

KANSAS BLACK BASS TOURNAMENT MONITORING

2005 ANNUAL REPORT

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INTRODUCTION

This report summarizes catches of black bass (*Micropterus* spp.) species from angling tournaments conducted in 2005 on Kansas waters by bass clubs that cooperated in our tournament-monitoring program. 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 2005, 11 Kansas bass clubs reported the catches of black bass from 42 tournaments (Table 1). Of the data used in this report, thirty-eight of the reported tournaments were held on federal reservoirs; the other 4 were held at one of our State Fishing Lakes.

Reservoir Statistics

The number of tournament events reported in 2005 was 19% higher than the previous year (Table 2). The reported numbers of angler days and angler hours fished in black bass tournaments in 2005 were 69 and 70 % lower than the 12-year mean but 34 % higher than in 2004. The numbers and total weight of bass \geq 12 inches caught were 36 and 35 % higher than

in 2004, and were 61 and 63 % lower than the 12-year mean. The 2005 hourly catch rate of bass ≥ 12 in was 31 % higher than the previous year and 10 % higher than the 12-year mean.

The 2005 catch of 65 bass ≥ 20 in was 7 % higher than the 2004 catch, and 63 % lower than the 12-year mean. The mean number of hours (96) necessary in 2005 to catch a bass ≥ 20 in was 16 % less than the 12-year mean. The largest bass reported in tournament fishing in 2005 was 6.3 pounds.

An accepted standard of quality largemouth bass fishing is a catch rate of 0.2 bass ≥ 12 in per hour. In 2005, all three reservoirs had catch rates that exceeded the standard, but Wilson reported only three events (Table 3). The highest catch of bass ≥ 12 in per hour with a minimum of five events occurred at Big Hill (0.39).

Heaviest mean weight for bass ≥ 12 in taken from reservoirs with a minimum of four events was 2.1 pounds (Cedar Bluff) (Table 3). Big Hill also had the highest reported catch of bass ≥ 20 inches (44) followed by Cedar Bluff (21). These two reservoirs required 74 and 132 angler hours, respectively, 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. Four bass tournaments were reported for one lake in 2005 and catch data from this impoundment are summarized in Table 5.

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The U.S. Fish and Wildlife Service
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4040 North Fairfax Drive, Suite 130
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Table 1. List of bass clubs contributing black bass catch data from tournament events in 2005 to the Kansas Department of Wildlife and Parks.

Bass Club
American Bass Anglers
Boothill Bass Club
Centennial Bass Club
Cherryvale Bassmasters
Colorado Bass Anglers Association
Hays Bass Angler Association
Kansas Bass Chapter Federation
Kansas Bassmasters
Liberal Bassmasters
Southwinds Bass Club
Walnut Valley Bass Club

Table 2. Annual tournament statistics on black bass in Kansas reservoirs, as reported by Kansas bass clubs, 1994-2005.

Statistic	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2005	
													12-year	% deviation
													mean	from mean
Tournaments reported	143	153	148	170	160	174	149	88	65	53	32	38	114	-67
Total Angler days	3,815	3,750	3,139	3,240	3,488	3,442	3,238	2,129	1,609	1,557	572	782	2,563	-69
Total Angler hours	30,517	29,998	25,115	25,920	27,902	27,532	25,902	17,029	12,874	12,456	4,572	6,252	20,506	-70
Bass over 12 inches	4,298	6,145	5,467	6,684	7,291	9,106	9,141	7,832	5,202	4,667	1,649	2,240	5,810	-61
Pounds of bass over 12 inches	9,936	12,308	11,350	14,091	15,768	19,111	18,976	15,545	10,247	9,308	3,340	4,509	12,041	-63
Mean pounds per bass over 12 inches	2.0	1.9	2.0	2.1	2.2	2.1	2.2	2.1	2.3	2.1	2.1	2.0	2.1	-4
Bass over 12 inches per hour	0.21	0.45	0.28	0.31	0.28	0.31	0.34	0.36	0.31	0.26	0.26	0.34	0.31	10
Pounds of bass > 12 inches per hour	0.33	0.41	0.45	0.54	0.57	0.69	0.73	0.91	1.25	1.33	0.73	0.72	0.72	0
Bass over 20 inches	203	171	159	222	210	279	292	170	137	142	61	65	176	-63
Hours per bass over 20 inches	150	175	158	117	133	99	89	100	94	88	68	96	114	-16
Largest bass (lbs)	8.8	9.5	7.4	8.1	7.7	8.2	8.8	8.8	7.3	7.7	8.2	6.3	8	-22

Table 3. Summary of length frequencies, stock indices, and catches of black bass in tournaments on Kansas Reservoirs in 2005.

Length (inches)	Percent of Catch			Mean	Total
	Big Hill	Cedar Bluff	Wilson		
8	3	3	3	3	
9	3	1	1	2	
10	7	3	10	7	
11	6	3	12	7	
12	13	7	18	13	
13	17	15	21	18	
14	18	23	20	20	
15	10	22	13	15	
16	7	10	2	6	
17	6	5	1	4	
18	4	4	0	3	
19	3	3	0	2	
20	2	1	0	1	
21	1	1	0	1	
22	0	0	0	0	
23	0	0	0	0	
24	0	0	0	0	
25					
Total Bass (all sizes)	1464	949	157	857	2570
Total Anglers	342	381	31	251	754
Angler Hours	3264	2781	207	2084	6252
Number of Tournaments	18	17	3	13	38
Percent of Catch					
Bass 8-12 inches	20	10	25	18	
Bass 12-15 inches	47	44	59	50	
Bass 15-20 inches	30	44	16	30	
Bass 20-25 inches	3	2	0	2	
Catch By Size Category *					
Bass 8-12 inches/hour	0.08	0.02	0.19	0.10	
Bass 12-15 inches/hour	0.24	0.14	0.44	0.27	
Bass 15-20 inches/hour	0.14	0.16	0.12	0.14	
Bass 20-25 inches/hour	0.01	0.01	0.00	0.01	
Bass > 8 inches / hour	0.48	0.33	0.77	0.53	
Bass > 12 inches / hour	0.39	0.30	0.57	0.42	
Wt. of bass >12 in. (lbs.)	2516	1817	176		4509
Mean wt. of bass >12 inches	2	2.1	1.5	1.87	
Number of bass > 12 inches	1245	878	117		2240
Number of bass > 20 inches	44	21	0		65
Hours per bass > 20 inches	74	132		96	
Wt. of largest bass (lbs.)	6.3	5.9	2.7	5.0	

* 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, 1994-2005

Reservoir	Length Group inches													Geo- metric mean	2005	
		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005		% deviation from mean	% deviation from 2004
Big Hill	>8	0.31	0.39	0.47	0.38	0.33	0.41	0.46	0.55	0.50	0.39	0.44	0.48	0.42	14.2	9.1
	>12	0.25	0.26	0.33	0.29	0.25	0.33	0.35	0.53	0.52	0.36	0.37	0.39	0.34	14.0	5.4
Cedar Bluff	>8		1.08	0.66	0.46	0.47	0.51	0.58	0.74	0.37	0.33	0.70	0.33	0.53	-37.9	-52.9
	>12		0.75	0.49	0.42	0.35	0.44	0.59	0.74	0.37	0.30	0.66	0.30	0.47	-35.7	-54.5
Clinton	>8	0.19	0.22	0.16	0.17	0.29	0.26	0.24	0.09	0.12	0.26			0.19		
	>12	0.17	0.19	0.13	0.14	0.25	0.21	0.20	0.06	0.06	0.25			0.15		
Council Grove	>8	0.15	0.09	0.31	0.17	0.67								0.22		
	>12	0.14	0.07	0.22	0.13	0.52								0.17		
El Dorado	>8	0.16	0.12	0.16	0.36	0.54	0.14	0.14			0.08	0.54		0.20		
	>12	0.13	0.11	0.14	0.28	0.34	0.11	0.10			0.08	0.33		0.16		
Fall River	>8				0.06									0.06		
	>12				0.04									0.04		
Glen Elder	>8	0.59	0.52	0.31		0.11								0.32		
	>12	0.53	0.45	0.30		0.08								0.28		
Hillsdale	>8	0.12	0.11	0.12	0.11	0.15	0.16	0.14	0.22	0.12		0.08		0.13		
	>12	0.10	0.10	0.12	0.10	0.15	0.17	0.14	0.19	0.10		0.05		0.12		
Kanopolis	>8					0.10								0.10		
	>12					0.04								0.04		
Kirwin	>8	0.61	0.82	0.79	0.79	0.43	0.43	0.62	0.59	0.15	0.23			0.49		
	>12	0.54	0.76	0.76	0.70	0.39	0.39	0.60	0.58	0.14	0.23			0.45		
La Cygne	>8	0.07	0.46	0.29	0.37	0.22	0.34	0.35	0.38	0.11	0.13			0.23		
	>12	0.07	0.36	0.23	0.30	0.18	0.26	0.26	0.22	0.10	0.13			0.19		
Marion	>8															
	>12															
Melvern	>8	0.04	0.03	0.09	0.22	0.31	0.25	0.24	0.26	0.67	0.37			0.18		
	>12	0.03	0.02	0.08	0.22	0.19	0.17	0.20	0.23	0.42	0.24			0.13		
Milford	>8	0.21	0.14	0.12	0.19	0.40	0.41	0.28	0.55	0.38	0.35			0.27		
	>12	0.18	0.12	0.10	0.18	0.26	0.27	0.18	0.32	0.23	0.24			0.20		
Norton	>8	1.45	1.27	1.07	1.09	0.89	1.03	1.07	0.97	0.64	0.77			1.00		
	>12	0.32	0.67	0.80	0.93	0.73	0.84	1.01	0.88	0.61	0.72			0.72		
Perry	>8	0.16	0.16	0.11	0.25	0.25	0.37	0.28	0.40	0.25				0.23		
	>12	0.13	0.13	0.09	0.20	0.21	0.33	0.21	0.33	0.22				0.19		
Pomona	>8	0.04	0.07	0.10			0.48		0.13					0.11		
	>12	0.02	0.07	0.08			0.31		0.13					0.09		
Toronto	>8															
	>12															
Tuttle Creek	>8	0.13	0.10	0.20	0.36	0.19								0.18		
	>12	0.13	0.09	0.15	0.36	0.18								0.16		
Webster	>8		1.67	0.49	0.50	0.48	0.34	0.38	0.21	0.40	0.33			0.45		
	>12		0.82	0.43	0.47	0.44	0.30	0.34	0.14	0.39	0.32			0.37		
Wilson***	>8	0.59	0.37	0.27	0.26	0.21	0.25	0.35	0.36	0.84	0.48	0.30	0.77	0.38	101.9	156.7
	>12	0.47	0.30	0.23	0.23	0.17	0.19	0.29	0.33	0.58	0.42	0.24	0.57	0.31	84.3	137.5

*** 2005 catch rates based on three tournaments or less.

Table 5. Summary of length frequencies, stock indices, and catches of black bass in tournaments on Kansas Lakes in 2005.

Length (inches)	Percent of Catch		Total
	Clark	SFL	
8		1	
9		1	
10		3	
11		0	
12		14	
13		22	
14		23	
15		13	
16		10	
17		4	
18		4	
19		4	
20		2	
21		1	
22		0	
23		0	
24		0	
25		0	
Total Bass (all sizes)		166	166
Total Anglers		44	44
Angler Hours		276	276
Number of Tournaments		4	4
Percent of Catch			
Bass 8-12 inches		4	
Bass 12-15 inches		59	
Bass 15-20 inches		34	
Bass 20-25 inches		2	
Catch By Size Category			
Bass 8-12 inches/hour		0.03	
Bass 12-15 inches/hour		0.36	
Bass 15-20 inches/hour		0.21	
Bass 20-25 inches/hour		0.01	
Bass > 8 inches / hour		0.6	
Bass > 12 inches / hour		0.57	
Number of bass > 12 inches		159	159
Bass > 20 in		4	
Hours per bass >=20 in		57	
Wt. of largest bass (lbs.)		5.9	