	
<i>Juncus</i> spp	Rushes	2	1		1
<i>Justicia americana</i>	Water Willow	2			2
<i>Plantanus occidentalis</i>	E. Sycamore	2	1	1	
<i>Rosa multiflora</i>	Multiflora Rose	2		1	1
<i>Salix</i> spp.	Willow Tree	2	1		1
<i>Urtica dioica</i>	Stinging Nettle	2			2
<i>Vitis</i> spp.	Wild Grapevine	2		1	1
<i>Acer</i> spp	Maple	1		1	
<i>Aithaea officinalis</i>	Marsh Mallow	1			1
<i>Campsis radicans</i>	Trumpet Creeper	1			1
<i>Fagus grandifolia</i>	American Beech	1		1	
<i>Ilex</i> spp.	Holly	1			1
<i>Lonicera</i> spp	Honey Suckle	1	1		
<i>Magnolia</i> spp.	Magnolia	1		1	
<i>Malus</i> spp.	Crab Apple	1	1		
<i>Mentha</i> spp.	Mint	1		1	
<i>Najas marina</i>	Spiny Naiad	1	1		
<i>Polygonus</i> spp.	Smartweeds	1	1		
<i>Potamogeton nodosus</i>	American Pondweed	1	1		

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 Carnico (Nicholas Co.) on 05 May 2010.

Species	Inch class																				Std. error
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	
Largemouth bass	3	1	1	1	4	21	11	13	5	11	18	15	9	5	2	4	1	4	2	130	86.67
nedsd1c.d10																					9.16

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																	Std error	
	3	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	% CPUE		
1	3	4	21													28	22	18.67	5.33
2				11	11	2	1	6								31	25	20.93	3.26
3					2	3	8	6								19	15	12.82	1.72
4						1	6	8	3							18	14	11.92	1.98
5										5						5	4	3.33	1.23
6									6							6	5	4.00	0.60
7								8			2	4	1		15	12	9.67	2.65	
10														4	4	3	2.67	1.98	
Total	3	4	21	11	13	5	11	18	15	9	5	2	4	1	4	126	100		
%	2	3	17	9	10	4	9	14	12	7	4	2	3	1	3	100			
nedaag1c.d08, nedsd1c.d10																			

Table 34. Population assessment of largemouth bass based on samples collected at Lake Carmico from 2004-2010 (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								
2010	11.0	18.67	28.00	12.00	1.33	11	Fair	-0.552	42.50%	
	3	2	2	2	2					
2009	11.0	18.00	18.67	8.67	1.33	10	Fair	-0.599	45.10%	
	3	2	1	2	2					
2008	11.0	2.70	9.30	8.00	1.30	9	Fair	-0.673	49.00%	
	3	1	1	2	2					
2007	12.2	39.50	31.30	14.70	1.30	12	Fair	-0.679	49.30%	
	4	2	2	2	2					
2006	12.2	27.50	18.00	9.30	0.70	10	Fair	-0.505	39.60%	
	4	2	1	2	1					
2005	12.2	23.20	24.70	14.00	0.70	11	Fair	-0.511	40.00%	
	4	2	2	2	1					
2004	12.2	54.10	36.00	19.30	0.70	14	Good	-0.631	46.90%	
	4	3	3	3	1					

necpsdlc.d04-d10; necdaaglc.d03.d08

Table 35. Spring electrofishing CPUE (fish/hr) for various length groups of largemouth bass collected at Lake Carnico from 2000 to 2010.

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.
2010	20.00	5.93	26.67	3.96	28.00	4.73	12.00	3.43	1.33	0.84	86.67	9.16
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.d10 - d00

Table 36. Largemouth bass PSD and RSD₁₅ values from spring electrofishing at Lake Carnico; confidence limits are in parentheses.

Year	No. ≥8.0 in	PSD (±95%)	RSD ₁₅ (±95%)
2010	100	60 (± 19)	18 (± 15)
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.d10-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 24 May 2010.

Species	Inch class							Total	CPUE	Std. Error
	1	2	3	4	5	6	7			
Bluegill	132	314	252	167	101	59	1	1026	#####	121.90
Green sunfish	3	30	53	34	27	13	1	161	161.00	57.28
Longear sunfish		7	37	63	4	4	1	116	116.00	24.24
Redear sunfish		3	1	4	3	2	2	15	15.00	3.84
Hybrid sunfish			4	1		1		6	6.00	2.00

nedsunlc.d10

Table 38. Spring electrofishing CPUE (fish/hr) for various length groups of sunfish collected at Lake Carnico in 2003, 2006-2010.

Species	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.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.		
Bluegill	2003	160.80	23.81	134.40	22.43	24.00	6.85			319.20	39.45
	2006	540.00	73.10	382.40	31.00	47.20	11.20			969.60	93.57
	2007	140.80	27.41	54.40	14.00	0.80	0.80	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
	2010	446.00	71.37	520.00	65.40	60.00	26.14			1026.00	121.90
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
	2010	3.00	1.46	8.00	4.00	4.00	2.14			15.00	3.84

nedsunlc.d10-d06, d03

Table 39. Bluegill PSD and RSD_g values from spring electrofishing at Lake Carnico; confidence limits are in parentheses.

Year	No. ≥ 3.0 in	PSD ($\pm 95\%$)	RSD _g ($\pm 95\%$)
2010	580	10 (± 5)	
2009	168	35 (± 7)	
2008	65	11 (± 8)	
2007	245	15 (± 5)	
2006	537	11 (± 3)	
2003	198	28 (± 6)	0.4 (± 0.8)

nedsunlc.d10-d06, d03

Table 40. Mean back-calculated lengths (in) at each annulus for bluegill collected from Lake Carnico, including size range at each age and 95% confidence intervals.

Year	No.	Age				
		1	2	3	4	5
2009	20	2.0				
2008	19	2.5	4.0			
2007	14	2.8	4.6	5.7		
2006	9	2.4	4.2	5.4	6.3	
2005	2	2.4	3.8	5.1	6.1	6.6
Mean		2.4	4.2	5.6	6.3	6.6
Number		64	44	25	11	2
Smallest		1.2	3.2	4.4	5.6	6.3
Largest		3.6	5.6	6.9	7.7	7.0
Std Error		0.1	0.1	0.1	0.2	0.4
95% CI (\pm)		0.1	0.1	0.2	0.3	0.6

Otoliths were used for age determination; Intercept = 0
nedaaglc.d10

Table 41. Age frequency and CPUE (fish/hr) of bluegill collected during spring electrofishing in Lake Carnico.

Age	Inch class							Total	%	CPUE	Std. error
	1	2	3	4	5	6	7				
1	132	314	25					471	46	471.20	72.15
2			227	152				379	37	378.62	48.58
3				15	88	25		129	13	128.84	34.93
4					13	30	1	43	4	42.63	15.82
5						4	1	5	0	4.71	1.94
Total	132	314	252	167	101	59	1	1,026	100		
%	13	31	25	16	10	6	0	100			

nedaaglc.d10; nedsunlc.d10

Table 42. Mean back-calculated lengths (in) at each annulus for redear sunfish collected from Lake Carnico, including size range at each age and 95% confidence intervals.

Year	No.	Age				
		1	2	3	4	5
2009	5	2.7				
2008	8	3.1	5.2			
2007	0					
2006	1	4.1	5.9	6.7	7.4	
2005	2	2.4	3.6	4.6	5.7	6.7
Mean		2.9	5.0	5.3	6.3	6.7
Number		16	11	3	3	2
Smallest		2.1	2.8	3.6	5.2	6.6
Largest		4.1	6.4	6.7	7.4	6.8
Std Error		0.1	0.3	0.9	0.6	0.1
95% CI (\pm)		0.2	0.6	1.7	1.2	0.2

Otoliths were used for age determination; Intercept = 0
nedaaglc.d10

Table 43. Age frequency and CPUE (fish/hr) of redear sunfish collected during spring electrofishing in Lake Carnico.

Age	Inch class						Total	%	CPUE	Std. error
	2	3	4	5	6	7				
1	3	1					4	27	4.0	1.51
2			4	3	1	1	9	60	9.0	4.33
4						1	1	7	1.0	1.00
5					1		1	7	1.0	0.65
Total	3	1	4	3	2	2	15	100		
%	20	7	27	20	13	13	100			

nedaaglc.d10; nedsunlc.d10

Table 44. Population assessment for bluegill based on samples collected at Lake Carnico from 2006-2010 (scoring based on statewide assessment).

Year	Mean length age-2 at capture	Years to 6.0 in	CPUE ≥6.0 in	CPUE ≥8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2010	4.1	3.00	60.00	0.00	8	Fair	-1.088	66.30%
	2	3	3	0				
2009	5.3	3.00	59.00	0.00	10	Fair	-0.506	39.70%
	4	3	3	0				
2008	5.3	3.00	7.00	0.00	8	Fair	-0.759	53.20%
	4	3	1	0				
2007	5.3	4.00	0.80	0.00	7	Fair	-0.561	42.90%
	4	2	1	0				
2006	5.3	4.00	47.20	0.00	8	Fair	-0.037	31.10%
	4	2	2	0				

nedsunlc.d06-10; nedaaglc.d06, d10

Table 45. Length frequency and CPUE (fish/hour) for largemouth bass collected in 1.5 hours of nocturnal electrofishing (6- 15-minute runs) at Lake Carnico on 30 September 2010.

Species	Inch class																					Total CPUE	Std.Error
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	19	21							
Largemouth bass	9	14	8	10	19	5	5	9	14	17	6	8	7	4	1	1	137	91.33	11.43				

nedwrslc.d10

Table 46. 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		≥15.0 in	
	N	W_r (se)	N	W_r (se)	N	W_r (se)
Largemouth bass	33	88 (1)	31	90 (2)	13	98 (1)

nedwrslc.d10

Table 47. Length frequency and CPUE (fish/hr) of sunfish collected in 0.50 hour of electrofishing (4- 7.5-minute runs) for sunfish at Clear Creek Lake on 27 May 2010.

Species	Inch class								Total	CPUE	Std. error
	1	2	3	4	5	6	7	8			
Bluegill	477	89	91	9	5	9	10	690	1380.00	585.12	
Redear sunfish	1	5	20	44	66	139	40	318	636.00	146.44	
Warmouth	4	8	6	8	13	10	4	56	112.00	23.55	
Green sunfish			4	4	2	1		11	22.00	19.43	
Hybrids sunfish							2	2	4.00	2.31	

Table 48. 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	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.
Bluegill	2010	1132.00	565.84	210.00	42.13	38.00	30.18	1380.00	585.12						
	2009	121.60	44.57	174.40	43.04	33.60	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						
Redear sunfish	2006	164.00	83.40	268.00	54.60	32.00	18.60	561.60	139.70						
	2010														
	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						
Hybrids sunfish	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-d10

Table 49. 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	7				
1	382	30	9					420	61	840.73	435.14
2	95	59	82	8				244	35	488.70	163.37
3				1	3	1		5	1	10.37	7.20
4					1	5	10	16	2	31.00	23.94
5					1	3		3	0	6.40	5.36
6					1	1		1	0	2.80	2.27
Total	477	89	91	9	5	9	10	690	100		
%	69	13	13	1	1	1	1	100			

nedaagcc.d09; nedsuncc.d10

Table 50. 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	5	4						9	3	18.00	6.28
2		16	24	26	13			79	25	158.96	35.54
3			20	40	126	35		221	70	441.04	104.81
4						5		5	2	10.00	4.45
6							3	3	1	6.00	3.83
Total	5	20	44	66	139	40	3	317	100		
%	2	6	14	21	44	13	1	100			

nedaagcc.d09; nedsuncc.d10

Table 51. PSD and RSD₈ values obtained from bluegill collected at Clear Creek Lake during May 2010 compared to past years; confidence intervals are in parenthesis.

Year	No. ≥ 3.0 in	PSD ($\pm 95\%$)	RSD ₈ ($\pm 95\%$)
2010	124	15 (± 6)	*
2009	130	16 (± 6)	*
2008	92	39 (± 10)	*
2007	112	45 (± 9)	*

* = No 8.0 in fish captured to calculate RSD₈

nedsuncc.d07 - d10

Table 52. Population assessment of bluegill based on samples collected at Clear Creek Lake from 2006-2010 (scoring based on statewide assessment).

Year		Mean length age-2 at capture	Years to 6.0 in	CPUE ≥6.0 in	CPUE ≥8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2010	Value	3.4	3-3+	38.00	0.00	6	Poor	-1.309	73.00%
	Score	1	3	2	0				
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				

nedsuncc.d06-10; nedaagcc.d09, d02

Table 53. Population assessment of redear sunfish based on samples collected from Clear Creek Lake in 2010 (scoring based on statewide assessment).

Year		Mean length age-3 at capture	Years to 8.0 in	CPUE ≥8.0 in	CPUE ≥10.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
2010	Value	6.1	6-6+	6.00	0.00	6	Poor	*	*
	Score	3	1	2	0				
2009	Value	6.1	5-5+	1.60	0.00	6	Poor	-1.495	77.60%
	Score	3	2	1	0				

nedsuncc.d09-10; nedaagcc.d09

* Age spread too unnatural for proper determination.

Table 54. Length frequency and CPUE (fish/hr) of black bass collected in 1.5 hours of nocturnal electrofishing (6- 15-minute runs) at Greenbo Lake (Greenup Co.) on 29 April 2010.

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	9	24	6	28	50	22	32	44	33	42	20	6	7	2	5	1	2	1	2	2	336	224.00	11.27

nedpsdgb.d10

Table 55. Length frequency and CPUE (fish/hr) of stocked and wild largemouth bass collected in 1.5 hours of nocturnal electrofishing at Greenbo Lake on 29 April 2010.

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	21	22		
Lower	Wild	9	24	6	27	50	20	29	43	33	42	20	6	7	2	5	1	2	1	2	329	219.33	12.41
	Stocked					1	2	3	1											7	4.67	1.61	

nedwidgb.d10, nedstkgb.d10

Table 56. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Greenbo Lake.

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.
2010	78.00	12.85	87.33	3.49	45.33	9.28	13.33	5.81	2.00	1.37	224.00	11.27
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.d10 - d98

Malfunctioning electrofishing boat in 2008

Table 57. Largemouth bass PSD and RSD₁₅ values from spring electrofishing at Greenbo Lake; confidence limits are in parentheses.

Year	No. ≥ 8.0 in	PSD (±95%)	RSD ₁₅ (±95%)
2010	88	40 (± 13)	9 (± 8)
2009	192	53 (± 7)	14 (± 5)
2008	84	51 (± 11)	9 (± 8)
2007	188	47 (± 7)	7 (± 4)

nedpsdgb.d10 - d07

Malfunctioning electrofishing boat in 2008

Table 58. 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	4	4																8	3	5.33	0.44
2	2	24	50	22	18		4											119	40	79.63	10.43
3					14	44	26	8										92	31	61.02	6.26
4						4	31	7	1									42	14	28.05	5.05
5								13	2	4	1							20	7	13.27	3.39
6								4		1	4	1						10	3	6.57	1.73
7													5		2			8	3	5.47	2.10
8														1				1	0	0.67	0.67
Total	6	28	50	22	32	44	33	42	20	6	7	2	5	1	2		300	100			
%	2	9	17	7	11	15	11	14	7	2	2	1	2	0	1		100				

nedaagb.d07, nedpsdgb.d10

Table 59. Electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Greenbo Lake from 2000 - 2010.

Age	Year									
	2000	2001	2003	2004	2005	2006	2007	2008	2009	2010
1	52.87	83.87	105.33	33.63	46.71	35.64	2.10	0.98	3.17	5.33
2	66.13	34.13	31.33	87.17	19.96	35.69	50.35	18.05	50.01	79.63
3	29.00	56.00	71.33	28.80	51.33	50.67	42.73	18.22	35.65	61.02
4	6.00	6.67	9.78	26.67	7.11	14.22	27.22	10.97	23.71	28.05
5	4.00	5.33	7.56	17.73	6.89	8.44	16.04	7.91	23.89	13.27
6	2.00	1.00	3.33	3.20	2.67	6.67	6.09	3.47	8.23	6.57
7	1.00	1.00	2.67	5.20	4.00	3.33	4.13	2.40	6.67	5.47
8							0.67	0.67	2.00	0.67

nedsdgb.d10 - d00

nedaagb.d07,03

Note: Did not sample in 2002 due to lake draw down; malfunctioning electrofishing boat in 2008.

Table 60. Population assessment of largemouth bass based on samples collected at Greenbo Lake from 2004-2010 (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)%
	at capture	age-3								
2010	Value 10.7	Score 2	5.33	45.33	13.33	2.00	11	Fair	-0.597	45.00%
2009	Value 10.7	Score 2	3.17	50.00	18.00	2.67	13	Good	-0.415	34.00%
	Value 10.7	Score 2	0.98	19.33	9.33	2.67				
2008	Value 10.7	Score 2	1	48.70	8.70	1.30	11	Fair	-0.687	49.70%
	Value 10.7	Score 2	1	58.80	16.80	4.00				
2006	Value 11.7	Score 4	35.60	50.00	18.70	7.30	17	Excellent	-0.521	40.70%
	Value 11.7	Score 4	46.70	28.00	13.30	3.30				
2005	Value 11.7	Score 4	33.60	58.80	16.80	4.00	16	Good	-0.557	42.70%
	Value 11.7	Score 4	2	4	2	4				

nedpsdgb.d04-d10; nedaaggl.d07

Malfunctioning electrofishing boat in 2008

Table 61. 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 25 May 2010.

Species	Inch class												Total	CPUE	Std. error
	1	2	3	4	5	6	7	8	9	10	11	12			
Bluegill	615	287	99	60	62	54	31	24	6				1238	990.40	255.77
Longear sunfish	89	114	90	50	26	9	2						380	304.00	78.54
Redear sunfish	1	5	7	3	4	8	2		4			1	35	28.00	7.28
Green sunfish	7	15	26	20	12	13	5						98	78.40	19.91
Hybrid sunfish	1												1	0.80	0.80

nedsungb.d10

Table 62. Spring electrofishing CPUE (fish/hr) for each length group of sunfish collected at Greenbo Lake.

Species	Year	Length group											
		<3.0 in		3.0-5.9 in		6.0-7.9 in		>8.0 in		>10.0 in		Total	
		CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
Bluegill	2010	721.60	226.24	176.80	40.43	68.00	10.00	24.00	6.31	990.40	255.77		
	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		
Redear sunfish	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		
	2010	4.80	2.13	11.20	4.17	8.00	2.39	4.00	2.15	0.80	28.00	7.28	
nedpsdgb.d10 - d05, d03	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		
	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		
nedpsdgb.d10 - d07	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		

Table 63. Bluegill PSD and RSD₈ values from spring electrofishing at Greenbo

Year	No. ≥3.0 in	PSD (±95%)	RSD ₈ (±95%)
2010	336	34 (±10)	9 (±6)
2009	294	17 (±4)	2 (±2)
2008	305	19 (±4)	2 (±2)
2007	305	22 (±5)	3 (±2)

Table 64. 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	615	258	27						900	73	720.24	225.65
2		29	72	60	62	16			239	19	191.12	40.47
3						27	12		36	3	31.52	4.59
4						11	16	10	37	3	29.27	5.27
5							3	3	7	1	5.22	1.12
6								10	10	1	8.23	2.12
Total	615	287	99	60	62	54	31	24	1232	100		
%	50	23	8	5	5	4	3	2	100			

nedaagb.d08; nedsungb.d10

Table 65. Population assessment of bluegill based on samples collected at Greenbo Lake from 2005-2010 (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)%
2010	Score	3	3	4	4				
2009	Value	4.9	3.00	40.80	5.60	10	Fair	-1.390	75.10%
2008	Score	3	3	2	2				
2007	Value	4.9	3.00	47.20	6.40	10	Fair	-0.865	57.90%
2006	Score	3	3	2	2				
2005	Value	5.2	3.00	52.80	7.20	12	Good	-1.350	74.20%
	Score	4	3	3	2				
	Value	5.2	3.00	28.00	4.80	11	Good	-1.310	73.20%
	Score	4	3	2	2				
	Value	5.2	3.00	49.60	3.20	11	Good	-1.270	71.90%
	Score	4	3	2	2				

nedsungb.d06-10; nedaagb.d08

Table 66. 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 16 September 2010.

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			
Largemouth bass	15	16	17	10	6	6	6	22	23	19	19	14	15	7	2	1	2	2	2	2	196	130.67	15.45

nedwrsbg.d10

Table 67. 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			W_r (se)	No.	W_r (se)	No.	W_r (se)
	8.0-11.9 in	12.0-14.9 in	>15.0 in					
2010	83	87 (2)	36	85 (1)	7	93 (5)		
2009	52	82 (1)	24	108 (24)	10	88 (1)		
2008	34	85 (1)	23	84 (2)	8	124 (38)		
2007	30	88 (2)	29	88 (1)	5	96 (5)		

nedwrsbg.d10 - d07

Table 68. 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 0		Age 0 >=5.0 in		Age 1	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2010	Total	3.9	0.14	40.67	9.15	8.67	2.62	5.33	0.44
2009	Total	5.1	0.16	48.00	6.02	26.00	4.82	3.17	1.26
2008	Total	3.5	0.06	82.00	7.57	2.00	1.37	0.98	0.87
2007	Total	3.9	0.09	44.70	11.29	3.33	1.19	2.10	1.03
2006	Total	3.6	0.10	45.30	9.16	2.67	1.69	35.60	5.45
2005	Total	3.8	0.12	32.00	7.00	4.00	1.03	46.70	21.20
2004	Total	3.6	0.17	20.00	6.02	2.67	1.33	33.60	2.11
2003	Total	4.4	0.12	45.00	7.72	14.00	3.46		

nedwrsbg.d10 - d03; nedpsdgb.d10 - 04; and nedaaggb.d03,07

Table 69. Length frequency, relative abundance, and CPUE (fish/set night) of channel catfish at Greenbo Lake. channel catfish were collected using baited, tandem hoop nets (72 hour soak time) that were set on 18 October 2010.

Species	Inch class											Std. Error		
	5	6	7	8	9	10	11	12	14	18	22	Total	CPUE	Error
Channel catfish				2	9	2	1	1	1	1	1	18	6.00	5.03
Bluegill				1								1	0.33	0.33
Redear sunfish	2	2	1	4	3							12	4.00	2.31
Black crappie						1	1					2	0.67	0.67

nedcfngb.d10

Table 70. Fishery statistics derived from a daytime creel survey at Greenbo Lake during March 08 through 31 October 2010 compared to the last creel survey (1990).

	2010	1990
Fishing trips		
No. of fishing trips (per acre)	7,575 (43.04)	27,344 (151)
Fishing pressure		
Total man-hours (S.E.)	25,532 (1,044.05)	123,491 (20,165)
Man hours/acre	145.07	682.27
Catch/harvest		
No. of fish caught (S.E.)	16,373 (2,678.93)	49,758 (8,797)
No. of fish harvested (S.E.)	11,302 (2,392.74)	21,829 (5,330)
Lbs. of fish harvested	3,998	11,886
Harvest rate		
Fish/hour	0.33	0.18
Fish/acre	64.22	120.6
Lbs/acre	22.72	65.67
Catch rates		
Fish/hour	0.55	0.40
Fish/acre	93.03	274.91
Misc. characteristics (%)		
Male	85.08	85.00
Female	14.92	15.00
Resident	88.73	81.00
Non-resident	11.27	19.00
Method (%)		
Still fishing	75.71	*
Casting	20.48	*
Fly fishing	0.63	*
Trolling	3.17	*
Mode (%)		
Boat	40.95	91.00
Bank	44.60	9.00
Dock	14.44	

(S.E.) = Standard error

* Data not provided

Table 71. Fish harvest statistics derived from the 2010 creel survey at Greenbo Lake.

	Trout group	Rainbow Trout	Black bass group	Largemouth Bass	Smallmouth Bass	Catfish group	Channel Catfish	Panfish group	Bluegill	Rock Sunfish	Longear Sunfish	Green Sunfish	Crappie group	White Crappie	Black Crappie	Anything
Number caught (per acre)	7,520 (42.73)	7,520 (42.73)	1,290 (7.33)	1,279 (7.23)	12 (0.07)	635 (3.61)	635 (3.63)	6,296 (35.77)	5,801 (32.96)	247 (1.40)	23 (0.13)	202 (1.15)	632 (3.59)	46 (0.26)	586 (3.33)	
Number harvested (per acre)	6,750 (38.36)	6,750 (38.36)	309 (1.76)	309 (1.76)		452 (2.57)	452 (2.57)	3,159 (17.95)	2,940 (16.71)	201 (1.14)		17 (0.10)	632 (3.59)	46 (0.26)	586 (3.33)	
% of total number harvested	59.73	59.73	2.74	2.74		4.00	3.99	27.95	26.02	1.78		0.15	5.59	0.41	5.18	
Pounds harvested (per acre)	1,934.8 (10.99)	1,934.8 (10.99)	475.2 (2.60)	457.2 (2.60)		374.2 (2.13)	374.2 (2.13)	894.5 (5.08)	833.7 (4.74)	58.4 (0.33)		2.4 (0.01)	337.5 (1.92)	14.6 (0.08)	322.9 (1.84)	
% of total pounds harvested	48.39	48.39	11.44	11.44		9.35	9.35	22.37	20.85	1.46		0.06	8.44	0.37	8.08	
Mean length (in)		11.1		15.0			13.7		6.7	8.2		6.0		9.0	10.4	
Mean weight (lb)		0.53		1.77			0.86		0.23	0.38		0.14		0.32	0.61	
Number fishing trips for that species	2,842.46		1,431.77			548.22		1,364.60					211.47			1176.44
% of all trips	37.52		18.90			7.24		18.01					2.79			15.53
Hours fished for that species (per acre)	9,580.68 (54.44)		4,825.86 (27.42)			1,847.82 (10.50)		4,599.45 (26.13)					712.76 (4.05)			3965.25 (15.53)
Number harvested fishing for that species	6,727		297			299		2,841					631			
Pounds harvested fishing for that species	1,923.6		443.3			261.2		859.2					337.2			
Number harvested per hour fishing for that species	0.587		0.050			0.185		0.598					0.627			
% success fishing for that species	38.04		6.87			26.09		24.22					53.33			7.59

Table 72. Length distribution (length of released fish are estimates) for each species of fish harvested (H) and/or released (R) at Greenbo Lake from March through October 2010.

Species	Inch class																			
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	28
Rainbow trout	H					196	2,465	224	2,605	476	560	140								
	R					22	198		462		87									
Largemouth bass	H										15	31	155	62	31	15				
	R				26	92	66	53	158	53	46	215	169	46	15	31				
Smallmouth bass	R						12													
Bluegill	H		45	255	240	405	900		660											
	R	13	157	418	1280	640	78		105											
Longear sunfish	R		23																	
Redear sunfish	H									15	124	15	47							
	R		31		15															
Green sunfish	H																			
	R		81	46	57					17										
Channel catfish	H																			
	R					14	56	14	28	28	28	16	89	43	16	59	13			
Crappie group	H																			
	R				25	66	15	296	127	76	27									
Rock bass	R																			
																				23

Table 73. Monthly Largemouth bass angling success at Greenbo Lake during the 2010 creel survey period.

Month	Total no. caught	Total no. harvested	Total no. of trips for	Hours fished for	Number caught fishing for	Catch / hour fishing for	No. harvested fishing for	No. harvested / hour fishing for
Mar	33	0	100.55	338.90	33	0.10	0	0.00
Apr	359	222	252.52	851.15	358	0.42	222	0.26
May	199	46	403.82	1361.08	199	0.15	46	0.03
Jun	398	0	258.75	872.14	363	0.42	0	0.00
Jul	138	12	166.50	561.19	104	0.19	0	0.00
Aug	61	12	111.29	375.10	49	0.13	0	0.02
Sep	22	11	71.33	240.42	11	0.05	11	0.05
Oct	68	6	67.02	225.88	31	0.14	6	0.03
Total	1,278	309	1,431.77	4,825.86	1,148	0.20	285	0.05
Mean								

Table 74. Monthly Rainbow trout angling success at Greenbo Lake during the 2010 creel survey period.

Month	Total no. caught	Total no. harvested	Total no. of trips for	Hours fished for	Number caught fishing for	Catch / hour fishing for	No. harvested fishing for	No. harvested / hour fishing for
Mar	6,513	6,022	1,834.96	6184.84	6,513	1.05	6,022	0.97
Apr	701	496	730.99	2463.86	701	0.29	496	0.20
May	77	46	91.18	307.34	77	0.25	46	0.15
Jun	0	0	38.81	130.82	0	0.00	0	0.00
Jul	58	46	14.48	48.80	58	1.19	46	0.94
Aug	0	0	0.00	0.00	0	0.00	0	0.00
Sep	22	22	23.78	80.14	22	0.28	22	0.28
Oct	149	118	108.26	364.88	149	0.41	118	0.32
Total	7,520	6,750	2,842.46	9580.68	7,520	0.43	6,750	0.36
Mean								

Table 75. Monthly panfish angling success at Greenbo Lake during the 2010 creel survey period.

Month	Total no. caught	Total no. harvested	Total no. of trips for	Hours fished for	Number caught fishing for	Catch / hour fishing for	No. harvested fishing for	No. harvested / hour fishing for
Mar	33	33	0.00	0.00	0	0.00	0	0.00
Apr	462	222	79.74	268.78	461	1.72	222	0.83
May	2,373	1,914	495.00	1668.42	2,189	1.31	1,914	1.15
Jun	1,315	519	362.25	1220.99	1,020	0.84	518	0.42
Jul	1,280	265	253.37	853.99	427	0.50	150	0.18
Aug	219	73	129.84	437.62	110	0.25	37	0.08
Sep	496	132	23.78	80.14	265	3.31	0	0.00
Oct	118	0	20.62	69.50	81	1.17	0	0.00
Total	6,296	3,158	1,364.60	4,599.44	4,553	1.14	2,841	0.33
Mean								

Table 76. Monthly Channel catfish angling success at Greenbo Lake during the 2010 creel survey period.

Month	Total no. caught	Total no. harvested	Total no. of trips for	Hours fished for	Number caught fishing for	Catch / hour fishing for	No. harvested fishing for	No. harvested / hour fishing for
Mar								
Apr	322	245	364.74	1229.36	322	0.26	245	0.20
May	121	86	90.56	305.25	17	0.06	17	0.06
Jun	46	23	50.67	170.80	12	0.07		
Jul	146	98	37.10	125.03	61	0.49	37	0.30
Sep								
Oct								
Total	635	452	543.07	1,830.44	412	0.11	299	0.07
Mean								

Table 77: Angler attitude survey carried out in conjunction with 2010 creel survey on Greenbo Lake.

3. Which species of fish do you fish for at Greenbo Lake?

Bass = 40.0%; **Sunfish** = 38.7%; **Trout** = 30.6%; **Catfish** = 18.2%; **Other** = 0.8% (Crappie, Anything)

4. Which species do you fish for most often at Greenbo Lake?

Bass = 34.2%; **Sunfish** = 31.2%; **Trout** = 22.7%; **Catfish** = 11.7%

Bass Anglers

5. What level of satisfaction do you have with bass fishing at Greenbo Lake?

Very Satisfied = 13.6%	Somewhat Satisfied = 26.8%	Total = 40.4%
Very Dissatisfied = 1.5%	Somewhat Dissatisfied = 6.1%	Total = 7.6%
Neutral = 47.5%	No Opinion = 4.5%	

5a. If you responded with somewhat or very dissatisfied in question 5 - what is the single most important reason for your dissatisfaction?

*Note: These numbers are from 8 of the 17 dissatisfied anglers **ONLY**

Number of fish	100.0%
-----------------------	--------

Catfish Anglers

6. What level of satisfaction do you have with catfish fishing at Greenbo Lake?

Very Satisfied = 8.9%	Somewhat Satisfied = 54.4%	Total = 63.3%
Very Dissatisfied = 0%	Somewhat Dissatisfied = 7.6%	Total = 7.6%
Neutral = 29.1%	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?

*Note: These numbers are from 1 of the 5 dissatisfied anglers **ONLY**

Size of fish	100.0%
---------------------	--------

Sunfish Anglers

7. What level of satisfaction do you have with sunfish fishing at Greenbo Lake?

Very Satisfied = 11.6%	Somewhat Satisfied = 38.4%	Total = 50.0%
Very Dissatisfied = 1.1%	Somewhat Dissatisfied = 2.1%	Total = 3.2%
Neutral = 42.1%	No Opinion = 4.7%	

7a. If you responded with somewhat or very dissatisfied in question 5 - what is the single most important reason for your dissatisfaction?

*Note: These numbers are from 5 of the 6 dissatisfied anglers **ONLY**

Number of fish	40.0%
Size of fish	60.0%

Trout Anglers

8. What level of satisfaction do you have with trout fishing at Greenbo Lake?

Very Satisfied = 31.9%	Somewhat Satisfied = 43.8%	Total = 75.7%
Very Dissatisfied = 0.0%	Somewhat Dissatisfied = 2.1%	Total = 2.1%
Neutral = 20.1%	No Opinion = 2.1%	

8a. If you responded with somewhat or very dissatisfied in question 6 - what is the single most important reason for your dissatisfaction?

**Note: These was only one dissatisfied angler who did no respond to this question*

All Anglers

9. How many times do you fish Greenbo Lake a year?

First time = 14.0% **1 to 4** = 18.2% **5 to 10** = 21.6% **More than 10** = 46.2%

10. Are you satisfied with the current size and creel limits on all sport fish at Greenbo Lake?

Yes = 98.1% **No** = 1.9%

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

**Note: numbers below are percentages ONLY from the anglers that answered no in number 10- 1.9%*

Sunfish creel limit changes: 20 (33.3%); 25 (33.3%); no limit (33.3%), based on 3 anglers

Catfish size limit changes: 12.0 inch (100%) based on 2 anglers

Largemouth bass creel limit changes: 2 (100%) based on 1 angler

Unsupervised comments in the "General Comments" section of the angler attitude survey (edited)

- Don't change the 12" size limit on largemouth bass.
- Several requests to remove grass carp
- Several requests to remove trout
- Better access to the dam, trail around entire lake, steps to the dam
- Add vegetation
- Catfish are too small
- More bluegill, increase creel limit,
- Too many bluegill, overpopulated
- Keep all bluegill they catch
- Enforce laws
- Make them bite
- Need more crappie
- Trail around lake

Table 78. Length frequency and CPUE (fish/hr) for largemouth bass collected in 1.0 hour of nocturnal electrofishing (4- 15-minute runs) at Mill Creek Lake (Powell/Wolfe Co.) on 28 April 2010.

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	
Largemouth bass	1	6	1	7	28	18	8	14	25	20	10	11	5	1	2	1	2	1	2	1	161	161.00	9.98

nedpsdmc.d10

Table 79. Spring electrofishing CPUE (fish/hr) for various length groups of largemouth bass collected at Mill Creek Lake from 2000, 2001, 2004 and 2006-2010.

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.		
2010	43.00	8.06	8.06	65.00	6.61	6.61	41.00	41.00	10.25	10.25	12.00	12.00	3.65	3.65	1.00	1.00	161.00	9.98
2009	9.00	3.79	3.79	52.00	5.42	5.42	44.00	44.00	3.27	3.27	12.00	12.00	4.62	4.62	4.00	1.63	117.00	3.42
2008	10.00	3.46	3.46	89.00	10.75	10.75	38.00	38.00	3.46	3.46	12.00	12.00	3.65	3.65	3.00	1.91	149.00	11.00
2007	31.00	5.30	5.30	84.00	15.90	15.90	31.00	31.00	9.00	9.00	7.00	7.00	2.50	2.50			153.00	22.29
2006	45.00	18.50	18.50	108.00	10.90	10.90	22.00	22.00	2.00	2.00	7.00	7.00	4.40	4.40			182.00	28.70
2004	50.40	16.10	16.10	52.00	68.00	68.00	17.60	17.60	2.00	2.00	5.60	5.60	1.60	1.60			141.60	18.00
2001*	36.00	8.50	8.50	59.00	10.60	10.60	13.00	13.00	3.00	3.00	7.00	7.00	2.50	2.50			115.00	17.50
2000*	39.00	11.40	11.40	70.00	11.50	11.50	12.00	12.00	3.30	3.30	4.00	4.00	0.00	0.00			125.00	21.60

nedpsdmc.d10 - d06; d04; d01; d00

* All Species Sampled

Table 80. 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%)
2010	118	45 (± 9)	10 (± 5)
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.d10 - d06, d04

Table 81. Population assessment of largemouth bass based on samples collected at Mill Creek Lake from 1996-2010 (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								
2010	10.5	2	1.00	41.00	12.00	1.00	10	Fair	-0.302	26.00%
			1	3	2	2				
2009	10.5	2	1.00	44.00	12.00	4.00	12	Good	-0.085	8.10%
			1	3	2	4				
2008	10.5	2	2.00	38.00	12.00	3.00	11	Fair	-0.312	26.80%
			1	3	2	3				
2007	10.5	2	14.10	31.00	7.00	0.00	7	Poor	-0.825	56.20%
			1	2	2	0				
2006	10.5	2	19.60	22.00	7.00	1.60	9	Fair	-0.425	34.90%
			2	1	2	2				
2005*										
2004	10.4	2	16.98	17.60	5.60	1.60	9	Fair	-0.315	27.10%
			2	1	2	2				
2003*										
2002*										
2001	10.4	2	30.11	13.00	7.00	1.00	9	Fair		
			2	1	2	2				
2000	10.4	2	27.78	12.00	4.00	0.00	7	Fair		
			2	1	2	0				
1999	10.4	2	5.78	7.00	2.00	0.00	5	Poor		
			1	1	1	0				
1998*										
1997	10.4	2	6.78	22.00	6.00	3.00	10	Fair		
			1	2	2	3				
1996										

* = Lake was not sampled
nedpsdmc.d10

Table 82. Length frequency and CPUE (fish/hr) for sunfish collected in 1.0 hour of diurnal electrofishing (4- 15-minute runs) at Mill Creek Lake on 26 May 2010.

Species	Inch class									Total	CPUE	Std. error
	1	2	3	4	5	6	7	8	9			
Bluegill	101	153	87	41	25	19	16	10	1	453	453.00	37.29
Green sunfish	10	16	19	22	6	12	2			87	87.00	29.77
Longear sunfish	11	11	31	11	4	1				69	69.00	15.00
Sunfish hybrids	1									1	1.00	1.00

nedsunmc.d10

Table 83. Spring electrofishing CPUE (fish/hr) for various length groups of sunfish collected at Mill Creek Lake from 2005-2010.

Species	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.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
Bluegill	2010	254.00	11.94	153.00	23.23	35.00	8.70	11.00	3.00	453.00	37.29
	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.d10 - d05

Table 84. Bluegill PSD and RSD₈ values from spring electrofishing at Mill Creek Lake; confidence limits are in parentheses.

Year	No. ≥3.0 in	PSD (±95%)	RSD ₈ (±95%)
2010	199	23 (± 6)	6 (± 3)
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.d10 - d06

Table 85. Mean back-calculated lengths (in) at each annulus for bluegill collected from Mill Creek Lake, including size range at each age and 95% confidence intervals.

Year	No.	Age						
		1	2	3	4	5	6	7
2009	17	1.9						
2008	33	2.3	3.8					
2007	26	2.4	4.5	6.4				
2006	11	2.5	4.8	6.9	8.1			
2005	1	2	3.8	5.9	7.2	8.0		
2004	0							
2003	1	2	3.1	4.9	6.9	8.0	8.7	9.2
Mean		2.3	4.2	6.5	7.9	8.0	8.7	9.2
Smallest		1.3	2.6	3.8	6.9	8.0	8.7	9.2
Largest		4	7.1	8.2	8.6	8.0	8.7	9.2
Number		89	72	39	13	2	1	1
Std Error		0.1	0.1	0.2	0.2			
95% CI (±)		0.10	0.25	0.30	0.30			

Otoliths were used for age determination; Intercept = 0
nedaagmc.d10

Table 86. Age frequency and CPUE (fish/hr) of bluegill collected during spring electrofishing in Mill Creek Lake.

Age	Inch class									Total	%	CPUE	Std. error
	1	2	3	4	5	6	7	8	9				
1	101	77	12							190	42	379.86	18.88
2		77	75	34	17					202	45	403.81	46.99
3				7	8	19	13	3		49	11	98.48	26.43
4							3	7		10	2	20.19	2.39
5								1		1	0	1.67	0.43
6										0	0	0.00	0.00
7									1	1	0	2.00	2.00
Total	101	153	87	41	25	19	16	10	1	453	100		
%	22	34	19	9	6	4	4	2	0	100			

nedaagmc.d10; nedsummc.d10

Table 87. Population assessment of bluegill based on samples collected at Mill Creek Lake 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	age-2 at capture							
2010	Value 3.9	Score 2	3 - 3+	46.00 2	11.00 3	10	Fair	-1.503	77.80%
2009	Value 4.4	Score 2	3 - 3+	23.00 1	4.00 1	7	Fair	-1.165	68.80%
2008	Value 4.4	Score 2	3 - 3+	28.00 2	8.00 2	9	Fair	-0.580	44.10%
2007	Value 4.4	Score 2	3 - 3+	25.00 2	7.00 2	9	Fair	-1.391	75.10%
2006	Value 4.2	Score 2	3 - 3+	42.00 2	9.10 3	10	Fair	-0.691	49.90%
2005	Value 4.2	Score 2	3 - 3+	100.00 4	22.70 4	13	Good	-0.451	36.40%
2004*	Value	Score							
2003*	Value	Score							
2002*	Value	Score							
2001	Value 4.2	Score 2	3 - 3+	56.00 3	2.00 1	9	Fair		
2000	Value 4.2	Score 2	3 - 3+	48.00 2	5.00 2	9	Fair		
1999	Value 4.2	Score 2	3 - 3+	42.00 2	16.00 3	10	Fair		
1998*	Value	Score							
1997	Value 4.2	Score 2	3 - 3+	24.00 1	1.00 1	7	Fair		
1996*	Value	Score							

* = Lake was not sampled
nedsummc.d10

Table 88. Length frequency and CPUE (fish/hr) for largemouth bass collected in 1.0 hours of nocturnal electrofishing (4- 15-minute runs) at Mill Creek Lake on 28 September 2010.

Species	Inch class																		Std. error	
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total CPUE		
Largemouth bass	23	11	10	1	16	19	8	31	4	9	6	1	1	1	1	1	1	145	145.00	15.26

nedwrsmc.d10

Table 89. 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	2010	60	85 (1)	16	84 (1)	3	93 (4)
	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)

nedwrsmc.d10 - d07

Table 90. Management objective results from 2009-2010 for Mill Creek Lake that can be determined through routine sampling.

Largemouth bass	2010		2009	
	Result	Met	Result	Met
Objective 1 >15.00 fish/hr age 1	1.00	No	1.00	No
Objective 2 >20.00 fish/hr 12.0-14.9 in	14.00	No	44.00	Yes
Objective 3 >5.00 fish/hr ≥ 15.0 in	12.00	Yes	12.00	Yes
Objective 4 >1.00 fish/hr ≥ 20.0 in	1.00	Yes	4.00	Yes
Bluegill				
Objective 1 >40.00 fish/hr ≥ 6.0 in	35.00	No	23.00	No
Objective 2 >5.00 fish/hr ≥ 8.0 in	11.00	Yes	4.00	No

Table 91. 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 26 April 2010.

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				
Largemouth bass	3	6	31	25	11	23	35	30	44	66	59	21	5	5	1	3	1	3	1	369	250.37	25.93	
nedpsdlr.d10																					1		

Table 92. 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
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20				
Wild	3	6	6	11	23	31	28	44	66	59	21	5	5	1	3	1	3	1	313	211.95	23.97		
Stocked																					56	38.43	5.82

*stocked in 2009 and 2008 as part of the largemouth bass stocking initiative.
nedwldlr.d10; nedstclr.d10

Table 93. Spring electrofishing CPUE (fish/hr) for various length groups of largemouth bass collected at Lake Reba from 1999-2010.

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.		
2010	67.68	8.08	118.26	19.39	57.68	8.01	6.75	1.66	0.67	0.67	0.67	0.67	0.67	0.67	0.67	250.37	25.82
2009	47.33	7.55	238.67	12.89	92.67	7.33	26.00	3.22	0.67	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	34.00	6.26	12.67	2.62	-	-	-	-	-	-	-	332.00	47.08
2007	134.67	20.93	216.67	45.87	60.67	5.21	18.67	4.09	0.67	0.67	0.67	0.67	0.67	0.67	0.67	430.67	52.20
2006	189.30	18.90	70.70	13.50	26.00	4.90	6.00	4.90	-	-	-	-	-	-	-	292.00	27.10
2005	53.30	9.30	57.30	8.10	45.30	4.30	13.30	2.20	0.70	0.70	0.70	0.70	0.70	0.70	0.70	169.30	16.40
2004	30.00	8.90	125.30	21.50	51.30	9.20	6.70	2.20	-	-	-	-	-	-	-	213.30	26.00
2003	110.00	17.90	126.00	10.90	52.00	6.10	8.00	2.50	0.70	0.70	0.70	0.70	0.70	0.70	0.70	296.00	27.30
2002	138.00	33.60	140.00	31.30	31.00	6.60	5.00	1.00	-	-	-	-	-	-	-	314.00	67.00
2001	196.00	25.00	30.70	15.40	9.30	5.30	4.00	2.30	-	-	-	-	-	-	-	240.00	33.60
2000	103.70	17.20	34.90	6.60	4.60	0.60	8.00	3.30	-	-	-	-	-	-	-	151.20	11.00
1999	115.20	34.90	11.20	4.10	8.80	2.30	20.00	5.20	-	-	-	-	-	-	-	155.20	33.10

nedpsdlr.d10 - d99

Table 94. Largemouth bass PSD and RSD₁₅ values from spring electrofishing at Lake Reba; confidence limits are in parentheses.

Year	No. ≥ 8.0 in	PSD ($\pm 95\%$)	RSD ₁₅ ($\pm 95\%$)
2010	270	35 (± 6)	4 (± 2)
2009	536	33 (± 4)	7 (± 2)
2008	382	18 (± 4)	5 (± 2)
2007	444	27 (± 4)	6 (± 2)
2006	154	31 (± 7)	6 (± 4)
2005	174	51 (± 15)	12 (± 10)
2004	275	32 (± 6)	4 (± 3)
2003	279	32 (± 6)	4 (± 3)
2002	176	20 (± 6)	3 (± 2)
2001	33	30 (± 32)	9 (± 22)
2000	43	36 (± 17)	22 (± 15)

nepdsd1r.d10 - d00

Table 95. Mean back-calculated lengths (in) at each annulus for largemouth bass collected from Lake Reba, including size range at each age and 95% confidence intervals.

Year	No.	Age						
		1	2	3	4	5	6	7
2010	0							
2009	19	4.3						
2008	42	5.3	8.4					
2007	17	5.9	9.2	11.3				
2006	16	5.4	9.1	11.4	12.9			
2005	5	5.9	8.9	11	12.6	13.9		
2004	0							
2003	1	7	9	11.5	12.7	13.8	14.7	15.7
Mean		5.3	8.7	11.3	12.8	13.9	14.7	15.7
Smallest		2.7	6.2	8.1	9.5	10.6	14.7	15.7
Largest		7.8	10.5	13.3	15.2	15.9	14.7	15.7
Number		100	81	39	22	6	1	1
Std Error		0.1	0.1	0.2	0.3	0.8		
95% CI (\pm)		0.25	0.25	0.30	0.60	0.60		

Otoliths were used for age determination; Intercept = 0
nedaag1r.d10

Table 96. Age frequency and CPUE (fish/hr) of largemouth bass collected in 1.5 hours of nocturnal electrofishing at Lake Reba.

Age	Inch class															Total	% CPUE	Std error		
	2	3	4	5	6	7	8	9	10	11	12	13	14	15						
1	3	6	31	25	4											69	19	47.12	6.99	
2					7	23	35	27	21	7						120	33	81.29	11.94	
3							3	15	51	22	4					94	26	63.84	9.96	
4								6	7	29	18	3	2			66	18	44.74	5.53	
5									3	7		2	2			14	4	9.36	0.98	
6																0	0			
7																1	1	0	0.68	0.25
Total	3	6	31	25	11	23	35	30	44	66	58	22	5	5	364	100				
%	1	2	9	7	3	6	10	8	12	18	16	6	1	1	100					

nedaag1r.d10, nepdsd1r.d10

Table 97. 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								
2010	11.4	Value	47.12	57.68	6.75	0.67	13	Good	-1.019	63.90%
	3	Score	3	4	2	1				
2009	11.2	Value	65.30	92.70	26.00	0.70	14	Good	-0.162	15.00%
	3	Score	3	4	3	1				
2008	11.2	Value	113.00	34.00	12.70	0.00	11	Fair	-1.030	64.30%
	3	Score	4	2	2	0				
2007	11.2	Value	183.67	60.70	18.70	0.67	15	Good	-1.040	65.00%
	3	Score	4	4	3	1				
2006	11.2	Value	192.00	26.00	6.00	0.00	11	Fair	-0.790	55.00%
	3	Score	4	2	2	0				
2005	11.2	Value	41.20	45.33	13.33	0.67	12	Good	-0.250	22.00%
	3	Score	3	3	2	1				
2004	11.2	Value	23.20	51.33	6.67	0.00	12	Good	-0.290	25.00%
	3	Score	3	4	2	0				
2003	11.2	Value	52.13	52.00	8.00	0.67	14	Good	-0.500	39.00%
	3	Score	4	4	2	1				
2002	11.2	Value	105.80	31.00	5.00	0.00	11	Fair		
	3	Score	4	2	2	0				
2001	11.2	Value	186.93	0.33	4.00	0.00	10	Fair		
	3	Score	4	1	2	0				
2000	11.2	Value	98.47	4.41	8.82	0.00	10	Fair		
	3	Score	4	1	2	0				
1999	11.2	Value	81.00	8.00	18.00	0.67	12	Good		
	3	Score	4	1	3	1				
1998	11.2	Value	144.00	23.00	21.00	2.00	14	Good		
	3	Score	4	1	3	3				
1997*		Value								
		Score								
1996		Value								
		Score								

* = Lake was not sampled

Table 98. Length frequency and CPUE (fish/hr) for sunfish collected in 1.25 hours of diurnal electrofishing (10- 7.5-minute runs) at Lake Reba on 03 June 2010.

Species	Inch class								Total CPUE	Std. error
	1	2	3	4	5	6	7	8		
Bluegill	103	540	333	109	27	22	5	1139	911.20	144.80
Redear sunfish	18	45	50	32	27	8	1	181	144.80	28.21
Warmouth	5	20	21	16	8	9	8	89	71.20	14.96
Green sunfish	1	3	8	6	2			20	16.00	8.09
Hybrid bluegills	1	2	4		1	2		10	8.00	2.67

Table 99. Spring electrofishing CPUE (fish/hr) for various length groups of bluegill collected at Lake Reba from 2003-2010.

Year	Length group											
	<3.0 in			3.0-5.9 in			6.0-7.9 in			Total		
	CPUE	S.E.		CPUE	S.E.		CPUE	S.E.		CPUE	S.E.	
2010	514.40	138.51		375.20	35.47		21.60	4.78		911.20	144.80	
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	

nedsunlr.d10 - d03

Table 100. Bluegill PSD and RSD₈ values from spring electrofishing at Lake Reba; confidence limits are in parentheses.

Year	No. ≥3.0 in	PSD (±95%)	RSD ₈ (±95%)
2010	496	5 (± 2)	
2009	222	10 (± 4)	
2008	265	27 (± 5)	<i>not enough large bluegills to determine RSD₈</i>
2007	102	28 (± 9)	
2006	385	26 (± 4)	
2005	211	24 (± 7)	
2004	263	11 (± 11)	
2003	507	12 (± 3)	

nedsunlr.d10 - d03

Table 101. 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)%
	Value	Score							
2010	4.0	2	3 - 3+	21.60	0.00	7	Fair	-1.426	76.00%
2009	4.0	2	3 - 3+	22.00	0.00	7	Fair	-0.959	61.70%
2008	4.0	2	3 - 3+	71.00	0.00	8	Fair	-0.810	55.70%
2007	4.1	2	3 - 3+	29.00	0.00	7	Fair	-0.662	48.40%
2006	4.1	2	3 - 3+	72.90	0.00	9	Fair	-1.149	68.30%
2005	4.1	2	3 - 3+	97.60	0.00	9	Fair	-0.601	45.10%
2004	4.1	2	3 - 3+	23.20	0.00	6	Poor	-0.793	54.70%
2003	4.1	2	3 - 3+	46.60	0.00	7	Fair	-0.322	27.90%
2002*									
2001	4.1	2	3 - 3+	89.30	0.00	9	Fair		
2000	5.0	4	>5	303.46	0.00	9	Fair		
1999	5.0	4	>5	48.00	0.00	7	Fair		
1998	5.0	4	>5	4.00	0.00	6	Poor		
1997*									
1996	5.0	4	>5	22.00	0.00	6	Poor		

* = Lake was not sampled
nedsunlr.d10

Table 102. Spring electrofishing CPUE (fish/hr) for various length groups of redear sunfish collected at Lake Reba from 2003-2010.

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.	CPUE	S.E.	CPUE	S.E.
2010	14.40	5.82	101.60	19.16	28.00	7.38	0.80	0.80
2009	184.00	52.92	150.00	22.92	60.00	4.54		
2008	10.00	4.96	134.00	18.31	225.00	18.00	1.00	1.00
2007			122.00	16.34	33.00	5.94	2.00	1.30
2006	111.20	30.70	121.60	17.20	205.60	44.70	0.80	0.80
2005	16.80	5.90	39.20	5.50	196.00	33.40		
2004	16.90	4.40	56.90	17.60	64.60	13.20		
2003	13.60	5.70	119.20	19.80	178.40	68.80		
necdsunlr.d10 - d03								

Table 103. Redear sunfish PSD and RSD₉ values from spring electrofishing at Lake Reba; confidence limits are in parentheses.

Year	No. ≥4.0 in	PSD (±95%)		RSD ₉ (±95%)
2010	118		8 (± 5)	
2009	175		4 (± 3)	
2008	342		11 (± 3)	<i>not enough large</i>
2007	141		10 (± 5)	<i>redear sunfish to</i>
2006	294		49 (± 6)	<i>determine RSD₉</i>
2005	264		19 (± 5)	
2004	146		4 (± 3)	
2003	359		4 (± 2)	
necdsunlr.d10 - d03				

Table 104. Population assessment of redear sunfish based on samples collected at Lake Reba from 1996-2010 (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)%
	Value	Score							
2010	6.3	3	> 5+	0.80	0.00	5	Poor	-1.221	70.50%
2009	6.3	3	> 5+	0.00	0.00	4	Poor	-1.158	68.60%
2008	6.3	3	> 5+	1.00	0.00	5	Poor	-0.719	51.30%
2007	6.6	4	> 5+	2.00	0.00	6	Poor	-1.046	64.90%
2006	6.6	4	> 5+	0.80	0.00	6	Poor	-0.335	28.50%
2005	6.6	4	6+	0.00	0.00	5	Poor	-0.165	15.20%
2004	6.6	4	6+	67.20	0.00	9	Fair	-0.659	48.30%
2003	6.6	4	6+	178.40	0.00	9	Fair	-0.422	34.40%
2002*									
2001	6.6	4	6+	85.33	0.00	9	Fair		
2000	6.6	4	6+	134.90	0.00	9	Fair		
1999	6.6	4	6+	122.00	0.00	9	Fair		
1998	6.6	4	6+	44.00	0.00	9	Fair		
1997*									
1996	6.6	4	6+	14.00	0.00	8	Fair		

* = Lake was not sampled
nedsunlr.d10

Table 105. 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 23 September 2010.

Species	Inch class																			Std.	
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total	CPUE	Error
Largemouth bass	12	45	15	8	9	22	55	22	49	66	48	50	18	7	2	2	1	431	287.33	28.24	

nedwrslr.d10

Table 106. 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	W _r (se)	N	W _r (se)	N	W _r (se)
Largemouth bass	2010	192	90 (3)	116	86 (1)	12	86 (7)
	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)

nedwrslr.d10 - d06

Table 107. 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	CPUE	Std. Error	CPUE	Std. Error	CPUE	Std. Error
2010	Total	3.9	0.1	58.67	18.87	10.67	4.81		
2009	Total	4.0	0.1	58.67	15.55	11.33	8.13	47.12	6.99
2008	Total	4.2	0.1	58.67	15.55	11.33	8.13	65.33	7.06
2007	Total	4.3	0.1	44.00	11.20	5.30	2.20	113.00	27.17
2006	Total	4.3	0.0	175.30	35.90	30.00	8.70	183.70	22.10
2005	Total	5.2	0.1	225.00	48.60	133.00	30.20	192.00	19.50
2004	Total	4.2	0.1	76.70	9.60	15.30	1.90	61.00	10.40
2003	Total	3.7	0.2	23.30	4.80	0.67	0.67	47.30	14.00

nedwrslr.d10 - d03, nedpsdr.d09-d02

Table 108. Management objective results from 2008-2010 at Lake Reba that can be determined through routine sampling.

	2010			2009			2008		
	Result	Met	Result	Met	Result	Met	Result	Met	
Largemouth bass									
Objective 1 >125.00 fish/hr age 1	69.00	No	65.33	No	113.00	No	113.00	No	
Objective 2 >40.00 fish/hr 12.0-14.9 in	57.68	Yes	92.67	Yes	34.00	No	34.00	No	
Objective 3 >11.00 fish/hr ≥15.0 in	0.75	No	26.00	Yes	12.67	Yes	12.67	Yes	
Objective 4 >0.50 fish/hr ≥20.0 in	0.67	Yes	0.67	Yes	0.00	No	0.00	No	
Bluegill									
Objective 1 >75.00 fish/hr ≥6.0 in	21.60	No	22.00	No	71.00	No	71.00	No	
Objective 2 >1.00 fish/hr ≥8.0 in	0.00	No	0.00	No	0.00	No	0.00	No	

Table 109. 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 27 May 2010.

Species*	Inch class										Total	CPUE	S.E.	Std. error
	1	2	3	4	5	6	7	8	9	10				
Bluegill	22	21	32	40	32	42	16	2			207	414.00	70.46	70.46
Redear sunfish		2	3	38	21	51	32	10	1	1	159	318.00	65.59	65.59
Warmouth	1	2	4	2	1	5	3				18	36.00	14.79	14.79
Sunfish hybrids					2		2				4	8.00	5.66	5.66

Table 110. Spring electrofishing CPUE (fish/hr) for each length group of sunfish collected at Rebel Trace.

Species	Year	Length group												Total	CPUE	S.E.		
		<3.0 in			3.0-5.9 in			6.0-7.9 in			≥8.0 in						≥10.0 in	
		CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	
Bluegill	2010	86.00	35.38	208.00	53.17	116.00	28.00	4.00	4.00	4.00	4.00	414.00	70.46	1068.00	394.96	872.00	62.38	
	2009	538.00	214.60	460.00	188.54	70.00	30.53	16.00	7.16	13.50	388.00	101.20	420.00	87.70				
	2008	518.40	41.21	337.60	49.15	16.00	7.16	40.00	13.50	34.60	24.00	14.24	2.00	2.00	232.00	91.62	574.40	41.83
	2007			348.00	89.10	40.00	13.50	50.00	34.60	2.00	2.00	2.00	2.00	2.00	632.00	99.10	494.00	47.80
Redear sunfish	2010	4.00	2.31	124.00	41.63	166.00	38.70	24.00	14.24	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
	2009	34.00	17.40	172.00	76.56	24.00	10.83	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
	2008	70.40	11.14	432.40	47.63	41.60	12.50	84.00	14.10	4.00	2.30	4.00	2.30	4.00	2.30	4.00	2.30	
	2007			544.00	107.80	84.00	14.10	22.00	6.80	18.00	6.80	18.00	6.80	18.00	6.80	18.00	6.80	
2006	172.00	60.30	282.00	53.70	22.00	19.40	19.40	18.00	6.80	18.00	6.80	18.00	6.80	18.00	6.80	18.00	6.80	

nedsumrt.d10 - 06

Table 111. PSD and RSD_g values obtained for bluegill collected at Rebel Trace, 95% confidence intervals are in parentheses.

Species	No. ≥3.0 in	PSD (±95%)	RSD _g (±95%)
Bluegill	164	37 (±15)	1 (±1)

nedsunrt.d10

Table 112. 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	22	19	5					45	22	90.48	34.19
2		2	27	40				70	34	139.52	31.16
3					16			16	8	32.00	10.71
4					13	29	3	45	22	90.15	22.50
5					3	10	10	22	11	44.98	12.85
6						3	3	6	3	12.86	3.85
Total	22	21	32	40	32	42	16	205	100		
%	11	10	16	20	16	20	8	100			

nedaagrt.d09; nedsunrt.d10

No age data for the two 8.0-inch bluegill collected in 2010

Table 113. Age frequency and CPUE (fish/hr) of redear sunfish collected during spring electrofishing in Rebel Trace Lake.

Age	Inch class								Total	%	CPUE	Std. error
	1	2	3	4	5	6	7	8				
1		2	2						4	3	8.80	4.36
2			1	38	7				46	29	91.20	28.45
3					14	38	32		84	54	168.50	33.23
4						13	10	23	14	45.50	13.20	
Total		2	3	38	21	51	32	10	157	100		
%		1	2	24	13	32	20	6	100			

nedaagrt.d09; nedsunrt.d10

Table 114. Population assessment of bluegill based on samples collected at Rebel Trace Lake from 2006-2010 (scoring based on statewide assessment).

Year	Mean length		Years to 6.0 in	CPUE ≥ 6.0	CPUE ≥ 8.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
	age-2 at capture	age-2							
2010	Value 3.8	Score 2	4 - 4+	120.00	4.00	11	Good	-0.443	35.80%
2009	Value 3.8	Score 2	4 - 4+	70.00	0.00	7	Fair	-0.760	53.30%
2008	Value 4.3	Score 2	3 - 3+	16.00	0.00	6	Poor	-1.919	85.30%
2007	Value 4.3	Score 2	3 - 3+	40.00	0.00	7	Fair	-1.360	74.30%
2006	Value 4.3	Score 2	3 - 3+	50.00	0.00	8	Fair	-1.216	70.40%

nedsunrt.d10-06; nedaagrt.d09, 02

Table 115. Population assessment of redear sunfish based on samples collected at Rebel Trace Lake in 2010 (scoring based on statewide assessment).

Year	Mean length		Years to 8.0 in	CPUE ≥ 8.0 in	CPUE ≥ 10.0 in	Total score	Assessment rating	Instantaneous mortality (z)	Annual mortality (A)%
	age-3 at capture	age-3							
2010	Value 6.0	Score 3	4 - 4+	24.00	2.00	12	Good	-0.323	27.60%
2009	Value 6.0	Score 3	6 - 6+	2.00	0.00	5	Poor	-1.328	73.50%

nedsunrt.d10; nedaagrt.d09

Table 116. Length frequency and CPUE (fish/hr) of largemouth bass collected in 0.9445 hour of diurnal electrofishing (3- 15-min and 1- 11.67-min run) at Smoky Valley Lake (Carter Co.) on 02 June 2010.

Species	Inch class																		
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total	CPUE	Std.Error	
Largemouth bass	10	20	6	10	9	28	18	8	1	2						1	113	117.9	15.25

nedsprsv.d10

Table 117. Spring electrofishing CPUE (fish/hr) for various length groups of largemouth bass collected at Smoky Valley Lake from 2000-2010.

Year	Length group														
	<8.0 in			8.0-11.9 in			12.0-14.9 in			≥15.0 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.
2010	47.73	9.25	7.81	65.89	7.81	3.29	1.13	1.13	1.00	1.00	1.00	1.00	117.91	15.25	15.25
2009	97.00	6.61	23.74	145.00	23.74	14.00	2.58	2.58	1.00	1.00	1.00	1.00	257.00	31.89	31.89
2008	155.00	23.29	199.00	34.42	34.42	46.00	7.75	7.75				400.00	62.14	62.14	
2007	119.00	21.75	229.00	32.51	32.51	37.00	6.40	6.40	2.00	1.15	1.15	387.00	42.56	42.56	
2006	112.00	12.80	256.00	33.80	33.80	62.00	8.70	8.70	4.00	1.60	1.60	434.00	45.70	45.70	
2005	54.40	10.20	190.40	22.70	22.70	63.20	9.10	9.10	0.80	0.80	0.80	308.80	30.80	30.80	
2001	117.30	11.60	180.00	14.10	14.10	46.70	12.70	12.70	2.70	2.70	2.70	346.70	11.60	11.60	
2000	68.00	13.00	218.00	22.10	22.10	69.00	13.70	13.70	1.00	1.00	1.00	356.00	46.80	46.80	

nedsprsv.d10; nedpsdsv.d09 - d05; d01 - d00

Table 118. 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%)
2010	67	6 (± 6)	1 (± 3)
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

nedsprsv.d10; nedpsdsv.d09 - d05

Table 119. Mean back-calculated lengths (in) at each annulus for largemouth bass collected from Smoky Valley Lake, including size range at each age and 95% confidence intervals.

Year	No.	Age										
		1	2	3	4	5	6	7	8	9	10	11
2010	0											
2009	29	3.9										
2008	27	5.2	8.2									
2007	19	4.6	7.8	9.3								
2006	3	5.5	8.4	10.2	11.2							
2005	3	4.6	8.2	9.5	10.5	11.3						
2004	1	4.6	7.6	8.8	10.3	11.2	11.9					
2003	0											
2002	3	3.8	7.5	8.9	10.2	11.2	11.9	12.3	12.7			
2001	0											
2000	0											
1999	1	4.4	8.7	10.3	11.5	12.4	13.1	13.8	14.7	16.1	16.8	17.5
Mean		4.6	8	9.4	10.7	11.4	12.1	12.7	13.2	16.1	16.8	17.5
Smallest		2.2	3.3	3.9	9.4	10.8	11.3	11.5	11.9	16.1	16.8	17.5
Largest		6.8	9.7	10.7	11.6	12.4	13.1	13.8	14.7	16.1	16.8	17.5
Number		86	57	30	11	8	5	4	4	1	1	1
Std Error		0.1	0.1	0.2	0.2	0.2	0.3	0.5	0.6			
95% CI (±)		0.20	0.25	0.50	0.40	0.40	0.60	0.95	1.10			

Otoliths were used for age determination; Intercept = 0
nedaagsv.d10

Table 120. Age frequency and CPUE (fish/hr) of largemouth bass collected at Smoky Valley Lake.

Age	Inch class											Total	%	CPUE	Std error	
	3	4	5	7	8	9	10	11	12	13	17					
1	10	19	5										34	30	34.92	7.55
2			1	8	9	16	4						39	35	40.8	6.97
3		1		2		12	13						27	24	28.5	4.65
4							1	3	0				4	4	4.19	0.82
5								5	0				6	5	5.85	1.31
6									0				0	0	0.32	0.32
8									0	2			2	2	2.32	1.00
11											1		1	1	1.00	1.00
Total	10	20	6	10	9	28	18	8	1	2	1		113	100		
%	9	18	5	9	8	25	16	7	1	2	1		100			

nedaagsv.d10, nedsprsv.d10

Table 121. 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 (A)%	
		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
2010	Value	9.6	34.92	3.29	1.00	0.00	5	Poor	-0.787	54.50%
	Score	1	2	1	1	0				
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				

nedsprsv.d10

Table 122. Length frequency and CPUE (fish/hr) of sunfish collected during 0.9445 hour of diurnal electrofishing (3- 15-min and 1- 11.67-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	90	109	101	38	19	20	6	1	384	413.44	104.02
Green sun fish	1	4	14	21	15	3	1		59	61.89	104.02
Longear sunfish	3	10	3	2	1				19	20.44	6.83
Hybrid sunfish		1		1	1				3	3.29	1.13

nedsprsv.d10; nedsuns.v.d09

Table 123. 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.
2010	216.90	69.35	166.95	36.82	28.60	6.01	1.00	1.00	413.44	104.02
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)	

Table 124. PSD and RSD₈ 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%)	RSD ₈ (±95%)
2010	185	15 (± 5)	0.5 (± 1.1)
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 RSD₈
nedsprsv.d10; nedsunsv.d09 - d03

Table 125. Population assessment of bluegill based on samples collected at Smoky Valley Lake from 2003-2009 (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)%																																																																																																				
2010	Value	3.9	3 - 3+	29.60	1.00	8	Fair	-0.987	62.70%																																																																																																				
	Score	2	3	2	1					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%
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										
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																									
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																																								
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																																																							
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																																																																						
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																																																																																					
2003	Value	3.2	4 - 4+	11.00	4.00	9	Fair	-0.523	40.70%																																																																																																				
	Score	1	2	4	2																																																																																																								

nedsprsv.d10

Table 126. Length frequency and CPUE (fish/hr) for largemouth bass collected for 1 hour (4- 15-min runs) 27 September 2010 at Smoky Valley Lake.

Species	Inch class														Total	CPUE	Std.Error
	2	3	4	5	6	7	8	9	10	11	12	13	14				
Largemouth bass	1	20	41	57	32	4	30	22	21	17	8	3	1	257	257.00	39.64	

nedwrssv.d10

Table 127. Number and mean relative weight (W_r) 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	W_r (se)	N	W_r (se)	N	W_r (se)
Largemouth bass	2010	90	81 (1)	12	82 (2)		
	2009	80	83 (1)	9	86 (3)	1	89 (0)
	2008	104	83 (1)	20	81 (1)		
	2007	99	85 (1)	10	87 (4)		

nedwrssv.d10 - d07

Table 128. Management objective results for 2010 at Smoky Valley Lake that can be determined through routine sampling.

		2010	
Largemouth bass		Result	Met
Objective 1	>30.00 fish/hr age 1	34.92	Yes
Objective 2	>50.00 fish/hr 12.0-14.9 in	3.29	No
Objective 3	>2.00 fish/hr ≥15.0 in	1.00	No
Objective 4	>1.00 fish/hr ≥20.0 in	0.00	No
Objective 5	>90.0 W_r 8.0-11.9 in	81.00	No
Objective 6	>90.0 W_r 12.0-14.9 in	82.00	No
Objective 7	>90.0 W_r ≥15.0 in	n/a	
Bluegill			
Objective 1	>40.00 fish/hr ≥6.0 in	28.60	No
Objective 2	>2.00 fish/hr ≥8.0 in	1.00	No

Table 129. 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 27 April 2010.

Species	Inch class																						Total	CPUE	Std. Error
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				
Largemouth bass	6	15	14	9		20	34	29	28	28	22	30	28	22	23	21	6	3	1		1	340	226.67	27.73	

nedpsdlw.d10

Table 130. Spring electrofishing CPUE (fish/hr) for length groups of largemouth bass collected at Lake Wilgreen from 1999-2010.

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.	CPUE	S.E.		
2010	42.67	5.73	79.33	14.36	53.33	6.50	51.33	4.06	1.33	0.84	226.67	21.73		
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	448.00	40.00		

nedpsdlw.d10 - d99

Table 131. 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%)
2010	276	57 (± 6)	28 (± 5)
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 132. Population assessment of largemouth bass based on samples collected at Lake Wilgreen from 1996-2010 (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								
2010	12.6	6.00	79.33	51.33	1.33	15	Good	-0.331	28.1%	
	4	1	4	4	2					
2009	12.6	6.00	52.00	50.00	1.33	15	Good	-0.162	15.0%	
	4	1	4	4	2					
2008	12.6	5.33	18.67	10.67	0.67	9	Fair	-0.633	46.9%	
	4	1	1	2	1					
2007	10.2	456.80	115.30	18.70	2.70	16	Good	-0.580	32.5%	
	2	4	4	3	3					
2006	10.2	469.40	148.00	22.00	2.70	16	Good	-0.069	6.6%	
	2	4	4	3	3					
2005	10.2	81.20	108.67	6.00	0.00	12	Good	-0.127	11.9%	
	2	4	4	2	0					
2004	10.2	6.00	48.00	12.80	0.00	8	Fair			
	2	1	3	2	0					
2003	10.2	91.51	48.00	12.80	0.00	11	Fair			
	2	4	3	0	0					
2002*										
	Value									
	Score									
2001*										
	Value									
	Score									
2000	10.9	54.23	58.00	6.00	0.00	12	Good			
	3	3	4	2	0					
1999	10.9	25.53	24.00	4.00	2.00	14	Good			
	3	2	4	2	3					
1998*										
	Value									
	Score									
1997*										
	Value									
	Score									
1996	10.9	106.60	90.00	15.00	5.00	17	Excellent			
	3	4	4	2	4					

* = Lake was not sampled
nedpsdlw.d10, nedaaglw.d08

Table 133. Length frequency and CPUE (fish/hr) for sunfish collected in 1.25 hours of diurnal electrofishing (10- 7.5-min runs) at Lake Wilgreen on 8 June 2010.

Species	Inch class								Total	CPUE	Std. Error
	1	2	3	4	5	6	7	8			
Bluegill	58	131	203	142	67	10			606	484.80	43.93
Green sunfish	1	7	32	37	23	12	2		114	91.20	19.16
Redear sunfish			2	4	9	14	4	5	38	30.40	6.62
Warmouth			1	3	2	1	2		9	7.20	2.22

nedsunlw.d10

Table 134. Spring electrofishing CPUE (fish/hr) for various length groups of sunfish collected at Lake Wilgreen from 2002-2010.

Species	Year	Length group																			
		<3.0 in			3.0-5.9 in			6.0-7.9 in			≥8.0 in			≥10.0 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.	S.E.		
Bluegill	2010	46.40	14.05	380.80	28.92	57.60	14.93													484.80	43.93
	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
Redear sunfish	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
	2010			12.00	4.34	14.40	3.73	4.00	1.79											30.40	6.62
	2009			11.00	4.77	13.00	5.64	14.00	2.51	1.00	1.00									38.00	8.52
Redear sunfish	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

nedsunlw.d10 - d05; d02

Table 135. 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	2010	548	13 (± 3)	*
	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	2010	36	25 (± 14)	*
	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

nedsunlw.d10 - d05

Table 136. Population assessment of bluegill based on samples collected at Lake Wilgreen from 2002-2009 (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)%																																																																																																																													
2010	Value	5.5	3 - 3+	57.60	0.00	10	Fair	-1.624	80.30%																																																																																																																													
	Score	4	3	3	0					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%
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										
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																									
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																																								
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																																																							
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																																																																						
2004*	Value																																																																																																																																					
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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
nedsunlw.d09

Table 137. 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 27 September 2010.

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	8	116	151	47	82	77	48	28	23	18	13	13	6	8	5	1	1	645	430.00	40.47

nedpsdlw.d10

Table 138. 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	2010	172	84 (1)	44	92 (1)	21	98 (2)
	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)

nedwrs/w.d10 - d05

Table 139. Management objective results for 2009-2010 at Lake Wilgreen that can be determined through routine sampling.

	Largemouth Bass	2010		2009	
		Result	Met	Result	Met
Objective 1	>30.00 fish/hr age 1	6.00	No	6.00	No
Objective 2	>75.00 fish/hr 12.0-14.9 in	53.33	No	52.00	No
Objective 3	>10.00 fish/hr ≥15.0 in	51.33	Yes	50.00	Yes
Objective 4	>1.00 fish/hr ≥20.0 in	1.33	Yes	1.33	Yes
Objective 5	Wr of 8.0-11.9 in ≥90	54.00	No	83.91	No
Objective 6	Wr of 12.0-14.9 in ≥90	92.00	Yes	91.83	Yes
Objective 7	Wr of ≥15.0 in ≥90	98.00	Yes	100.00	Yes
	Bluegill				
Objective 1	>90.00 fish/hr ≥6.0 in	57.60	No	110.00	Yes
Objective 2	>1.00 fish/hr ≥8.0 in	0.00	No	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 2007-2010 were conducted in areas further downstream in the embayments. Therefore, any comparisons of the 2007-2010 data to previous results should be interpreted accordingly.

Black Bass Sampling (Spring)

Nocturnal electrofishing studies were conducted at Wolf Creek dam, and in the Harmon Creek, Fishing Creek, and Lily Creek embayments of Lake Cumberland during April 2010 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 2010.

Largemouth bass catch rates met or exceeded the four CPUE management objectives (Table 8). The spotted bass population met two out of four catch rate management objectives, with the CPUE of age-1 spotted bass and the CPUE of 11.0-13.9 in spotted bass both exceeding the objectives (Table 9). The smallmouth bass population met two out of four catch rate management objectives (Table 10). The catch rates of ≥ 14.0 in (3.67 fish/hr) and ≥ 17.0 in (2.33 fish/hr) smallmouth bass met the management objectives.

Largemouth bass and smallmouth bass exhibited good size structure, with a PSD value of 51 and an RSD_{15} value of 22 for largemouth bass and a PSD value of 57 and an RSD_{14} value of 43 for smallmouth bass (Table 11). Spotted bass had a moderate size structure, with a PSD value of 27 and an RSD_{14} value of 2 (Table 11). Table 12 compares the size structure values of black bass populations in Lake Cumberland to other SEFD lakes sampled in 2010.

Age-growth data from smallmouth bass collected in 2010 is shown in Table 13. Age-2 and age-3 smallmouth bass comprised 61% of the smallmouth bass catch (Table 14). The smallmouth bass assessment score was 16 (rating=good; Table 15).

Black Bass Sampling (Fall)

Nocturnal electrofishing was conducted in the Fishing Creek embayment during September to index the largemouth bass year class strength (Tables 16 and 17). The CPUE of age-0 largemouth bass was higher in 2010 than 2009. Table 18 compares the CPUE of age-0 largemouth bass in Lake Cumberland to other SEFD lakes sampled in fall 2010. Relative weight (W_r) values for largemouth bass and spotted bass collected during September sampling are shown in Table 19. Table 20 compares W_r values for black bass in Lake Cumberland to other SEFD lakes sampled in fall 2010.

Walleye and White Bass Sampling

Gill nets were used in November 2010 to evaluate the walleye and white bass populations in the Jamestown/Bugwood, Conley Bottom, and Watisboro/Burnside areas of Lake Cumberland. A total of 135 walleye were captured in 32 net-nights for a catch rate of 4.22 fish/net-night. Length frequency and CPUE of walleye is shown in Table 21. Walleye ranged from 9.0-20.0 in with the mode being the 15.0 in class (34 fish). None of the catch rate management objectives for walleye were met (Table 22). Age-growth

data for male and female walleye are shown in Tables 23 and 24, respectively. The age-growth for both sexes combined is shown in Table 25. Six year-classes were represented in the catch, with the 2009 year class (age 1; 46%) being most abundant (Table 26). Mean length of age 2+ walleye at capture (17.6 in) did not meet the growth objective of 18.0 in (Table 27). Growth rates for walleye have declined over the last several years (Table 22). The walleye assessment score was 8 (rating=fair; Table 27). The assessment score in 2010 was the lowest score for walleye at Lake Cumberland, due in large part to the low CPUE of the ≥ 20.0 in fish (Table 22). Relative weight (Wr) values for walleye are shown in Table 28.

A total of 183 white bass were captured in 32 net-nights for a catch rate of 5.72 fish/net-night. Length frequency and CPUE of white bass is shown in Table 21. White bass ranged from 7.0-14.0 in with the mode being the 7.0 in class (70 fish). Age-growth data for white bass is shown in Table 29. Three year-classes were represented in the catch, with the 2010 year class (age 0; 81%) being most abundant (Table 30). The white bass assessment score was 7 (rating=fair; Table 31). Relative weight (Wr) values for white bass are shown in Table 32.

Striped bass were also recorded during walleye gill netting. Thirty-two net-nights captured 300 striped bass for a catch rate of 9.38 fish/net-night. Length-frequency and CPUE of striped bass are shown in Table 21. Striped bass ranged from 8.0 to 28.0 in with the mode being the 17.0 in class (75 fish). The age-growth data for striped bass collected during 2010 is shown in Table 33. Six year-classes were represented in the catch (Table 34). The 2009 (age 1) year class was the most abundant (64%) year class collected, which coincided with the increased (pulsed) stocking rate of 10.00 fish/acre in 2009. Relative weight (Wr) values were adequate for striped bass < 20.0 in, but condition values decreased as fish grew larger (Table 35). Warm water temperatures and decreased dissolved oxygen levels in the lake during 2010 may have affected the growth and condition of the striped bass.

Laurel River Lake (6,060 acres)

Black Bass Sampling (Spring)

Nocturnal electrofishing sampling was conducted during April and May 2010 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 36. The catch-per-hour (by area and length group) of the three black bass species is shown in Tables 37-40. Table 7 compares the catch-per-hour by length group of black bass in Laurel River Lake to other SEFD lakes sampled in 2010.

Although the largemouth bass population met three of the four catch rate objectives, the CPUE of age-1 largemouth bass failed to meet the management objective (Table 41). Spotted bass met two of the four catch rate management objectives, with the catch rates of 11.0-13.9 in fish (9.00 fish/hr) and the CPUE of ≥ 14.0 in (4.83 fish/hr) exceeding the management objectives (Table 42). The smallmouth bass population met three of the four management objectives, with the CPUE of 11.0-13.9 in fish (0.67 fish/hr) failing to meet the management objective (Table 43).

Largemouth and smallmouth bass exhibited excellent size structure, with largemouth bass having a PSD value of 57 and an RSD_{15} value of 29, and smallmouth bass had a PSD value of 51 and an RSD_{14} value of 41 (Table 44). Spotted bass exhibited good size structure, having a PSD of 39 and an RSD_{14} of 14 (Table 44). Table 12 compares the size structure values of black bass populations in Laurel River Lake to other SEFD lakes sampled in 2010.

Black Bass Sampling (Fall)

Nocturnal electrofishing was conducted in the Laurel River arm during September 2010 to index largemouth bass year class strength (Tables 45 and 46). CPUE of age-0 largemouth bass in 2010 was lower than catch rates in 2009. As a result of the low age-0 catch rate, the lake received a supplemental stocking

of 39,766 4.0-in fingerlings in October 2010 to bolster the low year class. Relative weight (Wr) values for largemouth and spotted bass collected during September sampling are shown in Table 47.

2010 Daytime Creel Survey

A roving daytime creel survey was conducted on Laurel River Lake (6,060 acres) from March 8-October 31 2010. The lake was stratified into two survey areas (upper and lower) and the survey was run 16 days per month in March, April, September, and October. The sampling frequency was reduced to 12 days in May, and 7 days in June and July, and 9 days in August to incorporate a nighttime creel survey at the lake.

Results of the daytime creel survey are shown in Tables 48-54. Anglers took an estimated 10,817 fishing trips and expended an estimated 41,358 hours (6.8 man hours/acre) during the survey period. Black bass anglers accounted for 61% of all trips taken, followed by walleye anglers at 20%.

2010 Nighttime Creel Survey

An access point nighttime creel survey was conducted on Laurel River Lake (6,060 acres) from May 18-August 22 2010. The survey was conducted 2 nights in May (1 weekday night and 1 weekend night), and 8 nights per month in June and July (4 weekday nights and 4 weekend nights), and 6 nights in August (3 weekday nights and 3 weekend nights). The survey ran from 10:00 pm until 3:00 am at four access sites (probability in parentheses): Flatwoods (0.4), Holly Bay (0.2), Grove (0.2), and Marsh Branch (0.2). Fishing pressure counts were made by counting the number of fishing boat trailers in the parking lot at 10:00 pm and again at 3:00 am, and then the numbers were averaged. During the interview process, the number of anglers per boat was recorded and an average number of anglers per boat was calculated. The final pressure count was calculated by multiplying the average number of boats X average number of anglers per boat.

Results from the nighttime creel survey are shown in Tables 55-60. Anglers took an estimated 7,107 fishing trips and expended an estimated 30,581 hours (5.1 man hours/acre) during the survey period. Black bass anglers accounted for 52% of all trips taken, followed by walleye (38%) and catfish (8%) anglers.

Angler Attitude Survey

An angler attitude survey was conducted in conjunction with the creel survey to gather angler opinions about the various fisheries at Laurel River Lake (Figure 1). A total of 262 anglers were interviewed. Eighty-three percent of the largemouth bass anglers were satisfied with the largemouth bass fishery at the lake, with the number of fish being the only reason for their dissatisfaction. Ninety-three percent of the smallmouth bass anglers were satisfied with the smallmouth bass fishery at Laurel River Lake, with the number of fish and wanting the length limit to increase to 21.0-in were the reasons listed for their dissatisfaction. Sixty-four percent of the spotted bass anglers were satisfied with the spotted bass fishery, with the number and size of fish being the main reasons for angler dissatisfaction.

Over half of the crappie anglers were satisfied with the crappie fishery. Of the crappie anglers dissatisfied with the crappie fishery, the number of fish was the only reason for their dissatisfaction.

Over 90% of the trout anglers were satisfied with the trout fishery at Laurel River Lake.

Almost 90% of the walleye anglers were satisfied with the walleye fishery at Laurel River Lake. Of the walleye anglers that were dissatisfied with the walleye fishery, the number on fish was the only reason listed for their dissatisfaction.

One hundred percent of the bluegill anglers were satisfied with the bluegill fishery at Laurel River Lake.

Nineteen percent of the anglers at Laurel River Lake would support a reduction in the statewide crappie creel limit to 20 fish, and 81% of the anglers had no opinion on the crappie creel limit reduction. Over 90% of the anglers fish Laurel River Lake more than 10 times per year, and over 90% of the anglers are satisfied the current regulations at Laurel River Lake.

Cedar Creek Lake (784 acres; Lincoln Co.)

Black Bass Sampling (Spring)

Nocturnal electrofishing was conducted on 10 May 2010 to assess the largemouth bass population in Cedar Creek Lake. The length-frequency and CPUE of largemouth bass is shown in Table 61. Size structure of largemouth bass was good (PSD=45, RSD₁₅=22; Table 62). The catch-per-hour (by area and length group) of largemouth bass for 2003-2010 is shown in Table 63. All of the CPUE management objectives for the largemouth bass population were exceeded (Table 64).

Age-growth data from largemouth bass collected in 2010 is shown in Table 65. Age-2 largemouth bass comprised 47% of the largemouth bass catch (Table 66). The largemouth bass assessment score was 17 (rating=excellent; Table 67).

Black Bass Sampling (Fall)

Nocturnal electrofishing was conducted on 29 September 2010 to index the largemouth bass year-class strength (Tables 68 and 69). Catch rates of age-0 bass in 2010 had increased over catch rates observed in 2009 (Table 69). Relative weight (Wr) values for largemouth bass are found in Table 70.

Bluegill/Redear Sunfish Sampling

Daytime electrofishing was conducted on 14 June 2010, in conjunction with the Black Bass Research (BBR) section, to assess the bluegill and redear sunfish populations in Cedar Creek Lake. The length-frequency and CPUE of bluegill and redear sunfish is shown in Table 71. The catch-per-hour (by length group) of bluegill and redear sunfish is shown in Table 72. PSD and RSD values are shown in Table 73. Age-growth of bluegill is shown in Table 74. Six year classes were represented in the catch of bluegill, with 2008 and 2009 year classes comprising 95% of the catch (Table 75). The bluegill population assessment score was 5 (rating=poor; Table 76). Age-growth of redear sunfish is shown in Table 77. Seven year classes were represented in the catch of redear sunfish, with the 2008 and 2009 year classes comprising 70% of the catch (Table 78). The redear sunfish assessment score was 5 (rating=poor; Table 79).

Bert T. Combs Lake (36 acres; Clay Co.)

Channel Catfish Sampling

Channel catfish sampling using tandem hoop nets was conducted at Bert T. Combs Lake in October 2010. Forty-two channel catfish were collected. The length-frequency of the channel catfish is shown in Table 80.

Beulah Lake (87 acres; Jackson Co.)

Channel Catfish Sampling

Channel catfish sampling using tandem hoop nets was conducted at Beulah Lake in October 2010. Thirty-five channel catfish were collected. The length-frequency of the channel catfish is shown in Table 81.

Laurel Creek Lake (43 acres; McCreary Co.)

Black Bass Sampling (Spring)

Nocturnal electrofishing was conducted on 14 April 2010 at Laurel Creek Lake to assess the black bass population. Length frequency and CPUE for largemouth bass are shown in Table 82. The catch-per-hour (by length group) for largemouth bass species is shown in Table 83. Table 84 lists the PSD and RSD values for largemouth bass in the lake.

Liberty Lake (81 acres; Casey Co.)

Black Bass Sampling (Spring)

Nocturnal electrofishing was conducted on 13 April 2010 at Liberty Lake to assess the black bass population. Length frequency and CPUE for largemouth and spotted bass are shown in Table 85. The catch-per-hour (by length group) for largemouth bass species is shown in Table 86. Table 87 lists the PSD and RSD values for largemouth bass in the lake. Age-growth data from largemouth bass collected in 2010 is shown in Table 88. Seven year classes were represented in the catch, with age-2 largemouth bass comprising 58% of the largemouth bass catch (Table 89). The largemouth bass assessment score was 12 (rating=good; Table 90).

Bluegill/Redear Sunfish Sampling

Daytime electrofishing was conducted on 17 June 2010 to assess the bluegill and redeer sunfish populations in Liberty Lake. No redeer sunfish were collected during sampling. The length-frequency and CPUE of bluegill is shown in Table 91. The catch-per-hour (by length group) of bluegill is shown in Table 92. PSD and RSD values are shown in Table 93. Age-growth of bluegill is shown in Table 94. Four year classes were represented in the catch of bluegill, with the 2009 year class comprising 74% of the catch (Table 95). The bluegill population assessment score was 7 (rating=fair; Table 96).

Crappie Sampling

Trap netting was conducted in late October 2010 to assess the crappie population in Liberty Lake. In 12 net-nights, only one (12.0 in) white crappie was collected.

Lake Linville (358 acres; Rockcastle Co.)

Black Bass Sampling (Spring)

Nocturnal electrofishing was conducted on 26 April 2010 at Lake Linville to assess the black bass population. Length frequency and CPUE for the black bass populations are shown in Tables 97-99. A population assessment for largemouth bass is shown in Table 100. Three of the four catch rate management objectives were met, with the CPUE of ≥ 15.0 in largemouth bass failing to meet the management objective. The size structure for the largemouth bass population is poor, with a PSD value of 20 ($RSD_{15}=4$), and the spotted bass population is also comprised of small individuals ($PSD=14$, $RSD_{14}=0$; Table 101). Age-growth data from spotted bass collected in 2010 is shown in Table 102. Six year classes were represented in the catch, with spotted bass ages 2-4 comprising 92% of the spotted bass catch (Table 103). The spotted bass assessment score was 12 (rating=good; Table 104).

Black Bass Sampling (Fall)

Nocturnal electrofishing was conducted on 30 September 2010 to index the largemouth bass year-class strength (Tables 105 and 106). Catch rates of age-0 largemouth bass in 2010 were lower than in 2009, but were near the historical averages (Table 106). Table 18 compares the CPUE of age 0 largemouth bass in Lake Linville to other SEFD lakes sampled in 2010. Relative weight values for largemouth bass and spotted bass are in Table 107.

Hybrid Striped Bass and White Bass Sampling

Gill netting was conducted in late October to assess the hybrid striped bass and white bass population in Lake Linville. A total of 57 hybrid striped bass were collected in 10 net-nights for a catch rate of 5.70 fish/net-night, and a total of 64 white bass were collected for a catch rate of 6.40 fish/net-night. Length frequency and CPUE of hybrid striped bass and white bass is shown in Table 108. Age-growth for hybrid striped bass is shown in Table 109. Two year-classes were represented in the hybrid striped bass catch, with the 2010 year class (age-0; 74%) being most abundant (Table 110). The hybrid striped bass assessment score was 2 (rating=poor; Table 111). Relative weight (W_r) values for hybrid striped bass are

shown in Table 112. Age-growth for white bass is shown in Table 113. Four year-classes were represented in the white bass catch, with the 2009 year class (age-1; 72%) being most abundant (Table 114). The white bass assessment score was 3 (rating=poor; Table 115). Relative weight (Wr) values for white bass are shown in Table 116.

2010 Daytime Creel Survey

A daytime access point creel survey was conducted 16 days/month on Lake Linville (358 acres) from 11 March - 31 October 2010. Results are shown in Tables 117 through 124. Anglers made an estimated 15,876 fishing trips and expended 61,969 hours (173.1 man-hours/acre) during the survey period. Panfish anglers accounted for almost half (45%) of the fishing trips to the lake, followed by black bass (31%) and catfish (17%) anglers.

Angler Attitude Survey

An angler attitude survey was conducted during the creel survey to gather opinions on the various fisheries in Lake Linville (Figure 2). A total of 199 anglers were interviewed. Thirty-six percent of black bass anglers were satisfied with the bass fishery at Lake Linville. Of the anglers who were dissatisfied, the size of the fish (83%) was the most important reason for their dissatisfaction.

Thirty-five percent of the crappie anglers were satisfied with the crappie fishery at Lake Linville. The number and size of the fish were the most cited reasons for the dissatisfaction with the crappie fishery.

Three-fourths of catfish anglers (74%) were satisfied with the catfish fishery at Lake Linville. The number of fish and size of fish were the most important reasons for angler dissatisfaction with the catfish fishery.

Most bluegill anglers (86%) were satisfied with the bluegill fishery at Lake Linville. Anglers listed the number of fish and the size of fish as the most important reasons for their dissatisfaction with the bluegill fishery.

Three-fourths of the hybrid striped bass anglers (77%) were satisfied with the hybrid striped bass fishery at Lake Linville. The number of fish and size of fish were the most important reasons for angler dissatisfaction with the hybrid striped bass fishery.

Approximately seventy percent of the anglers would support a reduction in the statewide crappie creel limit to 20 fish. Seventy-eight percent of the anglers fish Lake Linville more than 10 times per year. Nearly three-fourths of the anglers are satisfied with the current regulations at Lake Linville.

Stanford Reservoir (38 acres; Lincoln Co.)

Black Bass Sampling (Spring)

Nocturnal electrofishing was conducted on 14 April 2010 at Stanford Reservoir to assess the black bass population. Length frequency and CPUE for largemouth bass are shown in Table 125. The catch-per-hour (by length group) for largemouth bass species is shown in Table 126. Table 127 lists the PSD and RSD values for largemouth bass in the lake.

Wood Creek Lake (625 acres; Laurel Co.)

Black Bass Sampling (Spring)

Nocturnal electrofishing was conducted on 20 April 2010 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 128. The size structure for largemouth bass was good, having a PSD value of 52 (RSD₁₅=15; Table 129). The spotted bass population had a poor size structure (PSD=20, RSD₁₄=0; Table 129). Catch-per-hour (by length group) for largemouth and spotted bass are shown in Tables 130 and 131,

respectively. A largemouth bass population assessment is shown in Table 132. With the exception of the CPUE of ≥ 15.0 in largemouth bass, the remaining catch rate management objectives were met (Table 132). Age-growth data from largemouth bass collected in 2010 is shown in Table 133. Ten year classes were represented in the catch, with largemouth bass ages 2-3 comprising 58% of the largemouth bass catch (Table 134). The largemouth bass assessment score was 11 (rating=fair; Table 135).

Black Bass Sampling (Fall)

Nocturnal electrofishing was conducted on 23 September 2010 in the Dam, Pump Station, and Dock areas of Wood Creek Lake to index largemouth bass year class strength (Tables 136 and 137). Catch rates of age-0 largemouth bass in 2010 were higher than in previous years (Table 137). Table 18 compares the CPUE of age 0 largemouth bass in Wood Creek Lake to other SEFD lakes sampled in 2010. Relative weight values for largemouth and spotted bass are in Table 138.

Table 1. Summary of sampling conditions by waterbody, species sampled, and date for the Southeastern Fisheries District in 2010.

Water body	Location	Species	Date	Time (24hr)	Gear	Weather	Water temp. F	Water level	Secchi (in)	Conditions	Pertinent sampling comments		
Lake Cumberland	Dam	Black bass	4/19/2010	1945	shock	slightly overcast, 70s	62	681	45	good	all 2010 samples for all species conducted under reduced water levels due to dam repairs, which altered sampling locations		
		Black bass	4/19/2010	1945	shock	cloudy, mid 60s, windy	65	681	60	fair	green water, volunteer dipper		
		Black bass	4/28/2010	2000	shock	mostly clear, 60s	66	683	18	fair	water green and somewhat murky		
		Black bass	4/29/2010	1930	shock	mostly clear, 70s	66	683	78	good	murky		
		Black bass	9/20/2010	2000	shock	clear, warm	82	683	42	good	green, murky		
		Walleye	11/8-11-10		gill net	sunny, warm	62	680	72	good	floating woody debris		
		Walleye	11/15-11/17		gill net	rain, overcast, windy	60	681	-	fair	good green water		
		Walleye	11/15-11/17		gill net	rain, overcast, windy	63	681	-	fair			
		Laurel River Lake	Dam	Black bass	4/15/2010	1945	shock	partly cloudy, 70s	69	1011	132	good	clear
				Black bass	4/22/2010	2000	shock	mostly clear, low 70s	65	1011	60	good	water green, clear
Black bass	4/27/2010			1930	shock	cloudy, rainy, 50s	63	1012	72	good	good		
Black bass	5/12/2010			2000	shock	mostly clear, warm, humid	67	1010	30	fair	murky		
Black bass	9/20/2010			1930	shock	clear, 70s & dropping	79	1008	48	good	green, water looks good; some spotted bass look skinny		
LMB	5/10/2010			2000	shock	cloudy, overcast	66	normal	12	fair	murky to muddy, bass looked healthy		
Cedar Creek Lake	LMB	LMB	9/29/2010	2000	shock	clear, 70s falling into 60s	74	normal	36	good	green/clear with hint of brown; lots of vegetation (especially naiads)		
		BLG/redear	6/14/2010	1145	shock	overcast, humid, 80s	83	normal	-	good	murky in upper end		
Bert T. Combs Lake	Catfish	Catfish	10/4-10/7		hoop net	sunny	63	5 ft low	216	good	water greenish and clear		
Beulah Lake	Catfish	Catfish	10/18-10/21		hoop net	sunny, warm	59	10 ft low	72	good	water greenish, mostly clear		
Laurel Creek Reservoir	Black bass	Black bass	4/14/2010	2000	shock	clear, upper 70s & falling	68	normal	78	good	water yellowish brown		
Liberty Lake	Black bass	Black bass	4/13/2010	2000	shock	sunny, 70s, clear	67	normal	48	good	coffee-colored stained, clearish		
	BLG/redear	BLG/redear	6/17/2010		shock	sunny, hot, clear	85	normal	36	good	green, murky, looks fertile-looks like a plankton bloom		
	Creppie	Creppie	10/27-10/29		trap net	clear, sunny, 60s	60	5 ft low	72	good	good; front moved through area on 10/26		
Lake Linville	Black Bass	Black Bass	4/26/2010	2000	shock	cloudy, 50s, breezy	61	normal	18	fair	murky to slightly muddy		
	Black Bass	Black Bass	9/30/2010	1930	shock	clear, increasing clouds	70	2 ft low	36	good	water green, a little murky		
	Hybrid striped bass	Hybrid striped bass	10/26-10-29		gill net	mostly sunny, breezy, 50s	61	5 ft low	48	good	green-looks like good plankton bloom		
Stanford Reservoir	Black bass	Black bass	4/13/2010	2000	shock	clear, warm, 70s	68	3 ft low	42	good	shocked entire shoreline		
Wood Creek Lake	Black bass	Black bass	4/20/2010	2000	shock	rain early, cloudy, 50s	63	normal	30-108	good	two crews; control box shorted-combined crews and reduced samples		
	Black bass	Black bass	9/23/2010	2000	shock	clear, warm, full moon	80	normal	96-120	good	two crews; water green & very clear		

Table 2. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 6.00 hours of 15-minute nocturnal electrofishing runs for black bass in Lake Cumberland during April 2010; standard error is in parentheses.

Area	Species	Inch class																				Total	CPUE
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
Dam	Largemouth bass				4	2	2	2	3	1	3	2	3	2	3	4	5	2			36	24.00 (10.33)	
	Spotted bass	1	4	1		12	8	6	6	15	17	10	5	3							88	58.67 (10.62)	
	Smallmouth bass				1	1	3	3	1	2	1		2		3	1		1	1		20	13.33 (2.23)	
Harmon Creek	Largemouth bass				1		1	2	3	2	5	2	1	1		2	3	1	1		25	16.67 (7.11)	
	Spotted bass	1		7	13	22	11	8	5	8	5	1	1								82	54.67 (11.90)	
	Smallmouth bass			4	1	3	4		1	2	1	2	1	2	1	4	2	5			30	20.00 (3.72)	
Fishing Creek	Largemouth bass	5	4	3	6	15	7	15	33	28	10	14	23	12	9	1		1	1		187	124.67 (21.89)	
	Spotted bass	5	12	2	3	7	8	2		1	2		1								43	28.67 (7.55)	
	Smallmouth bass		1									1									2	1.33 (0.84)	
Lily Creek	Largemouth bass	2	3	3	9	17	14	3	8	15	7	9	4	8	5	1	3			1	112	74.67 (18.67)	
	Spotted bass	8	21	5	5	15	18	48	33	18	14	6	4								195	130.00 (10.67)	
	Smallmouth bass		3			3	1	1				1									9	6.00 (1.71)	
Total	Largemouth bass	2	8	4	6	20	34	24	23	45	48	24	28	30	24	18	9	8	2	2	1	360	60.00 (11.65)
	Spotted bass	14	38	6	14	43	55	73	49	38	40	23	10	5							408	68.00 (9.20)	
	Smallmouth bass	4		1	5	7	7	6	2	2	3	2	4	1	3	5	2	6	1		61	10.17 (1.85)	

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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 2006-2010.

Species/Area	Stock				Quality				Preferred						
	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Largemouth bass															
Dam	1.33	7.20	14.67	6.00	20.00	1.33	6.40	11.33	4.00	14.00	0.66	4.00	8.67	1.33	9.33
Harmon Creek	0.00	4.65	2.00	2.00	16.00	0.00	4.00	1.33	2.00	10.67	0.00	3.33	0.67	2.00	5.33
Fishing Creek	76.66	154.00	138.00	74.67	102.67	54.66	111.33	106.67	46.00	47.33	26.66	42.67	43.33	20.00	16.00
Lily Creek	22.66	28.00	42.00	22.67	52.00	20.00	18.00	33.33	14.67	25.33	13.33	9.33	19.33	9.33	12.00
Mean	25.18	48.48	49.17	26.33	47.67	19.00	34.95	38.17	16.67	24.33	10.18	14.80	18.00	8.17	10.67
Spotted bass															
Dam	47.33	78.40	86.67	34.67	46.67	26.66	54.40	35.33	14.67	23.33	9.33	24.00	12.67	2.00	2.00
Harmon Creek	33.33	74.67	32.00	22.67	40.67	9.33	20.00	4.00	7.33	10.00	2.00	4.67	0.67	0.67	0.67
Fishing Creek	12.00	18.67	26.00	6.00	14.00	4.00	0.67	3.33	2.00	2.67	0.00	0.00	0.00	0.00	0.67
Lily Creek	80.00	48.00	88.00	90.00	94.00	47.33	12.67	38.67	20.00	16.00	20.66	2.00	6.67	1.33	0.00
Mean	43.18	54.93	58.17	38.33	48.83	21.83	21.93	20.33	11.00	13.00	8.00	7.68	5.00	1.00	0.83
Smallmouth bass															
Dam	4.00	36.80	16.67	4.00	12.00	0.66	12.80	7.33	0.67	6.00	0.66	2.40	4.00	0.67	5.33
Harmon Creek	4.00	22.67	8.67	3.33	17.33	2.00	9.33	7.33	2.00	12.00	0.66	3.33	6.00	1.33	9.33
Fishing Creek	0.00	0.00	0.00	0.67	0.67	0.00	0.00	0.00	0.67	0.67	0.00	0.00	0.00	0.67	0.00
Lily Creek	0.66	0.67	2.67	3.33	4.00	0.00	0.00	0.67	0.00	0.67	0.00	0.00	0.67	0.00	0.00
Mean	2.18	15.03	7.00	2.83	8.50	0.68	5.53	3.83	0.83	4.83	0.33	1.43	2.67	0.67	3.67

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.

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Table 4. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Lake Cumberland during April 2010.

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.
2010	12.33	2.98	23.33	5.26	13.67	3.28	10.67	2.04	0.50	0.28	60.00	11.65
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 Lake Cumberland during April 2010.

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.
2010	28.33	3.98	26.67	5.49	12.17	2.64	0.83	0.42	0.00	0.00	68.00	9.20	68.00	9.20
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	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	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	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	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	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	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	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	25.10	3.70

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Table 6. Spring electrofishing CPUE (fish/hr) for each length group of smallmouth bass collected at Lake Cumberland during April 2010.

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.
2010	2.83	0.66	2.50	0.83	1.17	0.38	3.67	1.20	2.33	0.96	10.17	1.85
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 2010.

Species/Lake	Stock*	Quality*	Preferred*
Largemouth bass			
Lake Cumberland	47.67	24.33	10.61
Laurel River Lake	72.83	41.83	21.17
Cedar Creek Lake	194.41	88.27	43.30
Laurel Creek Reservoir	172.80	26.40	4.80
Liberty Lake	152.57	30.86	5.71
Linville Lake	244.67	50.00	10.67
Stanford Reservoir	218.29	99.43	14.86
Wood Creek Lake	90.50	47.50	14.00
Spotted bass			
Lake Cumberland	48.83	13.00	0.83
Laurel River Lake	35.17	13.83	4.83
Liberty Lake	13.14	0.00	0.00
Linville Lake	152.67	20.67	0.67
Wood Creek Lake	27.50	5.50	0.00
Smallmouth bass			
Lake Cumberland	8.50	4.83	3.67
Laurel River Lake	6.83	3.50	2.83
Linville Lake	9.33	2.00	0.00
Wood Creek Lake	2.00	1.00	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 1990-2010.

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 fish/hr	≥10.00 fish/hr	≥8.00 fish/hr	≥0.50 fish/hr		
2010	Value	13.4	11.50	13.67	10.67	0.50		
	Score	4	1	1	2	2	10	F
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

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Table 9. Population assessment for spotted bass based on spring electrofishing at Lake Cumberland from 1990-2010.

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 fish/hr	≥7.00 fish/hr	≥2.00 fish/hr	≥0.10 fish/hr		
2010	Value	11.0	9.67	12.17	0.83	0.00		
	Score	4	3	4	3	0	14	G
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	8.00	0.17		
	Score	4	2	4	4	2	16	G
2005	Value	11.4	5.10	11.20	3.10	0.00		
	Score	4	2	4	4	0	14	G
2004	Value	11.4	6.00	10.50	1.90	0.00		
	Score	4	2	4	3	0	13	G
2003	Value	11.4	16.70	9.10	2.90	0.00		
	Score	4	3	4	4	0	15	G
2002	Value	11.4	5.10	5.20	1.50	0.00		
	Score	4	2	3	3	0	12	G
2001	Value	11.4	2.10	4.70	1.60	0.00		
	Score	4	2	3	3	0	12	G
2000	Value	11.4	1.90	5.60	1.20	0.00		
	Score	4	2	3	3	0	12	G
1999	Value	11.4	3.00	11.20	3.00	0.13		
	Score	4	2	4	4	2	16	G
1997	Value	11.4	6.00	6.70	1.90	0.00		
	Score	4	2	3	3	0	12	G
1996	Value	11.4	1.00	6.60	1.30	0.00		
	Score	4	2	3	3	0	12	G
1995	Value	11.4	1.30	2.30	0.60	0.00		
	Score	4	2	3	3	0	12	G
1993	Value	11.4	0.70	2.70	0.00	0.00		
	Score	4	1	3	0	0	8	F
1992	Value	11.4	0.70	2.70	0.40	0.00		
	Score	4	1	3	3	0	11	F
1991	Value	11.4	1.30	1.30	0.00	0.00		
	Score	4	2	2	0	0	8	F
1990	Value	11.4	3.50	1.20	0.00	0.00		
	Score	4	2	2	0	0	8	F

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Table 10. Population assessment for smallmouth bass based on spring electrofishing at Lake Cumberland from 1990-2010.

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 fish/hr	≥3.00 fish/hr	≥2.00 fish/hr	≥0.50 fish/hr		
2010	Value	11.3	0.67	1.17	3.67	2.33		
	Score	3	2	3	4	4	16	G
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

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Table 11. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Lake Cumberland during April 2010; 95% confidence limits are in parentheses.

Area	Species	No. \geq stock size	PSD (+/- 95%)	RSD ^a (+/- 95%)
Dam	Largemouth bass	30	70 (\pm 17)	47 (\pm 18)
	Spotted bass	70	50 (\pm 12)	4 (\pm 5)
	Smallmouth bass	18	50 (\pm 24)	44 (\pm 24)
Harmon Creek	Largemouth bass	24	67 (\pm 19)	33 (\pm 19)
	Spotted bass	61	25 (\pm 11)	2 (\pm 3)
	Smallmouth bass	26	69 (\pm 18)	54 (\pm 20)
Fishing Creek	Largemouth bass	154	46 (\pm 8)	16 (\pm 6)
	Spotted bass	21	19 (\pm 17)	5 (\pm 9)
	Smallmouth bass	1	100 (NA)	0
Lily Creek	Largemouth bass	78	49 (\pm 11)	23 (\pm 9)
	Spotted bass	141	17 (\pm 6)	0
	Smallmouth bass	6	17 (\pm 33)	0
Total	Largemouth bass	286	51 (\pm 6)	22 (\pm 5)
	Spotted bass	293	27 (\pm 5)	2 (\pm 1)
	Smallmouth bass	51	57 (\pm 14)	43 (\pm 14)

^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, Laurel Creek Reservoir, Liberty Lake, Lake Linville, Stanford Reservoir, and Wood Creek Lake during 2010; 95% confidence limits are in parentheses.

Lake	Largemouth bass		Smallmouth bass		Spotted bass	
	PSD	RSD ₁₅	PSD	RSD ₁₄	PSD	RSD ₁₄
Lake Cumberland	51 (+6)	22 (+5)	57 (\pm 14)	43 (\pm 14)	27 (\pm 5)	2 (\pm 1)
Laurel River Lake	57 (+5)	29 (+4)	51 (\pm 15)	41 (\pm 15)	39 (+7)	14 (+5)
Cedar Creek Lake	45 (+4)	22 (+3)				
Laurel Creek Reservoir	15 (+5)	3 (+2)				
Liberty Lake	20 (+5)	4 (+2)				
Lake Linville	20 (+4)	4 (+2)	21 (\pm 22)	0 (0)	14 (+4)	0 (\pm 1)
Stanford Reservoir	46 (+7)	7 (+4)				
Wood Creek Lake	52 (+7)	15 (+5)	50 (\pm 57)	0 (0)	20 (+11)	0 (0)

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Table 13. Mean back calculated lengths (in) at each annulus for smallmouth bass collected from Lake Cumberland during 2010, including the 95% confidence interval (CI) for each mean length per age group.

Year	No.	Age						
		1	2	3	4	5	6	7
2008	18	4.3	7.9					
2007	12	5.2	8.4	11.3				
2006	1	4.5	8.6	11.7	14.1			
2005	5	5.6	9.0	12.6	15.1	16.5		
2004	9	5.5	9.1	13.1	15.7	17.1	18.1	
2003	2	5.0	8.0	13.7	16.3	17.8	18.3	19.0
Mean		4.9	8.4	12.3	15.5	17.0	18.1	19.0
Number		47	47	29	17	16	11	2
Smallest		3.3	5.8	7.7	13.3	15.0	16.7	18.8
Largest		7.4	11.5	15.4	17.9	19.1	19.5	19.2
Std error		0.2	0.2	0.4	0.3	0.3	0.3	0.2
95% CI \pm		0.3	0.5	0.7	0.6	0.5	0.5	0.4

Otoliths were used for age-growth determinations; Intercept = 0
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Table 14. Age-frequency and CPUE (fish/hr) of smallmouth bass collected during 6.0 hours of nocturnal electrofishing at Lake Cumberland in April 2010.

Age	Inch class																			Total	%	CPUE	Std error	
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19							
1	4																			4	6.5	0.67	-	
2			1	5	6	4	5	2												23	37.1	3.83	(1.02)	
3				1	1	3	1	2		3	2	3								15	24.2	2.50	(0.48)	
4												1								1	1.6	0.17	(0.10)	
5													1	1	3					5	8.1	0.83	(0.31)	
6														2	3	2	4			11	17.7	1.83	(0.60)	
7																1	2			3	4.8	0.50	(0.19)	
%	4	1.6	8.1	11.3	11.3	9.7	3.2	3.2	3.2	4.8	3.2	6.5	1.6	4.8	9.7	4.8	9.7	6	62	100.0	10.33			
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Table 15. Population assessment for smallmouth bass collected from Lake Cumberland in April 2010.

Parameter	Actual value	Assessment score
Mean length age-3 at capture	11.3	3
Spring CPUE age 1	0.67	2
Spring CPUE 11.0-13.9 in	1.17	3
Spring CPUE \geq 14.0 in	3.67	4
Spring CPUE \geq 17.0 in	2.33	4
Instantaneous mortality (Z)	0.123	
Annual mortality (A)	11.6	
Total score		16
Assessment rating		G

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Table 16. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 1.5 hours of 15-minute nocturnal electrofishing runs for black bass in Fishing Creek of Lake Cumberland on 20 September 2010; standard error is in parentheses.

Species	Inch class																Total	CPUE
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
Largemouth bass	5	6	16	34	46	22	10	12	12	3	7	2	4	2	1	182	121.33 (17.24)	
Spotted bass	8	9	4	2	4	1			3						31	20.67 (8.29)		

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Table 17. Indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected in the fall (September and October) in electrofishing samples at Lake Cumberland.

Year class	Area	Age-0		Age-0		Age-0 >5.0 in		Age-1 ^a	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
Lake Cumberland									
2010	Fishing Creek	5.8	0.11	85.33	9.39	67.33	8.35		
2009	Fishing Creek	4.8	0.16	42.00	9.45	22.67	6.42	21.33	6.59
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	0.80
2002	Fishing Creek	6.0	0.07	192.70	36.67	160.70	36.32	4.00	1.46

^a Age-1 largemouth bass CPUE based only Fishing Creek location

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Table 18. Year class strength at age 0 and mean lengths (in) of largemouth bass collected in September 2010 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	5.8	0.11	85.33	9.39	67.33	8.35
Laurel River Lake	Laurel River Arm	5.4	0.45	2.67	0.84	2.00	0.89
Cedar Creek Lake		5.0	0.06	59.46	15.83	33.40	6.05
Lake Linville		5.1	0.09	57.33	19.26	30.67	7.35
Wood Creek Lake		5.0	0.07	36.67	14.88	18.00	6.60

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sedyoywc.d10

Table 19. Number of fish and mean relative weight (Wr) for each length group of black bass collected in Fishing Creek of Lake Cumberland during 20 September 2010. 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	37	88 (1)	13	83 (2)	3	92 (1)
Spotted bass	8	92 (2)	0	-	0	-

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Table 20. Number of fish and mean relative weight (Wr) for each length group of black bass collected in Lake Cumberland, Laurel River Lake, Cedar Creek Lake, Lake Linville, and Wood Creek Lake during September 2010. 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)	37	88 (1)	13	83 (2)	3	92 (1)
	Laurel River Lake (Laurel River Arm)	40	98 (2)	12	102 (3)	4	104 (3)
	Cedar Creek Lake	189	90 (1)	130	88 (1)	43	97 (2)
	Lake Linville	120	82 (1)	33	85 (2)	8	87 (2)
	Wood Creek Lake	76	84 (1)	29	83 (1)	10	97 (3)
Spotted bass		7.0-10.9 in		11.0-13.9 in		≥14.0 in	
	Lake Cumberland (Fishing Creek)	8	92 (2)	0	-	0	-
	Laurel River Lake (Laurel River Arm)	20	96 (3)	7	108 (7)	0	-
	Lake Linville	66	87 (2)	20	83 (2)	0	-
	Wood Creek Lake	38	93 (1)	7	86 (2)	0	-

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 sedyoilr.d10
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 sedyoicw.d10

Table 21. Length frequency and CPUE (fish/net-night) of walleye, white bass, sauger, and striped collected from the Jamestown/Bugwood (10 net-nights), Conley Bottom (10 net-nights), and Burnside/Waitsboro (12 net-nights) areas of Lake Cumberland in November 2010.

Area	Species	Inch class																Total	CPUE	Std. error									
		7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	24	25	26	27	28			
Jamestown/Bugwood	Walleye					2				2	14	11	5	5	4	2											45	4.50	0.60
	White bass	2	2	3	2	1	3	2																			15	1.50	0.56
	Sauger																										0	0.00	0.00
	Striped bass		3	7	10	6		3	5	5	21	36	17	7	5	4					2	2	1				134	13.40	3.65
Conley Bottom	Walleye				10	6	2	1	4	15	6	4	2														50	5.00	1.01
	White bass	20	17	2	1	5	6	2																			53	5.30	1.38
	Sauger						1				1																3	0.30	0.15
	Striped bass		2					1	1	5	21	26	2	2	8	7	1	1	4		1			1			83	8.30	2.07
Burnside/Waitsboro	Walleye			3	4	3	1		5	5	8	7		3	1												40	3.33	0.64
	White bass	48	45	6		3	10	2	1																		115	9.58	2.32
	Sauger						1	3	4	2																	10	0.83	0.27
	Striped bass						1		1	9	31	13	3	3	3	5		4	5	2	2		1				83	6.92	3.44
Total	Walleye			3	14	11	3	1	11	34	25	16	7	7	3												135	4.22	0.44
	White bass	70	64	11	3	9	19	6	1																		183	5.72	1.13
	Sauger						2	3	5	2	1																13	0.41	0.13
	Striped bass		5	7	10	6	1	4	7	19	73	75	22	12	16	16	1	5	9	4	5	1	2				300	9.38	1.85

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Table 22. Population assessment for walleye based on fall gill netting at Lake Cumberland from 1991-2010.

Year	Parameters						Assessment rating
	CPUE \geq age 1+	Mean length age 2+ at capture	CPUE \geq 20.0 in \geq 18.0 in	CPUE \geq 20.0 in \geq 1.5 fish/net-night	CPUE age 1+ \geq 3.0 fish/net-night	Total score	
2010	Value 3.28 2	17.6 3	0.09 1	1.94 2	8	F	
2008	Value 5.90 3	18.5 4	0.87 2	2.48 3	12	G	
2006	Value 14.80 4	19.1 4	3.90 4	3.10 4	16	E	
2004	Value 8.85 4	18.8 4	1.80 3	4.55 4	15	E	
2002	Value 12.14 4	19.1 4	2.48 4	6.38 4	16	E	
2000	Value 4.30 3	18.6 4	1.50 3	1.60 2	12	G	
1998	Value 7.93 4	18.5 4	2.40 4	1.90 2	14	E	
1996	Value 5.32 3	18.5 4	0.90 2	3.64 4	13	G	
1994	Value 3.46 2	18.5 4	0.90 2	0.67 1	9	F	
1991	Value 5.10 3	18.5* 4	0.18 1	2.70 3	11	G	

sedgncbw.d10

* Data from 1994 used for age-growth

Table 23. Mean back calculated lengths (in) at each annulus for male walleye collected from Lake Cumberland during 2010, including the 95% confidence interval (CI) for each mean length per age group.

Year	No.	Age						
		1	2	3	4	5	6	7
2009	12	11.9						
2008	15	11.8	15.5					
2007	4	11.9	15.5	17.3				
2006	3	11.2	15.9	18.0	19.4			
2003	1	10.0	15.7	16.8	17.5	18.2	18.9	19.3
Mean		11.8	15.6	17.5	18.9	18.2	18.9	19.3
Number		35	23	8	4	1	1	1
Smallest		9.8	13.7	16.0	17.5	18.2	18.9	19.3
Largest		13.1	17.2	19.3	20.1	18.2	18.9	19.3
Std error		0.1	0.2	0.4	0.6			
95% CI ±		0.3	0.4	0.8	1.1			

Otoliths were used for age-growth determinations; Intercept = 0
sedagowm.d10

Table 24. Mean back calculated lengths (in) at each annulus for female walleye collected from Lake Cumberland during 2010, including the 95% confidence interval (CI) for each mean length per age group.

Year	No.	Age		
		1	2	3
2009	1	12.2		
2008	3	11.9	16.8	
2007	2	11.5	15.6	18.1
Mean		11.8	16.3	18.1
Number		6	5	2
Smallest		10.2	15.3	17.9
Largest		12.7	17.1	18.2
Std error		0.4	0.3	0.2
95% CI ±		0.8	0.7	0.3

Otoliths were used for age-growth determinations; Intercept = 0
sedagowm.d10

Table 25. Mean back calculated lengths (in) at each annulus for walleye (both sexes) collected from Lake Cumberland during 2010, including the 95% confidence interval (CI) for each mean length per age group.

Year	No.	Age						
		1	2	3	4	5	6	7
2009	27	11.8						
2008	20	11.9	15.8					
2007	6	11.7	15.5	17.6				
2006	3	11.2	15.9	18.0	19.4			
2003	1	10.0	15.7	16.8	17.5	18.2	18.9	19.3
Mean		11.8	15.7	17.6	18.9	18.2	18.9	19.3
Number	57	30	10	4	1	1	1	1
Smallest	9.8	13.7	16.0	17.5	18.2	18.9	19.3	19.3
Largest	13.5	17.2	19.3	20.1	18.2	18.9	19.3	19.3
Std error		0.1	0.2	0.3	0.6			
95% CI ±		0.3	0.4	0.7	1.1			

Otoliths were used for age-growth determinations; Intercept = 0
sedagcbw.d10

Table 26. Age-frequency and CPUE (fish/net-night) of walleye gill netting for 32 net-nights at Lake Cumberland during November 2010. Standard error is in parentheses.

Age	Inch class													Total	%	CPUE
	9	10	11	12	13	14	15	16	17	18	19	20				
0	3	14	11	3										31	22.8	0.97 (0.22)
1				1	10	31	16	4						62	45.6	1.94 (0.25)
2					1	3	9	6	3					31	22.8	0.97 (0.15)
3							4	1	3					8	5.9	0.25 (0.05)
4									1	2				3	2.2	0.09 (0.05)
7										1				1	0.7	0.03 (0.02)
Total	3	14	11	3	1	11	34	25	17	7	7	3		136	100.0	4.25
%	2.2	10.3	8.1	2.2	0.7	8.1	25.0	18.4	12.5	5.1	5.1	2.2				

sedgncbw.d10
sedagcbw.d10

Table 27. Walleye population assessment for walleye gill netted at Lake Cumberland in November 2010.

Parameter	Actual value	Assessment score
Population density (CPUE age 1 and older)	3.28	2
Growth rate (Mean length age 2+ at capture)	17.6	3
Size structure (CPUE \geq 20.0 in)	0.09	1
Recruitment (CPUE age 1)	1.94	2
Instantaneous mortality (Z)	0.857	
Annual mortality (A)	57.6	
Total score		8
Assessment rating		F
sedgncbw.d10		
sedagcbw.d10		

Table 28. Number of fish and mean relative weight (Wr) for each length group of walleye collected in Lake Cumberland during November 2010. Standard error is in parentheses.

Length group		
10.0-14.9 in	15.0-19.9 in	\geq 20.0 in
No.	No.	No.
40	85	3
Wr	Wr	Wr
88 (1)	89 (10)	88 (1)
sedgncbw.d10		

Table 29. Mean back calculated lengths (in) at each annulus for white bass collected from Lake Cumberland during 2010, including the 95% confidence interval (CI) for each mean length per age group.

Year	No.	Age	
		1	2
2009	23	9.6	
2008	3	10.8	12.6
Mean		9.8	12.6
Number		26	3
Smallest		7.5	12.1
Largest		11.4	13.4
Std error		0.2	0.4
95% CI +		0.4	0.8

Otoliths were used for age-growth determinations; Intercept = 0
sedagcwb.d10

Table 30. Age-frequency and CPUE (fish/net-night) of white bass collected during gill netting for 32 net-nights at Lake Cumberland during November 2010. Standard error is in parentheses.

Age	Inch class								Total	%	CPUE	
	7	8	9	10	11	12	13	14				
0	70	64	11	3					148	80.9	4.63	(1.03)
1					9	17	5		31	16.9	0.98	(0.19)
2						2	1	1	4	2.2	0.11	(0.04)
Total	70	64	11	3	9	19	6	1	183	100.0	5.72	
%	38.3	35.0	6.0	1.6	4.9	10.4	3.3	0.5				

sedgncbw.d10
sedagcwb.d10

Table 31. Population assessment for white bass collected from Lake Cumberland in November 2010.

Parameter	Actual value	Assessment score
CPUE age-1 and older	1.09	1
Mean length age-2+ at capture	13.6	4
CPUE ≥ 12.0 in	0.81	1
CPUE age 1	0.98	1
Instantaneous mortality (Z)	1.805	
Annual mortality (A)	83.6	
Total score		7
Assessment rating		F

sedgncbw.d10
sedagcwb.d10

Table 32. Number of fish and mean relative weight (Wr) for each length group of white bass collected in Lake Cumberland during November 2010. Standard error is in parentheses.

Length group					
6.0-8.9 in		9.0-11.9 in		>12.0 in	
No.	Wr	No.	Wr	No.	Wr
96	81 (1)	21	86 (3)	26	93 (1)

sedgncbw.d10

Table 33. Mean back calculated lengths (in) at each annulus for striped bass collected from Lake Cumberland during 2010, including the 95% confidence interval (CI) for each mean length per age group.

Year	No.	Age				
		1	2	3	4	5
2009	53	10.8				
2008	30	11.0	17.4			
2007	12	12.1	18.2	21.6		
2006	19	11.3	18.8	22.5	24.4	
2005	2	12.9	19.5	22.9	25.0	25.9
Mean		11.1	18.1	22.2	24.5	25.9
Number		116	63	33	21	2
Smallest		5.6	15.6	19.0	22.7	25.7
Largest		14.4	20.8	24.7	26.5	26.2
Std error		0.2	0.2	0.2	0.2	0.2
95% CI +		0.4	0.4	0.5	0.5	0.5

Otoliths were used for age-growth determinations; Intercept = 0
sedagcbs.d10

Table 34. Age-frequency and CPUE (fish/net-night) of striped bass collected during 32 net-nights of walleye gill netting at Lake Cumberland during November 2010. Standard error is in parentheses.

Age	Inch class																												Total	% CPUE	
	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28										
0	5	7	10	6																								28	9.3	0.88	(0.49)
1				1	4	7	19	73	68	20																		192	64.0	6.00	(1.13)
2									7			2	12	16	13													50	16.7	1.56	(0.33)
3											3	1	5	3	1													13	4.3	0.41	(0.15)
4													6	3	1	2												15	5.0	0.47	(0.14)
5																2												2	0.7	0.06	(0.03)
Total	5	7	10	6	1	4	7	19	73	75	22	12	16	16	1	5	9	4	5	1	2	300	100.0	9.38							
%	1.7	2.3	3.3	2.0	0.3	1.3	2.3	6.3	24.3	25.0	7.3	4.0	5.3	5.3	0.3	1.7	3.0	1.3	1.7	0.3	0.7										

sedgncbw.d10
sedagcbs.d10

Table 35. Number of fish and mean relative weight (Wr) for each length group of striped bass collected in Lake Cumberland during November 2010. Standard error is in parentheses.

Length group					
12.0-19.9 in		20.0-29.9 in		>30.0 in	
No.	Wr	No.	Wr	No.	Wr
208	87 (0)	59	75 (1)	0	-

sedgncbw.d10

Table 36. 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 2010; 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	22			
Dam	Largemouth bass			1	3	9	8	12	9	4	12	17	11	9	6	7	10	5	3		1		127	84.67 (18.46)	
	Spotted bass				2	1	2	2	7	4	8	10	6	7	6								55	36.67 (11.14)	
	Smallmouth bass	1			1	3	8	1	2	2	1		2	3	3	2	1						30	20.00 (6.37)	
Spruce Creek	Largemouth bass				1	3	3	10	4	6	14	22	9	13	15	12	7	4	2	2	1		128	85.33 (14.99)	
	Spotted bass				1	7	15	9	7	3		5	7	3									57	38.00 (7.98)	
	Smallmouth bass	11	3	9	8	3	2					1	1	1	1	1	1	1	1	1	1	1	43	28.67 (5.00)	
Laurel River Arm	Largemouth bass	25	3	1	4	8	11	18	16	15	7	13	13	16	7	6	5	4					172	114.67 (16.77)	
	Spotted bass	11	4	1	9	20	18	4	6	3	1	5	1		1								84	56.00 (8.52)	
	Smallmouth bass	1			1	1	2																4	2.67 (1.33)	
Upper Craigs Creek	Largemouth bass				5	3	18	23	20	9	3	2	5	3	3	5	2	2	1	1			105	70.00 (15.41)	
	Spotted bass	3	1	5	8	33	19	4	13	10	9	6	1	4									116	77.33 (14.52)	
	Smallmouth bass	3	2	2	2	1									1			1					12	8.00 (3.27)	
Total	Largemouth bass	25	4	10	19	37	56	51	35	44	48	38	38	40	31	25	16	10	2	3		532	88.67 (8.39)		
	Spotted bass	3	12	10	18	58	50	31	27	20	20	17	17	15	13	1							312	52.00 (6.12)	
	Smallmouth bass	3	15	5	12	13	13	3	2	2	1	3	4	4	2	2	1	2	1	1	1	1	89	14.63 (2.95)	

sedpsdlr.d10

Table 37. Comparison of catch-per-hour of black bass (by area) captured during spring electrofishing on Laurel River Lake during the period of 2006-2010.

Species/Area	Stock					Quality					Preferred				
	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Largemouth bass															
Dam	34.00	54.00	29.33	57.33	70.67	22.00	47.33	19.33	39.33	46.00	11.33	34.00	13.33	27.33	21.33
Spruce Creek	45.71	37.33	59.33	34.00	80.67	38.28	34.67	34.67	32.00	58.00	29.14	21.33	26.67	16.67	28.67
Laurel River Arm	95.33	56.00	52.67	84.00	87.33	65.33	40.67	37.33	62.67	47.33	28.66	20.67	24.00	35.33	25.33
Craigs Cr. headwaters	28.00	29.33	20.67	24.00	52.67	20.66	22.67	10.67	16.67	16.00	7.33	11.33	6.67	4.00	9.33
Mean	50.56	44.17	40.50	49.83	72.83	36.64	36.33	25.50	37.67	41.83	19.52	21.83	17.67	20.83	21.17
Spotted bass															
Dam	33.33	36.67	20.67	30.67	34.67	13.33	20.67	5.33	16.67	24.67	4.66	5.33	1.33	6.00	8.67
Spruce Creek	14.85	16.67	14.00	5.33	22.67	5.71	9.33	9.33	2.00	10.00	1.71	1.33	3.33	0.00	6.67
Laurel River Arm	34.00	38.67	60.00	22.00	39.33	9.33	8.67	14.00	8.67	7.33	2.00	0.67	1.33	2.00	1.33
Craigs Cr. headwaters	44.00	36.00	34.00	38.67	44.00	19.33	12.00	14.67	10.67	13.33	2.00	0.67	3.33	2.67	2.67
Mean	30.88	32.00	32.17	24.17	35.17	11.68	12.68	10.83	9.50	13.83	2.56	2.00	2.33	2.67	4.83
Smallmouth bass															
Dam	0.66	6.67	11.33	17.33	16.67	0.66	1.33	6.67	12.00	8.00	0.00	1.33	3.33	10.67	6.00
Spruce Creek	5.14	7.33	13.33	4.67	8.00	3.42	4.00	11.33	3.33	4.67	3.42	2.67	9.33	3.33	4.00
Laurel River Arm	0.00	0.00	0.00	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Craigs Cr. headwaters	0.00	4.00	0.67	2.00	1.33	0.00	0.67	0.00	1.33	1.33	0.00	0.67	0.00	0.00	1.33
Mean	1.60	4.50	6.33	6.00	6.83	1.12	1.50	4.50	4.17	3.50	0.96	1.18	3.17	3.50	2.83

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 38. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Laurel River Lake during April and May 2010.

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.
2010	15.83	2.98	31.00	4.37	20.67	3.11	21.17	2.44	0.83	0.42	88.67	8.39
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

sedpsdlr.d10

Table 39. Spring electrofishing CPUE (fish/hr) for each length group of spotted bass collected at Laurel River Lake during April and May 2010.

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.		
2010	25.17	4.21	13.00	2.27	9.00	2.00	4.83	1.18	0.00	0.00	52.00	6.12		
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		
2008	20.17	4.23	12.67	2.63	8.50	1.43	2.33	0.63	0.00	0.00	43.67	6.99		
2007	12.17	2.32	13.50	2.15	10.67	1.71	2.00	0.64	0.00	0.00	38.33	4.04		
2006	15.04	2.39	13.44	1.74	9.12	1.74	2.56	0.73	0.00	0.00	40.16	4.55		
2005	4.83	0.83	3.33	0.79	7.67	1.60	3.67	1.13	0.00	0.00	19.50	2.65		
2004	3.20	1.00	12.50	2.90	9.80	2.30	2.20	0.70	0.00	0.00	27.70	5.60		
2003	23.30	5.30	17.80	3.10	10.20	2.00	0.80	0.50	0.00	0.00	52.20	8.90		
2002	13.70	3.20	13.30	1.80	5.50	1.40	0.30	0.20	0.00	0.00	32.80	5.60		

secpsdlr.d10

Table 40. Spring electrofishing CPUE (fish/hr) for each length group of smallmouth bass collected at Laurel River Lake during April and May 2010.

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.
2010	10.17	2.15	1.17	0.45	0.67	0.39	2.83	0.74	1.17	0.38	14.83	2.95
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 41. Population assessment for largemouth bass based on spring electrofishing at Laurel River Lake from 1990-2010.

Year	Mean length		Spring		Spring		Spring		Assessment rating
	age-3 at capture	≥13.0 in	CPUE age 1	≥10.00 fish/hr	CPUE 12.0-14.9 in	≥20.00 fish/hr	CPUE ≥15.0 in	≥20.0 in	
2010	Value	13.3	6.50	20.67	21.17	0.83			
	Score	4	1	2	4	2			13
2009	Value	13.3	12.17	16.83	20.83	0.83			
	Score	4	1	2	4	2			13
2008	Value	13.3	36.33	7.83	17.67	0.67			
	Score	4	3	1	3	2			13
2007	Value	13.7	2.08	14.50	21.83	0.50			
	Score	4	1	1	4	2			12
2006	Value	13.7	18.40	17.12	19.52	0.64			
	Score	4	1	2	3	2			12
2005	Value	13.7	4.81	18.50	22.50	0.17			
	Score	4	1	2	4	1			12
2004	Value	13.7	2.61	18.50	14.17	0.00			
	Score	4	1	2	3	0			10
2003	Value	13.7	7.80	29.33	13.83	0.00			
	Score	4	1	3	3	0			11
2002	Value	13.7	18.19	23.33	8.83	0.00			
	Score	4	1	2	2	0			9
2001	Value	13.7	17.82	22.13	2.53	0.27			
	Score	4	1	2	1	2			10
2000	Value	13.7	2.30	16.29	2.14	0.14			
	Score	4	1	2	1	1			9
1999	Value	13.7	8.24	26.00	6.40	0.53			
	Score	4	1	3	2	2			12
1998	Value	13.7	5.96	9.17	7.83	1.50			
	Score	4	1	1	2	2			10
1997	Value	13.7	14.51	25.38	6.21	0.69			
	Score	4	1	3	2	2			12
1996	Value	13.7	8.71	15.43	6.57	0.86			
	Score	4	1	2	2	2			11
1995	Value	13.7	1.21	9.33	6.13	1.07			
	Score	4	1	1	2	2			10
1994	Value	13.7	5.70	13.86	7.00	1.29			
	Score	4	1	1	2	2			10
1993	Value	13.7	5.98	11.41	6.52	1.33			
	Score	4	1	1	2	2			10
1992	Value	13.7	9.10	24.42	8.75	1.31			
	Score	4	1	2	2	2			11
1991	Value	13.7	22.10	11.60	4.71	0.00			
	Score	4	2	1	2	0			9
1990	Value	13.7	17.52	10.20	4.90	1.10			
	Score	4	1	1	2	2			10

sedpsdir.d10

Table 42. Population assessment for spotted bass based on spring electrofishing at Laurel River Lake from 1990-2010.

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	≥3.00 fish/hr	≥7.00 fish/hr	≥1.00 fish/hr	≥0.10 fish/hr		
2010	Value	10.4	2.50	9.00	4.83	0.00		
	Score	4	2	4	4	0	14	G
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

Table 43. Population assessment for smallmouth bass based on spring electrofishing at Laurel River Lake from 1990-2010.

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	Assessment rating	
Management objective	≥ 13.0 in	≥ 3.00 fish/hr	≥ 1.5 fish/hr	≥ 1.00 fish/hr	≥ 0.50 fish/hr			
2010	Value Score	13.6 4	3.83 4	0.67 2	2.83 4	1.17 4	18	E
2009	Value Score	13.6 4	0.33 2	0.67 2	3.50 4	1.83 4	16	G
2008	Value Score	13.6 4	0.83 2	1.33 3	3.17 4	1.83 4	17	E
2007	Value Score	13.6 4	1.20 3	0.33 2	1.17 4	0.83 4	17	E
2006	Value Score	13.6 4	0.38 2	0.16 2	0.96 3	0.32 3	14	G
2005	Value Score	13.6 4	0.06 1	1.50 3	5.50 4	2.83 4	16	G
2004	Value Score	13.6 4	0.40 2	0.67 2	1.17 4	0.00 0	12	G
2003	Value Score	13.6 4	4.00 4	1.83 3	2.17 4	0.17 2	17	E
2002	Value Score	13.6 4	6.04 4	2.17 3	0.67 3	0.17 2	16	G
2001	Value Score	13.6 4	3.40 4	2.80 4	1.07 4	0.00 0	16	G
2000	Value Score	13.6 4	0.88 2	1.29 3	0.57 3	0.14 2	14	G
1999	Value Score	13.6 4	2.12 3	1.87 3	0.53 3	0.13 2	15	G
1998	Value Score	13.6 4	12.67 4	0.67 2	0.67 3	0.50 4	17	E
1997	Value Score	13.6 4	6.67 4	2.07 3	1.52 4	0.14 2	17	E
1996	Value Score	13.6 4	0.14 1	2.86 4	0.43 3	0.00 0	12	G
1995	Value Score	13.6 4	1.20 3	0.53 2	1.07 4	0.27 3	16	G
1994	Value Score	13.6 4	3.36 4	1.29 3	0.71 3	0.29 3	17	E
1993	Value Score	13.6 4	1.57 3	0.59 2	0.44 3	0.30 3	15	G
1992	Value Score	13.6 4	1.89 3	1.47 3	0.15 2	0.00 0	12	G
1991	Value Score	13.6 4	0.36 2	0.36 2	0.00 0	0.00 0	8	F
1990	Value Score	13.6 4	8.63 4	1.35 3	1.35 4	0.54 4	19	E

Table 44. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Laurel River Lake during April and May 2010; 95% confidence limits are in parentheses.

Area	Species	No. \geq stock size	PSD (+/- 95%)	RSD ^a (+/- 95%)
Dam	Largemouth bass	106	65 (\pm 9)	30 (\pm 9)
	Spotted bass	52	71 (\pm 12)	25 (\pm 12)
	Smallmouth bass	25	48 (\pm 20)	36 (\pm 19)
Spruce Creek	Largemouth bass	121	72 (\pm 8)	36 (\pm 9)
	Spotted bass	34	44 (\pm 17)	29 (\pm 16)
	Smallmouth bass	12	58 (\pm 29)	50 (\pm 30)
Laurel River Arm	Largemouth bass	131	54 (\pm 9)	29 (\pm 8)
	Spotted bass	59	19 (\pm 10)	3 (\pm 5)
	Smallmouth bass	2	0 (\pm 0)	0 (\pm 0)
Upper Craigs Creek	Largemouth bass	79	30 (\pm 10)	18 (\pm 8)
	Spotted bass	66	30 (\pm 11)	6 (\pm 6)
	Smallmouth bass	2	100 (\pm 0)	100 (\pm 0)
Total	Largemouth bass	437	57 (\pm 5)	29 (\pm 4)
	Spotted bass	211	39 (\pm 7)	14 (\pm 5)
	Smallmouth bass	41	51 (\pm 15)	41 (\pm 15)

^aLargemouth bass = RSD₁₅, spotted and smallmouth bass = RSD₁₄
sedpsdlr.d10

Table 45. 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 20 September 2010; standard error is in parentheses.

Area	Species	Inch class												Total	CPUE
		4	5	6	7	8	9	10	11	12	13	14	15		
Laurel River Arm	Largemouth bass	1	2	11	7	16	3	6	16	6	4	2	4	78	52.00 (8.58)
	Spotted bass		8	8	2	6	7	5	5	1	1			43	28.67 (7.89)
	Smallmouth bass					1								1	0.67 (0.67)

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Table 46. 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 ^a	
		Mean length	Std. error	CPUE	Std. error	CPUE	Std. error	CPUE	Std. error
2010 ^b	Laurel River Arm	5.4	0.45	2.67	0.84	2.00	0.89		
2009	Laurel River Arm	3.8	0.30	6.00	3.22	0.67	0.67	19.33	6.96
2008 ^b	Laurel River Arm	3.2	0.30	1.33	0.84	0.00	0.00	14.00 ^c	4.59
2007 ^b	Laurel River Arm	3.5	0.12	5.30	4.58	0.00	0.00	118.91 ^d	12.43
2006 ^b	Laurel River Arm	3.7	0.14	12.70	4.89	0.67	0.67	5.39 ^e	2.12
2005 ^b	Laurel River Arm	4.4	0.16	14.00	3.54	3.30	1.61	58.33 ^f	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-1 largemouth bass CPUE based only on Laurel River Arm location

^b Age-0 largemouth bass stocked in the fall

^c Includes bass stocked in fall 2008; CPUE of fin-clipped bass=8.00 fish/hr

^d Includes bass stocked in fall 2007; CPUE of fin-clipped bass=108.00 f/h

^e Includes bass stocked in fall 2006; CPUE of fin-clipped bass=2.00 fish/hr

^f Includes bass stocked in fall 2005; CPUE of fin-clipped bass=36.00 fish/hr

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Table 47. Number of fish and mean relative weight (Wr) for each length group of black bass collected at 312 Bridge in Laurel River Lake on 20 September 2010 Standard error is in parentheses.

Species	Length group					
	8.0-11.9 in		12.0-14.9 in		>15.0 in	
Largemouth bass	No.	Wr	No.	Wr	No.	Wr
		40	98 (2)	12	102 (3)	4
Spotted bass	7.0-10.9 in		11.0-13.9 in		>14.0 in	
	No.	Wr	No.	Wr	No.	Wr
	20	96 (3)	7	108 (7)	0	-

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Table 48. Fishery statistics derived from a daytime creel survey on Laurel River Lake (6,060 acres) from 8 March-31 October 2010 and 16 March - 31 October 2006.

	2010	2006
Fishing trips		
Number of fishing trips (per acre)	10,817 (1.78)	15,110 (2.49)
Average trip length (hours)	3.82	3.77
Fishing pressure		
Total man-hours (S.E.) ^a	41,358 (1,094)	57,033 (1,581)
Man hours/acre	6.82	9.4
Catch/harvest		
Number of fish caught (S.E.)	32,699 (3,558)	50,541 (4,588)
Number of fish harvested (S.E.)	15,309 (2,383)	17,192 (1,803)
Pounds of fish harvested	11,315	17,097
Harvest rates		
Fish/hour	0.34	0.29
Fish/acre	2.53	2.84
Pounds/acre	1.87	2.82
Catch rates		
Fish/hour	0.78	0.90
Fish/acre	5.40	8.34
Miscellaneous characteristics (%)		
Male	92	89
Female	8	11
Resident	91	93
Non-resident	9	7
Method (%)		
Still fishing	14	19
Casting	65	62
Trolling	21	19
Fly	<1	-
Mode (%)		
Boat	95	98
Bank	5	2
Dock	<1	-

^aS.E. = standard error

Table 49. Fish harvest statistics derived from a daytime creel survey at Laurel River Lake (6,060 acres) from 8 March - 31 October 2010.

	Black bass group	Largemouth bass	Spotted bass	Smallmouth bass	Crappie group	White crappie	Black crappie	Blacknose crappie	Trout group	Rainbow trout	Walleye	Catfish group	Channel catfish	Panfish group
No. caught (per acre)	15,008 2.48	7,376 1.22	5,302 0.87	2,330 0.38	3,237 0.53	793 0.13	2,330 0.38	114 0.02	1,315 0.22	1,315 0.22	2,448 0.40	869 0.14	869 0.14	9,050 1.49
No. harvested (per acre)	1,611 0.27	676 0.11	738 0.12	198 0.03	2,347 0.39	541 0.09	1,692 0.28	114 0.02	1,108 0.18	1,108 0.18	2,345 0.39	598 0.10	598 0.10	6,770 1.12
% of total no. harvested	10.5	4.4	4.8	1.3	15.3	3.5	11.1	0.7	7.2	7.2	15.3	3.9	3.9	44.2
Lbs. harvested	2,863	1,608	562	693	1,348	214	1,074	61	1,130	1,130	3,778	986	986	775
Lbs. harvested (per acre)	0.47	0.27	0.09	0.11	0.22	0.04	0.18	0.01	0.19	0.19	0.62	0.16	0.16	0.13
% of total lbs. harvested	25.3	14.2	5.0	6.1	11.9	1.9	9.5	0.5	10.0	10.0	33.4	8.7	8.7	6.8
Mean length (in)		17.0	12.1	19.8		9.7	10.5	10.0	13.6	13.6	17.3		17.4	
Mean weight (lb)		2.61	0.78	3.64		0.42	0.62	0.53	1.03	1.03	1.65		1.70	
Number of fishing trips for that species	6,559				333				253		2,164	130		201
Percent of all trips	60.6				3.1				2.3		20.0	1.2		1.9
Hours fished for that species	25,078				1,273				967		8,274	497		769
Hours fished for that species (per acre)	4.14				0.21				0.16		1.37	0.08		0.13
Number harvested fishing for that species	925				2,252				785		2,244	104		4,100
Lb. harvested fishing for that species	1,679				1,253				729		3,566	275		444
No./hr harvested fishing for that species	0.03				1.28				0.73		0.30	0.34		3.52
Percent success fishing for that species	4.9				79.2				72.2		26.3	25.0		85.7

t < 0.005 fish/hr or < 0.5%

Table 49. Cont.

	Bluegill	Longear sunfish	Redear sunfish	Redbreast sunfish	Warmouth	Morone group	White bass	Common carp	Anything	Illegal bass	Illegal smallmouth bass	Illegal black crappie
No. caught (per acre)	8,412 1.39	222 0.04	100 0.02	206 0.03	110 0.02	82 0.01	82 0.01	242 0.04	330 0.05	66 0.01	52 0.01	
No. harvested (per acre)	6,181 1.02	222 0.04	51 0.01	206 0.03	110 0.02	82 0.01	82 0.01	0 0.00	330 0.05	66 0.01	52 0.01	
% of total no. harvested	40.4	1.4	t	1.3	0.7	0.5	0.5	0.0	2.2	t	t	
Lbs. harvested	702	24	15	-	34	89	89	0	340	-	7	
Lbs. harvested (per acre)	0.12	0.00	0.00	-	0.01	0.01	0.01	0.00	0.06	-	0.00	
% of total lbs harvested	6.2	t	t	-	t	0.8	0.8	0.0	3.0	-	t	
Mean length (in)	5.9	6.6	7.5	6.0	7.0	14.0	14.0	12.7	12.7	14.0	7.0	
Mean weight (lb)	0.13	0.18	0.29	-	0.25	1.08	1.08	1.02	1.02	-	0.13	
Number of fishing trips for that species								27	1,150			
Percent of all trips								t	10.6			
Hours fished for that species								103	4,398			
Hours fished for that species (per acre)								0.02	0.73			
Number harvested fishing for that species												
Lb harvested fishing for that species												
No./hr harvested fishing for that species												
Percent success fishing for that species								0.0	31.6			

t < 0.005 fish/hr or < 0.5%

Table 51. Black bass catch and harvest statistics derived from a daytime creel survey at Laurel River Lake (6,060 acres) for each species of black bass caught and released by all anglers from 8 March - 31 October 2010.

	Largemouth bass		Spotted bass		Smallmouth bass	
	C&R		C&R		C&R	
	Harvest	Total	Harvest	Total	Harvest	Total
Total number of bass	676	7,376	738	5,302	198	2,330
% of black bass harvested by number	41.9		45.8		12.3	
Total weight of fish (lb)	1,608	13,414	562	4,068	693	5,948
% of black bass harvested by weight	56.2		19.6		24.2	
Mean length (in)	17.0		12.1		19.8	
Mean weight (lb)	2.61		0.78		3.64	
Rate (fish/hour)	0.013		0.018		0.004	

Table 52. Monthly black bass angling success at Laurel River Lake (6,060 acres) during the 2010 daytime creel survey period; data does not include black bass < 8.0 in.

Month	Total no. of bass caught	Total no. of bass harvested	Number of bass fishing trips	Hours fished by bass anglers	Bass caught by bass anglers	Bass caught/hour by bass anglers	Bass harvested by bass anglers	Bass harvested/hour by bass anglers
Mar	1,919	99	1,623	6,207	1,853	0.29	33	0.01
Apr	1,609	69	1,223	4,674	1,523	0.31	52	0.01
May	2,541	256	1,000	3,824	2,434	0.52	235	0.05
Jun	2,593	236	599	2,290	2,553	0.90	196	0.07
Jul	1,147	265	681	2,603	1,057	0.33	176	0.06
Aug	1,079	294	410	1,569	736	0.75	0	0.00
Sep	2,513	256	636	2,432	2,102	1.02	128	0.06
Oct	1,608	135	386	1,477	1,563	1.04	105	0.07
Total	15,009	1,610	6,558	25,076	13,821	0.54	925	0.03
Mean								

Table 53. Monthly crappie angling success at Laurel River Lake (6,060 acres) during the 2010 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
Mar	596	529	87	334	562	1.16	496	1.03
Apr	242	225	57	219	207	0.67	190	0.61
Aug	294	147	18	68	245	1.25	147	0.75
Sep	1,128	769	37	140	1,102	3.36	743	2.27
Oct	977	676	134	511	961	2.07	676	1.46
Total	3,237	2,347	333	1,273	3,077	1.76	2,252	1.28
Mean								

Table 54. Monthly walleye angling success at Laurel River Lake (6,060 acres) during the 2010 daytime creel survey period.

Month	Total no. of walleye caught	Total no. of walleye harvested	Number of walleye fishing trips	Hours fished by walleye anglers	Walleye caught by walleye anglers	Walleye caught/hour by walleye anglers	Walleye harvested by walleye anglers	Walleye harvested/hour by walleye anglers
Mar	0	0	122	467	0	0.00	0	0.00
Apr	17	0	0	0	0	0.00	0	0.00
May	0	0	0	0	0	0.00	0	0.00
Jun	118	118	130	495	118	0.37	118	0.37
Jul	88	88	227	868	88	0.36	88	0.36
Aug	1,079	1,079	589	2,251	1,030	0.40	1,030	0.40
Sep	769	744	416	1,590	718	0.48	692	0.46
Oct	376	316	282	1,079	331	0.30	316	0.29
Total	2,447	2,345	1,766	6,750	2,285	0.31	2,244	0.30
Mean								

Table 55. Fishery statistics derived from a nighttime creel survey on Laurel River Lake (6,060 acres) from 18 May-22 August 2010 and 16 May - 30 August 2006.

	2010	2006
Fishing trips		
Number of fishing trips (per acre)	7,107 (1.17)	11,815 (1.95)
Average trip length (hours)	4.30	4.50
Fishing pressure		
Total man-hours (S.E.) ^a	30,581 (1,920)	53,155 (1,974)
Man hours/acre	5.05	8.77
Catch/harvest		
Number of fish caught (S.E.)	16,273 (1,845)	31,855 (3,725)
Number of fish harvested (S.E.)	5,514 (946)	8,293 (1,735)
Pounds of fish harvested	8,374	13,062
Harvest rates		
Fish/hour	0.17	0.15
Fish/acre	0.91	1.37
Pounds/acre	1.38	2.16
Catch rates		
Fish/hour	0.55	0.59
Fish/acre	2.69	5.26
Miscellaneous characteristics (%)		
Male	95	93
Female	5	7
Resident	100	97
Non-resident	0	3
Method (%)		
Still fishing	7	5
Casting	70	68
Trolling	23	27
Mode (%)		
Boat	100	100

^aS.E. = standard error

Table 56. Fish harvest statistics derived from a nighttime creel survey at Laurel River Lake (6,060 acres) from 18 May - 22 August 2010.

	Black bass group	Largemouth bass	Spotted bass	Smallmouth bass	White crappie group	Black crappie group	Trout group	Rainbow trout	Walleye	Catfish group	Channel catfish	Panfish group	Bluegill	Illegal walleye	Illegal smallmouth bass
No. caught (per acre)	10.093	4.926	3.811	1.357	292	157	353	353	4,405	803	803	252	252	27	50
No. harvested (per acre)	1.67	0.81	0.63	0.22	0.05	0.03	0.06	0.06	0.73	0.13	0.13	0.04	0.04	0.00	0.01
% of total no. harvested	433	72	361	0	135	90	54	54	4,080	646	646	90	90	27	50
Lbs. harvested (per acre)	0.07	0.01	0.06	0.00	0.02	0.01	0.01	0.01	0.67	0.11	0.11	0.01	0.01	0.00	0.01
% of total lbs. harvested	7.9	1.3	6.5	0.0	2.4	0.8	1.0	1.0	74.0	11.7	11.7	1.6	1.6	0.5	0.9
Lbs. harvested (per acre)	431	135	296	0	73	56	35	35	6,696	1,107	1,107	14	14	17	-
% of total lbs. harvested	0.07	0.02	0.05	0.00	0.01	0.00	0.01	0.01	1.10	0.18	0.18	0.00	0.00	0.00	-
Mean length (in)	5.1	1.6	3.5	0.0	0.9	0.7	1	1	80.0	13.2	13.2	1	1	1	-
Mean weight (lb)	15.5	15.5	12.5	9.5	10.5	10.5	12.0	12.0	17.6	18.3	18.3	6.3	6.3	13.0	16.0
Number of fishing trips for that species	1.92	1.92	0.82	0.38	0.62	0.62	0.65	0.65	1.75	1.97	1.97	0.15	0.15	0.64	-
Percent of all trips	3.664	46	104	2,681	566	46	104	104	2,681	566	566	46	46	17	-
Hours fished for that species	51.5	1.5	1.5	37.7	8.0	0.7	1.5	1.5	37.7	8.0	8.0	0.7	0.7	13.0	16.0
Hours fished for that species (per acre)	15,764	199	448	11,536	2,435	199	448	448	11,536	2,435	2,435	199	199	66.7	-
Number harvested fishing for that species	2.60	0.03	0.07	1.90	0.40	0.03	0.07	0.07	1.90	0.40	0.40	0.03	0.03	0.00	0.01
Lb. harvested fishing for that species	410	3,743	591	6,028	1,058	410	54	54	3,743	591	591	410	410	13.0	16.0
No./hr. harvested fishing for that species	410	73	35	0.36	0.59	410	35	35	0.36	0.59	0.59	410	410	0.00	0.01
Percent success fishing for that species	0.03	0.48	0.15	0.36	0.59	0.03	0.15	0.15	0.36	0.59	0.59	0.03	0.03	0.00	0.01
Percent success fishing for that species	6.5	33.3	33.3	54.1	66.7	6.5	33.3	33.3	54.1	66.7	66.7	0.0	0.0	0.00	0.01

1 < 0.005 fish/hr or < 0.5%

Table 57. Length distribution for each species of fish harvested and released at night at Laurel River Lake (6,060 acres) during 18 May - 22 August 2010.

	Inch class																			
	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Largemouth bass																				
Harvested										48	24									
Released					48	97	436	631	1089	1276	601	263	263	38	75	36				
Spotted bass																				
Harvested						52	129	155	25											
Released					230	552	920	1564	184											
Smallmouth bass																				
Released										50	50	348	249	272	194	78	38			
Illegal smallmouth bass																				
Harvested																				50
White crappie																				
Harvested				22	23															
Released			90																	
Black crappie																				
Harvested				22	22	22	24													
Released			45				22													
Rainbow Trout																				
Harvested						27	163	27												
Released					81															
Walleye																				
Harvested											122	913	974	609	670	487	122	61	122	
Released											22	126	101	25	25				25	
Illegal walleye																				
Harvested													27							
Channel catfish																				
Harvested																				
Released																				51
Bluegill																				
Harvested	67	23																		
Released	46	116																		

Table 58. Black bass catch and harvest statistics derived from a nighttime creel survey at Laurel River Lake (6,060 acres) for each species of black bass caught and released by all anglers from 18 May - 22 August 2010.

	Largemouth bass			Spotted bass			Smallmouth bass					
	C&R			C&R			C&R					
	Harvest	12.0-14.9 in	Total	Harvest	12.0-14.9 in	Total	Harvest	12.0-14.9 in	Total			
Total number of bass	72	1,164	3,641	4,926	361	2,668	0	3,811	0	50	1,307	1,357
% of black bass harvested by number	16.6				83.4				0.0			
Total weight of fish (lb)	135	1,509	8,647	10,353	296	2,036	0	2,929	0	98	3,326	3,424
% of black bass harvested by weight	31.4				68.6				0.0			
Mean length (in)	15.5				12.5				-			
Mean weight (lb)	1.92				0.82				-			
Rate (fish/hour)	0.004				0.019				0.000			

Table 59. Monthly black bass angling success at night at Laurel River Lake (6,060 acres) during the 2010 creel survey period; data does not include black bass < 8.0 in.

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
May	4,918	0	1,108	4,768	4,638	0.90	0	0.00
Jun	2,658	298	937	4,031	2,604	0.64	298	0.07
Jul	2,517	135	1,619	6,966	2,426	0.34	112	0.02
Total	10,093	433	3,663	15,764	9,668	0.47	410	0.03
Mean								

Table 60. Monthly walleye angling success at night at Laurel River Lake (6,060 acres) during the 2010 creel survey period.

Month	Total no. of walleye caught	Total no. of walleye harvested	Number of walleye fishing trips	Hours fished by walleye anglers	Walleye caught by walleye anglers	Walleye caught/hour by walleye anglers	Walleye harvested by walleye anglers	Walleye harvested/hour by walleye anglers
May	0	0	1,108	4,768	0	0.00	0	0.00
Jun	705	515	260	1,120	380	0.37	353	0.34
Jul	1,124	989	393	1,692	831	0.55	787	0.52
Aug	2,603	2,603	919	3,956	2,603	0.66	2,603	0.66
Total	4,432	4,107	2,680	11,536	3,814	0.38	3,743	0.36
Mean								

Table 61. Length frequency and CPUE (fish/hr) of largemouth bass collected at Cedar Creek Lake in 3.58 hours (2.08 hours in lower end; 1.50 hours upper end; 30-min runs) of nocturnal electrofishing on 10 May 2010.

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					
Lower	Largemouth bass	9	30	30	28	7	30	67	77	45	31	35	18	20	16	12	15	11	7	1	1	490	233.07	24.29		
Upper	Largemouth bass	2	6	8	9	1	23	70	41	27	26	34	17	18	14	12	10	12	3	3	336	224.00	23.18			
Total	Largemouth bass	11	36	38	37	8	53	137	118	72	57	69	35	38	30	24	25	23	10	4	1	826	229.18	15.77		

bbrpscc1.d10

Table 62. PSD and RSD₁₅ values obtained for largemouth bass taken in spring electrofishing samples in each area of Cedar Creek Lake on 10 May 2010; 95% confidence levels are in parentheses.

Area	No. ≥ 8.0 in	PSD	RSD ₁₅
Lower	386	43 (± 5)	22 (± 4)
Upper	310	48 (± 6)	23 (± 5)
Total	696	45 (± 4)	22 (± 3)

bbrpscc1.d10

Table 63. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected from each section of Cedar Creek Lake from 2003-2010. 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	
2010	Lower	50.21 (5.41)	103.84 (15.58)	40.21 (6.78)	38.81 (11.08)	4.09 (2.24)	233.07 (24.29)
	Upper	17.33 (9.40)	107.33 (14.53)	51.33 (10.48)	48.00 (5.29)	4.00 (1.15)	224.00 (23.18)
	Total	36.12 (8.07)	105.34 (10.00)	44.98 (5.82)	42.75 (6.52)	4.05 (1.27)	229.18 (15.77)
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 64. Population assessment for largemouth bass based on spring electrofishing at Cedar Creek Lake from 2003-2010.

Year	Mean length age-3 at capture	Spring CPUE		Spring CPUE		Spring CPUE		Assessment rating
		age 1	≥16.00 fish/hr	12.0-14.9 in	≥15.0 in	≥20.0 in	Total score	
2010	13.5 4	35.47 2	44.98 3	42.75 4	4.05 4	17	E	
2009	12.0 4	92.57 4	34.00 2	36.29 4	5.14 4	18	E	
2008	12.0 4	72.57 3	18.29 1	32.57 4	4.29 4	16	G	
2007	12.0 4	26.57 2	18.90 1	34.90 4	3.40 3	14	G	
2006	14.0 4	23.14 2	6.57 1	33.43 4	0.29 1	12	G	
2005	14.0 4	1.71 1	30.00 2	49.43 4	0.00 0	11	F	
2004	14.0 4	5.38 1	74.70 4	6.30 2	0.00 0	11	F	
2003	14.0 4	5.97 1	17.30 1	0.50 1	0.00 0	7	P	

bbrpsccl.d10

Table 65. Mean back calculated lengths (in) at each annulus for largemouth bass collected from Cedar Creek Lake during 2010, 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										
2009	41	5.3																		
2008	45	6.3	9.9																	
2007	20	7.5	11.0	13.5																
2006	15	6.6	10.3	12.6	14.3															
2005	12	7.1	10.7	13.2	15.1	16.5														
2003	7	5.9	9.3	11.9	13.8	15.6	16.7	17.7												
2002	8	7.4	13.5	16.0	17.4	18.5	19.1	19.6	20.0											
2001	1	8.5	12.5	15.4	16.6	17.6	18.8	19.8	20.4	20.7										
Mean		6.3	10.5	13.4	15.1	16.9	18.0	18.8	20.0	20.7										
Number		149	108	63	43	28	16	16	9	1										
Smallest		3.0	6.7	9.8	11.7	13.4	15.3	16.5	18.2	20.7										
Largest		9.9	15.1	18.2	19.7	20.9	21.6	22.0	22.4	20.7										
Std error		0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4										
95% CI +		0.2	0.3	0.4	0.6	0.7	0.8	0.7	0.8	0.8										

Otoliths were used for age-growth determinations; Intercept = 0
sedagccl.d10

Table 66. Age-frequency and CPUE (fish/hr) of largemouth bass collected during 3.58 hours of nocturnal electrofishing at Cedar Creek Lake on 10 May 2010.

Age	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				
1	11	36	38	37	5	3	53	137	118	59	17										127	15.4	35.47	(7.93)
2																					387	46.8	108.10	(9.81)
3										7	40	31	20								98	11.9	27.37	(3.15)
4										7		38	6	30	9						90	10.9	25.14	(4.33)
5												9	8	13	12	10	3				55	6.7	15.36	(2.10)
7														9	12	10	3				34	4.1	9.50	(1.44)
8															5	16					26	3.1	7.26	(1.18)
9																10					10	1.2	2.79	(1.20)
%	11	36	38	37	8	53	137	118	73	57	69	35	38	31	24	25	22	10	4	1	827	100.0	231.01	
	1.3	4.4	4.6	4.5	1.0	6.4	16.6	14.3	8.8	8.3	6.9	4.2	4.6	3.7	2.9	3.0	2.7	1.2	0.5	0.1	100.0			

bbrpsccl.d10
sedagccl.d10

Table 67. Population assessment for largemouth bass collected from Cedar Creek Lake in May 2010.

Parameter	Actual value	Assessment score
Mean length age-3 at capture	13.5	4
Spring CPUE age-1	35.47	2
Spring CPUE 12.0-14.9 in	44.98	3
Spring CPUE ≥ 15.0 in	42.75	4
Spring CPUE ≥ 20.0 in	4.05	4
Instantaneous mortality (Z)	0.352	
Annual mortality (A)	29.7	
Total score		17
Assessment rating		E

bbrpsccl.d10
sedagccl.d10

Table 68. Length-frequency and CPUE (fish/hr) of largemouth bass collected during 3.45 hours of nocturnal electrofishing (1.95 hours in lower end; 1.50 hours upper end) (30 minute runs) at Cedar Creek Lake on 29 September 2010; 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	21			
Lower	1	17	65	60	23	13	39	31	27	28	31	15	12	3	4	3	2	1			375	191.50 (10.87)
Upper			1	6	22	10	6	29	40	31	41	47	24	13	5	12	3	5	4	1	300	200.00 (11.14)
Total	1	18	71	82	33	19	68	71	58	69	78	39	25	8	16	6	7	5	1		675	195.14 (7.38)

sedwrccl.d10

Table 69. 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
2010	5.0	0.06	59.46	15.83	33.40	6.05		
2009	4.1	0.11	17.43	4.31	3.71	1.77	35.47	7.93
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	

sedwrccl.d10

Table 70. Number of fish and mean relative weight (Wr) for each length group of largemouth bass collected in Cedar Creek on 29 September 2010. 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	99	87 (1)	58	86 (1)	13	91 (2)
	Upper	90	94 (1)	72	90 (1)	30	100 (2)
	Total	189	90 (1)	130	88 (1)	43	97 (2)

sedwrocl.d10

Table 71. Length frequency and CPUE (fish/hr) of bluegill and redear sunfish collected at Cedar Creek Lake in 1.875 hours (7.5-min runs) of daytime electrofishing on 14 June 2010.

Species	Inch class								Total	CPUE	Std. error
	1	2	3	4	5	6	7	8			
Bluegill	47	725	487	244	68	36	2		1609	858.13	145.65
Redear sunfish		24	26	38	41	18	31	7	185	98.67	15.21

bbrbgccl.d10

Table 72. Spring electrofishing CPUE (fish/hr) for each length group of bluegill and redear sunfish collected at Cedar Creek Lake on 14 June 2010.

Species	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.		
Bluegill	411.73	106.45	426.13	48.58	20.27	3.89	0.00	0.00			858.13	145.65
Redear sunfish	12.80	4.67	56.00	9.56	26.13	6.96	3.73	1.72	0.00	0.00	98.67	15.21

bbrbgccl.d10

Table 73. PSD and RSD values obtained for bluegill and redear sunfish taken in spring electrofishing samples in Cedar Creek Lake on 14 June 2010; 95% confidence levels are in parentheses.

Species	No. > stock size	PSD	RSD ^a
Bluegill	837	5 (\pm 1)	0 (\pm 0)
Redear sunfish	135	28 (\pm 8)	0 (\pm 0)

^a Bluegill = RSD₈, Redear sunfish = RSD₉

bbrbgccl.d10

Table 74. Mean back calculated lengths (in) at each annulus for bluegill collected from Cedar Creek Lake during June 2010, including the 95 % confidence interval (CI) for each mean length per age group.

Year	No.	Age					
		1	2	3	4	5	6
2009	16	2.0					
2008	24	2.2	3.8				
2007	8	2.3	4.2	5.3			
2006	4	2.3	3.8	4.8	5.9		
2005	5	2.6	4.4	5.5	6.0	6.5	
2004	2	2.4	4.0	5.1	5.5	5.9	6.3
Mean		2.2	3.9	5.2	5.9	6.3	6.3
Number		59	43	19	11	7	2
Smallest		1.4	2.9	3.8	5.3	5.8	6.0
Largest		3.3	5.3	5.9	6.5	6.9	6.5
Std error		0.1	0.1	0.1	0.1	0.2	0.3
95% CI ±		0.1	0.2	0.3	0.2	0.4	0.5

Otoliths were used for age-growth determinations; Intercept = 0
sedagccb.d10

Table 75. Age-frequency and CPUE (fish/hr) of bluegill collected during 1.875 hours of daytime electrofishing at Cedar Creek Lake on 14 June 2010.

Age	Inch class							Total	%	CPUE	Std error
	1	2	3	4	5	6	7				
1	47	725	37					809	50.3	431.47	(108.77)
2			450	244	19			713	44.3	380.27	(45.54)
3					37	7		44	2.7	23.47	(3.18)
4					6	11		17	1.1	9.07	(1.42)
5					6	11	2	19	1.2	10.13	(1.43)
6						7		7	0.4	3.73	(0.81)
Total	47	725	487	244	68	36	2	1609	100.0	858.13	
%	2.9	45.1	30.3	15.2	4.2	2.2	0.1	100.0			

bbrbgccl.d10
sedagccb.d10

Table 76. Population assessment for bluegill collected from Cedar Creek Lake in June 2010.

Parameter	Actual value	Assessment score
Mean length age-2 at capture	4.1	2
Years to 6.0 in	4-4+	2
CPUE \geq 6.0 in	20.27	1
CPUE \geq 8.0 in	0.00	0
Instantaneous mortality (Z)	1.016	
Annual mortality (A)	63.8	
Total score		5
Assessment rating		P

bbrbgcl.d10
sedagccb.d10

Table 77. Mean back calculated lengths (in) at each annulus for redear sunfish collected from Cedar Creek Lake during spring 2010, including the 95 % confidence interval (CI) for each mean length per age group.

Year	No.	Age						
		1	2	3	4	5	6	7
2009	15	2.9						
2008	19	2.8	4.7					
2007	3	3.0	5.2	6.3				
2006	9	3.0	5.0	6.2	7.0			
2005	6	2.7	5.4	6.2	6.8	7.5		
2004	6	2.8	5.1	6.4	6.9	7.5	8.0	
2003	2	2.6	5.4	6.8	7.3	7.5	7.9	8.3
Mean		2.8	5.0	6.3	6.9	7.5	8.0	8.3
Number		60	45	26	23	14	8	2
Smallest		2.1	3.8	5.3	5.8	6.3	7.3	8.1
Largest		3.5	5.7	7.1	7.7	8.2	9.0	8.4
Std error		0.0	0.1	0.1	0.1	0.1	0.2	0.2
95% CI \pm		0.1	0.2	0.2	0.2	0.3	0.4	0.3

Otoliths were used for age-growth determinations; Intercept = 0
sedagccb.d10

Table 78. Age-frequency and CPUE (fish/hr) of redear sunfish collected during 1.875 hours of daytime electrofishing at Cedar Creek Lake on 14 June 2010.

Age	Inch class							Total	%	CPUE	Std error
	2	3	4	5	6	7	8				
1	24	26						50	27.3	26.67	(7.87)
2			38	41				79	43.2	42.13	(8.53)
3					6			6	3.3	3.20	(1.08)
4					10	12		22	12.0	11.73	(3.12)
5					2	9	2	13	7.1	6.93	(1.98)
6						9	2	11	6.0	5.87	(1.90)
7							2	2	1.1	1.07	(0.57)
Total	24	26	38	41	18	30	6	183	100.0	97.60	
%	13.1	14.2	20.8	22.4	9.8	16.4	3.3	100.0			

bbrbgccl.d10
sedagccb.d10

Table 79. Population assessment for redear sunfish collected from Cedar Creek Lake in June 2010.

Parameter	Actual value	Assessment score
Mean length age-3 at capture	6.4	3
Years to 8.0 in	≥6	1
CPUE ≥8.0 in	3.73	1
CPUE ≥10.0 in	0.00	0
Instantaneous mortality (Z)	0.449	
Annual mortality (A)	36.2	
Total score		5
Assessment rating		P

bbrbgccl.d10
sedagccb.d10

Table 80. Length frequency of channel catfish collected during three nights of three tandem (3 nets) hoop net sets at Bert T. Combs Lake in October 2010.

Species	Inch class							Total
	7	8	10	11	12	13	14	
Channel catfish	1	3	8	13	6	10	1	42

sedhnbtc.d10

Table 81. Length frequency of channel catfish collected during three nights of three tandem (3 nets) hoop net sets at Beulah Lake in October 2010.

Species	Inch class									Total	
	8	9	10	11	13	14	15	17	18		20
Channel catfish	1	8	9	7	1	1	2	3	2	1	35

sedhnbl.d10

Table 82. Length frequency and CPUE (fish/hr) of largemouth bass collected at Laurel Creek Reservoir in 1.25 hours (7.5-min runs) of nocturnal electrofishing on 14 April 2010.

Species	Inch class														Total	CPUE	Std. error	
	3	4	5	7	8	9	10	11	12	13	14	15	16	19				21
Largemouth bass	9	5	6	10	34	18	82	49	16	8	3	2	1	1	2	246	196.80	10.20

sedpsdlc.d10

Table 83. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Laurel Creek Reservoir on 14 April 2010.

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.
2010	24.00	4.92	146.40	8.09	21.60	3.17	4.80	1.31	1.60	1.07	196.80	10.20
2007	4.00	1.07	105.00	9.64	24.00	3.21	1.00	1.00	1.00	1.00	134.00	11.49

sedpsdlc.d10

Table 84. PSD and RSD₁₅ values obtained for largemouth bass taken in spring electrofishing samples in Laurel Creek Reservoir on 14 April 2010; 95% confidence levels are in parentheses.

Year	No. ≥8.0 in	PSD (+/- 95%)	RSD ₁₅ (+/- 95%)
2010	216	15 (± 5)	3 (± 2)

sedpsdlc.d10

Table 85. Length frequency and CPUE (fish/hr) of black bass collected at Liberty Lake in 1.75 hours (15.0-min runs) of nocturnal electrofishing on 13 April 2010.

Species	Inch class																			Total	CPUE	Std. error
	4	5	6	7	8	9	10	11	12	13	14	15	16	19	21	22						
Largemouth bass	14	26	13	3	1	52	132	28	21	17	6	3	4	1	1	1	323	184.57	12.45			
Spotted bass				1	4	12	5	2									24	13.71	2.88			

sedpsdlb.d10

Table 86. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Liberty Lake on 13 April 2010.

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.
2010	32.00	8.90	121.71	10.21	25.14	1.44	5.71	1.92	1.14	0.74	184.57	12.45
2007	176.57	30.10	75.43	11.40	46.86	6.15	4.57	1.36	1.14	0.74	303.43	31.37

sedpsdlb.d10

Table 87. PSD and RSD₁₅ values obtained for largemouth bass taken in spring electrofishing samples in Liberty Lake on 13 April 2010; 95% confidence levels are in parentheses.

Year	No. ≥ 8.0 in	PSD (+/- 95%)	RSD ₁₅ (+/- 95%)
2010	267	20 (± 5)	4 (± 2)

sedpsdlb.d10

Table 88. Mean back calculated lengths (in) at each annulus for largemouth bass collected from Liberty Lake during 2010, including the 95% confidence interval (CI) for each mean length per age group.

Year	No.	Age						
		1	2	3	4	5	6	7
2009	17	6.2						
2008	26	6.0	10.1					
2007	6	6.8	10.9	12.4				
2006	19	6.0	9.8	11.6	12.7			
2005	3	7.2	11.9	13.4	14.6	15.4		
2004	1	8.1	10.3	11.4	12.5	13.2	13.6	
2003	1	5.3	8.2	10.3	11.4	12.7	13.2	14.3
Mean		6.2	10.2	11.9	12.9	14.4	13.4	14.3
Number		73	56	30	24	5	2	1
Smallest		4.1	8.2	9.6	10.5	12.7	13.2	14.3
Largest		9.2	12.7	14.6	15.6	16.0	13.6	14.3
Std error		0.1	0.1	0.2	0.3	0.6	0.2	
95% CI ±		0.2	0.3	0.5	0.6	1.3	0.4	

Otoliths were used for age-growth determinations; Intercept = 0
 sedagl.bl.d10

Table 89. Age-frequency and CPUE (fish/hr) of largemouth bass collected during 1.75 hours of nocturnal electrofishing at Liberty Lake on 13 April 2010.

Age	Inch class															Total	%	CPUE	Std error	
	4	5	6	7	8	9	10	11	12	13	14	15	16	19	21					22
1	14	26	13	3													56	17.4	32.00	(8.90)
2					1	52	122	12									187	58.1	106.86	(8.70)
3								3	8	3							14	4.3	8.00	(0.85)
4							10	12	13	11	2	2					50	15.5	28.57	(1.54)
5											2	1	4				7	2.2	4.00	(1.45)
6										3							3	0.9	1.71	(0.35)
7											2						2	0.6	1.14	(0.61)
Not aged														1	1	1	3	0.9	1.71	
	14	26	13	3	1	52	132	27	21	17	6	3	4	1	1	1	322	100.0	184.00	
%	4.3	8.1	4.0	0.9	0.3	16.1	41.0	8.4	6.5	5.3	1.9	0.9	1.2	0.3	0.3	0.3	100.0			

sedpsdlb.d10
 sedaglbl.d10

Table 90. Population assessment for largemouth bass collected from Liberty Lake in April 2010.

Parameter	Actual value	Assessment score
Mean length age-3 at capture	12.4	4
Spring CPUE age 1	32.00	2
Spring CPUE 12.0-14.9 in	25.14	2
Spring CPUE ≥ 15.0 in	5.71	2
Spring CPUE ≥ 20.0 in	1.14	2
Instantaneous mortality (Z)	0.677	
Annual mortality (A)	49.2	
Total score		12
Assessment rating		G

sedpsdlb.d10

Table 91. Length frequency and CPUE (fish/hr) of bluegill collected at Liberty Lake in 1.25 hours (7.5-min runs) of daytime electrofishing on 17 June 2010.

Species	Inch class							Total	CPUE	Std. error
	1	2	3	4	6	7	8			
Bluegill	12	64	29	6	2	2	1	116	92.80	14.95

sedbigg.d10

Table 92. Spring electrofishing CPUE (fish/hr) for each length group of bluegill collected at Liberty Lake on 17 June 2010.

Species	Length group								Total	
	<3.0 in		3.0-5.9 in		6.0-7.9 in		>8.0 in			
	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.
Bluegill	60.80	14.66	28.00	9.92	3.20	1.77	0.80	0.80	92.80	14.95

sedbgll.d10

Table 93. PSD and RSD₈ values obtained for bluegill taken in spring electrofishing samples in Liberty Lake on 17 June 2010; 95% confidence levels are in parentheses.

Species	No. \geq stock size	PSD	RSD ₈
Bluegill	40	13 (\pm 10)	3 (\pm 5)

^a Bluegill = RSD₈

sedbgll.d10

Table 94. Mean back calculated lengths (in) at each annulus for bluegill collected from Liberty Lake during June 2010, including the 95% confidence interval (CI) for each mean length per age group.

Year	No.	Age			
		1	2	3	4
2009	24	1.9			
2008	12	1.5	3.5		
2007	4	1.9	3.9	6.3	
2006	1	1.4	3.7	6.0	8.1
Mean		1.7	3.6	6.2	8.1
Number		41	17	5	1
Smallest		1.0	2.9	5.5	8.1
Largest		3.1	5.2	6.8	8.1
Std error		0.1	0.1	0.2	
95% CI ±		0.2	0.3	0.5	

Otoliths were used for age-growth determinations; Intercept = 0
sedaglb.d10

Table 95. Age-frequency and CPUE (fish/hr) of bluegill collected during 1.25 hours of daytime electrofishing at Liberty Lake on 17 June 2010.

Age	Inch class							Total	%	CPUE	Std error
	1	2	3	4	6	7	8				
1	12	64	10					86	74.1	68.80	(13.92)
2			19	6				25	21.6	20.00	(7.18)
3					2	2		4	3.4	3.20	(1.77)
4							1	1	0.9	0.80	(0.80)
Total	12	64	29	6	2	2	1	116	100.0	92.80	
%	10.3	55.2	25.0	5.2	1.7	1.7	0.9	100.0			

sedbgll.d10
sedaglb.d10

Table 96. Population assessment for bluegill collected from Liberty Lake in June 2010.

Parameter	Actual value	Assessment score
Mean length age-2 at capture	3.9	2
Years to 6.0 in	3-3+	3
CPUE \geq 6.0 in	4.00	1
CPUE \geq 8.0 in	0.80	1
Instantaneous mortality (Z)	1.520	
Annual mortality (A)	78.1	
Total score		7
Assessment rating		F

sedbgib.d10
 sedaglibb.d10

Table 97. Length frequency and CPUE (fish/hr) of black bass collected at Lake Linville in 1.5 hours (15-min runs) of nocturnal electrofishing on 26 April 2010.

Species	Inch class																					Total	CPUE	Std. error
	3	4	5	6	7	8	9	10	11	12	13	14	17	19	20	21								
Largemouth bass	2	18	36	13	9	29	132	65	66	46	8	5	6	3	4	3	445	296.67	71.45					
Spotted bass	1	8	2	10	27	36	69	66	26	4	1	250	166.67	34.40										
Smallmouth bass					2	5	4	1	2	14	9.33	2.86												

sedpsdll.d10

Table 98. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Lake Linville on 26 April 2010.

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.	CPUE	Std. Err.	CPUE	Std. Err.
2010	52.00	25.13	194.67	45.42	39.33	8.35	10.67	2.23	4.67	1.23	296.67	71.45			
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.d10

Table 99. Spring electrofishing CPUE (fish/hr) for each length group of spotted bass collected at Lake Linville on 26 April 2010.

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.
2010	32.00	8.26	114.00	22.31	20.00	5.27	0.67	0.67	0.00	0.00	166.67	34.40
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.d10

Table 100. Population assessment for largemouth bass based on spring electrofishing at Lake Linville from 2002-2010.

Year	Mean length age-3 at capture	Spring CPUE age 1		Spring CPUE 12.0-14.9 in		Spring CPUE ≥15.0 in		Spring CPUE ≥20.0 in		Total score	Assessment rating
		CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.		
2010	11.1	47.33	3	39.33	3	10.67	2	4.67	4	15	G
2009	11.1	52.00	3	8.40	1	10.40	2	2.40	3	12	G
2008	11.1	34.80	2	12.40	1	18.40	3	2.80	3	12	G
2007	11.1	39.20	2	13.20	1	25.60	3	4.80	4	13	G
2006	11.1	6.53	1	22.00	2	10.00	2	2.70	3	11	F
2002	11.7	4.00	1	12.00	1	14.67	2	1.33	2	10	F

sedpsdll.d10

Table 101. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Lake Linville on 26 April 2010; 95% confidence limits are in parentheses.

Species	No. fish \geq stock size	PSD (+/- 95%)	RSD ^a (+/- 95%)
Largemouth bass	367	20 (± 4)	4 (± 2)
Spotted bass	229	14 (± 4)	0 (± 1)

^aLargemouth bass = RSD₁₅, spotted bass = RSD₁₄
sedpsdll.d10

Table 102. Mean back calculated lengths (in) at each annulus for spotted bass collected from Lake Linville during 2010, including the 95% confidence interval (CI) for each mean length per age group.

Year	No.	Age						
		1	2	3	4	5	6	7
2009	8	4.6						
2008	23	4.4	7.1					
2007	16	4.8	7.6	9.3				
2006	20	4.8	7.9	9.5	10.7			
2004	1	4.7	7.2	8.6	9.4	9.9	10.5	
2003	3	4.4	7.2	9.3	10.6	11.4	12.1	12.8
Mean		4.6	7.5	9.4	10.7	11.0	11.7	12.8
Number		71	63	40	24	4	4	3
Smallest		3.5	5.9	8.1	9.2	9.9	10.5	12.0
Largest		5.6	8.9	10.9	12.2	12.3	13.2	14.1
Std error		0.1	0.1	0.1	0.2	0.5	0.6	0.7
95% CI ±		0.1	0.2	0.2	0.4	1.0	1.1	1.3

Otoliths were used for age-growth determinations; Intercept = 0
sedaglls.d10

Table 103. Age-frequency and CPUE (fish/hr) of spotted bass collected during 1.50 hours of nocturnal electrofishing at Lake Linville on 26 April 2010.

Age	Inch class											Total	%	CPUE	Std error
	3	4	5	6	7	8	9	10	11	12	14				
1	1	8	1									10	4.0	6.67	(3.18)
2			1	10	27	14						52	20.8	34.67	(9.14)
3						22	40	25				87	34.8	58.00	(11.32)
4							29	33	26	2		90	36.0	60.00	(12.07)
6								8				8	3.2	5.33	(1.24)
7										2	1	3	1.2	2.00	(0.89)
	1	8	2	10	27	36	69	66	26	4	1	250	100.0	166.67	
%	0.4	3.2	0.8	4.0	10.8	14.4	27.6	26.4	10.4	1.6	0.4	100.0			

sedpsdll.d10
sedaglls.d10

Table 104. Population assessment for spotted bass collected from Lake Linville in April 2010.

Parameter	Actual value	Assessment score
Mean length age-3 at capture	9.3	3
Spring CPUE age-1	6.89	2
Spring CPUE 11.0-13.9 in	20.00	4
Spring CPUE ≥ 14.0 in	0.67	3
Spring CPUE ≥ 17.0 in	0.00	0
Instantaneous mortality (Z)	0.326	
Annual mortality (A)	27.8	
Total score		12
Assessment rating		G

sedpsdll.d10

Table 105. 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 30 September 2010; standard error is in parentheses.

Species	Inch class																		Total	CPUE
	3	4	5	6	7	8	9	10	11	12	13	14	15	17	18					
Largemouth bass	10	30	29	17	11	51	55	65	49	23	10	3	4	3	1	361	240.67 (37.70)			
Spotted bass	2	11	10	4	25	25	42	39	22	7	187	124.67 (22.19)								
Smallmouth bass							1									1	0.67 (0.67)			

sedyoyll.d10

Table 106. 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
2010	5.1	0.09	57.33	19.26	30.67	7.35		
2009	4.5	0.06	75.33	33.71	18.00	6.35	47.33	22.66
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.d10

Table 107. Number of fish and mean relative weight (WR) for each length group of black bass collected in Lake Linville on 30 September 2010. 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	120	82 (1)	33	85 (2)	8	87 (2)
Spotted bass	66	87 (2)	20	83 (2)	0	-

sedyyfl.d10

Table 108. Length frequency and CPUE (fish/net-night) of hybrid striped bass and white bass collected at Lake Linville in 10 net-nights on 26-29 October 2010.

Species	Inch class										Total	CPUE	Std. error
	7	8	9	10	11	13	14						
Hybrid striped bass	4	38				9	6	57	5.70	2.59			
White bass	2	12	1	15	31	1	2	64	6.40	2.40			

sedgnll.d10

Table 109. Mean back calculated lengths (in) at each annulus for hybrid striped bass collected from Lake Linville during 2010, including the 95% confidence interval (CI) for each mean length per age group.

Year	No.	Age
2009	15	10.7
Mean		10.7
Number	15	
Smallest	9.8	
Largest	11.5	
Std error	0.1	
95% CI +	0.2	

Otoliths were used for age-growth determinations; Intercept = 0

sedagllh.d10

Table 110. Age-frequency and CPUE (fish/nn) of hybrid striped bass gill netted for 10 net-nights at Lake Linville in October 2010. Standard error is in parentheses.

Age	Inch class				Total	%	CPUE	
	7	8	13	14				
0+	4	38			42	73.7	4.20	(2.23)
1+			9	6	15	26.3	1.50	(0.67)
Total	4	38	9	6	57	100.0	5.70	
%	7.0	66.7	15.8	10.5				

sedgnll.d10
sedagllh.d10

Table 111. Hybrid striped bass population assessment for hybrid striped bass gill netted at Lake Linville in October 2010.

Parameter	Actual value	Assessment score
Population density (CPUE age-1 and older)	1.50	1
Growth rate (Mean length age 2+ at capture)	NA	-
Size structure (CPUE \geq 15.0 in)	0.00	0
Recruitment (CPUE age-1)	1.50	1
Instantaneous mortality (Z)	*	
Annual mortality (A)	*	
Total score		2
Assessment rating		P

* Unable to calculate due to only 2 year classes being collected

sedgnll.d10
sedagllh.d10

Table 112. Number of fish and mean relative weight (Wr) for each length group of hybrid striped bass collected in Lake Linville October 2010. Standard error is in parentheses.

Length group					
8.0-11.9 in		12.0-14.9 in		>15.0 in	
No.	Wr	No.	Wr	No.	Wr
30	79 (1)	15	67 (1)	0	-

sedgnll.d10

Table 113. Mean back calculated lengths (in) at each annulus for white bass collected from Lake Linville during 2010, including the 95% confidence interval (CI) for each mean length per age group.

Year	No.	Age				
		1	2	3	4	5
2009	22	8.2				
2006	2	8.1	11.5	12.4	13.5	
2005	1	7.4	11.9	13.5	14.0	14.5
Mean		8.2	11.6	12.8	13.7	14.5
Number		25	3	3	3	1
Smallest		6.5	11.2	12.0	13.1	14.5
Largest		9.4	11.9	13.5	14.0	14.5
Std error		0.1	0.2	0.4	0.3	
95% CI ±		0.2	0.4	0.8	0.6	

Otoliths were used for age-growth determinations; Intercept = 0
sedagllw.d10

Table 114. Age-frequency and CPUE (fish/net-night) of white bass gill netted for 10 net-nights at Lake Linville in October 2010. Standard error is in parentheses.

Age	Inch class							Total	%	CPUE	
	7	8	9	10	11	13	14				
0+	2	12	1					15	23.4	1.50	(1.50)
1+				15	31			46	71.9	4.60	(1.60)
4+						1	1	2	3.1	0.20	(0.13)
5+							1	1	1.6	0.10	(0.10)
Total	2	12	1	15	31	1	2	64	100.0	6.40	
%	3.1	18.8	1.6	23.4	48.4	1.6	3.1				

sedgnll.d10

sedagllw.d10

Table 115. Population assessment for white bass gill netted at Lake Linville in October 2010.

Parameter	Actual value	Assessment score
Population density (CPUE age-1 and older)	4.90	1
Growth rate (Mean length age 2+ at capture)	NA	-
Size structure (CPUE ≥ 15.0 in)	0.00	0
Recruitment (CPUE age-1)	4.60	2
Instantaneous mortality (Z)	0.607	
Annual mortality (A)	45.5	
Total score		3
Assessment rating		P

sedgnll.d10
sedagllw.d10

Table 116. Number of fish and mean relative weight (Wr) for each length group of white bass collected in Lake Linville October 2010. Standard error is in parentheses.

Length group					
6.0-8.9 in		9.0-11.9 in		≥ 12.0 in	
No.	Wr	No.	Wr	No.	Wr
14	81 (2)	30	88 (1)	3	80 (1)

sedgnll.d10

Table 117. Fishery statistics derived from a creel surveys on Lake Linville (358 acres) from 11 March - 31 October 2010 and 4 April - 31 October 2005.

	2010	2005
Fishing trips		
Number of fishing trips (per acre)	15,876 (44.35)	14,714 (41.10)
Average trip length	3.90	3.49
Fishing pressure		
Total man-hours (S.E.) ^a	61,969 (1,497)	51,346 (1,521)
Man hours/acre	173.10	143.42
Catch/harvest		
Number of fish caught (S.E.)	103,037 (11,567)	104,018 (13,000)
Number of fish harvested (S.E.)	47,735 (7,817)	46,862 (7,676)
Pounds of fish harvested	16,435	10,264
Harvest rates		
Fish/hour	0.74	0.82
Fish/acre	133.34	130.90
Pounds/acre	45.91	28.67
Catch rates		
Fish/hour	1.67	1.84
Fish/acre	287.81	290.55
Miscellaneous characteristics (%)		
Male	79	78
Female	21	22
Resident	98	98
Non-resident	2	2
Method (%)		
Still fishing	83	77
Casting	16	22
Fly	<1	0
Trolling	<1	<1
Mode (%)		
Boat	37	32
Bank	60	67
Dock	3	1

^aS.E. = standard error

Table 118. Fish harvest statistics derived from a daytime creel survey at Lake Linville (358 acres) from 11 March - 31 October 2010.

	Black bass group	Largemouth bass	Smallmouth bass	Croaker	Black crappe	White crappe	Crappie group	Chain pickerel	Chain pickerel	Fishhook catfish	Bullhead	Pike	Shad group	Shad	White bass	Hybrid striped bass	Mooneye group	Rock bass	Green sunfish	Black sunfish	Winnichou sunfish	Logperch sunfish	Spottail sunfish	Bluegill sunfish	Yellow perch	Illegal take	Anyfish			
no. caught (per acre)	27,592	20,560	6,341	17,711	3,244	351	2,993	2,589	2,359	194	36	64,640	58,201	3,655	1,234	343	736	321	4,431	4,410	21	71	289	45	138	0.38	-			
lbs. harvested (per acre)	1,978	1,424	493	1,196	9,065	7,701	8,366	7,233	6,990	554	10	180,566	162,577	10,633	3,455	986	2,006	990	12,388	12,337	0.06	0.20	0.81	0.13	0.38	-	-			
% of total line harvested	3.9	3.0	0.9	1	5.0	1	4.6	5.1	4.6	1	1	80.4	72.4	4.2	2.2	1	4.8	1	4.8	4.8	-	1	1	1	1	1	-	-		
lbs. harvested (per fish)	2.164	1.868	288	9	1,904	96	1,208	4,352	3,477	655	20	5,838	5,385	165	201	22	81	4	1,679	1,679	-	982	28	11	79	-	-			
% of total lbs. harvested	6.84	5.27	0.78	0.63	3.64	0.27	3.37	12.16	9.71	2.39	0.06	16.31	15.04	0.46	0.96	0.06	0.17	0.01	4.69	4.69	-	2.74	0.07	0.03	0.22	-	-			
Mean length (in)	13.2	11.5	1.6	12.0	7.9	0.6	7.4	26.5	21.2	9.2	1	38.5	32.8	1.0	1.2	1	1	1	10.2	10.2	-	6.0	1	1	1	-	-			
Mean weight (lb)	1.22	0.81	0.81	0.81	0.49	0.58	0.58	1.62	4.44	0.56	0.16	0.07	0.22	0.19	0.09	0.10	0.09	0.10	1.06	1.06	-	13.47	0.17	0.74	0.57	-	-			
Number of fishing trips for that species	4,975				789		2,891					7,124							233								34			
Percent of all trips	31.3				5.0		17.0					44.9							1.5								1			
Hours fished (per fish)	19,419				3,081		10,504					27,846							911								78		132	
Hours fished for that species (per acre)	54.24				8.61		29.34					77.76							2.54								0.21		0.37	
Number harvested (as % of that species)	1.549				2.067		1.903					96.630							1.397								0.51		0.37	
lbs. harvested (as % of that species)	1.899				1.114		3.562					5.857							5.67									0.57		0.37
% of total harvested (as % of that species)	0.10				0.46		0.15					1.50							1.38									0.0		0.0
Percent successful fishing for that species	11.4				27.7		16.2					27.9							57.1								0.0		0.0	

1 < 0.050 (5%); 0.05 < 0.010 (1%)

Table 119. Length distribution for each species of fish harvested and released at Lake Linville (358 acres) during 11 March - 31 October 2010.

	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	31	33							
Largemouth bass																																			
Harvested										637	271	112	127		64	143	48		16	16															
Released	484	271	3854	600	5675	5559	1663	376	158	59	59	20	20	40																					
Spotted bass																																			
Harvested																																			
Released	18	92	18	752	349	2899	1578	165	36																										
Smallmouth bass																																			
Harvested																																			
Released	17	17	17	116	17	266	132	90	18																										
Illegal bass																																			
Harvested																																			
Black crappie																																			
Harvested																																			
Released																																			
White crappie																																			
Harvested																																			
Released	69	326	120	137	69	52																													
Channel catfish																																			
Harvested																																			
Released																																			
Flathead catfish																																			
Harvested																																			
Bullhead																																			
Harvested																																			
Bluegill																																			
Harvested	56	1213	4174	15230	11451	2397	29																												
Released	5377	12807	3882	1361	178	46																													
Longear sunfish																																			
Harvested																																			
Released	546	688	989	153																															
Redear sunfish																																			
Harvested																																			
Released	20																																		
Warmouth																																			
Harvested																																			
Released																																			
Green sunfish																																			
Harvested																																			
Released	22	86	43	21																															
Rock bass																																			
Harvested																																			
Released	35	104																																	
Hybrid striped bass																																			
Harvested																																			
Released	16	16	481	16	1272	62	155	16	62	16	13																								
White bass																																			
Released																																			
Carp																																			
Harvested																																			
Shad																																			
Harvested																																			
Released	23	23	23	23	23	23	23	23	21																										
Yellow perch																																			
Harvested																																			
Released																																			

Table 120. Black bass catch and harvest statistics derived from a daytime creel survey at Lake Linville (358 acres) for each species of black bass caught and released by all anglers from 11 March - 31 October 2010.

	Largemouth bass			Spotted bass			Smallmouth bass					
	C&R			C&R			C&R					
	Harvest	12.0-14.9 in	>15.0 in	Harvest	12.0-14.9 in	>15.0 in	Harvest	12.0-14.9 in	>15.0 in	Total		
Total number of bass	1,434	2,237	436	20,550	433	201	0	6,341	11	108	18	701
% of black bass harvested by number	76			23					1			
Total weight of fish (lb)	1,888	2,528	492	11,969	268	91	0	2,900	9	125	21	386
% of black bass harvested by weight	87			12					<1			
Mean length (in)	13.3			11.0					12.0			
Mean weight (lb)	1.22			0.61					0.81			
Rate (fish/hour)	0.031			0.007					0.000			

Table 121. Monthly black bass angling success at Lake Linville (358 acres) during the 2010 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
Mar	784	0	801	3,128	713	0.15	0	0.00
Apr	8,270	647	800	3,122	7,364	1.66	599	0.13
May	6,047	311	827	3,228	3,278	0.97	198	0.06
Jun	4,270	160	769	3,003	3,380	1.47	69	0.03
Jul	3,904	198	662	2,582	3,033	1.13	159	0.06
Aug	605	48	383	1,496	435	0.36	24	0.02
Sep	1,836	215	330	1,288	1,649	1.27	201	0.15
Oct	1,877	299	403	1,572	1,621	1.25	299	0.23
Total	27,592	1,878	4,975	19,419	21,473	1.15	1,549	0.10
Mean								

Table 122. Monthly crappie angling success at Lake Linville (358 acres) during the 2010 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
Mar	0	0	163	637	0	0.00	0	0.00
Apr	1,489	1,198	300	1,171	1,327	0.83	1,068	0.67
May	819	706	129	504	565	0.59	537	0.56
Jun	297	205	30	119	296	0.71	205	0.49
Jul	178	0	0	0	0	0.00	0	0.00
Aug	97	97	37	142	97	0.23	97	0.23
Sep	86	0	27	106	86	0.88	0	0.00
Oct	277	203	84	328	235	0.39	160	0.27
Total	3,243	2,409	770	3,007	2,606	0.60	2,067	0.46
Mean								

Table 123. Monthly catfish angling success at Lake Linville (358 acres) during the 2010 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
Mar	36	36	223	869	36	0.08	36	0.08
Apr	16	16	233	910	16	0.04	16	0.04
May	735	735	672	2,623	593	0.17	593	0.17
Jun	982	936	476	1,857	776	0.26	776	0.26
Jul	515	416	699	2,730	416	0.15	337	0.12
Aug	266	266	237	926	145	0.14	145	0.14
Sep	29	29	103	401	0	0.00	0	0.00
Oct	11	11	48	188	0	0.00	0	0.00
Total	2,589	2,444	2,691	10,504	1,982	0.16	1,903	0.15
Mean								

Table 126. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Stanford Reservoir on 13 April 2010.

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.
2010	115.43	15.99	118.86	10.09	84.57	18.63	14.86	6.15	4.57	1.62	333.71	26.40
2007	40.89	7.59	112.00	13.06	63.11	6.86	3.56	1.94	1.78	1.18	219.56	21.59

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Table 127. PSD and RSD₁₅ values obtained for largemouth bass taken in spring electrofishing samples in Stanford Reservoir on 13 April 2010; 95% confidence levels are in parentheses.

Year	No. fish ≥ stock size	PSD (+/- 95%)	RSD ₁₅ (+/- 95%)
2010	191	46 (± 7)	7 (± 4)

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Table 128. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 2.0 hours of 15-minute nocturnal electrofishing runs for black bass in Wood Creek Lake on 20 April 2010; 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	1	1	1	1	1	1	1	1	3	2	4	2	1							18	36.00 (8.00)	
	Spotted bass	1	4	4	4	2	2	4	8	1	1	1									32	64.00 (8.00)	
	Smallmouth bass				3	2		1	1	1											8	16.00 (12.00)	
Pump Station	Largemouth bass						12	9	5	5	19	7	1	3	3	1			1	1	72	96.00 (2.31)	
	Spotted bass			3	3	1	4	8	3	1	2	2									27	36.00 (12.22)	
	Smallmouth bass										1										1	1.33 (1.33)	
Dock	Largemouth bass	1	10	14	3	11	22	16	6	13	15	11	8	6	1	3	3	3			146	194.67 (33.81)	
	Spotted bass				1		4	4	4	3	1										17	22.67 (9.33)	
	Smallmouth bass																				0	0.00 (0.00)	
Total	Largemouth bass	2	11	15	3	24	32	22	14	18	36	22	9	9	6	2	3	3	4	1	236	118.00 (26.58)	
	Spotted bass	1	7	7	6	6	14	11	13	6	4	1									76	38.00 (8.04)	
	Smallmouth bass				3	2		1	1	1	1										9	4.50 (3.42)	

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Table 129. PSD and RSD values obtained for each black bass species taken in spring electrofishing samples at Wood Creek Lake on 20 April 2010; 95% confidence limits are in parentheses.

Area	Species	No. stock size	PSD (+/- 95%)	RSD ^a (+/- 95%)
Dam	Largemouth bass	14	64 (+26)	21 (+22)
	Spotted bass	19	16 (±17)	0 (±0)
Pump Station	Largemouth bass	60	60 (±13)	15 (±9)
	Spotted bass	20	20 (±18)	0 (±0)
Dock	Largemouth bass	107	47 (±9)	15 (±7)
	Spotted bass	16	25 (±22)	0 (±0)
Total	Largemouth bass	181	52 (+7)	15 (+5)
	Spotted bass	55	20 (±11)	0 (±0)

^aLargemouth bass = RSD_{1.5}, spotted bass = RSD_{1.4}
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Table 130. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Wood Creek Lake during April 2010.

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.
2010	27.50	9.21	43.00	11.33	33.50	5.23	14.00	2.83	2.50	1.05	118.00	26.58
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 131. Spring electrofishing CPUE (fish/hr) for each length group of spotted bass collected at Wood Creek Lake during April 2010.

Year	Length group											
	<8.0 in		8.0-10.9 in		11.0-13.9 in		>14.0 in		Total			
	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.	CPUE	Std. Err.		
2010	13.50	5.45	19.00	2.90	5.50	1.30	0.00	0.00	38.00	8.04		
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 132. Population assessment for largemouth bass based on spring electrofishing at Wood Creek Lake from 2005-2010.

Year	Mean length age-3 at capture	Spring CPUE age 1	Spring CPUE 12.0-14.9 in	Spring CPUE ≥15.0 in	Spring CPUE ≥20.0 in	Total Score	Assessment rating
2010	11.4	15.09	33.50	14.00	2.50	11	F
2009	12.3	5.33	31.00	13.33	2.67	12	G
2008	12.3	5.67	15.33	14.33	2.00	11	F
2007	12.3	5.33	6.00	18.00	1.33	11	F
2006	12.3	11.83	10.00	20.67	2.00	12	G
2005	12.3	2.40	28.00	12.80	3.20	12	G

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Table 133. Mean back calculated lengths (in) at each annulus for largemouth bass collected from Wood Creek Lake during 2010, 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									
2009	4	5.3																		
2008	32	4.8	8.5																	
2007	27	4.7	9.0	11.3																
2006	9	6.0	10.1	12.6	14.1															
2005	9	5.6	9.4	11.2	12.7	13.7														
2004	10	5.3	8.8	10.9	12.4	13.6	14.6													
2003	5	4.9	9.3	12.1	13.7	14.9	15.7	16.3												
2002	1	4.9	9.2	12.8	15.8	17.4	18.4	19.4	19.7											
2001	3	6.0	9.8	12.0	13.9	14.9	16.1	16.6	17.2	17.6										
2000	1	5.3	9.2	11.2	12.8	14.2	15.8	16.5	17.1	17.8	18.1									
Mean		5.1	9.0	11.5	13.2	14.1	15.3	16.7	17.7	17.6	18.1									
Number		101	97	65	38	29	20	10	5	4	1									
Smallest		3.5	6.1	8.6	10.1	11.2	12.0	13.5	15.8	16.1	18.1									
Largest		7.9	12.1	14.1	16.4	17.6	18.7	19.4	19.7	19.6	18.1									
Std error		0.1	0.1	0.1	0.2	0.3	0.4	0.6	0.8	0.7										
95% CI ±		0.3	0.2	0.3	0.5	0.6	0.9	1.2	1.5	1.5										

Otoliths were used for age-growth determinations; Intercept = 0
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Table 134. Age-frequency and CPUE (fish/hr) of largemouth bass collected during 2.0 hours of nocturnal electrofishing at Wood Creek Lake on 20 April 2010.

Age	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	
1	2	11	15																		30	12.6	15.00	(7.36)
2				3	22	29	20	4													78	32.6	39.00	(9.74)
3						3	2	10	18	26	2										61	25.5	30.50	(5.76)
4										3	6	2	5								16	6.7	8.00	(1.64)
5											9	5									14	5.9	7.00	(1.81)
6										7	3	2	3	4							19	7.9	9.50	(1.34)
7											2	2	1	1	1	2					8	3.3	4.00	(0.66)
8																2					2	0.8	1.00	(0.53)
9													1	1	1	2					4	1.7	2.00	(0.54)
10																2					2	0.8	1.00	(0.53)
Not aged																	4	1	1	5	5	2.1	2.50	
%	0.8	4.6	6.3	1.3	10.0	13.4	9.2	5.9	7.5	15.1	9.2	3.8	4.2	2.5	0.8	1.7	1.7	1.7	0.4	100.0	239	100.0	119.50	

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sedagwcl.d10

Table 135. Population assessment for largemouth bass collected from Wood Creek Lake in April 2010.

Parameter	Actual value	Assessment score
Mean length age-3 at capture	11.4	3
Spring CPUE age 1	15.00	1
Spring CPUE 12.0-14.9 in	33.50	2
Spring CPUE \geq 15.0 in	14.00	2
Spring CPUE \geq 20.0 in	2.50	3
Instantaneous mortality (Z)	0.388	
Annual mortality (A)	32.2	
Total score		11
Assessment rating		F

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Table 136. Species composition, relative abundance, and CPUE (fish/hr) of black bass collected during 3.0 hours of 15-minute nocturnal electrofishing runs for black bass in Wood Creek Lake on 23 September 2010; 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
Dam	Largemouth bass				3	6	6	2	5	1	1	2	3	1		1		31	31.00 (9.00)
	Spotted bass	1	1	3	3	4	2	6	4	3	1							28	28.00 (9.80)
	Smallmouth bass		2															2	2.00 (2.00)
Pump station	Largemouth bass		2	16	6	10	10	5	8	13	4	3	4	1	6	1	1	90	90.00 (17.40)
	Spotted bass		5	3	1	7	5	2	5	4	3	2						37	37.00 (11.36)
	Smallmouth bass																	0	0.00 (-)
Dock	Largemouth bass		6	32	29	8	6	14	10	12	3	5	5	5	1			136	136.00 (53.44)
	Spotted bass				4		2		2	4	1		1					14	14.00 (8.72)
	Smallmouth bass																	0	0.00 (-)
Total	Largemouth bass		8	48	38	24	22	21	23	26	8	10	12	7	7	2	1	257	85.67 (21.50)
	Spotted bass	1	6	6	8	11	9	8	11	11	5	2	1					79	26.33 (5.96)
	Smallmouth bass		2															2	0.67 (0.67)

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Table 137. 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
2010	5.0	0.07	36.67	14.88	18.00	6.60		
2009 ^a	3.7	0.43	2.67	1.66	0.67	0.45	15.09 ^b	7.36
2008	3.8	0.12	13.33	3.24	1.00	0.72	5.33	2.67
2007	4.2	0.13	13.33	7.59	2.67	1.24	5.67	3.21
2006 ^a	4.4	0.27	3.70	1.74	0.70	0.45	5.33 ^c	2.38
2005	4.0	0.09	23.70	11.90	3.33	1.38	11.83	4.37
2004	4.2	0.13	17.90	4.78	4.30	1.46	2.40	1.22

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^a Age-0 largemouth bass stocked in the fall

^b Includes fish stocked in fall 2009; CPUE stocked fish=10.00 fish/hr

^c Includes fish stocked in fall 2006; CPUE stocked fish=0.33 fish/hr

Table 138. Number of fish and mean relative weight (Wr) for each length group of black bass collected at Wood Creek Lake during 23 September 2010. 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	76	84 (1)	29	83 (1)	10	97 (3)
	7.0-10.9 in		11.0-13.9 in		≥14.0 in	
	No.	Wr	No.	Wr	No.	Wr
Spotted bass	38	93 (1)	7	86 (2)	0	-

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Figure 1. Results of the Laurel River Lake angler attitude survey conducted from March 8-October 31, 2010.

LAUREL RIVER LAKE ANGLER ATTITUDE SURVEY 2010

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 Laurel River Lake (check all that apply)? (N=262)
91% Bass 12% Crappie 5% Trout 24% Walleye 5% Bluegill 1% Catfish
4. Which one species do you fish for most at Laurel River Lake (check only one)? (N=254)
84% Bass 2% Crappie 2% Trout 10% Walleye 2% Bluegill <1% Catfish

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

Largemouth Bass Anglers

5. In general, what level of satisfaction do you have with largemouth bass fishing at Laurel River Lake? (N=178)
30% Very satisfied 53% Somewhat satisfied 1% Neutral 15% Somewhat dissatisfied 1% Very dissatisfied
- 5a. If you responded with somewhat or very dissatisfied in question (5) -- what is the single most important reason for your dissatisfaction? (N=27)
100% Number of fish 0% Size of fish 0% Not happy with regulations 0% Too many boaters

Smallmouth Bass Anglers

6. In general, what level of satisfaction do you have with smallmouth bass fishing at Laurel River Lake? (N=166)
37% Very satisfied 56% Somewhat satisfied 1% Neutral 5% Somewhat dissatisfied 1% Very dissatisfied
- 6a. If you responded with somewhat or very dissatisfied in question (6) -- what is the single most important reason for your dissatisfaction? (N=8)
88% Number of fish 0% Size of fish 0% Not happy with regulations 0% Too many boaters 12% Increase size limit to 21 in

Spotted Bass Anglers

7. In general, what level of satisfaction do you have with spotted bass fishing at Laurel River Lake? (N=165)
14% Very satisfied 50% Somewhat satisfied 4% Neutral 25% Somewhat dissatisfied 7% Very dissatisfied 1% 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=47)
98% Number of fish 2% Size of fish 0% Not happy with regulations 0% Too many boaters

Crappie Anglers

8. In general, what level of satisfaction do you have with crappie fishing at Laurel River Lake? (N=29)
7% Very satisfied 45% Somewhat satisfied 35% Neutral 3% Somewhat dissatisfied 7% Very dissatisfied 3% 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=3)
100% Number of fish 0% Size of fish 0% Not happy with regulations 0% Too many boaters

Trout Anglers

9. In general, what level of satisfaction do you have with the trout fishing at Laurel River Lake? (N=12)
67% Very satisfied 25% Somewhat satisfied 8% Neutral 0% Somewhat dissatisfied 0% Very dissatisfied
- 9a. If you responded with somewhat or very dissatisfied in question (9) -- what is the single most important reason for your dissatisfaction? (N=0)
0% Number of fish 0% Size of fish 0% Not happy with regulations 0% Too many boaters

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Walleye Anglers

1. In general, what level of satisfaction do you have with the walleye fishing at Laurel River Lake? (N=57)
42% Very satisfied 46% Somewhat satisfied 7% Neutral 5% Somewhat dissatisfied 0% Very dissatisfied
- 10a. If you responded with somewhat or very dissatisfied in question (10) – what is the single most important reason for your dissatisfaction? (N=3)
100% Number of fish 0% Size of fish 0% Not happy with regulations 0% Too many boaters

Bluegill Anglers

2. In general, what level of satisfaction do you have with the bluegill fishing at Laurel River Lake? (N=13)
77% Very satisfied 23% Somewhat satisfied 0% Neutral 0% Somewhat dissatisfied 0% Very dissatisfied
- 11a. If you responded with somewhat or very dissatisfied in question (11) – what is the single most important reason for your dissatisfaction? (N=0)
0% Number of fish 0% Size of fish 0% Not happy with regulations 0% Too many boaters

All Anglers

3. Would you support or oppose a reduction in the current statewide 30 fish daily crappie creel limit to 20 fish? (N=250)
19% Support <1% Oppose 81% No opinion
4. How many times do you fish Laurel River Lake a year? (N=254)
0% First time 2% 1 to 4 8% 5 to 10 93% More than 10
5. Are you satisfied with the current size and creel limits on all sport fish at Laurel River Lake? (N=254) 94% Yes 6% No
- If **NO**:
- 14a. If not, which species are you dissatisfied with and what size and creel limits would you prefer?

Largemouth bass size limit (N=3)
100% 18 in

Largemouth bass creel limit (N=3)
67% 2
33% 5

Smallmouth bass size limit (N=4)
25% 16-21 in
25% 16 in
50% 21 in

Smallmouth bass creel limit (N=4)
75% 2
25% 5

Spotted bass size limit (N=9)
78% 12 in
22% 15 in

Spotted bass creel limit (N=9)
100% 5

Figure 2. Results of the Lake Linville angler attitude survey conducted from March 11-October 31, 2010.

LAKE LINVILLE ANGLER ATTITUDE SURVEY 2010

1. Have you been surveyed this year? Yes - stop survey No – continue
2. Name _____ and Phone number _____ (Optional)
3. Which species of fish do you fish for at Lake Linville (check all that apply)? (N=199)
58% Black bass 43% Crappie 61% Channel catfish 72% Bluegill 12% Hybrid striped bass 1% Carp
4. Which one species do you fish for most at Lake Linville (check only one)? (N=197)
38% Black bass 6% Crappie 25% Channel catfish 32% Bluegill 1% Hybrid striped bass
 -Answer the following questions for each species you fish for – (see question 3)

Black Bass Anglers

5. In general, what level of satisfaction do you have with black bass fishing at Lake Linville? (N=114)
4% Very satisfied 32% Somewhat satisfied 20% Neutral 33% Somewhat dissatisfied 11% Very dissatisfied
- 5a. If you responded with somewhat or very dissatisfied in question (5) – what is the single most important reason for your dissatisfaction? (N=48)
15% Number of fish 83% Size of fish 0% Not happy with regulations 2% Lake conditions

Crappie Anglers

6. In general, what level of satisfaction do you have with crappie fishing at Lake Linville? (N=85)
9% Very satisfied 26% Somewhat satisfied 4% Neutral 33% Somewhat dissatisfied 26% Very dissatisfied 2% 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=47)
64% Number of fish 34% Size of fish 0% Not happy with regulations 2% Lake conditions

Channel Catfish Anglers

7. In general, what level of satisfaction do you have with the channel catfish fishing at Lake Linville? (N=119)
31% Very satisfied 43% Somewhat satisfied 13% Neutral 10% Somewhat dissatisfied 3% Very dissatisfied
- 7a. If you responded with somewhat or very dissatisfied in question (7) – what is the single most important reason for your dissatisfaction? (N=15)
60% Number of fish 27% Size of fish 0% Not happy with regulations 7% Lake conditions 7% Creel and size increase

Bluegill Anglers

8. In general, what level of satisfaction do you have with the bluegill fishing at Lake Linville? (N=141)
57% Very satisfied 29% Somewhat satisfied 1% Neutral 11% Somewhat dissatisfied 2% Very dissatisfied 1% 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=17)
41% Number of fish 53% Size of fish 0% Not happy with regulations 0% Lake conditions 6% Creel amount set

Hybrid Striped Bass Anglers

9. In general, what level of satisfaction do you have with the hybrid striped bass fishing at Lake Linville? (N=22)
41% Very satisfied 36% Somewhat satisfied 5% Neutral 14% Somewhat dissatisfied 5% Very dissatisfied
- 9a. If you responded with somewhat or very dissatisfied in question (9) – what is the single most important reason for your dissatisfaction? (N=4)
50% Number of fish 25% Size of fish 0% Not happy with regulations 0% Lake conditions 25% Size limit

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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=199)
69% Support 27% Oppose 5% No opinion
2. How many times do you fish Lake Linville a year? (N=199)
0% First time 9% 1 to 4 13% 5 to 10 78% More than 10
3. Are you satisfied with the current size and creel limits on all sport fish at Lake Linville? (N=198) 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=33)

- 12% 14 in
- 85% 15 in
- 3% 20 in

Largemouth bass creel limit (N=33)

- 3% 1
- 6% 2
- 15% 3
- 6% 4
- 70% 5

Spotted bass size limit (N=18)

- 78% 12 in
- 22% 15 in

Spotted bass creel limit (N=18)

- 6% 3
- 6% 4
- 56% 5
- 8% 6
- 17% 7
- 11% 10

Crappie size limit (N=25)

- 56% 9 in
- 44% 10 in

Crappie creel limit (N=27)

- 4% 7
- 7% 15
- 63% 20
- 4% 25
- 22% 30

Channel catfish size limit (N=16)

- 6% 11 in
- 31% 12 in
- 6% 14 in
- 56% 15 in

Channel catfish creel limit (N=15)

- 33% 5
- 33% 10
- 13% 12
- 7% 15
- 7% 30
- 7% No limit

Bluegill size limit (N=7)

- 29% 5 in
- 14% 6 in
- 57% 8 in

Bluegill creel limit (N=11)

- 45% 20
- 18% 25
- 27% 30
- 9% 60

Hybrid striped bass size limit (N=7)

- 14% 10 in
- 57% 15 in
- 14% 20 in
- 14% 24 in

Hybrid striped bass creel limit (N=7)

- 43% 2
- 29% 3
- 14% 10
- 14% 15

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 2010.

Buckhorn Lake

Length frequency, catch-per-unit-effort (CPUE), and population assessment based on early spring sampling for muskellunge in 2010 using daytime electrofishing at Buckhorn Lake (1,230 acres) are shown in Tables 2 and 3. Musky were sampled through 46.1 in during electrofishing (Table 2). An assessment rating of "Good" was observed during 2010, down from "Excellent" in 2009 (Table 3). The 2010 sampling was presumably hindered somewhat by an approaching storm front. The \log_{10} length-weight equation for muskellunge during 2010 sampling was $-4.42 + 3.55(\log_{10} \text{ length})$. On 1 March 2010 the musky size limit in the lake changed from 40.0 in to 36.0 in. This may decrease CPUE of larger fish in the future. In 2009, a potential state record muskellunge was observed while sampling, but not caught. The fish was estimated to be 56.0-57.0 in. A total of 430 muskellunge (12.7 in) were stocked during September 2010. Muskellunge stocked in 2010 received a left pectoral fin clip for future identification. The tailwater below Buckhorn Lake continues to provide an additional good muskellunge fishery. During 2011, muskellunge will be sampled in the spring.

The black bass populations were sampled during the spring and fall (Tables 4-10). Largemouth bass comprise the major black bass species in this lake. The assessment rating has ranged from "Fair" to "Good" from 2003-2010 (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 (Table 10). However, due to a strong 2010 year class, largemouth bass were not stocked in 2010. Additionally during 2010, the lake remained at summer pool for approximately 40 days longer than normal before being dropped to winter pool. This will aid in growth of age-0 bass and reduce their natural mortality to predation. 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.

White crappie were sampled using trap nets in November 2010 (Tables 11-15). An assessment value of "Good" was observed (Table 15). While the growth rate (based on length of age-2 fish at capture) appears to have increased slightly since the 2007 and 2008 samples, it is still slower than that of 2003 – 2005 (Table 15). At present there is an over abundance of small fish slowing growth. A length limit of 9.0 in was implemented on 1 March 2007 and since this time the growth rate has decreased. This will prevent fishing mortality from reducing smaller fish numbers at present. Future management may require this regulation to be removed to improve growth rates and reduce small fish numbers. However, there is the possibility of increased natural mortality or poor recruitment years to reduce fish numbers. Also, growth of younger fish can be increased by maintaining the summer pool for longer periods before drawdown to winter pool.

Habitat improvement work (Christmas tree reefs, hardwood brush piles, wood pallet structures, and vegetation) will continue to aid recruitment of age-0 largemouth bass and other fish in the lake. During 2011, black bass will be sampled in the spring and fall with boat electrofishing.

Additional fish stocking occurred throughout the year at the tailwater area below the dam. A total of 3,200 rainbow trout (8.0-12.0 in) were stocked during the months of April-June and October.

Carr Creek Lake

The black bass population was sampled during the spring and fall at Carr Creek Lake (710 acres). Tables 16-22 provide data from the spring and fall sampling. The assessment rating remained "Fair" for largemouth bass in 2010, which it has been 7 of the last 9 years. However, the total assessment value has been "9" for three of the past 4 years which is down from values of "11-12" normally seen at Carr Creek Lake. The spring CPUE (fish/hr) was the

lowest it has been in the past nine years. This may be due partially to a late sample and warm temperatures, however, there has been a somewhat steady decline in CPUE over the past 6 years. The reduced densities of largemouth bass are in large part due to poor recruitment of age-0 to age-1 fish. Fall electrofishing for black bass was conducted early during high water temperature and very few fish could be collected. This was similar to conditions in 2008 and 2009. Approximately 11,136 largemouth bass (4.0 – 5.0 in) were stocked in October. During the fall of each year from 2005-2010, largemouth bass were stocked to supplement low recruitment of age-0 to age-1 fish. Fish stocked in 2005 received a right pectoral fin clip, 2006 a left pectoral fin clip, 2007 a left pelvic fin clip, 2008 a right pelvic fin clip, 2009 a right pectoral fin clip, and 2010 a left pectoral fin clip for future identification. Further work will continue investigation of the recruitment of young fish. During 2011, 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.

Daytime electrofishing was completed on 15-16 March 2010 for walleye. Tables 23-26 list length frequency, CPUE, age frequency, relative weights, and population assessment for walleye. The CPUE of walleye in 2010 (12.74 fish/hr) was less than that of 2009 (21.34 fish/hr) yet comparable to that of 2008 (12.76 fish/hr; Table 23). CPUE was considerably higher from 2003 to 2007 (26.70-32.92 fish/hr). The reason for the decreased CPUE in recent years is that effort has increased substantially in order to collect enough broodstock. As sampling time has increased, CPUE has decreased, mainly due to sampling parts of the lake multiple times and areas that are less productive as sampling time increases. The fishery and growth rate remains very good. The assessment value in 2010 was “Good” (Table 26) and relative weights are excellent (Table 25). 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 have seemed to significantly impact the fishery. Mean relative weights are near or exceed 100 for all size groups of walleye examined (Table 25). The \log_{10} length-weight equation for walleye during 2010 was $-3.59 + 3.14(\log_{10} \text{ length})$. During 2010, walleye will be sampled in the spring (March). An estimated 36,033 walleye (1.61-1.67 in) were stocked in May 2010.

Data for black and white crappie sampled during the spring walleye electrofishing is presented in Tables 27-30. Due to very poor fall trap netting catches, spring electrofishing was initiated in 2007. This will continue to be used to monitor the population. The \log_{10} length-weight equation for black crappie was $-3.61 + 3.30(\log_{10} \text{ length})$ and for white crappie was $-3.99 + 3.67(\log_{10} \text{ length})$. Approximately 7,100 black crappie and blacknose black crappie (3.0 in) were stocked in November 2007. Some of these blacknose crappie were observed in angler catches in 2009 and were legal size fish. The fishery has a special regulation of a 9.0-in minimum size. During the fall of 2009 a research study was initiated on white crappie recruitment. A total of 5,440 white crappie were stocked in 2009 and 9,676 white crappie were stocked in 2010. White crappie will be stocked for a minimum of 3 years during this study. Legal size fish at present are approximately 67% white crappie and 33% black crappie.

Cranks Creek

Spring and fall electrofishing was completed at Cranks Creek Lake (219 acres) for black bass in 2010. Tables 31-37 provide data from spring and fall sampling. Largemouth bass continued to receive an assessment rating of “Good” (Table 35). Spring electrofishing CPUE for largemouth bass <8.0 in, ≥ 15.0 in, and ≥ 20.0 in were all at their highest point of the last 10 years (Table 32). The CPUE of age-0 largemouth bass collected in the fall of 2010 was higher than other years on record indicating a strong 2010 year class (Table 37). However, mean length of age-0 largemouth bass (4.3 in) remained low. This lake is very low in fertility and has had periodic problems with low pH. During 2011, black bass will be sampled in the spring and fall. Channel catfish will also be sampled in fall 2011 using baited-tandem hoop nets.

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, aquatic plants can be very thick and thorough in coverage. Monitoring of 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 to offer guidance to the 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 2010 (Tables 38-44). The largemouth bass assessment rating was "poor" for the first time since 2003 (Table 42). This was due to poor timing of the spring sample which resulted in low CPUE. Recruitment of young-of-year fish remains consistent and has prevented the need for supplemental stocking of largemouth bass (Table 44).

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 was in 2007. 2010 was the final year for this research project and no white bass sampling is scheduled for 2011.

White and black crappie were sampled using trap nets in November 2010 (Tables 45-52). This sampling was cut short in time due to a mandatory furlough work day. An assessment value of "Good" was observed for white crappie (Table 51). While the overall white crappie CPUE (fish/net-night) was down, the growth rate has increased with the absence of hydrilla. Younger fish, especially, are showing much better growth rates than older fish that were spawned in years when hydrilla was still present.

A daytime creel survey was conducted at Dewey Lake from 1 April-24 October 2010 (Tables 53-60). The creel survey was a random roving creel design (date and time) and the lake was treated as one area. Surveys consisted of 2.0-6.0 hour periods (morning starting at 600 hrs and afternoon starting at 1300 hrs). Angler counts were conducted in the middle of each respective 6.0 hour time period.

The number of fishing trips during the 2010 creel survey was comparable to the previous creel survey in 2007 while the total angler hours were more in 2010 than in 2007 (Table 53). The total fishing trips and angler hours were 3,862 and 26,491, respectively in 2010 and 3,827 and 17,907 in 2007. Angler success rates during 2010 were 2.16% for black bass, 46.53% for crappie, 50.88% for panfish, and 20.51% for catfish (Table 54). Angler success rates during 2007 were 2.53% for black bass, 37.21% for crappie, 63.64% for panfish, and 26.47% for catfish. White crappie were the most numerous fish caught during the 2010 survey at 14,086 fish (Table 54). Largemouth bass were the second most numerous fish caught in 2010 at 10,450 fish (Table 54).

An angler attitude survey was conducted at the lake to obtain further information. Anglers were asked to answer a series of questions regarding the fishery at Dewey Lake (Appendix A). Anglers were surveyed throughout the creel during 2010 with anglers only being asked the questions once. A total of 210 surveys were completed during the lake creel. Black bass at 69.0% (N=145) were the most popular species fished for on the lake followed by crappie at 36.2% (N=76), channel catfish at 7.1% (N=15), bluegill at 6.7% (N=14), white bass at 5.7% (N=12), flathead catfish at 5.2% (N=11), blue catfish at 3.8% (N=8), and carp at 0.5% (N=1). Level of fishing satisfaction was asked for several fish groups or species and all categories exceeded 50.0% being somewhat satisfied to very satisfied except three. Angler fishing satisfaction of somewhat satisfied to very satisfied of $\geq 50.0\%$ was observed for channel catfish at 86.7%, black bass at 74.3%, and crappie at 67.6%. Neutral was 54.5% for flathead catfish. Somewhat dissatisfied to very dissatisfied was 62.5% for blue catfish, and 57.1% for white bass.

Several stockings of various fish occurred during 2010. A total of 36,100 redear sunfish (1.0-1.5 in), and 17,610 blue catfish (5.0-7.0 in) were stocked. These stockings were in conjunction with zebra mussel and hydrilla management at the lake. Channel catfish fingerlings (32,532 fish; 3.0-7.0 in) were also stocked in Dewey Lake in 2010. Rainbow trout were stocked in the tailwater of Dewey Lake in April and May (1000 fish/month), and October (800 fish).

Fishpond

Largemouth bass were sampled at Fishpond Lake (32 acres) on 22 April 2010 (Table 61). Due to the water clarity of this lake, nocturnal electrofishing was utilized. CPUE of largemouth bass in 2010 was down for every length group from 2009 and total CPUE (78.86 fish/hr) was at the lowest point since 1997 (Table 62). The low CPUE is not cause for alarm as it is likely due to a large amount of filamentous algae extending 10-12 ft from the shoreline and other conditions limiting sampling. While CPUEs were down from recent years, the CPUE of largemouth bass

≥ 20.0 in (4.57 fish/hr) was still above average for lakes in the Eastern District. The PSD value decreased from 2009 (66) to 2010 (54), while the RSD value increased slightly from 2009 (17) to 2010 (18; Table 63). Additional management at Fishpond Lake entails fertilization of the lake during the spring for increasing zooplankton density for young-of-year fishes. Fertilization will be actively pursued in 2011 to limit the filamentous algae growth. 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 2011.

Fishtrap Lake

Spring and fall 2010 black bass sampling data for Fishtrap Lake (1,143 acres) is shown in Tables 64-73. Largemouth, smallmouth, and spotted bass all provide significant fisheries at this lake. The population assessment ratings for largemouth bass and smallmouth bass remain "Good" (Tables 70-71). Below average recruitment of age-0 largemouth bass (Table 73) was supplemented with 11,454 largemouth bass (4.4 in) in October. These stocked fish received a left 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. Sampling during 2011 will occur in the spring and fall for black bass. Approximately 30,000 smallmouth bass fry were stocked in the lake in 2010.

Fall 2010 white crappie trap net sampling data for Fishtrap Lake is shown in Tables (74-78). The assessment rating was "Good" (Table 78). The mean total length of age 2+ fish at 7.5 in is down from previous years. This will be monitored following the implementation of a 9.0 in minimum size limit on crappie in 2010 as to whether fish continue to decrease in growth and become stunted.

About 23,002 hybrid striped bass (2.1 in) were stocked in the lake during the month of June. A total of 36,100 redear sunfish were stocked for utilizing the introduced zebra mussels for food. Native walleye fry (60,000) were stocked in April in the lake and 33,014 advanced fingerlings (1.2 in) were stocked in Levisa Fork upstream of Fishtrap Lake as part of a research study which began in 2010. Stockings and data collection pertaining to this study will be coordinated through the Lake Fisheries Research section. Rainbow trout (6,600 fish total) were stocked in the tailwater in April, May, June, October, and November.

Martin County Lake

Largemouth bass were sampled with electrofishing gear on 8 April 2010. Tables 79-80 contain length frequency, CPUE, PSD, and RSD data. Size distribution of largemouth bass in this small 3-acre lake is good for supporting a panfish fishery. The PSD level continues to remain below 40 with numerous smaller bass. Additionally during 2010, Martin County Lake was sampled by the "FINS" staff with boat electrofishing gear. This sample effort looked at sunfish, catfish, and black bass. In the future Martin County Lake will be monitored or sampled each year by just the FINS program staff.

Martin County Reservoir

This lake has recovered slowly since the Martin County coal slurry spill of October 2000. Current fish stockings occur with a total of 4,500 rainbow trout stocked annually during April, May, and October and channel catfish on an every other year rotation. Spring daytime electrofishing was conducted at this lake for largemouth bass on 11 May 2010. Length frequency and CPUE is presented in Table 81. The largemouth bass population appears to be stunted, with high numbers of fish <13.0 in and only 2 fish >15.0 in. A PSD value of 20 for largemouth bass in 2010 (Table 82) and a PSD value of 64 for bluegill in 2009 further reflect a population with high numbers of stunted largemouth, effectively cropping bluegill leading to better bluegill growth. Martin County Lake will not be sampled in 2011.

Martins Fork Lake

Martins Fork Lake (330 acres) was sampled for black bass in the spring and fall (Tables 83-89) and walleye in the spring. Assessment scores for largemouth bass have remained "Fair" from 2003 – 2010 (Table 87). While densities are low for largemouth bass, their length groups are rather evenly distributed (Table 84), and they show exceptional growth rates. The smaller coosa bass (redestye bass) continue to maintain a viable population in the lake. However, the black bass fishery is dominated in numbers by largemouth bass and spotted bass (Table 83).

Walleye numbers continue to decrease greatly with the elimination of their annual stocking in 2005. No walleye were found in 2010, and 2009 sampling found only 17 individuals, all age-5 or older (Table 90). 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 2011 and walleye will be sampled again in the spring of 2011 if conditions allow.

Channel catfish are scheduled to be stocked in 2011. Brush piles will be put in the lake during summer 2011 in an attempt to boost the crappie population. An additional fishery furnished by Martins Fork Lake that continues to be popular with anglers is the tailwater rainbow trout fishery. 4,200 trout were stocked in the tailwater from April-October 2010. Occasionally walleye are also caught in this area as well.

Paintsville Lake

During 2010, black bass were sampled in both the spring and fall (Tables 91-97). In 2002, a 12.0-15.0 in protective slot length limit was implemented on largemouth and smallmouth bass. Anglers haven't made an impact in the numbers of 8.0-12.0 in largemouth bass, however, finally in 2010 increases in numbers of largemouth bass greater than 15.0 in were improving (Table 92). This improved the assessment rating of the largemouth bass fishery from "Poor" in 2009 to "Good" in 2010 (Table 95). 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, trout, and walleye cool water habitat. A total of 20,318 smallmouth bass (mean length=2.3 in) were stocked in June 2010 to supplement low numbers of smallmouth bass in hopes of establishing a smallmouth bass fishery. Smallmouth bass will be stocked annually through 2014.

Quality of summertime cool water habitat has improved since 2006 and 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 received a stocking of approximately 18,500 rainbow trout (8.0 in) in January. Walleye (n=58,015, mean length=1.6 in) were also stocked in May 2010. Additional fisheries provided by the lake are the brown and rainbow trout fisheries found in the tailwater area below the dam. Approximately 16,600 rainbow trout were stocked in the tailwater from April to November, and 300 brown trout were stocked in the tailwater in April 2010.

Walleye and white crappie were sampled during March using daytime electrofishing. Walleye data is presented in Tables 98-100. The walleye assessment rating continues to be "Fair"; however, its score has improved slightly (Table 100). Future evaluations will hopefully show ratings of "Good." White crappie data is presented in Tables 101-104. White crappie CPUE in 2009 (39.02 fish/hr) and 2010 (22.62 fish/hr) is up from that of 2008 (8.09 fish/hr; Table 102). Best numbers occur in the upper lake above the junction of Little Paint and Open Fork branches. Black crappie are present, but rare in angler catches and electrofishing samples.

Hydrilla was treated at the Lost Creek boat ramp to aid in access. During summer 2010, approximately 20 spawning benches were placed in the lake for smallmouth bass and/or other black bass nesting habitat. Black bass, white crappie, and walleye will be sampled via electrofishing during the spring and black bass will be sampled again in the fall 2011. Spring black bass sampling will continue to 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. A creel and angler attitude survey will take place on Paintsville Lake in 2011 in order to evaluate angler exploitation of and attitudes towards the fisheries in the lake.

Pan Bowl Lake

Length frequency and CPUE were collected for largemouth bass on 13 April 2010 (Table 105). Additional summary of data can be found in Tables 106-109. The slow growth rate and sometimes cyclic high recruitment of young-of-the-year fish make this fishery difficult to manage for continuous angler satisfaction. The PSD level of 14 (Table 107) is very low, which would be good for a quality panfish fishery. However, this lake has always been known for its trophy bass and is a popular lake for tournaments. Some limited chemical application was done in 2010 to lessen areas of heavy plant growth. Also during 2010, approximately 20 grass carp were stocked in the lake for vegetation reduction. With reduced plant density it is believed this will allow largemouth bass to increase predation on sunfish. CPUEs for all length groups of largemouth bass except those <8.0 in were somewhat lower than previous years (Table 106). The increase of small fish each year is likely due to the high abundance of Eurasian milfoil in Pan Bowl Lake since 2007.

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 2011 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 21 April 2010 for largemouth bass. Tables 110-112 contain information from the April daytime electrofishing sample for bass. Total CPUE of largemouth bass increased from 2009 to 2010 in all length groups except largemouth bass >20.0 in which was the same in 2009 and 2010 (8.00 fish/hr; Table 111). The CPUEs of fish ≥ 15.0 in (52.57 fish/hr) and ≥ 20.0 in (8.00 fish/hr) in Pikeville City Lake are the highest in the Eastern Fisheries District. PSD and RSD have both increased from 2008 (56 and 46 respectively) to 2009 (65 and 48 respectively) to 2010 (77 and 55 respectively; Table 112). The increased PSD and RSD and the continued high CPUE of fish ≥ 20.0 in are indicative of a big bass fishery; a sign that the catch-and-release-only regulation is working for the time being. During 2011, no sampling will be conducted on Pikeville City Lake.

Yatesville Lake

Black bass (largemouth and spotted bass) were sampled during the spring and fall of 2010 (Tables 112-119). 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. Largemouth bass had an assessment value of 13 ("Good") in 2010 (Table 117), which is slightly greater than the value of 12 in 2008 and 2009. Monitoring will continue each year to determine if supplemental age-0 largemouth bass stocking will be necessary.

Several fish stockings occurred in 2010. A total of 36,100 redear sunfish were stocked in the lake during September. Rainbow trout were stocked in the tailwater of Yatesville Lake in April, May, and November (600 fish/month, 1,800 fish total).

During 2011, fish sampling and habitat work will continue at Yatesville Lake. Black bass will be sampled in the spring and fall and white crappie in the fall. Habitat work will primarily consist of selective cutting of cedar trees from the Yatesville Lake WMA property to create brush piles. This habitat should improve the recruitment for largemouth bass and white crappie.

Table 1: Summary of 2010 sampling conditions by waterbody, species sampled and date.

Water body	Species	Date	Time (24hr)	Gear	Weather	Water Temp (°F)	Water level (elev ft)	Secchl (in)	Pertinent sampling comments ^{a,b}
Buckhorn Lake	Musky	2/23	1100	shock	cloudy/cold/light rain	40.5	758.00	27	lower lake; used 1 boat; murky; missed one 56-57 in
Buckhorn Lake	Musky	2/24	1100	shock	cloudy/cold/snow	41.0	758.00		lower lake; used 1 boat; rain coming
Buckhorn Lake	Musky	3/8	1100	shock	cloudy/warm	44.0	759.70		lower lake; used 1 boat; rain coming; BBR assisted
Buckhorn Lake	LMB	5/19	2100	shock	cloudy/drizzly	72.0			cond: 230; whole lake; used 2 boats; upper lake-murky
Buckhorn Lake	LMB	10/4	2100	shock	cloudy/rain	70.0	782.00		cond: 470; whole lake; only had 1 boat
Buckhorn Lake	WC	11/15	1100	trap net	fog/light rain	48.0	766.03		upper lake
Buckhorn Lake	WC	11/16	1100	trap net	fog/light rain	50.0			upper lake
Buckhorn Lake	WC	11/17	1100	trap net	fog/light rain				upper lake
Carr Creek Lake	WE/WC/BC	3/15	900	shock	cloudy/windy/rain	45-49	1017.20		cond: 470; whole lake; used 2 boats; upper lake-turbid
Carr Creek Lake	WE/WC/BC	3/16	900	shock	partly cloudy/rain	46-48			whole lake; used 2 boats
Carr Creek Lake	LMB	5/20	2100	shock	cloudy	74.0			cond: 445; whole lake; used 2 boats
Carr Creek Lake	LMB	9/21	2100	shock	clear	77.0	1027.20	87-93	cond: 613; pH: 8.50; whole lake; used 2 boats
Cranks Crk Lake	LMB	9/27	2100	shock	rain	76.0	normal		bp: 29.84; cond: 293; pH: 7.91; whole lake
Cranks Crk Lake	LMB	4/22	1100	shock	cloudy	65.0	normal	90	whole lake; used 1 boat; water clear
Dewey Lake	WB	4/14	1100	shock	sunny	62.0	650.84		upper lake - Johns Creek; used 2 boats; assisted LFR
Dewey Lake	LMB	4/14	2100	shock	clear	66.0	650.84		cond: 435; whole lake; used 2 boats; no big fish on banks, too early
Dewey Lake	LMB	9/20	2100	shock	partly cloudy	79.0	650.37	28-66	bp: 30.13; cond: 606; pH: 8.69; whole lake; used 2 boats; lower-clear; upper-murky
Dewey Lake	WB	10/25	1100	gill net	sunny	63-64	650.2-650.3		whole lake; set 10 nets; assisted LFR
Dewey Lake	WB	10/26	1000	gill net	sunny/calm/windy	63-64	650.2-650.3	32	whole lake; set 9 nets; assisted LFR
Dewey Lake	WB	10/27	1000	gill net	cloudy/pt. sunny/calm	63-64	650.2-650.3	40	whole lake; set 9 nets; assisted LFR
Dewey Lake	WB	10/28	1000	gill net	sunny/breezy	63-64	650.2-650.3	32	whole lake; pulled 9 nets; assisted LFR
Dewey Lake	WC/BC	11/8	1100	trap net	sunny	48.0	649.10		bp: 30.17; upper lake
Dewey Lake	WC/BC	11/9	1100	trap net	sunny	47.0			upper lake; cut short (furlough day)
Fishpond	LMB	4/22	2100	shock	partly cloudy	64.0	normal		cond: 663; pH: 8.53; whole lake; used 1 boat
Fishtrap Lake	SMB/WC	March	1000	shock	cool	40.0			cond: 629; whole lake; smallmouth bass and white crappie broodfish acquisition; 2 days; BBR assisted
Fishtrap Lake	LMB	5/26	2100	shock	mostly clear	77-80	757.35	120	cond: 487; whole lake; used 2 boats
Fishtrap Lake	LMB	10/5	2100	shock	cloudy/rain	72.0	751.70		cond: 726; pH: 8.10; whole lake; used 2 boats
Fishtrap Lake	WC	11/22	1100	trap net	partly cloudy/rain		743.70		bp: 30.27; upper lake
Fishtrap Lake	WC	11/23	1100	trap net	partly cloudy/rain	51.0			upper lake
Fishtrap Lake	WC	11/24	1100	trap net	partly cloudy/rain				upper lake
Levisa Fork River	SMB	March	1100	shock		42.0			cond: 624; smallmouth broodstock acquisition; 1 day-Prestonsburg, 1 day-Paintsville
Martin Co Lake	LMB	4/8	1030	shock	cloudy/rain	64.0	normal	78	whole lake; used 1 boat
Martin Co Res	LMB	5/11	1100	shock	cloudy/rainy	65.0	normal	110	cond: 245; whole lake; used 1 boat
Martins Fk Lake	WE	3/23	1100	shock	cloudy/light rain	50.0	1301.25		cond: 143; whole lake-random, for small walleye-verification
Martins Fk Lake	LMB	4/29	2100	shock	mostly clear	64.0	1312.50		cond: 135; whole lake; used 1 boat
Martins Fk Lake	LMB	9/27	2100	shock	rain	76.0	1309.55		bp: 29.84; cond: 190; pH: 9.10; whole lake; used 1 boat
Paintsville Lake	WE/WC/BC	3/18	930	shock	sunny	47-53	709.30	12-30	cond: 124; whole lake; used 2 boats; water stained and murky
Paintsville Lake	LMB	4/15	2100	shock	partly cloudy	66.0	709.48		cond: 114; whole lake; used 3 boats; BBR assisted
Paintsville Lake	LMB	9/22	2100	shock	cloudy	77.5	708.55	135	bp: 30.13; cond: 136; pH: 8.36; whole lake; used 3 boats; BBR assisted

Table 3. Population assessment for muskellunge from Buckhorn Lake (1,230 acres) captured during spring electrofishing from 1998-2010. Assessment scores for 2002 were derived from fall electrofishing data. Actual values are in parentheses.

Parameter	Assessment scores												
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
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)	3 (5.09)
CPUE ≥ 20.0 in	2 (3.20)	3 (8.50)	3 (5.40)	1 (1.70)	3 (5.50)	2 (3.90)	4 (11.10)	2 (3.70)	3 (6.30)	4 (11.98)	2 (3.83)	3 (7.68)	3 (7.77)
CPUE ≥ 30.0 in	1 (0.90)	2 (1.80)	3 (3.80)	1 (1.20)	4 (4.00)	2 (2.00)	4 (6.30)	3 (2.60)	4 (4.40)	4 (5.32)	2 (2.17)	4 (4.65)	3 (3.37)
CPUE ≥ 36.0 in	1 (0.30)	1 (0.20)	3 (1.00)	2 (0.50)	4 (1.50)	2 (0.65)	4 (2.80)	4 (2.10)	4 (2.50)	4 (2.45)	2 (0.60)	4 (1.81)	4 (1.71)
CPUE ≥ 40.0 in	0 (0.00)	0 (0.00)	2 (0.20)	3 (0.30)	3 (0.50)	3 (0.30)	3 (0.30)	4 (1.10)	4 (1.00)	4 (1.55)	3 (0.48)	4 (1.04)	3 (0.37)

Total Score	6	8	13	8	15	11	18	15	18	17	12	19	16
Assessment Rating	Poor	Fair	Good	Fair	Good	Fair	Excellent	Good	Excellent	Excellent	Good	Excellent	Good
EFDBLMSS:D98 - EFDBLMSS:D10													

Table 4. Length frequency and CPUE (fish/hr) of black bass collected in approximately 2.514 hours of 15-min nocturnal electrofishing runs at Buckhorn Lake (1,230 acres) on 19 May 2010; 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			
Upper	LMB	4	4	12	5	2	15	10	11	6	15	11	2	5	2	2	6	1	113	90.40	(9.00)	
Lower	LMB	1	8	12	4	1	3	20	8	7	6	6	6	5	2	2	1	1	93	73.53	(22.43)	
Total	LMB	5	12	24	9	3	18	30	19	13	21	17	8	10	4	4	6	2	206	81.97	(11.73)	

LMB = largemouth bass
EFDBLLSS:D10

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											
	<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	22.67	3.53	18.67	2.33	28.33	3.76	6.33	1.15	0.00	0.00	76.00	6.89
2004	38.00	6.20	51.67	6.52	29.33	4.19	4.33	1.51	0.00	0.00	123.33	11.55
2005	17.00	3.49	45.00	5.12	38.33	5.49	8.33	1.15	0.33	0.33	108.67	7.86
2006	14.17	2.18	35.24	4.62	40.51	5.06	15.22	3.40	0.33	0.33	105.14	10.97
2007	14.50	4.27	26.00	2.73	20.50	3.33	14.00	2.39	0.50	0.50	75.00	6.04
2008	14.79	5.47	27.01	7.24	21.35	3.31	13.82	1.75	0.00	0.00	76.97	11.95
2009	41.16	3.54	32.03	7.71	17.18	4.84	14.45	3.03	0.00	0.00	104.82	13.16
2010	21.18	4.47	31.78	6.63	18.32	3.74	10.68	2.61	0.38	0.38	81.97	11.73

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Table 6. PSD and RSD₁₅ values for largemouth bass taken in spring electrofishing samples in each area of Buckhorn Lake (1,230 acres) on 19 May 2010; 95% confidence intervals are in parentheses.

Area	Species	No. ≥8.0 in	PSD (+/- 95%)	RSD ₁₅ (+/- 95%)
Upper	Largemouth bass	86	51 (41-62)	19 (10-27)
Lower	Largemouth bass	67	43 (31-55)	16 (7-25)
Total	Largemouth bass	153	48 (40-56)	18 (12-24)

EFDLLSS.D10

Table 7. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Buckhorn Lake (1,230 acres) from 2003-2010.

Age	Year									
	2003	2004	2005	2006	2007	2008	2009	2010	2010	2010
1	19.17	35.50	16.25	11.19	13.00	11.19	43.76	26.10		
2	19.92	53.33	42.42	36.41	25.25	28.73	25.94	24.30		
3	17.80	17.38	30.13	24.14	13.83	14.12	19.42	20.99		
4	9.81	9.75	9.56	14.66	7.87	7.74	10.96	5.41		
5	4.93	4.73	5.83	9.41	7.58	7.22	0.53	0.80		
6	1.71	1.64	2.15	5.02	3.47	4.41	2.11	2.38		
7	1.33	0.67	2.00	3.65	2.50	3.18	0.53	0.80		

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	2010	2010	2010
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 (12.6)	4 (13.3)	4 (13.3)	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)	2 (26.10)		
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)	2 (18.32)		
Spring CPUE ≥15.0 in	2 (6.30)	2 (4.30)	2 (8.30)	3 (15.20)	3 (14.00)	3 (13.82)	3 (14.45)	2 (10.68)		
Spring CPUE ≥20.0 in	0 (0.00)	0 (0.00)	2 (0.30)	2 (0.30)	2 (0.50)	0 (0.00)	0 (0.00)	2 (0.38)		
Total score	10	11	13	14	12	10	12	12		
Assessment rating	Fair	Fair	Good	Good	Good	Fair	Good	Good		
Instantaneous mortality (z)	0.61	0.85	0.67	0.48	0.45	0.42	0.64	0.73		
Annual mortality (A)	45.60	57.20	48.70	38.00	36.40	34.20	47.40	51.80		

EFDBLLSS.D03-D10
 EFDBLLAS.D04
 EFDBLLAS.D09

Table 9. Length frequency and CPUE (fish/hr) of black bass collected in approximately 2.00 hours of 15-min nocturnal electrofishing runs at Buckhorn Lake (1,230 acres) on 4 October 2010; numbers in parentheses are standard errors.

Area	Inch class																		Total	CPUE
	Species	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
Upper	LMB	11	12	14	25	10	7	2	4	4	3	3	1	2	1	1	1	100	100.00	(9.66)
Lower	LMB	15	25	12	7	3	4	1	2	3	6	3	2	1	1	2	93	93.00	(14.73)	
Total	LMB	26	37	26	32	13	11	1	4	7	10	9	6	3	3	1	2	193	96.50	(8.26)

LMB = largemouth bass
EFDBLLSF.D10

Table 10. Indices of year class strength at age-0 and age-1 and mean lengths (in) of age-0 largemouth bass at Buckhorn Lake (1,230 acres) from electrofishing. CPUE=fish/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	4.5	0.10	99.30	7.40	38.70	2.60	19.20	3.30		
2003	4.7	0.50	106.00	13.80	39.70	4.60	35.50	5.40		
2004	3.6	0.04	176.70	34.00	9.30	4.60	16.25	3.50		
2005	4.0	0.20	44.70	6.60	10.00	3.50	11.19	2.10		
2006	4.2	0.20	17.60	4.10	5.30	1.90	13.00	3.74		
2007	4.5	0.20	18.78	6.43	9.59	3.44	11.19	3.77		
2008	4.9	0.14	21.44	3.68	9.91	2.31	43.76	3.48		
2009	no fall sample						26.10	5.16		
2010	4.3	0.11	67.00	5.00	22.50	5.75				

EFDBLLSF.D02-D08, D10
EFDBLLAS.D04
EFDBLLAS.D09
EFDBLLSS.D03-D10

Table 11. Length frequency and CPUE (fish/net-night) for white crappie collected at Buckhorn Lake (1,230 acres) in 21 net-nights from 15 to 17 November 2010. Standard errors are in parentheses.

	Inch class													Total	CPUE	SE
	3	4	5	6	7	8	9	10	11	12	13					
403	65	390	315	174	139	62	37	21	4	1	1611	76.71	(11.72)			

EFDLCTF.D10

Table 12. PSD and RSD₁₀ values calculated for white crappie collected in trap nets at Buckhorn Lake (1,230 acres) during November 2010; 95% confidence intervals are in parentheses.

No. \geq stock size	PSD	RSD ₁₀
1,143	23 (21-26)	6 (4-7)

EFDLCTF.D10

Table 13. Mean back-calculated length (in) at each annulus for white crappie collected from Buckhorn Lake (1,230 acres) in November 2010, including 95% confidence intervals.

Year	class	No.	1	2	3	4	5	6	7
2009		31	4.2						
2008		11	4.4	6.2					
2007		24	4.5	6.0	7.4				
2006		19	4.6	6.0	7.0	8.2			
2005		17	4.5	6.0	7.1	7.9	8.9		
2004		6	4.7	6.1	7.4	8.5	9.5	10.7	
2003		2	4.8	6.3	7.6	8.5	9.3	10.0	10.9
Mean			4.5	6.0	7.2	8.2	9.1	10.6	10.9
Smallest			3.2	4.5	5.4	6.1	6.3	9.0	9.9
Largest			5.6	7.6	9.0	9.9	11.0	11.6	11.8
STD error			0.0	0.1	0.1	0.1	0.2	0.3	0.9
95% CI LO			4.4	5.9	7.1	7.9	8.7	10.0	9.0
95% CI HI			4.5	6.1	7.4	8.4	9.5	11.1	12.7

Intercept = 0

EFDLCAF.D10

Table 14. Age frequency and CPUE (fish/net-night) of white crappie collected by trap netting for 21 net-nights at Buckhorn Lake (1,230 acres) in November 2010; numbers in parentheses are standard errors.

Age	Inch class												Total	Age%	CPUE	
	3	4	5	6	7	8	9	10	11	12						
0	403	65												468	29	22.29 (4.02)
1			390	278	23									691	43	32.91 (6.58)
2				37	58	28	4							127	8	6.05 (1.19)
3					46	56	37	10	2					151	9	7.18 (1.34)
4					35	28	12	15	6					96	6	4.58 (0.77)
5					12	28	8	12	8	1				69	4	3.27 (0.52)
6									3	3				6	0	0.28 (0.09)
7									2	1				2	0	0.11 (0.03)
Total	403	65	390	315	174	139	62	37	21	4				1610	100	
%	25	4	24	20	11	9	4	2	1	0				100		

CPUE of ≥ 8.0 in (quality size) = 12.57 fish/net-night
 CPUE of ≥ 10.0 in (preferred size) = 3.00 fish/net-night
 EFDBLCAF.D10
 EFDBLCTF.D10

Table 15. Population assessment scores for white crappie collected from Buckhorn Lake (1,230 acres). Actual values are in parentheses.

Parameter	Year									
	2003	2004	2005	2006	2007	2008	2010			
CPUE of crappie (excluding age 0)	4 (31.40)	2 (5.50)	3 (14.80)	4 (191.42)	4 (32.50)	4 (60.73)	4 (54.00)			
CPUE age 1	4 (17.40)	1 (0.70)	3 (7.40)	4 (58.60)	1 (2.99)	4 (14.51)	4 (32.91)			
CPUE age 0	4 (28.20)	1 (0.75)	1 (0.40)	4 (29.80)	1 (0.55)	1 (0.44)	4 (22.29)			
CPUE \geq 8.0 in	2 (4.20)	2 (2.20)	2 (4.10)	4 (17.78)	3 (5.50)	3 (5.89)	4 (12.57)			
Mean length age 2 at capture	1 (8.2)	1 (8.1)	1 (8.3)	1 (7.1)	1 (6.3)	1 (6.3)	1 (7.7)			
Instantaneous mortality (z)	1.32	1.37	1.30	1.52	1.74	1.03	0.87			
Annual Mortality (A)	73.20	74.70	72.80	78.00	82.50	64.40	58.20			
Total score	15	7	10	17	10	13	17			
Assessment rating	Good	Poor	Fair	Good	Fair	Good	Good			
EFDBLCTF.D03-D10										
EFDBLCAF.D03-D10										

Table 16. Species composition, relative abundance and CPUE (fish/hr) of black bass collected in approximately 2.46 hours of 15-minute electrofishing samples at Carr Creek Lake (710 acres) on 20 May 2010; numbers in parentheses are standard errors.

Area	Species	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	CPUE	SE
Upper	Smallmouth bass							1												1	1.08	(1.08)
	Spotted bass	7	3		2	4	2	3	3		1	2		1						26	21.90	(7.21)
	Largemouth bass	7		6	8	2	2	5	7	2	7	3	5	7	2	1	3			67	57.18	(4.35)
Lower	Smallmouth bass																			0	0.00	(0.00)
	Spotted bass				3	5	3	1	7	1	2	1		2	1					26	24.96	(10.10)
	Largemouth bass	2	4	2	2		1	3	4	2	3	3	3	3	6	2	1	2	43	38.63	(6.57)	
Total	Smallmouth bass							1											1	0.54	(0.54)	
	Spotted bass	7	3	3	7	7	1	10	4	2	2	2	2	2	2				52	23.43	(5.84)	
	Largemouth bass	9	4	8	10	2	3	8	11	4	10	6	8	10	8	1	5	1	2	110	47.90	(4.83)

EFDCLLSS.D10

Table 17. 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												Total	
	<8.0 in		8.0-11.9 in		12.0-14.9 in		>15.0 in		>20.0 in		CPUE	SE	CPUE	SE
2002	116.33	14.24	16.89	1.71	12.33	1.57	7.11	1.16	0.00				152.67	13.32
2003	67.56	11.32	15.89	2.18	11.11	1.46	10.67	1.50	0.44	0.26			105.22	14.37
2004	135.00	17.73	24.44	5.31	8.44	1.37	9.00	1.16	0.22	0.15			176.89	18.81
2005	20.00	2.70	19.80	1.60	24.80	2.40	14.00	1.80	0.33	0.30			78.60	4.90
2006	22.26	6.95	30.90	4.80	27.92	3.34	29.90	3.11	0.67	0.45			111.00	10.20
2007	7.95	1.85	20.78	4.65	18.59	3.42	15.72	3.64	0.49	0.49			63.03	5.49
2008	2.99	1.25	16.36	2.57	24.72	5.39	23.71	3.31	0.50	0.50			67.78	8.44
2009	5.14	0.74	10.29	2.60	17.14	2.99	16.00	3.38	0.57	0.57			48.57	6.14
2010	13.81	3.21	10.75	2.58	10.80	2.11	12.55	3.47	0.94	0.63			47.90	4.83

BBRPSCFL.D02-D05

EFDCLLSS.D06-D10

Table 18. PSD and RSD values for each species of black bass in each area of Carr Creek Lake (710 acres) on 20 May 2010. 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	33	70 (54-86)	42 (25-60)	0			18	33 (11-56)	17 (0-34)
Upper	44	64 (50-78)	30 (16-43)	1			14	29 (4-53)	7 (0-21)
Total	77	66 (56-77)	35 (24-46)	1			32	31 (15-48)	13 (1-24)

EFDCLLSS.D10

Table 19. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Carr Creek Lake (710 acres) from 1999-2010.

Age	Year											
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	129.60	66.90	160.40	114.40	66.20	133.70	18.84	21.10	7.61	2.43	3.14	9.95
2	31.80	21.20	16.10	17.30	17.10	25.20	20.82	31.70	21.07	13.11	7.90	7.59
3	17.00	17.30	13.40	11.90	6.90	5.40	14.27	14.20	11.97	20.12	14.92	11.50
4	16.10	18.30	20.10	7.20	6.90	5.70	13.24	21.30	9.95	21.11	9.97	9.41
5	12.00	10.60	8.20	1.30	3.20	2.50	4.44	8.90	3.91	6.41	6.44	3.13
6	2.70	4.00	2.70	0.40	0.00	0.00	0.00	0.00	0.00	3.60	3.90	1.79
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		0.94

BBRPS CFL.D99-D05
 EFDCLLSS.D06-D10
 BBRSCCFL.D03
 EFDCLLAS.D08

Table 20. 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	2010	2011
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 (12.6)
Spring CPUE age 1	4 (114.40)	3 (66.20)	4 (133.70)	2 (18.84)	2 (21.10)	1 (7.61)	1 (2.43)	1 (3.14)	1 (9.95)	1 (10.80)
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)	1 (17.14)	1 (10.80)	1 (10.80)
Spring CPUE ≥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 (12.55)	2 (12.55)
Spring CPUE ≥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 (0.94)	1 (0.94)
Total score	11	11	12	11	12	9	11	9	9	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	0.34	0.34
Annual mortality (A)		40.30	42.00	37.50	35.10	30.90	33.50	52.30	29.10	29.10

BBRPSFL.D02-D05
 BBRSCFL.D03
 EFDCLLSS.D06-D10
 EFDCLLAS.D08

Table 21. Length frequency and electrofishing CPUE (fish/hr) of black bass collected in approximately 2.00 hours of 15-minute nocturnal electrofishing samples at Carr Creek Lake (710 acres) on 21 September 2010; 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		
Lower	Smallmouth bass						1														1	1.00	(1.00)
	Spotted bass	1	2	4	7	5	3	2	3	3	3	3	3								33	33.00	(12.04)
	Largemouth bass	1	1	3	1	1	5	1	1	1	3	3	5	2	2	1	1	1	1	1	21	21.00	(7.00)
Upper	Smallmouth bass																				0	0.00	(0.00)
	Spotted bass	1	1	5	8	3	1	3	6	2	1	1	2	2	2						33	33.00	(8.70)
	Largemouth bass	5	7	7	1	5	2	6	3	4	3	5	2	2	1	1	1				55	55.00	(9.29)
Total	Smallmouth bass						1														1	0.50	(0.50)
	Spotted bass	2	3	9	15	8	4	5	9	2	4	3	3	2	2						66	33.00	(6.88)
	Largemouth bass	1	6	10	8	2	10	2	7	4	4	6	5	2	2	2	2	1	1	1	76	38.00	(8.38)

Table 22. 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	4.4	0.14	14.00	5.40	5.78	2.30	133.77	17.49		
2004	5.2	0.01	132.00	17.30	88.22	12.70	18.84	2.60		
2005	4.7	0.10	15.80	6.70	5.60	1.70	21.30	6.70		
2006	4.2	0.20	11.00	4.10	3.00	1.00	7.61	2.03		
2007	3.7	0.47	4.98	2.24	0.99	0.65	2.43	1.16		
2008	4.3	0.17	15.23	6.63	3.77	1.68	3.14	0.76		
2009	3.6	0.28	12.50	2.77	3.50	1.59	9.95	2.47		
2010	4.6	0.18	13.50	4.40	5.00	1.65				

BBWRFCFL.D03-D05
 BBRSCFL.D03
 EFDCLLSF.D06-D10
 EFDCLLAS.D08
 EFDCLLSS.D06-D10

Table 23. 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			
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																							
2003	2	1			1	1	2				3	7	4	2		1	1	1	1	1	28	26.70	8.50
2004										1	3	13	10	13	13	4	3	1			61	27.10	7.40
2005						1	1	1	1	2	10	2	10	6	5	4	3	1	1		46	28.17	5.00
2006										1	4	6	7	9	9	8	3	4	2	2	55	31.30	5.40
2007						1				1	2	4	3	11	15	8	4	5	2		60	32.92	7.36
2008						1	2	5	12	16	19	21	19	15	14	7	3	1	1		136	12.76	1.15
2009					1	4	3	9	18	21	17	15	13	10	11	2					124	21.34	1.29
2010					6	8	7	7	10	15	16	14	16	13	8	8	9	1			138	12.74	3.29

EFDCLWSS.D00-D10

Table 24. Spring electrofishing catch rate (fish/hr) for each age of walleye collected from Carr Creek Lake (710 acres) from 2007-2010.

Age	Year			
	2007	2008	2009	2010
1				
2	1.18	0.55	2.02	2.13
3	8.79	3.43	7.22	3.15
4	7.46	3.16	5.46	2.59
5	5.41	1.71	2.41	1.44
6	1.92	0.56	0.80	0.28
7	0.94	0.65	0.79	0.43
8	3.45	0.90	0.95	0.87
9	2.39	1.09	1.43	0.76
10	0.60	0.23	0.26	0.21

EFDCLWSS.D07-D10

EFDCLWAS.D09

Table 25. Number of fish and relative weight (Wr) for each length group of walleye collected at Carr Creek Lake (710 acres) on 15 and 16 March 2010. Numbers in parentheses are standard errors.

	Length group	
	10.0-14.9 in	15.0-19.9 in >20.0 in
No.	No.	Wr
6	47	101
	(3)	(2)
EFDCLWSS.D10		

Table 26. 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	2010	2010	2010
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)	2 (12.74)	4 (19.3)	2 (12.74)
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)	4 (19.3)	4 (19.3)	4 (19.3)
Size structure (CPUE ≥20.0 in)	4 (10.50)	4 (19.50)	4 (18.40)	4 (24.80)	4 (20.85)	4 (9.28)	4 (11.77)	4 (7.75)	4 (7.75)	4 (7.75)
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)	0 (0.00)	0 (0.00)	0 (0.00)
Total Score	16	12	12	12	12	10	12	10	12	10
Assessment Rating	Excellent	Good	Good	Good	Good	Good	Good	Good	Good	Good
Instantaneous mortality (z)	0.72	1.12	0.26	0.20	0.35	0.94	0.36	0.33	0.36	0.33
Annual mortality (A)	51.40	67.30	22.50	22.50	41.40	60.90	30.60	28.20	30.60	28.20
EFDCLWSS.D03-D10										
EFDCLWAS.D03, D09										

Table 27. Length frequency, CPUE (fish/hr) and SE (standard error) of crappie collected by electrofishing at Carr Creek Lake (710 acres) on 15 and 16 March 2010.

	Inch class													Total	CPUE	SE
	5	6	7	8	9	10	11	12	13	13	13	13				
White crappie	16	5	2	1	2	10	3	1	40	4.87	(3.53)					
Black crappie	3	14	18	12	10	6	1	1	65	6.08	(2.30)					

EFDCLWSS.D10

Table 28. 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												Total			
	>8.0 in			>10.0 in			>8.0 in			>10.0 in			WC	SE	BC	
	WC	CPUE	SE	BC	CPUE	SE	WC	CPUE	SE	all crappie	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
2010	2.48	1.91	2.40	1.01	2.16	1.78	0.75	0.30	4.88	2.27	2.92	2.01	4.87	3.53	6.08	2.30

EFDCLWSS.D10

Table 29. PSD and RSD₁₀ values for black and white crappie taken in spring electrofishing samples at Carr Creek Lake (710 acres) on 15 and 16 March 2010; 95% confidence intervals are in parentheses.

Species	No. ≥ 5.0 in	PSD (+/- 95%)	RSD ₁₀ (+/- 95%)
White crappie	40	48 (32-63)	40 (25-55)
Black crappie	65	46 (34-58)	12 (4-20)

EFDCLWSS.D10

Table 30. Spring electrofishing catch rate (fish/hr) for each age of white and black crappie collected from Carr Creek Lake (710 acres).

Age	Year							
	2007		2008		2009		2010	
	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	0.51	0.93	0.39
4	4.37	0.76	0.11	0.09	0.06	0.54	3.09	1.84
5	6.69	3.07	0.70	0.68	0.47	2.44	1.00	0.98
6	7.51	2.31	0.66	0.39	0.26	0.28		
7	1.55		0.11					
8	0.78			0.06	0.21	0.34	0.08	0.64

EFDCLWSS.D07-D10
 EFDCLCAS.D07
 WC=white crappie
 BC=black crappie

Table 31. Length frequency and CPUE (fish/hr) of black bass collected in 1,250 hours of 15-min nocturnal electrofishing runs at Cranks Creek Lake (219 acres) on 22 April 2010; 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			
LMB	2	23	49	13	2	12	20	8	15	11	7	2	3	3	3	3	2	1	2	2	2	185	148.00	(41.18)
SB	2	2	3	1	2	2	2	3	3	3	1											19	15.20	(4.96)

LMB = largemouth bass
 SB = spotted bass
 EFDCLLSS.D10

Table 32. Spring electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Cranks Creek Lake (219 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	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	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	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	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	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	119.00	8.23
2009							no sample							
2010	80.80	27.64	43.20	10.38	9.60	2.99	14.40	2.04	4.80	2.33	148.00	41.18	148.00	41.18

EFDCLLSS.D00-D10

Table 33. PSD and RSD values for each species of black bass in each area of Cranks Creek Lake (219 acres) on 22 April 2010. 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			Spotted bass		
	No.	PSD	RSD ₁₅	No.	PSD	RSD ₁₄
Total	84	36 (25-46)	21 (13-30)	12	33 (5-61)	8 (0-25)

EFDCCLSS.D10

Table 34. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Cranks Creek Lake (219 acres) from 2008-2010.

Age	Year	
	2008	2009
1	23.00	No 68.80
2	41.75	Sample 35.80
3	14.58	14.87
4	26.11	9.16
5	6.56	4.18
6	1.00	2.40
7	1.00	0.40
8	1.00	0.80
9	3.00	2.00

EFDCCLSS.D08-D10
EFDCCLAS.D08

Table 35. 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	2010
Mean length age 3 at capture	3 (11.2)	3 (11.2)	3 (11.2)
Spring CPUE age 1	3 (50.40)	2 (23.00)	3 (68.80)
Spring CPUE 12.0-14.9 in	1 (4.00)	2 (27.00)	1 (9.60)
Spring CPUE \geq 15.0 in	2 (6.40)	2 (8.00)	2 (14.40)
Spring CPUE \geq 20.0 in	3 (2.40)	3 (3.00)	4 (4.80)
Total score	12	12	13
Assessment rating	Good	Good	Good
Instantaneous mortality (z)	0.48	0.52	0.49
Annual mortality (A)	38.40	40.60	38.90

EFDCCLAS.D08
EFDCCLSS.D05, D08, D09, D10

Table 36. Length frequency and CPUE (fish/hr) of black bass collected in 0.750 hours of 15-min nocturnal electrofishing runs at Cranks Creek Lake (219 acres) on 27 September 2010; numbers in parentheses are standard errors.

Species	Inch class												Total	CPUE	
	2	3	4	5	6	7	8	9	10	11	12	13			
LMB		25	33	9	5	2	8	7	5	3	1	2	100	133.33	(39.82)
SB		2	1		2		1		1	1			8	10.67	(5.81)

LMB = largemouth bass
SB = spotted bass
EFDCCLSF.D10

Table 37. 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	68.80	26.08
2010	4.3	0.09	93.33	28.50	16.00	6.11		

EFDCCLSF.D01-D02, D07, D09-D10
 EFDCCLAS.D08
 EFDCCLSS.D00, D01, D04, D05, D08, D10

Table 38. Species composition, relative abundance and CPUE (fish/hr) of black bass collected in approximately 2.517 hours of 15-minute nocturnal electrofishing samples by area at Dewey Lake (1,100 acres) on 14 April 2010. 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			
Lower	Spotted bass	3	1	2	4	1	2	5										18	14.26	(4.14)	
	Largemouth bass	6	16	12	32	90	57	26	27	11	7	3	5	7	1			300	238.32	(42.23)	
Upper	Spotted Bass																	0	0.00	(0.00)	
	Largemouth bass	1	3	7	10	20	22	11	6	7	3	2	5	3	1	1	1	2	105	84.00	(12.13)
Total	Spotted bass	3	1	2	4	1	2	5										18	7.13	(3.08)	
	Largemouth bass	1	9	23	22	52	112	68	34	14	9	8	8	8	1	2	2	405	161.16	(33.02)	

EFDDLSS.D10

Table 39. 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	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE
1987	44.60		38.30		12.00		0.60		0.00		0.00		95.40	
1988	84.00		40.70		26.70		2.00		0.00		0.00		154.70	
1989	75.00		27.50		10.80		7.00		0.00		0.00		120.70	
1990	58.80		68.00		32.00		11.40		0.57		0.18		171.40	
1991	73.80		50.60		18.40		3.50		0.22		0.22		146.40	
1992	57.40		64.10		17.20		7.40		0.80		0.80		140.00	
1993	43.70		71.80		15.60		8.80		0.00		0.00		138.30	16.90
1994	no data													
1995	46.60		59.60		28.50		3.60		0.00		0.00		112.00	12.20
1996	no data												122.00	8.50
1997	15.30		53.30		32.30		11.00		0.80		0.80		165.80	12.70
1998	20.10		51.40		43.20		7.20		0.10		0.10		140.10	9.50
1999	78.90		34.80		39.50		12.80		0.60		0.60		252.60	22.80
2000	62.20	4.70	44.00	4.40	23.60	3.50	10.30	1.30	0.70		0.70		171.80	14.60
2001	150.10	17.20	57.80	5.70	26.90	2.70	17.80	1.60	1.00		1.00		168.30	13.90
2002	no data												153.90	12.80
2003	71.11	10.05	55.56	4.40	23.11	1.77	22.00	2.12	0.70		0.70		147.80	10.00
2004	96.20	11.90	34.70	3.80	20.00	3.20	17.50	2.60	1.00		1.00		200.91	19.94
2005	39.30	5.00	59.20	6.30	31.00	3.20	24.50	1.90	0.30		0.30		211.73	12.35
2006	32.30	5.70	66.40	8.60	24.20	3.60	24.90	3.60	0.70		0.70		179.75	16.92
2007	54.86	9.63	80.77	9.79	35.09	4.97	30.18	4.07	1.48		1.48		161.16	33.02
2008	87.37	10.41	86.46	9.50	21.56	3.60	16.34	3.44	0.80		0.80			
2009	83.68	12.69	62.82	6.33	18.83	1.91	14.42	3.39	0.50		0.50			
2010	42.58	5.91	97.99	27.59	12.30	2.75	8.28	2.03	0.00		0.00			

Table 40. PSD and RSD values for each species of black bass in each area of Dewey Lake (1,100 acres) during spring 2010. 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	234	15 (10-19)	6 (3-8)	12		
Upper	64	28 (17-39)	13 (4-21)	0		
Total	298	17 (13-22)	7 (4-10)	12		

Table 41. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Dewey Lake (1,100 acres) from 2000-2010.

Age	Year									
	2000	2001	2003	2004	2005	2006	2007	2008	2009	2010
1	55.30	125.70	61.20	79.69	24.76	27.90	48.98	49.46	55.59	16.36
2	35.60	47.10	36.60	30.14	37.57	30.20	41.33	98.64	70.75	91.97
3	11.30	34.90	17.20	12.75	20.87	21.10	27.13	31.29	25.67	34.29
4	18.80	14.30	22.10	17.83	28.16	28.40	37.19	13.68	10.68	9.41
5	9.70	16.70	11.40	9.43	15.48	13.20	14.59	8.26	6.64	3.77
6	3.70	6.50	2.10	1.91	3.10	1.70	3.15	6.95	6.17	3.78
7	3.30	2.30	7.40	5.59	7.61	8.90	9.16	0.53	1.16	0.26
8	0.40	1.80	4.40	3.21	4.76	5.70	5.00	1.33	0.83	0.53
9	1.70	1.80	8.40	6.51	10.73	9.60	12.41	1.20	2.00	0.80
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-D10
 BBRPSDEW.D00-D05
 BBRSCDEW.D03
 EFDDLAS.D08

Table 42. 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	2010
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)	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)	1 (16.36)
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)	1 (12.30)
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)	2 (8.28)
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)	0 (0.00)
Total score	13	12	12	11	14	13	13	6
Assessment rating	Good	Good	Good	Fair	Good	Good	Good	Poor
Instantaneous mortality (z)	0.41	0.40	0.42	0.41	0.39	0.56	0.48	0.77
Annual mortality (A)	33.60	32.60	34.30	33.50	32.10	42.80	38.40	53.90
BBRPSDEW.D03-D05								
EFDLLSS.D06-D10								
BBRSCDEW.D03								
EFDLLAS.D08								

Table 43. Length-frequency distribution of each black bass species captured during 2.50 hours of 15-minute nocturnal electrofishing runs at Dewey Lake (1,100 acres) on 20 September 2010. 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				
Lower	Spotted bass	16	37	6	1	3	6	1	1	2	1								74	59.20	(31.63)
	Largemouth bass	2	29	36	14	2	19	37	35	12	5	2	1	3	1	1			199	159.20	(32.87)
Upper	Spotted Bass					1													1	0.80	(0.80)
	Largemouth bass	15	27	40	6	6	20	54	29	16	3		2	1	2	1	1		223	178.40	(39.04)
Total	Spotted bass	16	37	6	1	4	6	1	1	2	1								75	30.00	(17.81)
	Largemouth bass	17	56	76	20	8	39	91	64	28	8	2	3	4	3	2	1		422	168.80	(24.27)
EFDLLSF.D10																					

Table 44. 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	Age 0		Age 0		Age 0 >5.0 in		Age 1	
	Mean length	SE	CPUE	SE	CPUE	SE	CPUE	SE
2002	5.0	0.04	75.58	14.20	37.56	9.36	61.23	9.44
2003	4.9	0.08	38.89	10.64	15.11	3.79	79.69	10.46
2004	5.2	0.06	45.20	7.11	25.40	4.60	24.76	4.12
2005	4.4	0.06	58.67	16.12	16.89	6.60	27.90	5.49
2006	5.1	0.07	38.97	9.89	21.32	5.82	48.98	9.18
2007	4.8	0.09	54.28	12.82	21.15	4.23	49.46	10.04
2008	5.0	0.07	54.93	14.31	30.03	7.36	55.59	12.08
2009	5.3	0.09	45.68	8.81	28.78	5.17	16.36	3.31
2010	5.0	0.06	67.60	14.18	38.40	8.50		

BBRPSDEW.D03-D05
 BBRDLLSF.D02
 BBRWRDEW.D03-D04
 BBRSCDEW.D03
 EFDDLLSF.D05-D10
 EFDDLLSS.D06-D10
 EFDDLLAS.D08

Table 45. Length frequency and CPUE (fish/net-night) for white crappie collected at Dewey Lake (1,100 acres) in 11 net-nights from 8 to 9 November 2010. Standard errors are in parentheses.

Species	Inch class											Total	CPUE	SE
	2	3	4	5	6	7	8	9	10	11	12			
WC	3	13	25	12	26	50	34	24	24	8	6	225	20.45	(6.98)
BC	1	9	1		5	9	6	2				33	3.00	(0.92)

WC=white crappie
 BC=black crappie
 EFDDLCTF.D10

Table 46. PSD and RSD₁₀ values calculated for crappie collected in trap nets at Dewey Lake (1,100 acres) during November 2010; 95% confidence intervals are in parentheses.

Species	No. fish \geq stock size	PSD	RSD ₁₀
WC	184	52 (45-59)	21 (15-27)
BC	22	36 (16-57)	

WC = white crappie
 BC = black crappie
 EFDDLCTF.D10

Table 47. Mean back-calculated length (in) at each annulus for white crappie collected from Dewey Lake (1,100 acres) in November 2010, including 95% confidence intervals.

Year class	No.	Age							
		1	2	3	4	5	6	7	8
2009	39	4.7							
2008	11	4.2	6.9						
2007	12	4.5	6.6	8.4					
2006	7	4.1	5.9	7.4	8.6				
2005	22	4.4	5.9	7.2	8.3	9.2			
2004	9	4.1	5.4	6.6	7.6	8.6	9.5		
2003	1	3.6	4.8	5.7	6.4	7.0	7.4	8.3	
2002	1	4.1	6.1	7.1	7.8	8.6	9.2	9.9	11.1
Mean		4.4	6.1	7.3	8.1	9.0	9.3	9.1	11.1
Smallest		3.2	4.2	5.0	5.9	6.6	7.1	8.3	11.1
Largest		6.3	8.2	9.6	10.6	11.6	11.4	9.9	11.1
STD error		0.1	0.1	0.1	0.2	0.2	0.5	0.8	
95% CI LO		4.3	5.9	7.1	7.8	8.5	8.3	7.6	
95% CI HI		4.6	6.3	7.6	8.4	9.4	10.3	10.6	

Intercept = 0

EFDDLCAF.D10

Table 48. Mean back-calculated length (in) at each annulus for black crappie collected from Dewey Lake (1,100 acres) in November 2010, including 95% confidence intervals.

Year class	No.	Age				
		1	2	3	4	5
2009	1	4.1				
2008	4	3.5	5.3			
2007	7	3.5	5.4	6.9		
2006	4	3.4	4.5	5.7	6.8	
2005	5	3.4	4.5	5.8	6.9	7.7
Mean		3.5	5.0	6.3	6.8	7.7
Smallest		3.0	4.0	4.8	6.1	7.0
Largest		4.3	6.9	8.5	7.9	8.9
STD error		0.1	0.2	0.2	0.2	0.3
95% CI LO		3.3	4.7	5.8	6.5	7.0
95% CI HI		3.6	5.3	6.7	7.2	8.3

Intercept = 0

EFDDLCAF.D10

Table 49. Age frequency and CPUE (fish/net-night) of white crappie collected by trap netting for 11 net-nights at Dewey Lake (1,100 acres) in November 2010; 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	13	25	12								53	24	4.82	(2.04)
1					24	43	8	10				85	38	7.78	(3.14)
2					2	3	6	4	4			19	9	1.77	(0.72)
3						4	3	6	3	3		16	7	1.42	(0.70)
4							3	6	1			9	4	0.84	(0.40)
5							10	3	8	3	3	27	12	2.50	(1.21)
6						3	4	1		1	2	12	5	1.09	(0.43)
7							2					2	1	0.18	(0.09)
8											1	1	0	0.05	(0.03)
Total	3	13	25	12	26	50	34	24	24	8	6	225	100		
%	1	6	11	5	12	22	15	11	11	4	3	100			

CPUE of ≥ 8.0 in (quality size) = 8.73 fish/net-night

CPUE of ≥ 10.0 in (preferred size) = 3.45 fish/net-night

EFDDLCAF.D10

EFDDLCTF.D10

Table 50. Age frequency and CPUE (fish/net-night) of black crappie collected by trap netting for 11 net-nights at Dewey Lake (1,100 acres) in November 2010; numbers in parentheses are standard errors.

Age	Inch class											Total	Age%	CPUE	
	2	3	4	5	6	7	8	9							
0	1	9	1									11	33	1.00	0.62
1					1							1	4	0.11	0.07
2					4	1						5	14	0.41	0.23
3						5		1				6	17	0.50	0.24
4						2	2					4	13	0.39	0.15
5						2	4	1				7	20	0.59	0.22
Total	1	9	1	0	5	9	6	2	33	100					
%	3	27	3	0	15	27	18	6	100						

CPUE of ≥ 8.0 in (quality size) = 0.73 fish/net-night

CPUE of ≥ 10.0 in (preferred size) = 0.00 fish/net-night

EFDBLCAF.D10

EFDBLCTF.D10

Table 51. Population assessment scores for white crappie collected from Dewey Lake (1,100 acres). Actual assessment values are in parentheses.

Parameter	Year		
	2002	2008	2010
CPUE of crappie (excluding age 0)	4 (48.20)	4 (43.95)	3 (15.63)
CPUE age 1	4 (14.40)	2 (6.62)	3 (7.78)
CPUE age 0	4 (27.50)	1 (2.63)	2 (4.82)
CPUE \geq 8.0 in	2 (4.80)	4 (15.47)	3 (8.73)
Mean length age 2 at capture	1 (6.3)	1 (7.0)	3 (9.1)
Instantaneous mortality (z)	1.27	0.49	0.50
Annual Mortality (A)	72.00	38.80	39.50
Total score	15	12	14
Assessment rating	Good	Fair	Good
EFDDLCTF.D02, D08, D10			
EFDDLCAF.D02, D08, D10			

Table 52. Population assessment scores for black crappie collected from Dewey Lake (1,100 acres). Actual assessment values are in parentheses.

Parameter	Year		
	2002	2008	2010
CPUE of crappie (excluding age 0)	2 (6.10)	3 (17.35)	1 (2.00)
CPUE age 1	1 (1.30)	1 (2.92)	1 (0.11)
CPUE age 0	1 (1.60)	1 (2.39)	1 (1.00)
CPUE \geq 8.0 in	1 (0.10)	1 (1.84)	1 (0.73)
Mean length age 2 at capture	1 (5.0)	1 (6.5)	1 (6.7)
Instantaneous mortality (z)	1.25	0.35	0.06
Annual Mortality (A)	71.40	29.60	6.20
Total score	6	7	5
Assessment rating	Poor	Poor	Poor
EFDDLCTF.D02, D08, D10			
EFDDLCAF.D02, D08, D10			

Table 53. Fish harvest statistics derived from a daytime creel survey at Dewey Lake (1,100 acres) from 1 April through 24 October 2010. Standard errors are in parentheses.

<u>Fishing trips</u>	
No. of fishing trips	3,862
No. of fishing trips per acre	3.51
<u>Fishing pressure</u>	
Total angler hours	26,491 (678.92)
Man-hours/acre	24.08
<u>Catch/harvest</u>	
No. of fish caught	41,710 (4,296.61)
No. of fish harvested	13,960 (2,173.41)
Lb of fish harvested	8,412
<u>Harvest rates</u>	
Fish/hour	0.50
Fish/acre	12.69
Lb/acre	7.65
<u>Catch rate</u>	
Fish/hour	1.49
Fish/acre	37.92
<u>Miscellaneous characteristics (%)</u>	
Male	95.35
Female	4.65
Resident	99.79
Non-resident	0.21
<u>Method (%)</u>	
Still fishing	45.88
Casting	52.71
Fly fishing	0.14
Trolling	0.78
Spider rig	0.42
Jugging	0.07
<u>Mode (%)</u>	
Boat	78.65
Bank	21.28
Dock	0.07

Table 54. Fish harvest statistics derived from a creel survey at Dewey Lake (1,100 acres) from 1 April through 24 October 2010.

	Common carp	Blue catfish	Channel catfish	Flathead catfish	White bass	Rock bass	Warmouth	Green sunfish	Bluegill	Longear sunfish	Redear sunfish	Spotted bass	Largemouth bass	White crappie	Black crappie
No. caught (per acre)	472 (0.429)	206 (0.187)	971 (0.882)	434 (0.395)	1410 (1.281)	45 (0.041)	68 (0.062)	909 (0.826)	7,199 (6.545)	35 (0.032)	919 (0.836)	222 (0.202)	10,450 (9.500)	14,086 (12.806)	4284 (3.895)
No. harvested (per acre)	20 (0.018)	23 (0.021)	503 (0.458)	391 (0.355)	6.89 (0.627)	0.00	0.00	59 (0.054)	2,805 (2.550)	18 (0.016)	668 (0.608)	84 (0.077)	351 (0.319)	6,386 (5.805)	1983 (1.784)
% of total no. harvested	0.10	0.16	3.60	2.80	4.94	0.00	0.00	0.42	20.09	0.13	4.79	0.60	2.51	45.74	14.06
Lb harvested (per acre)	25.70 (0.023)	40.20 (0.037)	981.90 (0.893)	2154.30 (1.958)	390.10 (0.355)	0.00	0.00	3.60 (0.003)	455.80 (0.414)	2.20 (0.002)	234.70 (0.213)	100.50 (0.091)	743.30 (0.676)	2505.20 (2.277)	774.50 (0.704)
% of total lb harvested	0.31	0.48	11.57	25.61	4.64	0.00	0.00	0.04	5.42	0.03	2.79	1.19	8.84	29.78	9.21
Mean length (in)	14.0	16.0	16.6	23.1	10.1			4.5	6.2	6.0	7.5	14.3	15.8	10.0	9.0
Mean weight (lb)	1.31	1.71	1.56	5.04	0.48			0.07	0.15	0.13	0.31	1.21	2.07	0.48	0.37
No. of fishing trips for that species															
% of all trips															
Hours fished for that species (per acre)															
No. harvested fishing for that species															
Lb harvested fishing for that species															
No./hour harvested fishing for that species															
% success fishing for that species															

Table 56. Monthly catfish (flathead, channel, and blue) angling success at Dewey Lake (1,100 acres) during the 2010 creel survey period.

	Total no. of catfish caught	Total no. of catfish harvested	No. of catfish fishing trips	Hours fished by catfish anglers	Catfish caught by catfish anglers	Catfish caught/hour by catfish anglers	Catfish harvested by catfish anglers	Catfish harvested/hour by catfish anglers
Apr	18	18						
May	96	56	46.63	319.81	56	0.49	24	0.21
Jun	393	275	26.63	182.68	294	1.33	216	0.97
Jul	247	141	18.88	129.48	159	0.94	106	0.63
Aug	356	250	34.06	233.65	274	0.47	203	0.35
Sep	175	110	24.03	164.85	110	0.52	66	0.31
Oct	323	67	56.28	386.02	189	0.86	44	0.20
Total	1,610	917	214.45	1,470.97	1,082		659	
Mean						0.66		0.38

Table 57. Monthly black and white crappie angling success at Dewey Lake (1,100 acres) during the 2010 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
Apr	3,551	1343	124.41	853.40	3,486	3.83	1306	1.44
May	305	88	34.97	239.86	296	2.31	80	0.63
Jun	1,061	255	29.30	200.95	1,061	3.75	255	0.90
Jul	618	141	21.24	145.67	617	3.27	141	0.75
Aug	725	166	51.10	350.48	643	2.09	167	0.54
Sep	2,654	833	82.40	565.21	2,653	3.55	833	1.11
Oct	9,457	5520	479.83	3291.33	9,056	2.68	5409	1.60
Total	18,371	8348	823.24	5,646.88	17,812		8191	
Mean						2.97		1.41

Table 58. Monthly black bass angling success at Dewey Lake (1,100 acres) during the 2010 creel survey period.

	Total no. of black bass caught	Total no. of black bass harvested	No. of black bass fishing trips	Hours fished by bass anglers	Black bass caught by bass anglers	Black bass caught/hour by bass anglers	Black bass harvested by bass anglers	Black bass harvested/hour by bass anglers
Apr	1,518	28	365.30	2505.72	1,409	0.47	28	0.01
May	2,198	8	370.08	2538.53	2,022	0.56		0.00
Jun	1,317	98	271.65	1863.34	1,160	0.54	59	0.03
Jul	1,783	177	205.28	1408.10	1,713	1.07	141	0.88
Aug	795	48	193.73	1328.89	714	0.65	48	0.04
Sep	1,075	44	192.27	1318.82	1,031	0.81	22	0.02
Oct	1,985	33	287.31	1970.73	1,651	0.79	22	0.01
Total	10,672	435	1885.63	12,934.12	9,700		320	
Mean						0.62		0.02

Table 59. Monthly white bass (morone) angling success at Dewey Lake (1,100 acres) during the 2010 creel survey period.

	Total no. of morone caught	Total no. of morone harvested	No. of morone fishing trips	Hours fished by morone anglers	Morone caught by morone anglers	Morone caught/hour by morone anglers	Morone harvested by morone anglers	Morone harvested/hour by morone anglers
Apr	9		2.65	18.16				
May	15							
Jun	79	20						
Jul	18	18	2.36	16.19				
Aug	285	202	10.64	73.02	285	3.00	202	2.13
Sep	702	417	24.03	164.85	680	2.38	417	1.46
Oct	301	33	2.96	20.32	33	2.00	33	2.00
Total	1,410	689	45.31	310.80	998		652	
Mean						2.30		1.55

Table 60. Catch and harvest statistics derived from a creel survey at Dewey Lake (1,100 acres) for largemouth and white bass, white and black crappie, and channel and flathead catfish caught and released by all anglers from 1 April to 24 October 2010.

	Largemouth bass			White crappie			Channel Catfish			
	Harvest	catch & release	Total	Harvest	catch & release	Total	Harvest	catch & release	Total	
Total number	351	4,491	1,727	6,386	7,588	113	503	165	151	971
Total weight (lb)	743.30	3129.60	3954.90	2505.20	708.00	11.10	981.90	120.00	109.50	1321.40
Mean length (in)	15.8			10.0			16.6			
Mean weight (lb)	2.07			0.46			1.56			
Rate (fish/hour)	0.010			0.246			0.017			

	White bass			Black crappie			Flathead Catfish			
	Harvest	catch & release	Total	Harvest	catch & release	Total	Harvest	catch & release	Total	
Total number	689	57	28	1,963	2,230	92	391	29	14	434
Total weight (lb)	390.1	16.00	10.20	774.50	271.00	10.80	2154.30	27.00	12.80	2194.10
Mean length (in)	10.1			9.0			23.1			
Mean weight (lb)	0.48			0.37			5.04			
Rate (fish/hour)	0.018			0.078			0.011			

Table 61. 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 2010; 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	23					
LMB	1	1	2	3	2	6	19	7	9	7	3	1	3	1	3	1	1	1	1	1	1	1	69	78.86 (9.14)	

LMB = largemouth bass
 EFDFFLSS.D10

Table 62. Spring nocturnal electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Fishpond Lake (32 acres). S.E. = 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	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.	CPUE	S.E.
1990	19.23		43.60		14.10		2.56		0.00		79.50	
1991	216.30		192.27		62.75		10.68		0.67		80.00	
1992											134.00	
1993	9.00		83.00		42.00		0.00		0.00		90.00	
1994	57.00		28.00		0.00		5.00		0.00			
1995												
1996	2.32		99.59		25.48		10.42		1.16		137.80	
1997	4.00		33.33		32.67		6.00		0.67		76.00	
1998	11.67		29.62		49.37		21.54		0.00		112.20	
1999	193.60		107.20		19.20		24.80		0.80		344.80	
2000	5.90		246.39		11.07		7.38		0.74		270.73	
2001	28.00		118.00		32.00		8.67		4.00		186.67	
2002												
2003												
2004	78.85	12.20	75.96	7.90	45.19	5.90	39.42	6.70	3.85	2.91	239.50	14.90
2006	31.88	5.54	168.05	9.90	14.67	3.82	30.42	2.40	7.94	2.92	245.02	12.53
2008	4.97	1.99	109.29	13.59	61.79	6.21	16.86	3.33	11.63	2.39	192.91	15.38
2009	11.43	2.38	43.43	6.73	64.00	10.62	21.71	4.17	10.29	2.88	140.57	15.50
2010	4.57	2.38	34.29	6.70	26.29	2.88	13.71	4.17	4.57	2.38	78.86	9.14

EFDPLSS.D90-D91

EFDPLSS.D93-D94

EFDPLSS.D96-D01

EFDPLSS.D04,D06, D08-D10

Table 65. 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		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	0.64	135.88	15.05
2010	52.40	3.07	35.60	5.58	20.40	2.83	10.40	2.54	0.40	0.40	118.80	11.27

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		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
2010	3.60	2.76	2.40	1.36	1.60	0.88	1.60	0.88	0.40	0.40	9.20	4.00

EFDLSS.D00-D10

Table 66. PSD and RSD values obtained for black bass collected in spring electrofishing samples in each area of Fishtrap Lake during 2010; 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	81	46 (35-57)	11 (4-18)
	Smallmouth bass	9	33 (1-66)	22 (0-51)
	Spotted bass	32	25 (10-40)	
Upper	Largemouth bass	85	47 (36-58)	20 (11-29)
	Smallmouth bass	5	100 (100-100)	40 (0-88)
	Spotted bass	0		
Total	Largemouth bass	166	46 (39-54)	16 (10-21)
	Smallmouth bass	14	57 (30-84)	29 (4-53)
	Spotted bass	32	25 (10-40)	

^A Largemouth bass = RSD₁₅; smallmouth and spotted bass = RSD₁₄
EFDLLSS.D10

Table 67. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Fishtrap Lake (1,143 acres) from 2003-2010.

Age	Year							
	2003	2004	2005	2006	2007	2008	2009	2010
1	42.00	44.73	61.45	52.49	28.29	38.51	44.17	51.55
2	26.79	46.82	73.41	43.50	57.76	34.78	64.39	24.07
3	9.61	13.30	26.53	22.99	22.68	21.33	14.08	15.97
4	7.20	7.30	9.80	5.21	8.79	9.12	6.42	12.73
5	2.50	2.53	4.93	1.13	2.05	2.10	3.15	7.75
6	0.50	1.45	1.09	0.16	0.39	0.99	0.33	5.52
7	4.40	4.96	5.69	1.60	2.57	4.11	3.02	0.40
8	1.00	1.09			0.60		0.32	0.80

EFDLLSS.D03-D10
EFDLLAS.D04, D10

Table 68. Mean back-calculated length (in) at each annulus for largemouth bass collected from Fishtrap Lake (1,143 acres) on 26 May 2010, including 95% confidence intervals.

Year class	No.	Age								
		1	2	3	4	5	6	7	8	
2009	33	6.0								
2008	23	6.0	9.5							
2007	17	6.2	9.9	11.6						
2006	16	6.1	9.8	11.4	12.8					
2005	11	5.9	10.0	12.0	13.4	14.7				
2004	7	6.2	10.7	13.0	14.5	15.8	17.2			
2003	1	7.2	11.5	13.9	15.5	16.8	18.1	18.9		
2002	2	7.6	11.4	13.1	15.2	16.9	18.0	18.8	19.7	
Mean		6.1	9.9	11.9	13.5	15.3	17.4	18.9	19.7	
Smallest		4.6	7.9	10.3	11.2	12.3	15.5	18.2	19.3	
Largest		8.6	12.0	13.9	15.6	17.4	18.9	19.4	20.0	
STD error		0.1	0.1	0.1	0.2	0.3	0.4	0.4	0.3	
95% CI LO		5.9	9.7	11.6	13.4	14.7	16.8	18.2	19.0	
95% CI HI		6.2	10.1	12.2	13.9	16.0	18.1	19.6	20.3	

Intercept = 0
EFDLLAS.D10

Table 69. Spring electrofishing catch rate (fish/hr) for each age of smallmouth bass collected from Fishtrap Lake (1,143 acres) from 2006-2010.

Age	Year				
	2006	2007	2008	2009	2010
1	6.97	6.39	1.50	3.95	3.60
2	5.80	13.39	3.46	4.94	1.87
3	2.81	4.98	1.73	1.65	1.93
4	0.33	1.59	0.25		0.60
5	0.49	1.00	1.25	0.66	0.20
6	0.16	0.20	0.25	0.66	0.20

EFDLLSS.D06-D10
EFDLSAS.D07

Table 70. 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	2010	2011	2012
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)	4 (13.6)	4 (13.6)	3 (11.7)
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)	3 (51.55)	4 (51.55)	4 (51.55)
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)	2 (20.40)	2 (20.40)	2 (20.40)
Spring CPUE ≥15.0 in	2 (11.00)	3 (13.10)	3 (14.90)	1 (4.00)	2 (7.91)	2 (9.37)	2 (9.85)	2 (10.40)	2 (10.40)	2 (10.40)
Spring CPUE ≥20.0 in	3 (2.00)	2 (1.50)	0 (0.00)	0 (0.00)	2 (1.19)	0 (0.00)	2 (0.64)	2 (0.40)	2 (0.40)	2 (0.40)
Total score	14 Good	13 Good	15 Good	12 Good	13 Good	12 Good	13 Good	13 Good	13 Good	13 Good
Assessment rating	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
Instantaneous mortality (z)	0.52	0.56	0.65	0.83	0.72	0.59	0.67	0.66	0.66	0.66
Annual mortality (A)	40.40	42.70	48.00	56.50	51.30	44.30	49.10	48.20	48.20	48.20
EFDLLSS.D03-D10										
EFDLLAS.D04, D10										

Table 71. 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	2010
Mean length age 3 at capture	4 (12.5)	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)	2 (3.60)
Spring CPUE 11.0-13.9 in	3 (2.97)	3 (5.58)	3 (2.97)	2 (1.31)	2 (1.60)
Spring CPUE \geq 14.0 in	3 (1.32)	4 (2.38)	3 (1.50)	3 (1.98)	3 (1.60)
Spring CPUE \geq 17.0 in	4 (0.66)	4 (1.19)	4 (0.50)	4 (1.98)	3 (0.40)
Total score	16	17	16	15	14
Assessment rating	Good	Excellent	Good	Good	Good
Instantaneous mortality (z)	0.69	0.85	0.56	0.44	0.48
Annual mortality (A)	49.60	57.30	42.70	35.50	38.3
EFDFLLSS.D06-D10					
EFDFLSAS.D07					

Table 72. Length frequency and CPUE (fish/hr) of black bass collected in approximately 2,375 hours of 15-minute nocturnal electrofishing samples at Fishtrap Lake (1,143 acres) on 5 October 2010; 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	21				
Lower																							
SMB	1	3	1	1	3	8	2	2	2	2	1					2	1	3		28			
SB	6	37	16	4	2	2	7	6	7	5	1									93			
LMB	6	51	46	40	11	13	30	24	11	12	10	7	4			1				266			
Upper																							
SMB				1											1	1				3			
SB	1								1											2			
LMB	16	48	39	26	11	16	20	13	12	6	6	2	4	1	3	1	2	1	2	229			
Total																							
SMB	1	3	1	2	3	8	2	2	2	2	1				1	3	1	3		31			
SB	7	37	16	4	2	2	7	6	8	5	1									95			
LMB	22	99	85	66	22	29	50	37	23	18	16	9	8	1	3	2	2	1	2	495			

LMB = largemouth bass
 SMB = smallmouth bass
 SB = spotted bass
 EFDLLSF.D10

Table 73. 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	Mean length	Age 0			Age 0 >5.0 in			Age 1		
		SE	CPUE	SE	CPUE	SE	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	51.55	3.17		
2010	5.2	0.06	111.60	16.44	61.60	8.35				

EFDLLSF.D03-D10
 EFDLLSS.D04-D10
 EFDLLAS.D04, D10

Table 74. Length frequency and CPUE (fish/net-night) for white crappie collected at Fishtrap Lake (1,143 acres) in 17 net-nights from 22 to 24 November 2010. Standard errors are in parentheses.

	Inch class													Total	CPUE	SE
	3	4	5	6	7	8	9	10	11	12	13	14	15			
8	45	63	109	122	111	38	17	5	4	1	523	30.76	(6.38)			

EFDLCTF.D10

Table 75. PSD and RSD₁₀ values calculated for white crappie collected in trap nets at Fishtrap Lake (1,143 acres) during November 2010; 95% confidence intervals are in parentheses.

No. \geq stock size	PSD	RSD ₁₀
470	37 (33-42)	6 (4-8)

EFDLCTF.D10

Table 76. Mean back-calculated length (in) at each annulus for white crappie collected from Fishtrap Lake (1,143 acres) in November 2010, including 95% confidence intervals.

Year class	No.	Age					
		1	2	3	4	5	6
2009	32	4.4					
2008	16	4.3	6.3				
2007	41	4.7	6.8	8.1			
2006	14	4.5	7.1	8.4	9.6		
2005	1	5.0	7.9	9.6	10.4	11.6	
2004	1	4.7	7.4	9.6	10.5	11.5	12.7
Mean		4.5	6.8	8.2	9.7	11.5	12.7
Smallest		2.9	4.6	6.4	7.8	11.5	12.7
Largest		6.1	8.8	10.8	12.2	11.6	12.7
STD error		0.1	0.1	0.1	0.3	0.1	
95% CI LO		4.4	6.6	8.0	9.2	11.4	
95% CI HI		4.6	7.0	8.5	10.2	11.6	

Intercept = 0

EFDLCAF.D10

Table 77. Age frequency and CPUE (fish/net-night) of white crappie collected by trap netting for 17 net-nights at Fishtrap Lake (1,143 acres) in November 2010; numbers in parentheses are standard errors.

Age	Inch class											Total	Age%	CPUE		
	3	4	5	6	7	8	9	10	11	12	13					
0	8	45											53	10	3.12	(1.05)
1			59	83	38								180	34	10.60	(2.41)
2			4	26	46	21	5						101	19	5.97	(1.32)
3					38	83	28	11	2	1			164	31	9.62	(2.31)
4						7	5	6	3	1	1		23	4	1.34	(0.31)
5										1			1	0	0.08	(0.04)
6												1	1	0	0.03	(0.03)
Total	8	45	63	109	122	111	38	17	5	3	1		523	100		
%	2	9	12	21	23	21	7	3	1	1	0		100			

CPUE of ≥ 8.0 in (quality size) = 10.35 fish/net-night

CPUE of ≥ 10.0 in (preferred size) = 1.59 fish/net-night

EFDLCAF.D10

EFDLCTF.D10

Table 78. Population assessment scores for white crappie collected from Fishtrap Lake (1,143 acres). Actual assessment values are in parentheses.

Parameter	Year				
	2003	2005	2007	2008	2010
CPUE of crappie (excluding age 0)	4 (100.00)	4 (38.90)	2 (6.70)	4 (31.89)	4 (27.18)
CPUE age 1	4 (33.20)	1 (2.10)	2 (3.20)	3 (10.84)	3 (10.60)
CPUE age 0	1 (0.001)	4 (22.50)	1 (2.70)	4 (18.78)	2 (3.12)
CPUE ≥ 8.0 in	4 (15.90)	4 (25.90)	2 (2.85)	3 (8.83)	3 (10.35)
Mean length age 2 at capture	1 (7.1)	1 (8.2)	2 (8.8)	1 (7.8)	1 (7.5)
Instantaneous mortality (z)	1.45	0.56	0.80	0.78	1.19
Annual Mortality (A)	76.60	43.10	54.90	54.40	69.7
Total score	14	14	9	15	13
Assessment rating	Good	Good	Fair	Good	Good
EFDLCTF.D03, D05, D07, D08, D10					
EFDLCAF.D03, D05, D07, D08, D10					

Table 79. Length frequency and CPUE (fish/hr) of largemouth bass collected in 0.503 hours of 7.5 minute daytime electrofishing runs at Martin County Lake (3 acres) on 8 April 2010; 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		
LMB	7	13	13	2		1	3	7	25	13	8	6	4	3	1	106	212.00 (23.66)

LMB = largemouth bass
EFDMCLSS.D10

Table 80. PSD and RSD₁₅ values obtained for largemouth bass collected at Martin County Lake (3 acres) on 8 April 2010; 95% confidence intervals are in parentheses.

Species	No. \geq stock size	PSD (+/- 95%)	RSD ₁₅ (+/- 95%)
Largemouth bass	70	31 (20-42)	6 (0-11)

EFDMCLSS.D10

Table 81. Length frequency and CPUE (fish/hr) of largemouth bass collected in 0.681 hours of 7.5 minute daytime electrofishing runs at Martin County Reservoir (19 acres) on 11 May 2010; 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	
LMB	9	21	17	4	7	20	14	29	33	20	2				1				1	178	264.22 (16.54)

LMB = largemouth bass
EFDMLRSS.D10

Table 82. PSD and RSD₁₅ values obtained for largemouth bass collected at Martin County Reservoir (19 acres) on 11 May 2010; 95% confidence intervals are in parentheses.

Species	No. \geq stock size	PSD (+/- 95%)	RSD ₁₅ (+/- 95%)
Largemouth bass	120	20 (13-27)	2 (0-4)

EFDMLRSS.D10

Table 83. Length frequency and CPUE (fish/hr) of black bass and walleye collected in 1,267 hours of 15-min nocturnal electrofishing runs in Martins Fork Lake (330 acres) on 29 April 2010; 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			
LMB	5	11	1	1	5	11	5	4	13	4	2	4	6	4	5	3	5	1	89	71.20 (22.78)	
RB	3	1	1	1	1	1	1												7	5.60 (2.04)	
SB	2	2	6	3	5	1	3	1	1										24	19.20 (6.25)	
WE																			0	0.00	

LMB = largemouth bass

RB = redeye bass (coosa bass)

SB = spotted bass

WE = walleye

EFDMLLSS.D10

Table 84. 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	<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	0.96	51.74	10.70
2007	7.86	3.30	48.64	13.30	15.65	2.58	21.13	5.27	1.57	0.77	93.27	19.34
2008	7.80	4.80	19.46	7.18	20.21	3.74	19.41	2.41	0.77	0.97	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
2010	17.60	6.27	26.40	16.42	8.00	2.83	19.20	2.65	0.80	0.80	71.20	22.78

EFDMLLSS.D03-D10

Table 85. PSD and RSD values obtained for each black bass species taken in spring nocturnal electrofishing samples in Martins Fork Lake (330 acres) in April 2010; 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	11	18 (0-42)	
Largemouth bass	67	51 (39-63)	36 (24-47)

^a Largemouth bass = RSD₁₅, spotted bass = RSD₁₄
EFDMLLSS.D10

Table 86. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Martins Fork Lake (330 acres) from 2003-2010.

Age	Year							
	2003	2004	2005	2006	2007	2008	2009	2010
1	15.31	10.86	5.37	9.98	10.12	9.98	7.17	4.80
2	19.35	78.25	20.76	17.66	41.28	17.80	15.14	16.80
3	3.33	6.89	15.47	9.49	8.22	13.50	12.39	16.96
4	2.67	1.33	2.40	6.64	15.65	10.06	10.74	9.44
5	0.67			1.33	2.36	3.90	0.53	1.33
6							2.12	2.13
7							1.32	5.33

EFDMLLSS.D03-D10
EFDMLLAS.D03, D09

Table 87. 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	2010	2010	2010
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 (11.8)	4 (11.8)	4 (11.8)	4 (11.8)
Spring CPUE age 1	1 (15.31)	1 (10.86)	1 (5.37)	1 (9.98)	1 (10.12)	1 (9.98)	1 (7.17)	1 (7.17)	1 (4.80)	1 (4.80)
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)	1 (9.57)	1 (8.00)	1 (8.00)
Spring CPUE ≥15.0 in	2 (5.30)	2 (5.30)	2 (4.80)	2 (9.30)	3 (21.13)	3 (19.41)	2 (11.16)	2 (11.16)	3 (19.20)	3 (19.20)
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)	2 (1.59)	1 (0.80)	1 (0.80)
Total score	8	8	8	9	11	11	10	10	10	10
Assessment rating	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair
Instantaneous mortality (z)	1.03	2.04	1.08	0.81	0.80	0.48	0.54	0.54	0.37	0.37
Annual mortality (A)	64.40	87.00	66.00	55.70	55.10	38.40	41.60	41.60	31.30	31.30
EFDMLLSS.D03-D10										
EFDMLLAS.D03, D09										

Table 88. Length frequency and CPUE (fish/hr) of black bass collected at Martins Fork Lake (330 acres) during 0.750 hours of 15 minute nocturnal electrofishing samples on 27 September 2010; 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	2	8	15	5	3	3	2	2	2	2	1	1	1	1	1	1	1	46	61.33 (15.72)
RB	1	1	2	1	2	1												8	10.67 (5.33)
SB	1	6	2	5	3	5	1				1	1	2					26	34.67 (9.33)
SMB					1	1												2	2.67 (2.67)

LMB = largemouth bass
 RB = redeye bass (coosa bass)
 SB = spotted bass
 SMB = smallmouth bass
 EFDMLLSF.D10

Table 89. Electrofishing indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected during 2002 - 2010 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	SE	CPUE	SE	SE	CPUE	SE
2002	5.5	0.1	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	4.4	0.2	32.00	4.30	10.00	2.60	10.12	3.36		
2006	4.5	0.1	38.40	14.50	11.20	3.20	9.98	5.09		
2007	4.6	0.2	28.68	8.65	10.36	2.99	7.17	2.93		
2008	4.4	0.2	31.87	14.27	10.33	2.72	4.80	1.96		
2009	4.3	0.2	23.20	8.33	7.20	2.33				
2010	5.2	0.2	40.00	11.55	26.67	9.33				

EFDMLLSF.D02
 EFDMLLSF.D05-D10
 EFDMLLS.D03-D10
 EFDMLLAS.D03, D09

Table 90. 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	Age											
	class	No.	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	
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 91. Length frequency and CPUE (fish/hr) of black bass collected in approximately 3,750 hours of 15-minute nocturnal electrofishing samples in Paintsville Lake (1,150 acres) on 15 April 2010; numbers in parentheses are standard errors.

Species/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	22				
Upper																									
LMB	2	9	23	2	24	45	37	39	10	8	2	4	2							3	1	213	121.71	(14.18)	
SMB								1														1	0.57	(0.57)	
SB	1	13	8	2	8	11	4	2	3	2	3	5	2								64	36.57	(13.25)		
Lower																									
LMB	3	10	30	48	29	12	42	63	45	43	21	14	1	3	3	2	1	1	1	1	2	374	187.00	(46.48)	
SMB										1											1	0.50	(0.50)		
SB	2			1			1			1				1							6	3.00	(1.46)		
Total																									
LMB	3	12	39	71	31	36	87	100	84	53	29	16	5	5	3	2	3	1	3	1	3	587	156.53	(26.31)	
SMB									1												2	0.53	(0.36)		
SB	3	13	8	3	8	11	5	2	3	3	3	5	3								70	18.67	(7.46)		

LMB = largemouth bass

SMB = smallmouth bass

SB = spotted bass

EFDPLLSS.D10

Table 92. 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		Total		CPUE	SE
	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	0.00		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	0.00		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	0.00		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	0.00		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	0.00		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	0.00		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	0.00		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	0.00		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	0.00		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	0.00		16.43
2010	51.20	16.39	86.40	11.56	13.33	1.73	5.60	1.09	1.87	0.53	156.53	0.00		26.31

EFDPLSS.D88-D10

Table 93. 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 15 April 2010; 95% confidence intervals are in parentheses; largemouth bass stock size ≥ 8.0 in and spotted bass stock size >7.0 in.

Area	Species	No. \geq stock size	PSD (+/- 95%)	RSD ^a (+/- 95%)
Upper	Spotted bass	40	38 (22-53)	18 (6-29)
	Largemouth bass	153	14 (9-20)	5 (2-9)
Lower	Spotted bass	3	67 (1-132)	33 (0-99)
	Largemouth bass	242	20 (15-25)	5 (3-8)
Total	Spotted bass	43	40 (25-54)	19 (7-30)
	Largemouth bass	395	18 (14-22)	5 (3-8)

^a Largemouth bass = RSD₁₅; spotted bass = RSD₁₄

EFDPLLSS.D10

Table 94. 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	2010
1	11.80	41.00	41.20	95.18	54.60	75.60	43.52	43.97	51.50	35.64	58.13
2	68.80	29.70	50.30	51.15	81.80	104.10	53.22	77.57	66.06	61.88	78.97
3	42.60	65.70	42.80	19.45	22.40	55.60	8.08	9.91	6.90	3.34	10.09
4	7.10	9.60	8.70	10.32	9.60	8.70	4.01	2.37	2.94	2.16	3.03
5	2.90	3.90	3.90	4.46	2.60	4.10	2.10	1.52	1.45	0.52	1.60
6	1.70	2.80	2.50	1.28	1.10	1.90	0.66	0.43	0.40		0.44
7				0.31		0.40					

EFDPLLSS.D00-D10

EFDPLLAS.D03

EFDPLLAS.D06

Table 95. 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	2010
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)
Spring CPUE age 1	3 (41.20)	4 (95.18)	4 (61.44)	4 (75.60)	3 (43.52)	3 (43.97)	4 (51.50)	2 (35.64)	4 (58.13)
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)	1 (13.33)
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)	2 (5.60)
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)	3 (1.87)
Total score	10	11	9	14	8	9	11	7	13
Assessment rating	Fair	Fair	Fair	Good	Fair	Fair	Fair	Poor	Good
Instantaneous mortality (z)	0.83	0.95	1.15	1.10	1.02	1.16	1.17	1.12	1.18
Annual mortality (A)	56.50	61.30	68.20	66.60	63.80	68.60	69.10	67.40	69.40
EFDPLLSS.D02-D10									
EFDPLLAS.D03, D06									

Table 96. Length frequency and CPUE (fish/hr) of black bass collected in 3,762 hours of 15-minute nocturnal electrofishing samples in Paintsville Lake (1,150 acres) on 22 September 2010; 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			
Lower																							
SMB	1																				1		
SB	2					1		2	1												6		
LMB	1	20	28	25	10	6	26	28	12	10	5	3	1								175		
Middle																							
SMB	1																				1		
SB	5	1		1	2					1											10		
LMB	2	34	20	18	2	14	34	22	11	6	1	1	1			1					167		
Upper																							
SMB																					0		
SB	2	8			2	2	6	3	2												25		
LMB	30	71	54	12	21	48	26	17	4	2	2	3	1	4	1			1	1	1	298		
Total																							
SMB	2																				2		
SB	5	5	8	1	4	3	6	5	3	1											41		
LMB	3	84	119	97	24	41	108	76	40	20	8	6	4	2	4	1	1	1	1	1	640		
CPUE																							
SMB																					0.53		
SB																					10.93		
LMB																					170.67		

LMB = largemouth bass
SMB = smallmouth bass
SB = spotted bass
EFDPLLSF.D10

Table 97. 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	CPUE	Standard error	CPUE	Standard error
2002					95.18	20.09
2003	4.8	0.1	31.30	6.10	14.00	2.20
2004	5.1	0.1	65.67	10.80	37.33	8.60
2005	4.5	0.1	46.00	9.60	10.70	2.70
2006	4.9	0.1	72.40	12.00	33.60	5.10
2007	5.1	0.1	52.35	24.04	30.20	15.57
2008	4.6	0.1	24.84	8.75	8.07	5.15
2009	4.6	0.1	64.57	13.30	23.08	10.74
2010	4.6	0.1	86.40	19.52	31.47	6.89

EFDPLLSF.D03-D10
 EFDPLLS.D03-D10
 EFDPLLAS.D03, D06

Table 98. Length frequency and CPUE (fish/hr) of walleye collected at Paintsville Lake (1,150 acres) during 4,129 hours of daytime spring electrofishing on 18 March 2010; numbers in parentheses are standard errors.

Year	Inch class													Total	CPUE	SE				
	13	14	15	16	17	18	19	20	21	22	23	24	25				26	27	28	29
2000	1	3	2	1	2													10	5.13 (0.00)	
2001						1	1	1	3	1							1	9	7.26 (0.00)	
2002									no data											
2003						1			1	1	1	1	4					9	5.14 (2.58)	
2004						2	1	1	2	1	1	1	1					16	6.40 (2.32)	
2005									no data											
2006						1	4	11	6	2	2	1						27	29.03 (13.17)	
2007									no data											
2008						1	2	4	2	6	4	3	2	2	1	3	4	34	7.91 (4.08)	
2009						1	1	1	1	1	1	1	1	1	1	1	1	11	2.19 (1.06)	
2010						1	1	3	2	1	3	2	3	1	8	5	5	1	36	8.64 (2.72)

EFDPLWSS.D00-D10

Table 99. Number of fish and relative weight (Wr) for each length group of walleye collected at Paintsville Lake (1,150 acres) during 4,129 hours of daytime spring electrofishing on 18 March 2010. 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
	0		7	90	28	98
			(2)	(2)	(2)	(2)

EFDPLWSS.D10

Table 100. 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	2010
Population density (CPUE all fish)	1 (7.91)	1 (2.19)	1 (8.64)
Growth rate (mean length age 3 at capture)	3 (17.4)	3 (17.4)	3 (17.4)
Size structure (CPUE \geq 20.0 in)	3 (3.49)	2 (1.28)	4 (7.02)
Recruitment (CPUE <13.0 in)	0 (0.00)	0 (0.00)	0 (0.00)
Total Score	7	6	8
Assessment Rating	Fair	Fair	Fair
Instantaneous mortality (z)	0.31	0.16	0.17
Annual mortality (A)	26.70	14.60	15.60

EFDPLWSS.D08-D10
EFDPLWAS.D08

Table 101. Length frequency and CPUE (fish/hr) of white crappie collected at Paintsville Lake (1,150 acres) during 4.129 hours of daytime spring electrofishing on 18 March 2010; numbers in parentheses are standard errors.

	Inch class											Total	CPUE	SE
	2	3	4	5	6	7	8	9	10	11	12			
White crappie		1	2	26	19	18	13	6	1	4	1	91	22.62	(10.35)

EFDPLWSS.D10

Table 102. 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					
	\geq 8.0 in		\geq 10.0 in		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
2010	6.12	2.35	1.44	0.86	22.62	10.35

EFDPLWSS.D08-D10

Table 103. PSD and RSD₁₀ values for white crappie taken in spring electrofishing samples at Paintsville Lake (1,150 acres) on 18 March 2010, 95% confidence intervals are in parentheses.

No. ≥ 5.0 in	PSD (+/- 95%)	RSD ₁₀ (+/- 95%)
88	28 (19-38)	7 (2-12)

EFDPLWSS.D10

Table 104. Spring electrofishing catch rate (fish/hr) for each age of white crappie collected from Paintsville Lake (1,150 acres).

Age	Year		
	2008	2009	2010
1	0.00	0.00	0.00
2	2.39	23.53	11.81
3	2.15	6.89	4.95
4	1.66	3.59	2.69
5	1.41	1.23	2.17
6			
7	0.24		

EFDPLWSS.D08-D10

EFDPLCAS.D08

Table 105. Length frequency and electrofishing CPUE (fish/hr) of largemouth bass collected at Pan Bowl Lake (98 acres) during 1.00 hours of 7.5 minute daytime runs on 13 April 2010; numbers in parentheses are standard errors.

Species	Inch class																					
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	CPUE
LMB	25	21	3	2	21	31	22	32	20	3	2	2	4			3	1	1	1	1	194	194.00 (32.06)
SB										1											1	1.00 (1.00)

LMB = largemouth bass
 SB = spotted bass
 EFDPLSS.D10

Table 106. Spring daytime electrofishing CPUE (fish/hr) for each length group of largemouth bass collected at Pan Bowl Lake (98 acres). Nocturnal electrofishing was used 1992-2000. 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	CPUE	SE	CPUE	SE	CPUE	SE	CPUE	SE				
1992	19.43		22.28		14.28		25.71		1.14														81.71	
1993																								
1994																								
1995																								
1996	20.00		56.00		9.00		14.00		2.00		14.00		25.60		4.10		4.30		1.80		2.72		275.43	39.19
1997	12.10		39.52		8.06		15.32		0.81		15.32		18.00		4.72		7.00		1.81		158.50	26.87		
1998	26.00		20.00		5.00		10.00		3.00		10.00		15.33		2.87		1.40		1.40		190.01	22.62		
1999	17.33		24.67		30.00		15.33		4.00		15.33		34.67		8.67						138.67	21.75		
2000	34.00		52.00		18.00		18.00																	
2001							no data																	
2002							no data																	
2003	28.80	10.20	47.20	9.60	12.00	1.30	12.00	1.30	25.60	4.10	4.10	3.20	25.60	4.10	4.30	1.80	106.00	18.90	113.60	20.50				
2004							no data																	
2005	12.80	4.10	65.80	13.30	9.40	3.60	9.40	3.60	18.00	4.30	4.30	1.80	18.00	4.30	4.30	1.80	106.00	18.90	113.60	20.50				
2006							no data																	
2007	90.29	26.63	149.71	20.19	12.57	3.85	12.57	3.85	22.86	4.43	4.43	1.81	22.86	4.43	4.43	1.81	275.43	39.19	275.43	39.19				
2008	28.00	10.03	91.00	15.56	21.50	6.37	21.50	6.37	18.00	4.72	4.72	1.81	18.00	4.72	4.72	1.81	158.50	26.87	158.50	26.87				
2009	50.39	8.36	119.96	17.79	11.22	3.15	11.22	3.15	8.43	2.18	2.18	0.87	8.43	2.18	2.18	0.87	190.01	22.62	190.01	22.62				
2010	72.00	22.53	105.00	19.39	7.00	2.80	7.00	2.80	10.00	2.93	2.93	1.14	10.00	2.93	2.93	1.14	194.00	32.06	194.00	32.06				

EFDPLSS.D03-D10

Table 107. PSD and RSD₁₅ values for largemouth bass taken in spring electrofishing samples in Pan Bowl Lake (98 acres) on 13 April 2010; 95% confidence intervals are in parentheses.

No. fish \geq 8.0 in	PSD (\pm 95%)	RSD ₁₅ (\pm 95%)
122	14 (8-20)	8 (3-13)

EFPBLS.D10

Table 108. Spring electrofishing catch rate (fish/hr) for each age of largemouth bass collected from Pan Bowl Lake (98 acres) from 2003-2010.

Age	Year					
	2003	2005	2007	2008	2009	2010
1	19.20	3.42	72.00	17.00	43.86	51.00
2	32.00	53.68	92.11	51.40	54.42	69.60
3	15.38	14.77	45.03	32.91	46.02	35.71
4	10.05	7.5	30.29	21.83	25.81	19.33
5	10.30	10.09	14.10	13.86	9.69	7.36
6	10.40	6.84	4.57	6.50	3.45	2.00
7	2.53	3.56	4.95	2.50	2.16	1.00
8	5.60	3.42	8.00	7.00	0.90	2.00
9	1.73	2.71	4.38	2.50	1.92	1.00
10						

EFPBLS.D03, D05, D07-D10

EFPBLAS.D07

Table 109. Population assessments for largemouth bass collected during spring at Pan Bowl Lake (98 acres). Actual values are in parentheses.

Parameter	Year					
	2003	2005	2007	2008	2009	2010
Mean length age 3 at capture	2 (10.5)	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)	3 (51.00)
Spring CPUE 12.0-14.9 in	1 (12.00)	1 (9.40)	1 (12.60)	2 (21.50)	1 (11.22)	1 (7.00)
Spring CPUE \geq 15.0 in	3 (25.60)	3 (18.00)	3 (22.86)	3 (18.00)	2 (8.43)	2 (10.00)
Spring CPUE \geq 20.0 in	3 (3.20)	2 (1.80)	4 (6.86)	4 (7.00)	3 (2.87)	3 (2.00)
Total score	11	9	13	13	10	11
Assessment rating	Fair	Fair	Good	Good	Fair	Fair
Instantaneous mortality (z)	0.36	0.37	0.43	0.42	0.62	0.65
Annual mortality (A)	30.30	31.20	35.20	34.10	46.10	47.60

EFPBLS.D03, D05, D07-D10

EFPBLAS.D07

Table 110. Length frequency and electrofishing CPUE (fish/hr) of black bass collected in approximately 0.875 hours of 7.5-min. electrofishing runs in Pikeville City Lake (20 acres) on 21 April 2010; 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			
LMB	1	1	1	1	9	8	8	2	5	4	10	7	2	4	10	9	7	9	3	4	104	118.86	(10.09)
SB										1	1										2	2.29	(1.48)

LMB = largemouth bass
 SB = spotted bass
 EFDHALSS.D10

Table 111. Spring electrofishing 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	CPUE	SE	CPUE	CPUE	SE	CPUE	CPUE	SE	CPUE	CPUE	SE
2004	5.13	2.60	12.82	12.80	15.38	7.70	30.77	8.90	2.56	64.10	2.60			
2005	12.80	4.30	11.50	3.30	1.30	1.30	51.30	9.50	8.90	76.90	8.10			
2006	5.07	2.54	34.81	4.11	3.98	2.73	49.01	6.22	1.30	92.87	9.05			
2007	43.20	15.09	11.20	3.20	8.00	4.38	46.40	6.88	6.40	108.80	24.34			
2008	10.67	3.37	48.00	7.45	10.67	2.67	50.67	7.35	10.67	120.00	16.65			
2009	22.67	4.81	18.67	4.92	9.33	3.21	25.33	4.81	8.00	76.00	6.11			
2010	22.86	3.23	21.71	5.44	21.71	7.55	52.57	4.89	8.00	118.86	10.09			

EFDHALSS.D04-D10

Table 112. PSD and RSD₁₅ values obtained for largemouth bass species taken in spring electrofishing samples in Pikeville City Lake (20 acres) on 21 April 2010; 95% confidence intervals are in parentheses.

No. \geq 8.0 in	PSD (+/- 95%)	RSD ₁₅ (+/- 95%)
84	77 (68-86)	55 (44-65)

EFDHALSS.D10

Table 113. Length frequency and nocturnal electrofishing CPUE (fish/hr) of black bass collected at Yatesville Lake (2,280 acres) during 3,026 hours of 15 minute samples on 24 May 2010; 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			
Upper																							
LMB	1	2	9	19	21	8	36	35	30	20	18	11	16	5	5	3	2	1	1	1	243	162.00 (9.56)	
SB				1																	1	0.67 (0.67)	
Lower																							
LMB	7	14	21	24	6	8	12	20	10	5	6	2	7	5	1	1	1	2			151	100.67 (11.66)	
SB	8	9	6	1	7	5	7	3	1	1											48	32.00 (8.39)	
Total																							
LMB	1	9	23	40	45	14	44	47	50	30	23	17	18	12	10	4	3	2	1	1	394	131.33 (11.71)	
SB	8	9	7	1	7	5	7	3	1	1											49	16.33 (6.20)	

LMB = largemouth bass

SB= spotted bass

EFDYLLSS.D10

Table 114. 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	28.63	5.35	68.31	7.47	30.56	2.80	16.57	3.15	0.00		144.07	9.68
2010	44.00	6.32	57.00	8.73	19.33	3.81	11.00	2.79	0.67	0.45	131.33	11.71

EFDYLLSS.D93 - D10

Table 115. PSD and RSD values for black bass species taken in spring nocturnal electrofishing samples in each area of Yatesville Lake (2,280 acres) on 24 May 2010; 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	Largemouth bass	183	34 (27-41)	9 (5-14)
	Spotted bass	0		
Lower	Largemouth bass	79	37 (26-47)	20 (11-29)
	Spotted bass	24	8 (0-20)	
Total	Largemouth bass	262	35 (29-41)	13 (9-17)
	Spotted bass	24	8 (0-20)	

^a Largemouth bass = RSD₁₅; spotted bass = RSD₁₄
EFDYLLSS.D10

Table 116. 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	2010
1	59.70	32.20	52.10	13.00	42.30	45.93	46.98	44.95	28.22	42.63
2	56.00	54.90	46.60	35.70	54.90	69.67	63.65	40.61	69.39	58.29
3	11.30	23.40	22.70	23.60	43.00	16.32	23.12	15.92	22.95	14.91
4	5.70	8.50	16.40	11.90	23.20	15.67	18.54	16.38	18.67	11.40
5	1.10	1.20	1.00	0.60	1.90	3.41	4.77	3.78	3.74	2.44
6	1.60	1.80	1.20	0.90	2.80	0.33				
7										
8		0.30								

EFDYLLSS.D00-D02
 EFDYLLSS.D04-D10
 EFDYLLAS.D05
 EFDYLLAS.D06

Table 117. 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	2010		
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)	4 (13.5)	4 (13.5)
Spring CPUE age 1	4 (52.10)	1 (13.00)	3 (42.30)	3 (45.93)	3 (46.98)	3 (44.95)	2 (28.22)	3 (42.63)	2 (28.22)	3 (42.63)
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)	3 (30.56)	2 (19.33)	3 (30.56)	2 (19.33)
Spring CPUE ≥15.0 in	3 (16.70)	2 (9.00)	4 (21.70)	3 (16.00)	3 (15.78)	3 (16.60)	3 (16.57)	2 (11.00)	3 (16.57)	2 (11.00)
Spring CPUE ≥20.0 in	0 (0.00)	0 (0.00)	2 (0.30)	2 (0.70)	0 (0.00)	0 (0.00)	0 (0.00)	2 (0.67)	0 (0.00)	2 (0.67)
Total score	14	10	17	14	13	12	12	13	12	13
Assessment rating	Good	Fair	Excellent	Good	Good	Good	Good	Good	Good	Good
Instantaneous mortality (z)	0.86	1.07	0.91	1.23	0.80	0.70	0.91	1.22	0.70	0.91
Annual mortality (A)	57.80	65.80	59.80	70.70	55.20	50.20	59.80	70.40	50.20	59.80
EFDYLLSS.D02-D10										
EFDYLLAS.D05										
EFDYLLAS.D06										

Table 118. Length frequency and CPUE (fish/hr) of black bass collected in approximately 2.750 hours of 15-minute nocturnal electrofishing samples in Yatesville Lake (2,280 acres) on 28 September 2010; 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				
Upper																			
LMB	5	37	47	24	5	14	21	15	8	3	1		1	4			185	148.00 (21.76)	
SB			1		1												2	1.60 (1.60)	
Lower																			
LMB	10	40	39	14	6	18	29	3	6	4	3			3	2		177	118.00 (19.67)	
SB	24	48	12	12	8	5	3	2	1		2						117	78.00 (28.09)	
Total																			
LMB	15	77	86	38	11	32	50	18	14	7	4		1	7	2		362	131.64 (14.63)	
SB	24	48	13	12	9	5	3	2	1		2						119	43.27 (18.98)	

LMB = largemouth bass

SB= spotted bass

EFDYLLSF.D10

Table 119. Fall electrofishing indices of year class strength at age 0 and age 1 and mean lengths (in) of largemouth bass collected during 2003 - 2010 at Yatesville Lake (2,280 acres); 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
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	28.22	5.28
2009	4.9	0.1	32.67	6.45	16.33	3.95	42.63	6.40
2010	5.1	0.1	78.55	11.53	45.09	8.65		

EFDYLLSS.D03-D10

EFDYLLSF.D03-D10

EFDYLLAS.D05

EFDYLLAS.D06

Appendix A. Dewey Lake Angler Attitude Survey Results

Frequency Table (N=210)

3. Which species do you fish for at Dewey Lake?

	Frequency	Percent
Bass	145	69.0%
Crappie	76	36.2%
Channel Catfish	15	7.1%
Bluegill	14	6.7%
White Bass	12	5.7%
Flathead Catfish	11	5.2%
Blue Catfish	8	3.8%
Carp	1	0.5%

4. Which one species do you fish for most at Dewey Lake?

	Frequency	Percent
Bass	124	67.0%
Crappie	47	25.4%
Channel Catfish	3	1.6%
Flathead Catfish	1	0.5%
White Bass	4	2.2%
Bluegill	5	2.7%
Carp	1	0.5%
Total	185	
No Response	25	

5. What level of satisfaction do you have with bass fishing at Dewey Lake?

	Frequency	Percent
Very Satisfied	34	23.6%
Somewhat Satisfied	73	50.7%
Neutral	16	11.1%
Somewhat Dissatisfied	21	14.6%
Very Dissatisfied	0	0.0%
No Opinion	0	0.0%
Total	144	
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	9	52.9%
Size of Fish	8	47.1%
Not Happy With Regulations	0	0.0%
Too Many Anglers	0	0.0%
Too Many Weeds	0	0.0%
Total	17	
No Response	4	

6. What level of satisfaction do you have with crappie fishing at Dewey Lake?

	Frequency	Percent
Very Satisfied	21	28.4%
Somewhat Satisfied	29	39.2%
Neutral	14	18.9%
Somewhat Dissatisfied	10	13.5%
Very Dissatisfied	0	0.0%
No Opinion	0	0.0%
Total	74	
No Response	2	

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

	Frequency	Percent
Number of Fish	4	40.0%
Size of Fish	6	60.0%
Not Happy With Regulations	0	0.0%
Too Many Anglers	0	0.0%
Too Many Weeds	0	0.0%
Total	10	
No Response	0	

7. What level of satisfaction do you have with channel catfish fishing at Dewey Lake?

	Frequency	Percent
Very Satisfied	4	26.7%
Somewhat Satisfied	9	60.0%
Neutral	1	6.7%
Somewhat Dissatisfied	2	13.3%
Very Dissatisfied	1	6.7%
No Opinion	1	6.7%
Total	15	
No Response	0	

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	2	100.0%
Size of Fish	0	0.0%
Not Happy With Regulations	0	0.0%
Too Many Anglers	0	0.0%
Too Many Weeds	0	0.0%
Total	2	
No Response	1	

8. What level of satisfaction do you have with blue catfish fishing at Dewey Lake?

	Frequency	Percent
Very Satisfied	0	0.0%
Somewhat Satisfied	0	0.0%
Neutral	1	12.5%
Somewhat Dissatisfied	4	50.0%
Very Dissatisfied	1	12.5%
No Opinion	2	25.0%
Total	8	
No Response	0	

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	5	100.0%
Size of Fish	0	0.0%
Not Happy With Regulations	0	0.0%
Too Many Anglers	0	0.0%
Too Many Weeds	0	0.0%
Total	5	
No Response	0	

9. What level of satisfaction do you have with flathead catfish fishing at Dewey Lake?

	Frequency	Percent
Very Satisfied	1	9.1%
Somewhat Satisfied	3	27.3%
Neutral	6	54.5%
Somewhat Dissatisfied	1	9.1%
Very Dissatisfied	0	0.0%
No Opinion	0	0.0%
Total	11	
No Response	0	

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	1	100.0%
Size of Fish	0	0.0%
Not Happy With Regulations	0	0.0%
Too Many Anglers	0	0.0%
Too Many Weeds	0	0.0%
Total	1	
No Response	0	

10. What level of satisfaction do you have with white bass fishing at Dewey Lake?

	Frequency	Percent
Very Satisfied	1	14.3%
Somewhat Satisfied	2	28.6%
Neutral	0	0.0%
Somewhat Dissatisfied	4	57.1%
Very Dissatisfied	0	0.0%
No Opinion	0	0.0%
Total	7	
No Response	5	

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

	Frequency	Percent
Number of Fish	4	100.0%
Size of Fish	0	0.0%
Not Happy With Regulations	0	0.0%
Too Many Anglers	0	0.0%
Too Many Weeds	0	0.0%
Total	4	
No Response	0	

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

	Frequency	Percent
Support	94	49.5%
Oppose	18	9.5%
No Opinion	78	41.1%
Total	190	
No Response	20	

12. How many times do you fish Dewey Lake a year?

	Frequency	Percent
First Time	3	1.5%
1 to 4	53	26.2%
5 to 10	39	19.3%
More than 10	107	53.0%
Total	202	
No Response	8	

13. 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?

	Frequency	Percent
Support	78	41.5%
Oppose	2	1.1%
No Opinion	108	57.4%
Total	188	
No Response	22	

13. Angler Comments

	Frequency	Percent
need to clean out boat ramp at German Bridge	2	50.0%
needs to be stocked with muskie	1	25.0%
slot limit	1	0.25
Total	4	

14. Are you satisfied with the current size and creel limits on all sportfish at Dewey Lake?

	Frequency	Percent
Yes	166	91.7%
No	15	8.3%
Total	181	
No Response	29	

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

Bass Size limit

	Frequency	Percent
10	1	50.0%
15	1	50.0%
Total	2	

Bass Creel Limit

	Frequency	Percent
5	1	100.0%
Total	1	

Crappie Size limit

	Frequency	Percent
9	3	30.0%
10	7	70.0%
Total	10	

Crappie Creel Limit

	Frequency	Percent
15	2	22.2%
20	7	77.8%
Total	9	

Channel Catfish Size limit

	Frequency	Percent
15	1	100.0%
Total	1	

Channel Catfish Creel Limit

	Frequency	Percent
20	1	100.0%
Total	1	

Blue Catfish Size limit

	Frequency	Percent
15	1	100.0%
Total	1	

Blue Catfish Creel Limit

	Frequency	Percent
20	1	100.0%
Total	1	

Flathead Catfish Size limit

	Frequency	Percent
20	1	100.0%
Total	1	

Flathead Catfish Creel Limit

	Frequency	Percent
5	1	100.0%
Total	1	

White Bass Size limit

	Frequency	Percent
10	1	100.0%
Total	1	

White Bass Creel Limit

	Frequency	Percent
15	1	100.0%
Total	1	