

ILLINOIS NATURAL HISTORY SURVEY
 CENTER FOR AQUATIC ECOLOGY
 2006 CREEL SURVEY RESULTS

2006 POWERTON LAKE
 1426 ACRES
 REGION 1, DISTRICT 5

STRATIFICATION SUMMARY:

Day creel only.
 Results cover 02/16/2006 through 10/19/2006
 Year periods stratified.
 Fishing modes (boat vs. shore) stratified.
 Day types (weekday vs. weekend/holiday) stratified.
 Day periods (morning, midday, and afternoon) stratified.

SAMPLING RATIO: 322/738 = 43.6%

NUMBER OF INTERVIEWS: 4434

Table 1. Total fishing effort, by fishing mode and day type.

FISHING MODE	DAYTYPE	ANGLER-HOURS	95% CI	HOURS/ACRE	95% CI	% EFF
BOAT	WEEKDAY	7479	6360-8599 (15%)	5	4-6 (15%)	21%
	HOLIDAY	9992	8736-11247 (13%)	7	6-8 (13%)	45%
	TOTAL	17471	15789-19153 (10%)	12	11-13 (10%)	35%
SHORE	WEEKDAY	13235	11915-14556 (10%)	9	8-10 (10%)	22%
	HOLIDAY	14724	13444-16005 (9%)	10	9-11 (9%)	45%
	TOTAL	27960	26120-29799 (7%)	20	18-21 (7%)	34%
BOAT & SHORE	WEEKDAY	20715	18983-22446 (8%)	15	13-16 (8%)	22%
	HOLIDAY	24716	22923-26509 (7%)	17	16-19 (7%)	45%
	TOTAL	45431	42938-47923 (5%)	32	30-34 (5%)	34%

Table 2. Total fishing harvest and harvest rates, in numbers of fish.

# HARVESTED	95% CI	#/HOUR	95% CI	#/HA	#/ACRE	SPECIES
18736	15589-21883 (17%)	.385	.325-.444 (16%)	32.47	13.14	All species
1727	1145-2308 (34%)	.034	.024-.044 (30%)	2.99	1.21	Blue catfish
		****	NOT RECORDED ****			Black bullhead
		****	NOT RECORDED ****			Black crappie
8956	6334-11578 (29%)	.196	.141-.252 (28%)	15.52	6.28	Bluegill
187	82-291 (56%)	.002	.001-.003 (50%)	0.32	0.13	Carp
6927	5704-8151 (18%)	.136	.107-.164 (21%)	12.00	4.86	Channel catfish
5	0-17 (257%)	.000	.000-.000 (257%)	0.01	0.00	Flathead catfish
606	154-1058 (75%)	.007	.004-.011 (51%)	1.05	0.43	Freshwater drum
51	2-100 (96%)	.004	.000-.011 (161%)	0.09	0.04	Green sunfish
		****	NOT RECORDED ****			Gizzard shad
		****	NOT RECORDED ****			Largemouth bass
		****	NOT RECORDED ****			Redear sunfish
27	6-49 (79%)	.000	.000-.001 (114%)	0.05	0.02	Smallmouth buffalo
61	29-94 (53%)	.002	.000-.003 (89%)	0.11	0.04	Smallmouth bass
		****	NOT RECORDED ****			Warmouth
36	0-75 (107%)	.001	.000-.002 (141%)	0.06	0.03	White bass
16	0-35 (111%)	.000	.000-.001 (132%)	0.03	0.01	Yellow bullhead
136	0-304 (124%)	.002	.000-.004 (159%)	0.24	0.10	Yellow bass

Table 3. Total fishing harvest and harvest rates, in kilograms.

KG HARVESTED	95% CI	KG/HOUR	95% CI	KG/HA	AVE KG	SPECIES
9155	7226-11084 (21%)	.179	.146-.212 (19%)	15.86	0.489	All species
3162	1765-4559 (44%)	.063	.034-.092 (46%)	5.48	1.831	Blue catfish
		****	NOT RECORDED ****			Black bullhead
		****	NOT RECORDED ****			Black crappie
1183	837-1529 (29%)	.027	.019-.034 (30%)	2.05	0.132	Bluegill
233	106-360 (54%)	.002	.001-.003 (48%)	0.40	1.250	Carp
3559	2892-4225 (19%)	.072	.056-.088 (22%)	6.17	0.514	Channel catfish
74	0-263 (257%)	.000	.000-.001 (245%)	0.13	15.084	Flathead catfish
604	149-1059 (75%)	.007	.004-.010 (47%)	1.05	0.997	Freshwater drum
6	1-11 (85%)	.000	.000-.001 (161%)	0.01	0.119	Green sunfish
		****	NOT RECORDED ****			Gizzard shad
		****	NOT RECORDED ****			Largemouth bass
		****	NOT RECORDED ****			Redear sunfish
169	26-313 (85%)	.003	.000-.007 (120%)	0.29	6.217	Smallmouth buffalo
91	44-139 (52%)	.003	.000-.005 (95%)	0.16	1.487	Smallmouth bass
		****	NOT RECORDED ****			Warmouth
27	0-58 (113%)	.001	.000-.001 (187%)	0.05	0.740	White bass
5	0-10 (114%)	.000	.000-.000 (138%)	0.01	0.298	Yellow bullhead
41	0-100 (142%)	.001	.000-.001 (161%)	0.07	0.304	Yellow bass

Table 4. Total fishing harvest and harvest rates, in pounds.

LB HARVESTED	95% CI	LB/HOUR	95% CI	LB/ACRE	AVE LB	SPECIES
20183	15930-24436 (21%)	.394	.321-.467 (19%)	14.15	1.077	All species
6971	3890-10051 (44%)	.139	.075-.202 (46%)	4.89	4.037	Blue catfish
		****	NOT RECORDED ****			Black bullhead
		****	NOT RECORDED ****			Black crappie
2609	1846-3372 (29%)	.059	.041-.076 (30%)	1.83	0.291	Bluegill
515	234-795 (54%)	.005	.003-.007 (48%)	0.36	2.756	Carp
7845	6376-9315 (19%)	.159	.124-.194 (22%)	5.50	1.133	Channel catfish
162	0-579 (257%)	.001	.000-.003 (257%)	0.11	33.254	Flathead catfish
1332	329-2336 (75%)	.016	.008-.023 (47%)	0.93	2.198	Freshwater drum
13	2-25 (85%)	.001	.000-.003 (161%)	0.01	0.263	Green sunfish
		****	NOT RECORDED ****			Gizzard shad
		****	NOT RECORDED ****			Largemouth bass
		****	NOT RECORDED ****			Redear sunfish
373	56-689 (85%)	.007	.000-.015 (120%)	0.26	13.706	Smallmouth buffalo
201	97-306 (52%)	.006	.000-.012 (95%)	0.14	3.278	Smallmouth bass
		****	NOT RECORDED ****			Warmouth
60	0-127 (113%)	.001	.000-.003 (187%)	0.04	1.631	White bass
11	0-23 (114%)	.000	.000-.000 (138%)	0.01	0.656	Yellow bullhead
91	0-221 (142%)	.001	.000-.003 (161%)	0.06	0.671	Yellow bass

Table 5. Total fishing catch and catch rates, in numbers of fish.
Catch includes both harvested and released fish.

# CAUGHT	95% CI	#/HOUR	95% CI	#/HA	#/ACRE	SPECIES
73384	48773-97995 (34%)	1.499	1.195-1.802(20%)	127.16	51.46	All species
2498	1843-3153 (26%)	.055	.036-.074 (35%)	4.33	1.75	Blue catfish
2	0-7 (231%)	.000	.000-.000 (231%)	0.00	0.00	Black bullhead
10	0-31 (223%)	.000	.000-.000 (220%)	0.02	0.01	Black crappie
14846	10860-18831 (27%)	.303	.217-.390 (29%)	25.72	10.41	Bluegill
941	525-1357 (44%)	.025	.007-.042 (70%)	1.63	0.66	Carp
47611	20881-74340 (56%)	.891	.565-1.217(37%)	82.50	33.39	Channel catfish
35	2-68 (93%)	.000	.000-.001 (84%)	0.06	0.02	Flathead catfish
1807	1182-2432 (35%)	.069	.000-.148 (112%)	3.13	1.27	Freshwater drum
170	62-277 (63%)	.010	.001-.018 (88%)	0.29	0.12	Green sunfish
5	0-17 (245%)	.000	.000-.000 (257%)	0.01	0.00	Gizzard shad
33	13-53 (61%)	.001	.000-.001 (88%)	0.06	0.02	Largemouth bass
3	0-11 (236%)	.000	.000-.000 (236%)	0.01	0.00	Redear sunfish
220	0-450 (105%)	.005	.000-.009 (92%)	0.38	0.15	Smallmouth buffalo
4821	3810-5833 (21%)	.132	.089-.176 (33%)	8.35	3.38	Smallmouth bass
2	0-6 (257%)	.000	.000-.000 (257%)	0.00	0.00	Warmouth
64	17-112 (74%)	.002	.000-.005 (124%)	0.11	0.05	White bass
160	0-451 (181%)	.003	.001-.005 (75%)	0.28	0.11	Yellow bullhead
156	0-325 (108%)	.002	.000-.004 (132%)	0.27	0.11	Yellow bass

Table 6. Total fishing catch and catch rates, in kilograms.

KG CAUGHT	95% CI	KG/HOUR	95% CI	KG/HA	AVE KG	SPECIES
24060	20706-27413 (14%)	.585	.484-.686 (17%)	41.69	0.328	All species
4618	2910-6326 (37%)	.102	.029-.175 (71%)	8.00	1.849	Blue catfish
0	0-0 (236%)	.000	.000-.000 (231%)	0.00	0.016	Black bullhead
0	0-2 (223%)	.000	.000-.000 (223%)	0.00	0.051	Black crappie
1530	1150-1911 (25%)	.033	.024-.042 (27%)	2.65	0.103	Bluegill
1698	791-2604 (53%)	.054	.010-.098 (81%)	2.94	1.804	Carp
9530	7068-11991 (26%)	.197	.157-.237 (20%)	16.51	0.200	Channel catfish
139	0-327 (136%)	.001	.000-.002 (122%)	0.24	3.937	Flathead catfish
1717	1138-2297 (34%)	.070	.000-.160 (130%)	2.98	0.950	Freshwater drum
17	9-25 (45%)	.001	.000-.002 (100%)	0.03	0.101	Green sunfish
0	0-2 (257%)	.000	.000-.000 (257%)	0.00	0.084	Gizzard shad
21	8-34 (61%)	.000	.000-.001 (71%)	0.04	0.636	Largemouth bass
0	0-1 (245%)	.000	.000-.000 (245%)	0.00	0.116	Redear sunfish
951	199-1704 (79%)	.021	.005-.038 (77%)	1.65	4.318	Smallmouth buffalo
3728	2956-4499 (21%)	.103	.066-.139 (36%)	6.46	0.773	Smallmouth bass
0	0-0 (257%)	.000	.000-.000 (245%)	0.00	0.072	Warmouth
44	10-77 (77%)	.002	.000-.004 (128%)	0.08	0.679	White bass
22	0-55 (154%)	.000	.000-.001 (82%)	0.04	0.135	Yellow bullhead
45	0-104 (131%)	.001	.000-.001 (143%)	0.08	0.287	Yellow bass

Table 7. Total fishing catch and catch rates, in pounds.

LB CAUGHT	95% CI		LB/HOUR	95% CI	LB/ACRE	AVE LB	SPECIES
53042	45650-60435	(14%)	1.290	1.068-1.512	(17%)	37.20	0.723 All species
10181	6415-13947	(37%)	.226	.065-.386	(71%)	7.14	4.076 Blue catfish
0	0-0	(236%)	.000	.000-.000	(236%)	0.00	0.035 Black bullhead
1	0-3	(220%)	.000	.000-.000	(220%)	0.00	0.113 Black crappie
3374	2534-4213	(25%)	.073	.054-.093	(27%)	2.37	0.227 Bluegill
3742	1743-5742	(53%)	.119	.023-.215	(81%)	2.62	3.978 Carp
21009	15582-26436	(26%)	.434	.346-.523	(20%)	14.73	0.441 Channel catfish
305	0-721	(136%)	.002	.000-.004	(122%)	0.21	8.679 Flathead catfish
3786	2508-5063	(34%)	.154	.000-.353	(130%)	2.65	2.095 Freshwater drum
38	21-55	(45%)	.002	.000-.004	(100%)	0.03	0.224 Green sunfish
1	0-3	(245%)	.000	.000-.000	(245%)	0.00	0.186 Gizzard shad
46	18-75	(61%)	.001	.000-.001	(71%)	0.03	1.402 Largemouth bass
1	0-3	(236%)	.000	.000-.000	(236%)	0.00	0.255 Redear sunfish
2097	438-3756	(79%)	.047	.011-.084	(77%)	1.47	9.520 Smallmouth buffalo
8218	6517-9919	(21%)	.226	.145-.307	(36%)	5.76	1.705 Smallmouth bass
0	0-1	(245%)	.000	.000-.000	(257%)	0.00	0.158 Warmouth
96	22-170	(77%)	.004	.000-.009	(128%)	0.07	1.496 White bass
48	0-121	(154%)	.001	.000-.002	(82%)	0.03	0.297 Yellow bullhead
99	0-229	(131%)	.001	.000-.003	(143%)	0.07	0.634 Yellow bass

Table 8. Hours per completed trip and supplementary questions for all trips.

	MEAN	95% CI		MIN	MAX	#SAMPLES
HOURS PER COMPLETED TRIP*						
BOAT	3.7	3.6-3.8	(3%)	0.2	10.3	873
SHORE	2.7	2.6-2.8	(3%)	0.3	12.5	1774
BOAT & SHORE	3.0	3.0-3.1	(2%)	0.2	12.5	2647
MILES TRAVELED	20.6	19.7-21.6	(5%)	1	600	2939
SUCCESS RATING (1-10)	6.0	5.9-6.1	(2%)	1	10	2929

*1313 samples were from split interviews of completed trips.
86.4% of all 3063 interviews were completed trips.

ILLEGAL HARVEST: Clerk noted 7 out of 3063 interviews with illegal harvests.

Table 9. Frequency distribution of angler party size for all interviews.

PARTY SIZE:	1	2	3	4	5	6	7	8	9	10+
BOAT INTERVIEWS	185	595	100	8	2					
SHORE INTERVIEWS	917	978	195	61	13	5	4			

Table 10. Number of interviews (and %) per species sought for all interviews.

197 (6.4%)	ANY	All species
145 (4.7%)	BCF	Blue catfish
1 (0.0%)	BLC	Black crappie
211 (6.9%)	BLG	Bluegill
29 (0.9%)	CAP	Carp
1700 (55.5%)	CCF	Channel catfish
4 (0.1%)	FCF	Flathead catfish
11 (0.4%)	FRD	Freshwater drum
2 (0.1%)	LMB	Largemouth bass
1 (0.0%)	SAB	Smallmouth buffalo
747 (24.4%)	SMB	Smallmouth bass
1 (0.0%)	WAE	Walleye
8 (0.3%)	WCF	White catfish
1 (0.0%)	YEB	Yellow bullhead
5 (0.2%)	YLB	Yellow bass

