

ILLINOIS NATURAL HISTORY SURVEY
 CENTER FOR AQUATIC ECOLOGY
 1997 CREEL SURVEY RESULTS

1997 CARLYLE TAILWATER
 24 ACRES
 REGION 0, DISTRICT 0

STRATIFICATION SUMMARY:

Day creel only.
 Results cover 03/15/1997 through 10/31/1997
 Year periods stratified.
 Fishing modes (boat vs. shore) stratified.
 Day types (weekday vs. weekend/holiday) stratified.
 Day periods (morning, midday, and afternoon) stratified.
 Yearperiod 3 coalesced with yearperiod 4.
 Yearperiod 8 coalesced with yearperiod 9.

SAMPLING RATIO: 219/693 = 31.6%

NUMBER OF INTERVIEWS: 2663

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	2796	2135-3457 (24%)	117	90-145 (24%)	5%
	HOLIDAY	2256	1706-2807 (24%)	95	72-118 (24%)	6%
	TOTAL	5053	4224-5881 (16%)	212	177-247 (16%)	5%
SHORE	WEEKDAY	48597	44672-52523 (8%)	2042	1877-2207 (8%)	9%
	HOLIDAY	53610	48119-59102 (10%)	2253	2022-2483 (10%)	11%
	TOTAL	102208	95663-108752 (6%)	4294	4019-4569 (6%)	10%
BOAT & SHORE	WEEKDAY	51394	47413-55375 (8%)	2159	1992-2327 (8%)	8%
	HOLIDAY	55867	50360-61373 (10%)	2347	2116-2579 (10%)	11%
	TOTAL	107261	100664-113857 (6%)	4507	4230-4784 (6%)	10%

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

# HARVESTED	95% CI	#/HOUR	95% CI	#/HA	#/ACRE	SPECIES
73569	66562-80575 (10%)	.399	.326-.472 (18%)	7638.17	3091.12	All species
15	0-55 (257%)	.000	.000-.001 (257%)	1.60	0.65	Blue catfish
2339	1654-3023 (29%)	.009	.006-.013 (35%)	242.80	98.26	Bigmouth buffalo
54	0-133 (148%)	.000	.000-.001 (140%)	5.57	2.25	Bighead carp
764	0-1576 (106%)	.002	.000-.003 (100%)	79.35	32.11	Black buffalo
778	396-1160 (49%)	.004	.000-.009 (134%)	80.78	32.69	Black bullhead
975	565-1386 (42%)	.006	.000-.011 (95%)	101.27	40.98	Black crappie
9614	7586-11642 (21%)	.038	.029-.047 (23%)	998.18	403.96	Bluegill
6033	4946-7120 (18%)	.029	.022-.037 (26%)	626.33	253.47	Carp
11078	9555-12601 (14%)	.078	.064-.091 (18%)	1150.16	465.46	Channel catfish
618	148-1087 (76%)	.002	.001-.003 (47%)	64.12	25.95	Flathead catfish
4394	3142-5646 (28%)	.016	.011-.022 (34%)	456.19	184.62	Freshwater drum
111	5-218 (95%)	.000	.000-.001 (88%)	11.57	4.68	Green sunfish
181	0-473 (161%)	.007	.000-.024 (246%)	18.83	7.62	Gizzard shad
113	40-186 (64%)	.001	.000-.001 (75%)	11.74	4.75	Largemouth bass
		****	NOT RECORDED ****			Longnose gar
167	68-265 (59%)	.000	.000-.001 (59%)	17.30	7.00	Longear sunfish
40	0-101 (152%)	.000	.000-.000 (158%)	4.14	1.68	Orangespotted sunfish
20	0-46 (127%)	.000	.000-.000 (143%)	2.10	0.85	Paddlefish
5	0-16 (245%)	.000	.000-.000 (245%)	0.47	0.19	Redear sunfish
5	0-14 (212%)	.000	.000-.000 (212%)	0.48	0.19	River carpsucker
3374	2496-4252 (26%)	.017	.012-.023 (32%)	350.31	141.77	Smallmouth buffalo
111	0-234 (110%)	.000	.000-.001 (131%)	11.56	4.68	Sauger
443	220-666 (50%)	.002	.000-.003 (83%)	45.96	18.60	Striped bass hybrid
218	16-420 (93%)	.001	.000-.002 (95%)	22.63	9.16	Shortnose gar
11	0-28 (152%)	.000	.000-.000 (151%)	1.14	0.46	Spotted gar
6	0-19 (226%)	.000	.000-.000 (226%)	0.59	0.24	Quillback
746	367-1124 (51%)	.005	.002-.009 (72%)	77.40	31.32	Walleye
24546	20118-28974 (18%)	.139	.067-.212 (52%)	2548.46	1031.35	White bass
6274	5060-7487 (19%)	.040	.027-.054 (34%)	651.34	263.59	White crappie
365	59-671 (84%)	.001	.000-.002 (104%)	37.86	15.32	Yellow bullhead
173	0-462 (167%)	.001	.000-.002 (173%)	17.94	7.26	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
39783	34310-45257 (14%)	.193	.163-.222 (15%)	4130.45	0.541	All species
49	0-168 (245%)	.001	.000-.004 (257%)	5.06	3.248	Black catfish
8623	4909-12337 (43%)	.030	.017-.043 (43%)	895.29	3.688	Bigmouth buffalo
		****	NOT RECORDED ****			Bighead carp
1706	0-3582 (110%)	.003	.000-.007 (110%)	177.11	2.233	Black buffalo
388	203-573 (48%)	.002	.000-.004 (133%)	40.27	0.499	Black bullhead
217	126-308 (42%)	.001	.000-.002 (92%)	22.52	0.222	Black crappie
935	719-1150 (23%)	.004	.003-.005 (24%)	97.02	0.097	Bluegill
4262	3342-5183 (22%)	.020	.013-.026 (31%)	442.50	0.707	Carp
4790	3811-5769 (20%)	.031	.024-.037 (22%)	497.35	0.432	Channel catfish
851	402-1299 (53%)	.004	.002-.006 (59%)	88.33	1.379	Flathead catfish
2413	1570-3256 (35%)	.009	.006-.012 (35%)	250.54	0.549	Freshwater drum
13	0-27 (100%)	.000	.000-.000 (90%)	1.40	0.121	Green sunfish
4	0-11 (163%)	.000	.000-.001 (247%)	0.45	0.024	Gizzard shad
134	44-225 (67%)	.001	.000-.001 (91%)	13.96	1.190	Largemouth bass
		****	NOT RECORDED ****			Longnose gar
19	6-31 (67%)	.000	.000-.000 (66%)	1.93	0.112	Longear sunfish
3	0-7 (171%)	.000	.000-.000 (179%)	0.29	0.071	Orangespotted sunfish
210	0-475 (127%)	.001	.000-.002 (147%)	21.76	10.478	Paddlefish
0	0-0 (245%)	.000	.000-.000 (245%)	0.01	0.013	Redear sunfish
2	0-6 (212%)	.000	.000-.000 (211%)	0.21	0.501	River carpsucker
6133	4440-7826 (28%)	.037	.020-.053 (46%)	636.74	1.818	Smallmouth buffalo
798	0-1676 (110%)	.002	.000-.004 (128%)	82.83	7.188	Sauger
314	117-511 (63%)	.001	.000-.002 (87%)	32.62	0.711	Striped bass hybrid
154	0-329 (114%)	.001	.000-.002 (119%)	15.99	0.710	Shortnose gar
15	0-38 (151%)	.000	.000-.000 (158%)	1.58	1.522	Spotted gar
5	0-18 (231%)	.000	.000-.000 (226%)	0.56	1.076	Quillback
277	161-393 (42%)	.003	.000-.005 (100%)	28.71	0.371	Walleye
5904	4726-7082 (20%)	.034	.017-.051 (50%)	612.98	0.241	White bass
1273	1017-1530 (20%)	.009	.006-.012 (34%)	132.21	0.203	White crappie
194	20-367 (89%)	.001	.000-.001 (112%)	20.10	0.532	Yellow bullhead
98	0-300 (207%)	.000	.000-.001 (207%)	10.14	0.568	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
87707	75640-99775 (14%)	.425	.360-.489 (15%)	3685.18	1.192	All species
107	0-384 (257%)	.002	.000-.008 (245%)	4.51	7.162	Black catfish
19011	10823-27198 (43%)	.065	.037-.094 (43%)	798.77	8.131	Bigmouth buffalo
		****	NOT RECORDED ****			Bighead carp
3761	0-7897 (110%)	.007	.000-.015 (110%)	158.01	4.922	Black buffalo
855	447-1263 (48%)	.004	.000-.010 (133%)	35.93	1.099	Black bullhead
478	278-678 (42%)	.003	.000-.005 (92%)	20.09	0.491	Black crappie
2060	1585-2536 (23%)	.008	.006-.010 (24%)	86.56	0.214	Bluegill
9396	7367-11426 (22%)	.043	.030-.057 (31%)	394.80	1.558	Carp
10561	8402-12720 (20%)	.068	.053-.083 (22%)	443.73	0.953	Channel catfish
1876	887-2864 (53%)	.008	.003-.013 (59%)	78.80	3.040	Flathead catfish
5320	3461-7179 (35%)	.020	.013-.027 (35%)	223.53	1.211	Freshwater drum
30	0-59 (100%)	.000	.000-.000 (90%)	1.25	0.268	Green sunfish
10	0-25 (163%)	.000	.000-.001 (247%)	0.40	0.053	Gizzard shad
297	97-496 (67%)	.002	.000-.003 (91%)	12.46	2.624	Largemouth bass
		****	NOT RECORDED ****			Longnose gar
41	13-69 (67%)	.000	.000-.000 (66%)	1.72	0.247	Longear sunfish
6	0-16 (171%)	.000	.000-.000 (179%)	0.25	0.155	Orangespotted sunfish
462	0-1048 (127%)	.002	.000-.004 (147%)	19.41	23.099	Paddlefish
0	0-0 (257%)	.000	.000-.000 (245%)	0.00	0.028	Redear sunfish
4	0-14 (211%)	.000	.000-.000 (211%)	0.19	1.104	River carpsucker
13521	9789-17252 (28%)	.081	.043-.118 (46%)	568.10	4.007	Smallmouth buffalo
1759	0-3696 (110%)	.003	.000-.008 (128%)	73.90	15.846	Sauger
693	259-1126 (63%)	.003	.000-.005 (87%)	29.10	1.567	Striped bass hybrid
339	0-726 (114%)	.002	.000-.003 (119%)	14.26	1.564	Shortnose gar
34	0-84 (151%)	.000	.000-.000 (158%)	1.41	3.354	Spotted gar
12	0-39 (226%)	.000	.000-.000 (226%)	0.50	2.373	Quillback
610	354-865 (42%)	.006	.000-.012 (100%)	25.61	0.818	Walleye
13016	10420-15613 (20%)	.076	.038-.113 (50%)	546.90	0.530	White bass
2807	2243-3372 (20%)	.019	.013-.026 (34%)	117.96	0.448	White crappie
427	45-809 (89%)	.001	.000-.003 (112%)	17.93	1.173	Yellow bullhead
215	0-662 (207%)	.001	.000-.003 (207%)	9.05	1.252	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
190258	172263-208253 (9%)	1.030	.904-1.157 (12%)	19753.26	7994.03	All species
15	0-55 (257%)	.000	.000-.001 (257%)	1.60	0.65	Blue catfish
4186	2831-5542 (32%)	.017	.010-.024 (39%)	434.65	175.90	Bigmouth buffalo
62	0-145 (134%)	.000	.000-.001 (128%)	6.45	2.61	Bighead carp
777	0-1589 (104%)	.002	.000-.003 (94%)	80.72	32.67	Black buffalo
1286	794-1779 (38%)	.005	.001-.010 (86%)	133.56	54.05	Black bullhead
3328	1479-5178 (56%)	.012	.006-.019 (51%)	345.57	139.85	Black crappie
18928	15080-22776 (20%)	.070	.055-.085 (22%)	1965.18	795.30	Bluegill
12363	10171-14556 (18%)	.061	.049-.074 (21%)	1283.61	519.47	Carp
19071	16740-21401 (12%)	.129	.104-.153 (19%)	1980.00	801.30	Channel catfish
716	241-1192 (66%)	.002	.001-.003 (41%)	74.3	30.10	Flathead catfish
14229	10844-17614 (24%)	.060	.045-.074 (24%)	1477.33	597.87	Freshwater drum
111	5-218 (95%)	.000	.000-.001 (88%)	11.57	4.68	Green sunfish
10002	6463-13541 (35%)	.061	.034-.087 (44%)	1038.45	420.25	Gizzard shad
1564	1053-2074 (33%)	.017	.000-.039 (133%)	162.35	65.70	Largemouth bass
7	0-23 (226%)	.000	.000-.000 (223%)	0.74	0.30	Longnose gar
199	80-319 (60%)	.000	.000-.001 (56%)	20.69	8.37	Longear sunfish
40	0-101 (152%)	.000	.000-.000 (158%)	4.14	1.68	Orangespotted sun
50	6-94 (87%)	.000	.000-.000 (90%)	5.20	2.10	Paddlefish
5	0-16 (245%)	.000	.000-.000 (245%)	0.47	0.19	Redear sunfish
5	0-14 (212%)	.000	.000-.000 (212%)	0.48	0.19	River carpsucker
4923	3563-6283 (28%)	.025	.017-.033 (33%)	511.14	206.86	Smallmouth buffalo
585	269-900 (54%)	.002	.000-.003 (74%)	60.72	24.57	Sauger
463	233-694 (50%)	.002	.000-.003 (81%)	48.11	19.47	Striped bass hybrid
3313	1909-4716 (42%)	.018	.008-.029 (56%)	343.93	139.19	Shortnose gar
239	0-813 (241%)	.000	.000-.001 (194%)	24.77	10.02	Spotted gar
6	0-19 (226%)	.000	.000-.000 (226%)	0.59	0.24	Quillback
16066	12077-20055 (25%)	.062	.048-.077 (23%)	1668.03	675.04	Walleye
47102	40812-53392 (13%)	.286	.201-.371 (30%)	4890.26	1979.06	White bass
29733	24301-35165 (18%)	.193	.134-.251 (30%)	3086.97	1249.28	White crappie
595	245-944 (59%)	.003	.000-.006 (93%)	61.75	24.99	Yellow bullhead
287	0-610 (112%)	.001	.000-.002 (123%)	29.84	12.08	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
53467	46968-59966 (12%)	.263	.230-.296 (13%)	5551.13	0.281	All species
49	0-168 (245%)	.001	.000-.004 (257%)	5.06	3.248	Black catfish
10172	5789-14555 (43%)	.035	.020-.050 (43%)	1056.09	2.430	Bigmouth buffalo
		****	NOT RECORDED ****			Bighead carp
1712	0-3588 (110%)	.003	.000-.007 (108%)	177.69	2.203	Black buffalo
494	296-693 (40%)	.002	.000-.005 (115%)	51.34	0.384	Black bullhead
430	220-640 (49%)	.002	.001-.003 (65%)	44.65	0.129	Black crappie
1197	914-1480 (24%)	.005	.004-.006 (23%)	124.31	0.063	Bluegill
5989	4880-7097 (19%)	.028	.021-.035 (25%)	621.76	0.484	Carp
5657	4619-6695 (18%)	.036	.028-.043 (20%)	587.33	0.297	Channel catfish
883	432-1334 (51%)	.004	.002-.006 (57%)	91.69	1.233	Flathead catfish
3834	2731-4936 (29%)	.016	.012-.019 (24%)	398.01	0.269	Freshwater drum
13	0-27 (100%)	.000	.000-.000 (90%)	1.40	0.121	Green sunfish
172	99-244 (42%)	.001	.001-.002 (46%)	17.81	0.017	Gizzard shad
619	420-818 (32%)	.007	.000-.015 (112%)	64.23	0.396	Largemouth bass
8	0-26 (223%)	.000	.000-.000 (223%)	0.85	1.170	Longnose gar
20	7-33 (64%)	.000	.000-.000 (64%)	2.06	0.100	Longear sunfish
3	0-7 (171%)	.000	.000-.000 (179%)	0.29	0.071	Orangespotted sunfi
296	17-574 (94%)	.001	.000-.002 (113%)	30.69	5.913	Paddlefish
0	0-0 (245%)	.000	.000-.000 (245%)	0.01	0.013	Redear sunfish
2	0-6 (212%)	.000	.000-.000 (211%)	0.21	0.501	River carpsucker
6606	4833-8379 (27%)	.039	.021-.056 (45%)	685.83	1.342	Smallmouth buffalo
1212	232-2192 (81%)	.003	.001-.006 (81%)	125.80	2.075	Sauger
335	135-535 (60%)	.001	.000-.002 (86%)	34.75	0.723	Striped bass hybrid
1327	854-1800 (36%)	.007	.004-.010 (41%)	137.74	0.401	Shortnose gar
305	0-943 (209%)	.001	.000-.002 (125%)	31.64	1.280	Spotted gar
5	0-18 (231%)	.000	.000-.000 (226%)	0.56	1.076	Quillback
1660	1332-1988 (20%)	.009	.006-.013 (40%)	172.36	0.103	Walleye
7528	6215-8840 (17%)	.043	.025-.060 (41%)	781.54	0.160	White bass
2590	2118-3062 (18%)	.017	.013-.022 (27%)	268.91	0.087	White crappie
253	77-429 (70%)	.001	.000-.002 (76%)	26.24	0.426	Yellow bullhead
99	0-302 (204%)	.000	.000-.001 (205%)	10.29	0.345	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
117875	103547-132202 (12%)	.580	.507-.653 (13%)	4952.71	0.620	All species
107	0-384 (257%)	.002	.000-.008 (245%)	4.51	7.162	Blue catfish
22425	12762-32088 (43%)	.077	.044-.111 (43%)	942.24	5.357	Bigmouth buffalo
		****	NOT RECORDED ****			Bighead carp
3773	0-7909 (110%)	.007	.000-.015 (108%)	158.54	4.856	Black buffalo
1090	652-1528 (40%)	.005	.000-.011 (115%)	45.80	0.848	Black bullhead
948	485-1411 (49%)	.004	.001-.007 (65%)	39.83	0.285	Black crappie
2640	2016-3263 (24%)	.010	.008-.013 (23%)	110.91	0.139	Bluegill
13203	10758-15647 (19%)	.062	.047-.077 (25%)	554.73	1.068	Carp
12472	10184-14759 (18%)	.078	.063-.094 (20%)	524.02	0.654	Channel catfish
1947	953-2941 (51%)	.008	.004-.013 (57%)	81.81	2.719	Flathead catfish
8452	6020-10883 (29%)	.034	.026-.042 (24%)	355.11	0.594	Freshwater drum
30	0-59 (100%)	.000	.000-.000 (90%)	1.25	0.268	Green sunfish
378	219-538 (42%)	.002	.001-.003 (46%)	15.89	0.038	Gizzard shad
1364	925-1803 (32%)	.016	.000-.034 (112%)	57.31	0.873	Largemouth bass
18	0-59 (226%)	.000	.000-.001 (223%)	0.76	2.580	Longnose gar
44	16-72 (64%)	.000	.000-.000 (64%)	1.84	0.220	Longear sunfish
6	0-16 (171%)	.000	.000-.000 (179%)	0.25	0.155	Orangespotted sunfi
652	37-1266 (94%)	.002	.000-.004 (113%)	27.39	13.036	Paddlefish
0	0-0 (257%)	.000	.000-.000 (245%)	0.00	0.028	Redear sunfish
4	0-14 (211%)	.000	.000-.000 (211%)	0.19	1.104	River carpsucker
14563	10655-18471 (27%)	.085	.047-.123 (45%)	611.90	2.958	Smallmouth buffalo
2671	510-4832 (81%)	.007	.001-.013 (81%)	112.24	4.574	Sauger
738	297-1179 (60%)	.003	.000-.005 (86%)	31.00	1.594	Striped bass hybrid
2925	1882-3967 (36%)	.016	.009-.023 (41%)	122.89	0.883	Shortnose gar
672	0-2079 (209%)	.002	.000-.004 (125%)	28.23	2.823	Spotted gar
12	0-39 (226%)	.000	.000-.000 (226%)	0.50	2.373	Quillback
3660	2937-4383 (20%)	.021	.012-.029 (40%)	153.78	0.228	Walleye
16595	13702-19489 (17%)	.095	.056-.133 (41%)	697.29	0.352	White bass
5710	4669-6752 (18%)	.038	.028-.049 (27%)	239.92	0.192	White crappie
557	169-945 (70%)	.002	.001-.004 (76%)	23.41	0.938	Yellow bullhead
218	0-665 (204%)	.001	.000-.003 (205%)	9.18	0.761	Yellow bass