WISCONSIN DEPARTMENT OF NATURAL RESOURCES

WEST CENTRAL DISTRICT

FISH MANAGEMENT BUREAU
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Mississippi River Special Tailwater Sport Fishing Creel Census in Pool 7, March 1 - April 30, 1973

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INTRODUCTION

A creel census was conducted in the tailwaters of Pool 7 from March 1 to April 30, 1973 to evaluate the fishing pressure and harvest during a two-month period previously closed to fishing for large game fish.[1] The 1973 special tailwater creel census survey was conducted under the auspices of the Fish Technical Section of the Upper Mississippi River Conservation Committee as part of a plan to maintain a continuing evaluation of the sport fishery.[2]

The 1973 census concludes a series of similar surveys which began in 1969. Accordingly, a management report summarizing the results of the entire series will follow this report at a later date.

DESCRIPTION OF THE AREA

Pool 7 is one of 26 navigation pools created by the construction of locks and dams on the Mississippi River in the 1930's between Hastings, Minnesota and Alton, Illinois--a distance of approximately 928 miles. Pool 7 is impounded by Lock and Dam No. 7 at Dresbach, Minnesota. It is 12 miles long and contains 13,600 acres.

The upper boundary of the pool is Lock and Dam No. 6 which is located at Trempealeau, Wisconsin. The rapid passage of water through the gates of the dam influences the navigation channel for a distance of approximately one-half mile downstream depending upon the volume of water passed. This area is classified as tailwater and is known to provide excellent angling for the larger game fish species. It was in this tailwater area that the 1973 sport fishery creel census was conducted. Just below Lock and Dam No. 6 is a permanently moored fishing barge from which the public can fish for a small daily fee.

Towns found along Pool 7 are Trempealeau and Onalaska, Wisconsin and Dresbach and Dakota, Minnesota. La Crosse, Wisconsin is the largest city in the area with a population of over 50,000 and is located just below Pool 7.

[1] Large game fish include walleye, sauger, northern pike, largemouth bass, and smallmouth bass.

[2] The U.M.R.C.C. is an organization consisting of representatives from Minnesota, Wisconsin, Iowa, Illinois, and Missouri whose objectives are to facilitate cooperation between the states for studies and management of the natural resources of the river, to exchange information about the river and its problems at regular meetings, and to promote cooperation in resource management of interstate waters.

METHODS

One man was stationed at the Trempealeau landing which is the only public boat landing located within the tailwater area of Pool 7. In addition to completing creel census forms (figures 2 and 3), lengths of every walleye and sauger in the catch were recorded. Weights were taken from a representative sample of walleye and sauger in the catch. Aging data used to compile the tables were obtained from scales collected from walleye and sauger in 1969, 1970, and 1971.

To insure a uniform and random census, a work schedule was established which utilized a combination of two consecutive census days followed by one day off plus a rotation between "early" days (7:00 - 11:00 a.m.), "mid" days (11:00 a.m. - 3:00 p.m.), and "late" days (3:00 - 7:00 p.m.). By following this prearranged schedule without deviation throughout the two month study period, the requisite randomness and uniformity was achieved.

The use of a bait with the trade name "Sonar" manufactured by Heddon has been criticized by a number of anglers and conservationists. Their concerns are (1) that the Sonar may be exceedingly effective in harvesting large spawning walleye and sauger; (2) that the Sonar may be responsible for much of the foul hooking occurring on the river. Sonar catch data have been analyzed separately, and average lengths and weights of walleye and sauger caught on sonars have been compared to those taken by other methods.

RESULTS

The creel census was designed to evaluate the fishing pressure and harvest during a two-month period previously closed to fishing for large game fish and to provide information on the angler, catch, and relationship of various factors to the catch. These factors are discussed below in limited detail. The accompanying tables should be consulted for further information. Pertinent tables are grouped at the end of each section for reference.

The Angler (age and origin)

Of the 703 fishermen contacted during March and April, 93.3 percent were men. The average age of all anglers was 37.5 years. Male anglers averaged 37.2 years and women averaged 42.2 years. Ages ranged from 4 to 87 years. Nearly thirteen percent of the fishermen were 65 years of age or older (Tables 1, 2, and 3).

Fishing in the tailwaters of Pool 7 during March and April was primarily a local sport since 78.7 percent of the anglers resided within 50 miles of Pool 7. Wisconsin residents comprised 90.0 percent of the anglers contacted. Trempealeau County contributed the greatest fishing pressure followed by La Crosse, Milwaukee, and Jackson Counties (Tables 4 and 5).

Table 1.

AGE COMPOSITION OF ANGLERS

AGE	MALE		FEMALE		COMBINED	
	Number	Percent	Number	Percent	Number	Percent
Under 12	30	4.5	-	-	30	4.3
12 - 15	54	8.1	-	-	54	7.7
16 - 17	28	4.3	1	2.1	29	4.1
18 - 24	93	14.2	12	25.5	105	14.9
25 - 34	150	22.9	7	14.9	157	22.3
35 - 44	93	14.2	2	4.3	95	13.5
45 - 64	123	18.8	20	42.5	143	20.4
65 and over	85	13.0	5	10.7	90	12.8
TOTAL	656	93.3	47	6.7	703	100.0

Table 2.

AGE COMPOSITION OF ANGLERS ENGAGED IN DIFFERENT TYPES OF FISHING

TYPE OF FISHING	MALE		FEMALE		OVERALL	
	Number	Avg. Age	Number	Avg. Age	Number	Avg. Age
Boat	455	35.2	12	32.2	467	35.1
Bank	189	40.6	33	46.2	222	41.4
Barge	7	51.6	2	36.0	9	48.1
Ice	5	63.6	0	0	5	63.6
TOTAL	656		47		703	
AVERAGE AGE		37.2		42.2		37.5

Table 3.

TOTAL NUMBER OF ANGLERS BY AGE

Age	Male	Female	Total	Age	Male	Female	Total	Age	Male	Female	Total
4	1	-	1	31	13	-	13	57	4	1	5
5	1	-	1	32	12	1	13	58	8	2	10
7	4	-	4	33	16	1	17	59	1	-	1
8	1	-	1	34	8	-	8	60	13	2	15
9	5	-	5	35	9	-	9	61	4	2	6
10	8	-	8	36	20	-	20	62	9	1	10
11	10	-	10	37	10	-	10	63	5	2	7
12	14	-	14	38	8	1	9	64	16	-	16
13	12	-	12	39	6	1	7	65	16	2	18
14	14	-	14	40	10	-	10	66	3	1	4
15	14	-	14	41	6	-	6	67	5	1	6
16	10	1	11	42	9	-	9	68	6	-	6
17	18	-	18	43	8	-	8	69	3	-	3
18	10	1	11	44	7	-	7	70	6	1	7
19	13	4	17	45	13	1	14	71	3	-	3
20	13	-	13	46	7	1	8	72	9	-	9
21	16	3	19	47	2	-	2	73	6	-	6
22	12	1	13	48	4	-	4	74	4	-	4
23	9	3	12	49	2	-	2	75	3	-	3
24	20	-	20	50	6	2	8	78	5	-	5
25	11	1	12	51	4	1	5	79	1	-	1
26	21	1	22	52	5	2	7	80	10	-	10
27	22	1	23	53	2	2	4	81	1	-	1
28	22	2	24	54	2	-	2	83	3	-	3
29	6	-	6	55	8	1	9	87	1	-	1
30	19	-	19	56	8	-	8				
						TOTAL			656	47	703

Table 4.

STATE AND COUNTY OF ORIGIN FOR ANGLERS FISHING
POOL 7 TAILWATERS

WISCONSIN			MINNESOTA			OTHER STATES		
County	No.	% of Total	County	No.	% of Total	State	No.	% of Total
Brown	1	0.1	Winona	6	0.9	Illinois	36	5.1
Chippewa	1	0.1	Hennepin	4	0.6	Iowa	9	1.3
Clark	7	1.0	Olmstead	10	1.4	Others	2	0.3
Dane	10	1.4	Other	3	0.4			
Jackson	20	2.8						
Kenosha	6	0.9						
La Crosse	88	12.5						
Milwaukee	30	4.3						
Monroe	6	0.9						
Racine	8	1.1						
Rock	2	0.3						
Trempealeau	429	61.0						
Vernon	3	0.4						
Walworth	4	0.6						
Waukesha	13	1.8						
Winnebago	3	0.4						
Wood	2	0.3						
TOTAL	633	90.0		23	3.3		47	6.7

Table 5.

DISTANCE TRAVELED BY ANGLERS BASED ON ZONE

Zone	1	2	3	4	5	6	7	8	9
Miles	0-25	26-50	51-75	76-100	101-125	126-150	151-250	251-500	Over 500
Number	476	77	25	2	16	10	95	0	2
Percent	67.7	11.0	3.6	0.3	2.3	1.4	13.5	.0	0.3

Table 6.

ANGLER ORIGIN AND WATERS FISHED

Angler Origin	Wisconsin Statutory Waters	Minnesota Statutory Waters
Wisconsin	450	183
Illinois	30	6
Iowa	5	4
Minnesota	15	8
Others	1	1
Totals	501	202

Reciprocity between Minnesota and Wisconsin allows anglers from either state to fish the Mississippi River under the same regulations and one license. Wisconsin statutory waters received 71.3 percent of the fishing pressure.

The Angler (method and extent of fishing)

Projection of data collected during the census indicates that 5,238 fishing trips were made to the tailwaters of Pool 7 during March and April, 1973, and a total of 17,397 hours were spent fishing (Tables 7 and 11).

Boat fishing predominated during March and accounted for 62.3 percent of the total fishing hours. In April anglers used a boat 55.1 percent of the time and fished from the bank or the barge the remainder of the time (Table 7).

April was the most active fishing month as it accounted for 72.0 percent of the total hours. March was the most productive month with a catch rate of 0.9509 fish per man-hour. The overall catch rate for March and April was 0.8256 fish per man-hour (Table 9).

Casting and still fishing were the only two methods of fishing used. Casting was used 16.8 percent of the time, and still fishing 83.2 percent of the time (Table 10).

Live bait was used 77.8 percent and artificial baits 16.9 percent of the time. Artificial lures with live bait attached were used 5.3 percent of the time (Table 10).

Since the tailwater area is inhabited mainly by the larger game fish species during March and April, it would be expected that most of the anglers fishing this area were seeking these species. Such was the case since 72.8 percent of the anglers contacted were seeking walleye or sauger. Panfish made up the remainder of the species being sought.

The Catch (general information)

Projection of data obtained from contacts with 703 fishermen and 39 "instantaneous" angler counts reveals that during the 17,397 hours spent fishing in the tailwaters of Pool 7 in March and April, 1973, a total of 14,301 fish were caught at a rate of 0.8220 fish per man-hour (Table 11).

Anglers spent 3,037 hours fishing during March to catch 2,608 fish at a catch rate of 0.8587 fish per man-hour. April anglers were less successful and caught 4,403 fish in 6,550 hours at a catch rate of 0.6722 fish per man-hour (Table 11).

The Catch (composition)

The most abundant species in the overall catch was walleye which made up 42.9 percent of the catch. Next in abundance was yellow perch (25.3 percent) followed by sauger (30.0 percent) (Table 12).

Table 7.

TOTAL PROJECTED NUMBER OF HOURS SPENT FISHING BY TYPE OF FISHING AND MONTH

Month	TYPE OF FISHING										TOTAL	
	Boat		Bank or Wading		Barge		Total Open Water		Ice			
	No. Hours	%[1]	No. Hours	%	No. Hours	%	No. Hours	%	No. Hours	%	No. Hours	%[2]
March	3,037	62.3	1,494	30.7	0	0	4,531	93.0	341	7.0	4,872	28.0
April	6,550	52.3	3,600	28.7	2,375	19.0	12,525	100.0	0	.0	12,525	72.0
Total Hours	9,587	55.1[3]	5,094	29.3	2,375	13.7	17,056	98.0	341	2.0	17,397	100.0

[1] Percentage by type of fishing for month.

[2] Percentage by month for the two-month period.

[3] Percentage by type of fishing for the two-month period.

Table 8.

SUMMARY OF COMPLETED FISHING TRIPS

	Boat	Bank	Barge	Total Open Water	Ice	Total All Types
Total Hours	1,775.2	71.0	36.5	1,882.7	19.0	1,901.7
Total Anglers Contacted	445	19	9	473	5	478
Average Hours Fished	4.0	3.7	4.1	4.0	3.8	4.0

Table 9.

CATCH PER MAN-HOUR BY MONTH

	March	April	Total
Hours Fished	1,049.5	1,415.2	2,464.7
Fish Caught	998	1,037	2,035
Catch Per Man-Hour	0.9509	0.7327	0.8256

Table 10.

ACTUAL NUMBER OF ANGLERS BY FISHING METHOD AND LURE USED IN EACH MONTH

FISHING METHOD	MARCH		APRIL		TOTAL	
	No. Anglers	%	No. Anglers	%	No. Anglers	%
Casting	41	13.7	77	19.1	118	16.8
Still Fishing 1/	259	86.3	326	80.9	585	83.2
TOTAL	300		403		703	
FISHING LURE						
Worms	17	5.7	27	6.7	44	6.3
Minnows	210	70.0	293	72.7	503	71.6
TOTAL LIVE BAIT	227	75.7	320	79.4	547	77.8
Jigs	12	4.0	8	2.0	20	2.8
Flies	2	0.7	3	0.7	5	0.7
Sonar	37	12.3	50	12.4	87	12.4
Other Artificials	4	1.3	3	0.7	7	1.0
TOTAL ARTIFICIALS	25	18.3	64	15.8	119	16.9
Artificial with live bait attached	18	6.0	19	4.7	37	5.3

1/ Includes ice.

Table 11.

PROJECTED CATCH OF FISH BY TYPE OF FISHING DURING EACH MONTH

SPECIES	MARCH					APRIL				TOTAL FOR MARCH AND APRIL				
	Boat	Bank	Barge	Ice	Total	Boat	Bank	Barge	Total	Boat	Bank	Barge	Ice	Grand Total
Bowfin	4	-	-	-	4	-	-	-	-	4	-	-	-	4
Mooneye	-	-	-	-	-	12	10	-	22	12	10	-	-	22
Golden Redhorse	-	-	-	-	-	45	-	-	45	45	-	-	-	45
Northern Redhorse	-	-	-	-	-	31	-	-	31	31	-	-	-	31
Spotted Sucker	-	-	-	-	-	7	-	-	7	7	-	-	-	7
Carp	-	-	-	-	-	45	-	-	45	45	-	-	-	45
Channel Catfish	-	-	-	-	-	38	-	-	38	38	-	-	-	38
Black Bullhead	-	7	-	-	7	26	10	-	36	26	17	-	-	43
Brown Bullhead	-	-	-	-	-	-	-	195	195	-	-	195	-	195
Yellow Bullhead	-	-	-	-	-	7	-	-	7	7	-	-	-	7
Northern Pike	18	7	-	-	25	-	84	-	84	18	91	-	-	109
White Bass	7	-	-	-	7	102	-	-	102	109	-	-	-	109
Yellow Perch	374	1,505	-	-	1,879	121	1,980	-	2,101	495	3,485	-	-	3,980
Sauger	649	170	-	251	1,070	1,477	146	456	2,079	2,126	316	456	251	3,149
Walleye	1,537	244	-	144	1,925	2,257	427	976	3,660	3,794	671	976	144	5,585
Smallmouth Bass	-	-	-	-	-	12	10	-	22	12	10	-	-	22
Largemouth Bass	-	-	-	-	-	-	21	-	21	-	21	-	-	21
Bluegill	-	-	-	-	-	7	94	-	101	7	94	-	-	101
Rock Bass	-	7	-	-	7	7	-	-	7	7	7	-	-	14
White Crappie	15	7	-	-	22	12	42	-	54	27	49	-	-	76
Black Crappie	-	7	-	-	7	159	490	-	649	159	497	-	-	656
Freshwater Drum	4	-	-	-	4	38	-	-	38	42	-	-	-	42
Projected Number of Fishermen	893	467	-	107	1,467	1,926	1,125	720	3,771	2,819	1,592	720	107	5,238
Projected Number of Fish	2,608	1,954	-	395	4,957	4,403	3,314	1,627	9,344	7,011	5,268	1,627	395	14,301
Projected Hours Fished	3,037	1,494	-	341	4,872	6,550	3,600	2,375	12,525	9,587	5,094	2,375	341	17,397

Table 12.

ACTUAL CATCH PER MAN-HOUR AND NUMBER OF FISH CAUGHT DURING EACH MONTH

SPECIES	MARCH		APRIL		TOTAL	
	No. Fish	Fish Per Man-Hour	No. Fish	Fish Per Man-Hour	No. Fish	Fish Per Man-Hour
Bowfin	1	0.0010	-	-	1	0.0004
Mooneye	-	-	3	0.0021	3	0.0012
Golden Redhorse	-	-	7	0.0049	7	0.0028
Northern Redhorse	-	-	5	0.0035	5	0.0020
Spotted Sucker	-	-	1	0.0007	1	0.0004
Carp	-	-	7	0.0049	7	0.0028
Channel Catfish	-	-	6	0.0042	6	0.0024
Black Bullhead	1	0.0010	5	0.0035	6	0.0024
Brown Bullhead	-	-	3	0.0021	3	0.0012
Yellow Bullhead	-	-	1	0.0007	1	0.0004
Northern Pike	6	0.0057	8	0.0057	14	0.0057
White Bass	2	0.2039	16	0.0113	18	0.0073
Yellow Perch	306	0.2916	209	0.1477	515	0.2090
Sauger	214	0.2039	254	0.1795	468	0.1899
Walleye	460	0.4383	412	0.2911	872	0.3538
Smallmouth Bass	-	-	3	0.0021	3	0.0012
Largemouth Bass	-	-	2	0.0014	2	0.0008
Bluegill	-	-	10	0.0071	10	0.0041
Rock Bass	1	0.0010	1	0.0007	2	0.0008
White Crappie	5	0.0048	6	0.0042	11	0.0045
Black Crappie	1	0.0010	72	0.0509	73	0.0296
Freshwater Drum	1	0.0010	6	0.0042	7	0.0028
Total Fish Caught	998		1,037		2,035	
Fish Per Man-Hour		0.9509		0.7328		0.8257
Total Hours Fished	1,049.5		1,415.2		2,464.7	

Projected data indicates that a total of 8,734 walleye and sauger were caught during the months of March and April in the Pool 7 tailwater area. This figure represents 42.1 percent of the total walleye and sauger caught during a twelve-month 1967-68 Pool 7 creel census period. March anglers caught 2,995 walleye and sauger at a catch rate of 0.6147 fish per man-hour. April anglers caught the remaining 5,739 at a rate of 0.4582 fish per man-hour (Table 11).

March anglers caught 3,020 large game fish at a rate of 0.6199 fish per man-hour. April anglers caught 5,866 large game fish at a rate of 0.4683 fish per man-hour (Table 11).

The Catch (rates for various methods and baits)

Ice fishing produced the highest catch rate of any type of fishing (1.1579 fish per man-hour). Bank fishermen caught fish at a rate of 1.0639 fish per man-hour and boat anglers registered 0.7549 fish per man-hour (Table 13).

Ice fishing was the most productive method and yielded 1.1579 fish per man-hour as compared to 0.8771 for still fishing and 0.5721 for casting (Table 14).

Anglers using worms had the highest catch rate of 1.2019 fish per man-hour. Fishermen using live bait averaged 0.8474 fish per man-hour, while those using artificial baits averaged 0.6326 fish per man-hour (Table 15).

Anglers using sonars caught walleye and sauger at a rate of 0.7351 fish per man-hour, or 0.1914 fish per man-hour more than the rate for all baits combined. Walleye taken with sonars averaged 0.1 inches longer than those taken with other baits. Sauger taken with sonars averaged 0.9 inches shorter than those taken with other baits. Neither figure represents a significant difference. About three percent of the walleye caught with sonars were of the "lunker" class compared to two percent taken with all other baits combined (Tables 15 and 16).

The proportion of sauger to walleye in the catch was similar for sonar caught fish (0.60/1.00) and fish caught with all other baits (0.54/1.00).

The Catch (length and age distribution of walleye and sauger)

The 1973 spring sauger fishery in the Pool 7 tailwaters was primarily dependent upon two year classes. Over half (57.5 percent) of the sauger creeled were three-year-old fish. Only 0.7 percent of the sauger were over four years old and no one-year-old fish were creeled (Table 17).

Nearly seventy-five percent (74.9 percent) of the sauger caught were between 10.0 and 12.9 inches. Prior to 1950 there existed a statewide 13.0 inch minimum size limit on walleye and sauger. Eighty-three percent of the sauger catch was smaller than 13.0 inches during March and April, 1973 (Table 18).

Table 13.

ACTUAL CATCH PER MAN-HOUR AND NUMBER OF FISH CAUGHT BY TYPE OF FISHING

SPECIES	BOAT		BANK		BARGE		ICE		TOTAL	
	No. Fish	Fish Per Man-Hour	No. Fish	Fish Per Man-Hour	No. Fish	Fish Per Man-Hour	No. Fish	Fish Per Man-Hour	No. Fish	Fish Per Man-Hour
Bowfin	1	0.0005	-	-	-	-	-	-	1	0.0004
Mooneye	2	0.0011	1	0.0018	-	-	-	-	3	0.0012
Golden Redhorse	7	0.0038	-	-	-	-	-	-	7	0.0028
Northern Redhorse	5	0.0027	-	-	-	-	-	-	5	0.0020
Spotted Sucker	1	0.0005	-	-	-	-	-	-	1	0.0004
Carp	7	0.0038	-	-	-	-	-	-	7	0.0028
Channel Catfish	6	0.0032	-	-	-	-	-	-	6	0.0024
Black Bullhead	4	0.0021	2	0.0036	-	-	-	-	6	0.0024
Brown Bullhead	-	-	-	-	3	0.0822	-	-	3	0.0012
Yellow Bullhead	1	0.0005	-	-	-	-	-	-	1	0.0004
Northern Pike	5	0.0027	9	0.0164	-	-	-	-	14	0.0057
White Bass	18	0.0097	-	-	-	-	-	-	18	0.0073
Yellow Perch	121	0.0650	394	0.7190	-	-	-	-	515	0.2090
Sauger	410	0.2203	37	0.0675	7	0.1918	14	0.7368	468	0.1899
Walleye	775	0.4164	74	0.1350	15	0.4110	8	0.4211	872	0.3538
Smallmouth Bass	2	0.0011	1	0.0018	-	-	-	-	3	0.0012
Largemouth Bass	-	-	2	0.0036	-	-	-	-	2	0.0008
Bluegill	1	0.0005	9	0.0164	-	-	-	-	10	0.0041
Rock Bass	1	0.0005	1	0.0018	-	-	-	-	2	0.0008
White Crappie	6	0.0032	5	0.0091	-	-	-	-	11	0.0045
Black Crappie	25	0.0134	48	0.0876	-	-	-	-	73	0.0296
Freshwater Drum	7	0.0038	-	-	-	-	-	-	7	0.0028
Total Fish Caught	1,405		583		25		22		2,035	
Catch Per Man-Hour		0.7549		1.0639		0.6849		1.1579		0.8257
Total Hours Fished	1,861.2		548.0		36.5		19.0		2,464.7	

Table 14.

ACTUAL CATCH PER MAN-HOUR AND NUMBER OF FISH CAUGHT BY FISHING METHOD

SPECIES	CASTING		STILL FISHING		ICE FISHING[1]		TOTAL	
	No. Fish	Fish Per Man-Hour	No. Fish	Fish Per Man-Hour	No. Fish	Fish Per Man-Hour	No. Fish	Fish Per Man-Hour
Bowfin	-	-	1	0.0005	-	-	1	0.0004
Mooneye	-	-	3	0.0015	-	-	3	0.0012
Golden Redhorse	-	-	7	0.0034	-	-	7	0.0028
Northern Redhorse	3	0.0072	2	0.0010	-	-	5	0.0020
Spotted Sucker	1	0.0024	-	-	-	-	1	0.0004
Carp	1	0.0024	6	0.0029	-	-	7	0.0028
Channel Catfish	-	-	6	0.0029	-	-	6	0.0024
Black Bullhead	-	-	6	0.0029	-	-	6	0.0024
Brown Bullhead	-	-	3	0.0015	-	-	3	0.0012
Yellow Bullhead	-	-	1	0.0005	-	-	1	0.0004
Northern Pike	1	0.0024	13	0.0063	-	-	14	0.0057
White Bass	13	0.0313	5	0.0024	-	-	18	0.0073
Yellow Perch	9	0.0216	506	0.2470	-	-	515	0.2090
Sauger	49	0.1178	419	0.2045	14	0.7368	468	0.1899
Walleye	147	0.3534	725	0.3539	8	0.4211	872	0.3538
Smallmouth Bass	2	0.0048	1	0.0005	-	-	3	0.0012
Largemouth Bass	-	-	2	0.0010	-	-	2	0.0008
Bluegill	-	-	10	0.0049	-	-	10	0.0041
Rock Bass	-	-	2	0.0010	-	-	2	0.0008
White Crappie	-	-	11	0.0054	-	-	11	0.0045
Black Crappie	12	0.0288	61	0.0298	-	-	73	0.0296
Freshwater Drum	-	-	7	0.0034	-	-	7	0.0028
Total Fish Caught	238	0.5721	1,797	0.8771	22	1.1579	2,035	0.8257
Total Hours Fished	416.0		2,048.7		19.0		2,464.7	

[1] Ice fishing is included in still fishing totals.

Table 15.

ACTUAL CATCH PER MAN-HOUR AND NUMBER OF FISH CAUGHT WITH VARIOUS BAITS

SPECIES	JIG		FLY		SONAR		OTHER ARTIFICIAL		TOTAL ARTIFICIAL		MULTIPLE LIVE AND ARTIFICIAL	
	No. Fish	Fish Per Man-Hour	No. Fish	Fish Per Man-Hour	No. Fish	Fish Per Man-Hour	No. Fish	Fish Per Man-Hour	No. Fish	Fish Per Man-Hour	No. Fish	Fish Per Man-Hour
Golden Redhorse	-	-	-	-	3	0.0099	-	-	3	0.0073	-	-
Northern Redhorse	-	-	-	-	-	-	-	-	-	-	2	0.0145
Spotted Sucker	-	-	-	-	-	-	-	-	-	-	1	0.0072
Carp	-	-	-	-	6	0.0199	-	-	6	0.0147	-	-
Channel Catfish	-	-	-	-	2	0.0066	-	-	2	0.0048	-	-
Black Bullhead	-	-	-	-	1	0.0033	-	-	1	0.0024	-	-
Brown Bullhead	-	-	-	-	-	-	-	-	1	0.0024	-	-
Yellow Bullhead	-	-	-	-	1	0.0033	-	-	-	-	-	-
Northern Pike	-	-	-	-	-	-	-	-	-	-	1	0.0072
White Bass	3	0.0500	-	-	3	0.0099	-	-	6	0.0147	3	0.0218
Yellow Perch	1	0.0166	-	-	3	0.0099	-	-	4	0.0977	3	0.0218
Sauger	13	0.2166	-	-	83	0.2748	1	0.0384	97	0.2369	29	0.2109
Walleye	34	0.5666	12	0.5581	139	0.4603	4	0.1538	189	0.4719	49	0.3563
Black Crappie	-	-	-	-	-	-	-	-	-	-	7	0.0509
Smallmouth Bass	-	-	-	-	-	-	-	-	-	-	1	0.0072
Freshwater Drum	-	-	-	-	5	0.0166	-	-	5	0.0122	-	-
Total Fish Caught	51	0.8500	12	0.5581	246	0.8146	5	0.1923	309	0.7546	96	0.6982
Total Hours Fished	60.0		21.5		302.0		26.0		409.5		137.5	

Table 15. (continued)

ACTUAL CATCH PER MAN-HOUR AND NUMBER OF FISH CAUGHT WITH VARIOUS BAITS

SPECIES	WORMS		MINNOWS		TOTAL LIVE BAIT		TOTAL ALL BAITS	
	No. Fish	Fish Per Man-Hour	No. Fish	Fish Per Man-Hour	No. Fish	Fish Per Man-Hour	No. Fish	Fish Per Man-Hour
Bowfin	-	-	1	0.0006	1	0.0005	1	0.0004
Mooneye	-	-	3	0.0017	3	0.0016	3	0.0012
Golden Redhorse	4	0.0376	-	-	4	0.0021	7	0.0028
Northern Redhorse	1	0.0094	2	0.0011	3	0.0016	5	0.0020
Spotted Sucker	-	-	-	-	-	-	1	0.0004
Carp	-	-	1	0.0006	1	0.0005	7	0.0028
Channel Catfish	4	0.0376	-	-	4	0.0021	6	0.0024
Black Bullhead	3	0.0282	2	0.0011	5	0.0026	6	0.0024
Brown Bullhead	-	-	3	0.0017	3	0.0016	3	0.0012
Yellow Bullhead	-	-	-	-	-	-	1	0.0004
Northern Pike	-	-	13	0.0072	13	0.0068	14	0.0057
White Bass	-	-	9	0.0050	9	0.0047	18	0.0073
Yellow Perch	88	0.8263	420	0.2319	508	0.2649	515	0.2090
Sauger	8	0.0751	334	0.1844	342	0.1783	468	0.1899
Walleye	7	0.0657	627	0.3462	634	0.3306	872	0.3538
Smallmouth Bass	-	-	2	0.0011	2	0.0010	3	0.0012
Largemouth Bass	-	-	2	0.0011	2	0.0010	2	0.0008
Bluegill	4	0.0376	6	0.0033	10	0.0052	10	0.0041
Rock Bass	-	-	2	0.0011	2	0.0010	2	0.0008
White Crappie	1	0.0094	10	0.0055	11	0.0057	11	0.0045
Black Crappie	7	0.0657	59	0.0326	66	0.0344	73	0.0296
Freshwater Drum	1	0.0094	1	0.0006	2	0.0010	7	0.0028
Total Fish Caught	128	1.2019	1,497	0.8265	1,625	0.8474	2,035	0.8257
Total Hours Fished	106.5		1,811.2		1,917.7		2,464.7	

Table 16.

LENGTH DISTRIBUTION OF WALLEYE AND SAUGER TAKEN WITH SONARS[1] IN POOL 7 TAILWATERS

Length (inches)	Walleye	Sauger
9.0 - 9.9	3	5
10.0 - 10.9	26	32
11.0 - 11.9	43	22
12.0 - 12.9	26	13
13.0 - 13.9	12	4
14.0 - 14.9	5	2
15.0 - 15.9	7	-
16.0 - 16.9	5	2
17.0 - 17.9	4	1
18.0 - 18.9	1	2
19.0 - 19.9	3	-
20.0 - 20.9	2	-
21.0 - 21.9	-	-
22.0 - 22.9	-	-
23.0 - 23.9	2	-
Total	139	83
Average Size (inches)	12.8	11.7
Average size of fish taken by other methods (inches)	12.7	12.6

[1] Sonar is the trade name of a popular artificial bait manufactured by Heddon.

Table 17.

AGE AND LENGTH COMPOSITION OF SAUGER IN THE CATCH

Length (Inches)	AGE[1/]						TOTAL
	Number of Sauger by Age and Length						
	I	II	III	IV	V	VI	
9.0 - 9.9	-	34	4	-	-	-	38
10.0 - 10.9	-	94	63	-	-	-	157
11.0 - 11.9	-	13	113	-	-	-	126
12.0 - 12.9	-	14	54	-	-	-	68
13.0 - 13.9	-	-	27	12	-	-	39
14.0 - 14.9	-	-	5	19	-	-	24
15.0 - 15.9	-	-	3	6	-	-	9
16.0 - 16.9	-	-	-	3	-	-	3
17.0 - 17.9	-	-	-	1	-	-	1
18.0 - 18.9	-	-	-	-	1	1	2
19.0 - 19.9	-	-	-	-	-	1	1
Total Fish	0	155	269	41	1	2	468
Percent of Total	0	33.1	57.5	8.7	0.2	0.5	100.0
Estimated Mean Size (inches)	-	10.5	11.7	14.6	17.5	19.0	12.6

1/ Ages are estimated from an aged sample of sauger collected during the 1969, 1970, and 1971 spring creel censuses and boom-shocking investigations in the tailwaters of Pool 7.

Table 18.

LENGTH FREQUENCY OF WALLEYE AND SAUGER IN THE CATCH

Size Range (inches)	WALLEYE						SAUGER					
	March		April		Total		March		April		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
9.0 - 9.9	7	1.6	7	1.6	14	1.6	12	5.9	26	9.7	38	8.1
10.0 - 10.9	72	16.6	93	21.2	165	18.9	70	34.3	87	32.5	157	33.5
11.0 - 11.9	146	33.7	148	33.7	294	36.7	47	23.0	79	29.5	126	26.9
12.0 - 12.9	90	20.8	90	20.5	180	20.6	31	15.2	37	13.8	68	14.5
13.0 - 13.9	29	6.7	34	7.7	63	7.2	19	9.3	20	7.5	39	8.3
14.0 - 14.9	14	3.2	22	5.0	36	4.1	14	6.9	10	3.7	24	5.1
15.0 - 15.9	27	6.2	12	2.7	39	4.5	7	3.4	2	0.7	9	1.9
16.0 - 16.9	12	2.8	13	2.9	25	2.9	2	0.9	1	0.4	3	0.6
17.0 - 17.9	6	1.4	6	1.4	12	1.4	-	-	1	0.4	1	0.2
18.0 - 18.9	6	1.4	-	-	6	0.7	1	0.5	1	0.4	2	0.4
19.0 - 19.9	14	3.2	6	1.4	20	2.3	1	0.5	-	-	1	0.2
20.0 - 20.9	5	1.2	5	1.1	10	1.1	-	-	-	-	-	-
21.0 - 21.9	-	-	1	0.2	1	0.1	-	-	-	-	-	-
22.0 - 22.9	-	-	1	0.2	1	0.1	-	-	-	-	-	-
23.0 - 23.9	4	0.9	-	-	4	0.5	-	-	-	-	-	-
24.0 - 24.9	-	-	1	0.2	1	0.1	-	-	-	-	-	-
25.0 - 25.9	1	0.2	-	-	1	0.1	-	-	-	-	-	-
Total	433		439		872		204		268		468	
Average Length (inches)	12.7		12.6		12.7		12.7		12.6		12.6	
Average Weight (pounds)	0.85		0.70		0.77		0.56		0.46		0.49	

The 1973 spring walleye fishery in the Pool 7 tailwaters was dependent upon two year classes. Nearly eighty percent (77.5 percent) of the walleye creeled were in the two-year-old (49.6 percent) or three-year-old (27.9 percent) class. Over eleven percent of the catch was four years old or older, and about eleven percent of the total catch was comprised of one-year-old walleyes. "Lunker fish," those 20.0 inches and over, comprised 2.1 percent of the catch, with ages ranging from five to nine years old (Table 19).

Over 57 percent (57.3 percent) of the walleye were between 11.0 inches and 12.9 inches long. Over 77 percent (77.8 percent) were under 13.0 inches in length (Table 18).

The walleye and sauger year classes in Pool 7 vary somewhat; however, it appears that the population is relatively stable.

Table 19.

AGE AND LENGTH COMPOSITION OF WALLEYE IN THE CATCH

Length (inches)	AGE									Total
	Numbers of Fish by Age[1] and Length									
	I	II	III	IV	V	VI	VII	VIII	IX	
9.0 - 9.9	14	-	-	-	-	-	-	-	-	14
10.0 - 10.9	83	66	16	-	-	-	-	-	-	165
11.0 - 11.9	-	235	59	-	-	-	-	-	-	294
12.0 - 12.9	-	113	67	-	-	-	-	-	-	180
13.0 - 13.9	-	19	44	-	-	-	-	-	-	63
14.0 - 14.9	-	-	32	4	-	-	-	-	-	36
15.0 - 15.9	-	-	19	12	4	4	-	-	-	39
16.0 - 16.9	-	-	7	13	3	2	-	-	-	25
17.0 - 17.9	-	-	-	5	4	3	-	-	-	12
18.0 - 18.9	-	-	-	1	1	3	1	-	-	6
19.0 - 19.9	-	-	-	-	9	9	2	-	-	20
20.0 - 20.9	-	-	-	-	3	5	2	-	-	10
21.0 - 21.9	-	-	-	-	-	-	1	-	-	1
22.0 - 22.9	-	-	-	-	-	-	-	1	-	1
23.0 - 23.9	-	-	-	-	-	-	1	2	1	4
24.0 - 24.9	-	-	-	-	-	-	-	-	1	1
25.0 - 25.9	-	-	-	-	-	-	-	-	1	1
Total Fish	97	433	244	35	24	26	7	3	3	872
Percent of Total	11.1	49.6	27.9	4.0	2.8	3.0	0.8	0.3	0.3	100
Estimated Mean Size (inches)	10.4	11.7	12.9	16.1	18.2	18.5	20.5	23.2	24.5	12.7

[1] Ages are estimated from an aged sample of walleye collected during the 1969, 1970, and 1971 spring creel censuses and boom shocking investigations in the tailwaters of Pool 7.

SUMMARY

1. A special creel census was conducted in the tailwaters of Pool 7 of the Mississippi River from March 1 to April 30, 1973. The objectives were to evaluate fishing pressure and harvest during a two-month period previously closed to fishing for large game fish and to provide information on the angler, the catch, and the relationship of various factors to the catch. A summary report of five years of data will be forthcoming in the near future.

2. All data was segregated by type of fishing (boat, bank, ice), method of fishing (still, cast, troll, ice), and month (March, April).

3. A total of 703 fishermen of which 93.3 percent were men were contacted during the census. The average age of all anglers was 37.5 years.

4. Fishing in the tailwaters of Pool 7 during March and April was primarily a local sport with 78.7 percent of the anglers residing within 50 miles of the area.

5. Projected data indicates that 5,238 fishing trips were made to the tailwaters of Pool 7 during March and April, 1973, and a total of 17,397 hours were spent fishing.

6. Boat fishing predominated during March and accounted for 62.3 percent of the total fishing hours. April anglers used a boat 55.1 percent of the time and fished from the bank or the barge the remainder of the time.

7. April was the most active month with 72.0 percent of the total fishing hours. March was the most productive month with a catch rate of 0.8256 fish per man-hour.

8. Still fishing and casting were the only methods of fishing used. Still fishing was used 83.2 percent of the time, and casting was used 16.8 percent of the time.

9. Anglers contacted were fishing for walleye and sauger 72.8 percent of the time.

10. March anglers caught 3,020 large game fish at a rate of 0.6199 fish per man-hour. April anglers caught 5,866 large game fish at a rate of 0.4683 fish per man-hour.

11. Ice fishing produced the highest catch rate of any type of fishing (1.1579 fish per man-hour).

12. Anglers using worms had the highest catch rate of 1.2019 fish per man-hour.

13. Anglers using sonars caught walleye and sauger at a rate of 0.7351 fish per man-hour which is 0.1914 fish per man-hour less than the rate for all baits combined.

14. The average size of walleye and sauger caught with sonars was not significantly different than the average size of those caught with other baits.

15. About three percent of the walleye caught with sonars were of the "lunker" class as compared to two percent taken with all other baits combined.

16. The proportion of sauger to walleye in the catch was 0.60/1.00 for sonar caught fish and 0.54/1.00 for sauger and walleye caught with all other baits.

17. It is doubtful that random snagging with sonars or other lures is a major factor influencing the harvest of walleye and sauger.

18. The spring sauger fishery was primarily dependent upon two year classes.

19. Nearly seventy-five percent of the sauger caught were between 10.0 and 12.9 inches.

20. Nearly eighty-three percent of the sauger catch was smaller than 13.0 inches long.

21. The spring walleye fishery was dependent upon two year classes of two- and three-year-old fish.

22. Over seventy-five percent of the walleye caught were under 13.0 inches long.

23. Over fifty-seven percent of the walleye caught were between 11.0 and 12.9 inches long.

24. "Lunker" walleye, those 20.0 inches and over, comprised 2.1 percent of the catch and their ages ranged from five to nine years old.

25. As a general observation, it appears that the walleye population in Pool 7 is stable.

350--36--D7983

Dist.: List 2
FM Dist. Supvs.
Dist. Staff Pers.
Madison Off. Staff Pers.
Area Fish Managers
U.S. Fish & Wildlife Serv.

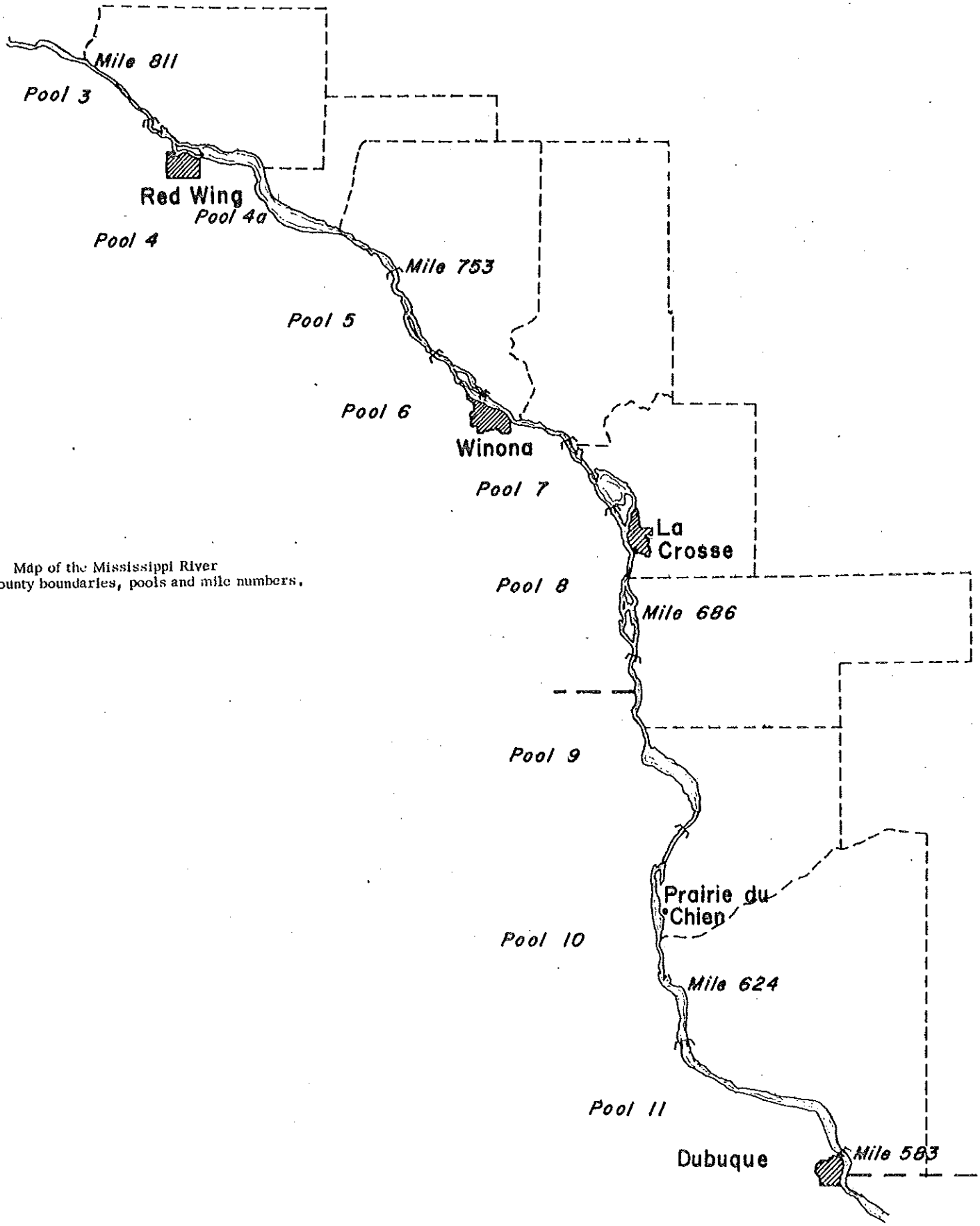

Fig. 1 Map of the Mississippi River with county boundaries, pools and mile numbers.

CREEL CENSUS – COVER SHEET
FORM 3600–51

DEPARTMENT OF NATURAL RESOURCES

Card Type 3
(cc80)

Pool and Section Number _____ ___ ___ ___

DATE: Month ___ ___ Day ___ ___ Year ___ ___

CONTACT SCHEDULE: Early ___ Late ___ ___

Time of Beginning Angler Count _____ ___ ___ ___ ___

Time of Ending Angler Count _____ ___ ___ ___ ___

Total Time Spent on Count and Contacts _____ ___ ___

TOTAL NUMBER OF FISHERMEN COUNTED IN SECTION

Boat _____ ___ ___ ___
Wading or Bank _____ ___ ___ ___
Barge _____ ___ ___ ___
Ice _____ ___ ___ ___

Air Temperature _____ ___ ___
Water Temperature _____ ___ ___

WATER LEVEL: High ___ Low ___ Normal ___
Rising ___ Dropping ___ ___ ___

WEATHER: Clear ___ Cloudy ___ Bright ___ Overcast ___
Rain ___ Snow ___ Wind (over 15 mph) ___ ___ ___
_____ Other ___

REMARKS: _____

_____

_____

(Other factors affecting fishing)

OBSERVER ----------

Rev. 5–71

Card Type 1
(cc80)

CREEL CENSUS
FORM 3600–42

DEPARTMENT OF NATURAL RESOURCES

Interview No. ___ ___ ___ ___ ___ Pool and Section No. ___ ___ ___

Date: Month ___ ___ Day ___ ___ Year ___ ___

Waters _____ Habitat Type _____ ___

Statutory Waters Fished: Wis. ___ Minn. ___ Ia. ___ Multiple ___ ___

Site: Boat ___ Wading or Bank ___ Barge ___ Ice ___ ___

Method: Cast ___ Still ___ Troll ___ Multiple ___ ___

Bait: Minnows ___ Worms ___ Other Live Bait ___ Jig ___ Fly ___ ___

Other Artificial Bait ___ Prepared Bait ___

Multiple (Live & Artificial) ___ Sonar ___

Residence: City _____ State _____ ___ ___

County _____ ___ ___

Access: Private ___ Public _____ ___ ___

Fishing Trip: Complete ___ Incomplete ___ ___

Sex and Age: Male ___ Female ___ Age ___ ___ ___ ___

Time of Day: Morning ___ Midday ___ Afternoon ___ ___

12 1 2 3 4 5 6 7 8 9 10 11 12 a.m. p.m.

Total Hours ___ ___ ___

Primary Species Sought _____ ___ ___ ___

Card Type 2
(cc80)

SPECIES	CODE	NUMBER CODE
Bluegill	2 8 6	___ ___ ___
Black Crappie	2 9 1	___ ___ ___
Yellow Perch	2 5 0	___ ___ ___
White Crappie	2 9 0	___ ___ ___
Sauger	2 5 1	___ ___ ___
Northern Pike	2 0 6	___ ___ ___
White Bass	2 4 0	___ ___ ___
Walleye	2 5 2	___ ___ ___
Largemouth Bass	2 8 1	___ ___ ___
Rock Bass	2 8 9	___ ___ ___
Freshwater Drum	3 0 5	___ ___ ___
Smallmouth Bass	2 8 0	___ ___ ___
_____	___ ___ ___	___ ___ ___
_____	___ ___ ___	___ ___ ___
_____	___ ___ ___	___ ___ ___
_____	___ ___ ___	___ ___ ___
_____	___ ___ ___	___ ___ ___
_____	___ ___ ___	___ ___ ___

REV. 1–72