

KANSAS BLACK BASS TOURNAMENT MONITORING

2007 ANNUAL REPORT

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INTRODUCTION

This report summarizes catches of black bass (*Micropterus* spp.) species from angling tournaments conducted in 2007 on Kansas waters by those bass clubs that cooperated in our voluntary tournament-monitoring program or catch data compiled from on-site event requirements by other authorities. Tournament catches of black bass have been recorded in Kansas since 1977 and have proven valuable for indexing largemouth bass (*Micropterus salmoides*) relative abundance and length frequencies in reservoirs. These catch statistics supplement the Department of Wildlife and Park's sampling data and both are used to evaluate management activities. However, caution is expressed on the reliability of estimates of length frequency, structural indices or catch rates based on catch data at individual reservoirs or lakes where the number of events reported were few.

RESULTS AND DISCUSSION

Replication of events at individual impoundments is key to the reliability of any reported catch statistic. Therefore, recognize the catch statistics provided in this report may be skewed based on minimal efforts reported for particular impoundments.

In 2007, 9 Kansas bass clubs reported the catches of black bass from 37 tournaments (Table 1). Of the data used in this report, thirty-five of the reported tournaments were held on federal reservoirs; the other 2 were held at smaller water bodies (Tables 2 and 5).

Reservoir Statistics

The number of tournament events reported in 2007 was similar (-10%) than the previous year (Table 2). The reported numbers of angler days and angler hours fished in black bass tournaments in 2007 were 61 % lower than the 12-year means but slightly higher than in 2006. The numbers and total weight of bass \geq 12 inches caught were 29 and 24 % lower than in 2006,

and were 59 and 60 % lower than the 12-year means. The 2007 hourly catch rate of bass ≥ 12 in was 42 % lower than the previous year and 12 % lower than the 12-year mean.

The 2007 catch of 51 bass ≥ 20 in was similar (-4%) to the 2006 catch, but 67 % lower than the 12-year mean. The mean number of hours (125) necessary in 2007 to catch a bass ≥ 20 in was similar (+7%) to the previous year, but 16 % higher than the 12-year mean. The largest bass reported in tournament fishing in 2007 was 6.9 pounds.

An accepted standard of quality largemouth bass fishing is a catch rate of 0.2 bass ≥ 12 in per hour. In 2007, eight of eleven reservoirs had catch rates that exceeded the standard, but only Big Hill and Cedar Bluff had multiple events reported (Table 3). The highest catch of bass ≥ 12 in per hour with a minimum of five events occurred at Big Hill (0.38).

Heaviest mean weight for bass ≥ 12 in taken from reservoirs with a minimum of five events was 2.1 pounds (Cedar Bluff) (Table 3). Big Hill had the highest reported catch (25) of bass ≥ 20 inches. Big Hill required 96 angler hours per fish ≥ 20 in.

A cursory estimate of the current condition of a given reservoir's largemouth bass fishery can be made by comparing the number of bass caught per hour in the present year to the historic mean catch rate for that reservoir (Table 4). The percent deviation indicates whether catches are above or below (+ or -) for each impoundment and describes the magnitude. Above average percentages may suggest the presence of strong year classes. Those deviations plus or minus 10% of the mean could indicate steady-state populations; reservoirs that produce catch rates of -25%, or lower, than their historical average may signal a decline in reproduction or recruitment.

State, County and City Lake Statistics

The catch data reported from tournaments held at small lakes are seldom adequate to make reliable estimates of length frequency, structural indices or catch rates because of the low number of events conducted per lake. Two bass tournaments were reported in 2007 and catch data from this impoundment are summarized in Table 5.

Table 1. Bass clubs providing black bass catch data from tournament events in Kansas, 2007.

Bass Clubs
American Bass Anglers
Bass Anglers of Central Kansas
Big Hill Bassmasters
Cherryvale Bassmasters
Fishin' with Friends
Hays Bass Anglers
Kansas Bass Federation
Mid-America Bass Masters
Shawnee Mission Bass Masters

Table 2. Annual tournament statistics on black bass in Kansas reservoirs, as reported by Kansas bass clubs, 1996-2007.

Statistic	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	12-year mean	2007 % deviation from mean	2007 % deviation from 2006
Tournaments reported	148	170	160	174	149	88	65	53	32	38	39	35	96	-64	-10
Total Angler days	3,139	3,240	3,488	3,442	3,238	2,129	1,609	1,557	572	782	776	797	2,064	-61	3
Total Angler hours	25,115	25,920	27,902	27,532	25,902	17,029	12,874	12,456	4,572	6,252	6,206	6,377	16,511	-61	3
Bass over 12 inches	5,467	6,684	7,291	9,106	9,141	7,832	5,202	4,667	1,649	2,240	3,104	2,192	5,381	-59	-29
Pounds of bass over 12 inches	11,350	14,091	15,768	19,111	18,976	15,545	10,247	9,308	3,340	4,509	5,788	4,379	11,034	-60	-24
Mean pounds per bass over 12 inches	2.0	2.1	2.2	2.1	2.2	2.1	2.3	2.1	2.1	2.0	1.8	1.9	2.1	-9	4
Bass over 12 inches per hour	0.28	0.31	0.28	0.31	0.34	0.36	0.31	0.26	0.26	0.34	0.48	0.28	0.32	-12	-42
Pounds of bass > 12 inches per hour	0.45	0.54	0.57	0.69	0.73	0.91	1.25	1.33	0.73	0.72	0.93	0.69	0.80	-13	-26
Bass over 20 inches	159	222	210	279	292	170	137	142	61	65	53	51	153	-67	-4
Hours per bass over 20 inches	158	117	133	99	89	100	94	88	75	96	117	125	108	16	7
Largest bass (lbs)	7.4	8.1	7.7	8.2	8.8	8.8	7.3	7.7	8.2	6.3	6.9	6.9	8	-10	0

Table 3. Summary of length frequencies, stock indices, and catches of black bass in tournaments on Kansas Reservoirs in 2007.

Length (inches)	Percent of Catch											Mean	Total
	Big Hill	Cedar Bluff	Clinton	El Dorado	Glen Elder	Hillsdale	LaCygne	Melvorn	Perry	Pomona	Wilson		
8	2	4	0	22	6	4	1	1	0	0	6	4	
9	3	1	0	3	4	0	0	2	0	0	6	2	
10	4	4	0	6	10	1	1	5	0	0	15	4	
11	4	3	0	13	6	8	5	8	0	0	10	5	
12	14	7	18	23	18	18	24	17	17	13	19	17	
13	17	9	27	13	15	12	17	25	13	13	13	16	
14	17	20	9	6	14	13	19	33	29	20	10	17	
15	12	22	9	10	10	9	5	4	13	13	17	11	
16	11	18	18	3	7	14	8	3	8	20	4	10	
17	7	4	9	1	8	9	1	2	4	13	0	5	
18	5	3	0	0	0	8	8	1	13	7	0	4	
19	2	2	0	0	1	3	3	0	4	0	0	1	
20	2	2	0	0	0	1	5	0	0	0	0	1	
21	0	1	9	0	0	0	0	0	0	0	0	1	
22	0	0	0	0	0	0	1	0	0	0	0	0	
23	0	0	0	0	0	0	0	0	0	0	0	0	
24	0	0	0	0	0	0	0	0	0	0	0	0	
25	0	0	0	0	0	0	0	0	0	0	0	0	
Total Bass (all sizes)	1087	682	11	69	99	77	75	160	24	15	52	214	2351
Total Anglers	288	245	11	36	16	36	32	32	8	8	36	68	748
Angler Hours	2408	2132	77	288	272	288	256	256	56	56	288	580	6377
Number of Tournaments	19	7	1	1	1	1	1	1	1	1	1	3	35
Percent of Catch													
Bass 8-12 inches	14	12	0	43	26	13	8	16	0	0	37	15	
Bass 12-15 inches	47	37	55	42	47	43	60	74	58	47	42	50	
Bass 15-20 inches	37	49	36	14	26	43	25	10	42	53	21	32	
Bass 20-25 inches	2	3	9	0	0	1	7	0	0	0	0	2	
Catch By Size Category *													
Bass 8-12 inches/hour	0.08	0.03	0.00	0.10	0.10	0.03	0.02	0.10	0.00	0.00	0.07	0.05	
Bass 12-15 inches/hour	0.22	0.14	0.08	0.10	0.17	0.11	0.18	0.46	0.25	0.13	0.08	0.17	
Bass 15-20 inches/hour	0.15	0.19	0.05	0.03	0.10	0.11	0.07	0.06	0.18	0.14	0.04	0.10	
Bass 20-25 inches/hour	0.01	0.01	0.01	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0	0.00	
Bass > 8 inches / hour	0.47	0.36	0.14	0.24	0.36	0.27	0.29	0.63	0.43	0.27	0.18	0.33	
Bass > 12 inches / hour	0.38	0.33	0.14	0.14	0.27	0.23	0.27	0.53	0.43	0.27	0.11	0.28	
Wt. of bass >12 in. (lbs.)	1902	1289	23	57	127	140	141	205	49	31	50.9	364.95	4379
Mean wt. of bass >12 inches	2.02	2.14	2.13	1.5	1.7	2.1	2.04	1.5	2.0	2.1	1.54	1.89	
Number of bass > 12 inches	940	603	11	39	73	67	69	135	24	15	33	182.64	2192
Number of bass > 20 inches	25	19	1	0	0	1	5	0	0	0	0		51
Hours per bass > 20 inches	96	112	77			288	51					125	
Wt. of largest bass (lbs.)	6.7	6.9	5.7	3.0	4.2	4.8	5.7	3.1	4.2	3.5	2.23	4.5	

* Geometric mean catches were weighted according to the number of tournaments at each reservoir. Hourly catches of bass > 8 or > 12 inches may not equal the sum of catches of included length groups because each catch statistic was calculated independently as a mean of replicate tournaments on each reservoir.

Table 4. Trends in catch per hour for two length groups of black bass from Kansas reservoir black bass angling tournaments, 1996-2007.

Reservoir	Length Group (inches)	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Geo-metric mean	2007 % deviation from mean	2007 % deviation from 2006
Big Hill	>8	0.47	0.38	0.33	0.41	0.46	0.55	0.50	0.39	0.44	0.48	0.55	0.47	0.45	4.9	-14.5
	>12	0.33	0.29	0.25	0.33	0.35	0.53	0.52	0.36	0.37	0.39	0.46	0.38	0.37	2.3	-17.4
Cedar Bluff	>8	0.66	0.46	0.47	0.51	0.58	0.74	0.37	0.33	0.70	0.33	0.56	0.36	0.49	-26.1	-35.7
	>12	0.49	0.42	0.35	0.44	0.59	0.74	0.37	0.30	0.66	0.30	0.51	0.33	0.44	-24.8	-35.3
Clinton ***	>8	0.16	0.17	0.29	0.26	0.24	0.09	0.12	0.26				0.14	0.19	-25.9	
	>12	0.13	0.14	0.25	0.21	0.20	0.06	0.06	0.25				0.14	0.15	-6.3	
Council Grove	>8	0.31	0.17	0.67										0.22		
	>12	0.22	0.13	0.52										0.17		
El Dorado ***	>8	0.16	0.36	0.54	0.14	0.14			0.08	0.54			0.24	0.20	20.2	
	>12	0.14	0.28	0.34	0.11	0.10			0.08	0.33			0.14	0.16	-10.4	
Fall River	>8		0.06											0.06		
	>12		0.04											0.04		
Glen Elder ***	>8	0.31		0.11									0.36	0.32	12.6	
	>12	0.30		0.08									0.27	0.28	-1.8	
Hillsdale ***	>8	0.12	0.11	0.15	0.16	0.14	0.22	0.12		0.08			0.27	0.13	110.0	
	>12	0.12	0.10	0.15	0.17	0.14	0.19	0.10		0.05			0.23	0.12	99.9	
Kanopolis	>8			0.10										0.10		
	>12			0.04										0.04		
Kirwin	>8	0.79	0.79	0.43	0.43	0.62	0.59	0.15	0.23					0.49		
	>12	0.76	0.70	0.39	0.39	0.60	0.58	0.14	0.23					0.45		
La Cygne	>8	0.29	0.37	0.22	0.34	0.35	0.38	0.11	0.13				0.29	0.25	14.1	
	>12	0.23	0.30	0.18	0.26	0.26	0.22	0.10	0.13				0.27	0.21	31.5	
Marion	>8															
	>12															
Melvern ***	>8	0.09	0.22	0.31	0.25	0.24	0.26	0.67	0.37			0.37	0.63	0.18	258.0	70.3
	>12	0.08	0.22	0.19	0.17	0.20	0.23	0.42	0.24			0.24	0.53	0.13	302.1	120.8
Milford	>8	0.12	0.19	0.40	0.41	0.28	0.55	0.38	0.35					0.27		
	>12	0.10	0.18	0.26	0.27	0.18	0.32	0.23	0.24			0.63		0.20		
Norton	>8	1.07	1.09	0.89	1.03	1.07	0.97	0.64	0.77					1.00		
	>12	0.80	0.93	0.73	0.84	1.01	0.88	0.61	0.72					0.72		
Perry ***	>8	0.11	0.25	0.25	0.37	0.28	0.40	0.25					0.43	0.23	86.7	
	>12	0.09	0.20	0.21	0.33	0.21	0.33	0.22					0.43	0.19	126.4	
Pomona ***	>8	0.10			0.48		0.13						0.27	0.11	141.5	
	>12	0.08			0.31		0.13						0.27	0.09	216.6	
Toronto	>8															
	>12															
Tuttle Creek	>8	0.20	0.36	0.19										0.18		
	>12	0.15	0.36	0.18										0.16		
Webster	>8	0.49	0.50	0.48	0.34	0.38	0.21	0.40	0.33					0.45		
	>12	0.43	0.47	0.44	0.30	0.34	0.14	0.39	0.32					0.37		
Wilson***	>8	0.27	0.26	0.21	0.25	0.35	0.36	0.84	0.48	0.30	0.77	1.08	0.18	0.38	-52.8	-83.3
	>12	0.23	0.23	0.17	0.19	0.29	0.33	0.58	0.42	0.24	0.57	0.88	0.11	0.31	-64.4	-87.5

*** 2007 catch rates based on one tournament.

Table 5. Summary of length frequencies, stock indices, and catches of black bass in tournaments on Kansas Lakes in 2007.

Length (inches)	Percent of Catch		Mean	Total
	Banner Creek	Lake Shawnee		
8	0	0	0	
9	0	0	0	
10	0	0	0	
11	0	0	0	
12	4	38	21	
13	25	17	21	
14	20	24	22	
15	25	7	16	
16	16	10	13	
17	5	3	4	
18	5	0	3	
19	0	0	0	
20	0	0	0	
21	0	0	0	
22	0	0	0	
23	0	0	0	
24	0	0	0	
25	0	0	0	
Total Bass (all sizes)	56	29	43	85
Total Anglers	11	6	9	17
Angler Hours	77	42	60	119
Number of Tournaments	1	1	1	2
Percent of Catch				
Bass 8-12 inches	0	0	0	
Bass 12-15 inches	48	79	64	
Bass 15-20 inches	52	21	37	
Bass 20-25 inches	0	0	0	
Catch By Size Category				
Bass 8-12 inches/hour	0.00	0.00	0.00	
Bass 12-15 inches/hour	0.35	0.55	0.45	
Bass 15-20 inches/hour	0.38	0.14	0.26	
Bass 20-25 inches/hour	0.00	0.00	0.00	
Bass > 8 inches / hour	0.73	0.69	0.71	
Bass > 12 inches / hour	0.73	0.69	0.71	
Number of bass > 12 inches	56	29	43	83
Bass > 20 in	0	0	0	
Hours per bass >=20 in				
Wt. of largest bass (lbs.)	3.6	3.0	3.3	