

Wisconsin Department of Natural Resources

West Central District

Fish Management Bureau  
Management Report Number 56

November, 1972

MISSISSIPPI RIVER SPECIAL TAILWATER SPORT FISHING CREEL CENSUS

IN POOL 7, MARCH 1 - APRIL 30, 1972

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## INTRODUCTION

A creel census was conducted in the tailwaters of Pool 7 from March 1 to April 30, 1972 to evaluate the fishing pressure and harvest during a two month period previously closed to fishing for large game fish.<sup>1/</sup> The 1972 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.<sup>2/</sup>

## 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 1972 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.

## 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.

<sup>1/</sup> Large game fish include walleye, sauger, northern pike, largemouth bass, and smallmouth bass.

<sup>2/</sup> 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.

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 776 fishermen contacted during March and April, 96.0 percent were men. The average age of all anglers was 38.6 years. Male anglers averaged 38.2 years and women averaged 47.8 years. Ages ranged from 4 to 82 years. Nearly ten 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 79.9 percent of the anglers resided within 50 miles of Pool 7. Wisconsin residents comprised 81.7 percent of the anglers contacted. Trempealeau County contributed the greatest fishing pressure followed by La Crosse, Milwaukee, and Jackson Counties (Tables 4 and 5).

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 46.7 percent of the fishing pressure.

### The Angler (method and extent of fishing)

Projection of data collected during the census indicates that 4,724 fishing trips were made to the tailwaters of Pool 7 during March and April, 1972, and a total of 14,936 hours were spent fishing (Tables 7 and 11).

Table 1

## AGE COMPOSITION OF ANGLERS

Age	Male		Female		Combined	
	No.	%	No.	%	No.	%
Under 12	34	4.4	-	-	34	4.4
12-15	37	5.0	-	-	37	5.0
16-17	26	3.4	-	-	26	3.4
18-24	79	10.1	3	0.4	82	10.5
25-34	187	24.1	2	0.3	189	24.4
35-44	140	18.0	5	0.6	145	18.6
45-64	168	21.6	20	2.6	188	24.2
65 and over	74	9.4	1	0.1	75	9.5
TOTAL	745	96.0	31	4.0	776	100.0

Table 2

## AGE COMPOSITION OF ANGLERS ENGAGED IN DIFFERENT TYPES OF FISHING

Type of Fishing	Male		Female		Overall	
	No.	Avg. Age	No.	Avg. Age	No.	Avg. Age
Boat	477	36.2	23	45.7	500	36.6
Bank	123	38.3	8	54.0	131	39.2
Barge	3	73.3	0	.0	3	73.3
Ice	142	44.2	0	.0	142	44.2
TOTAL	745		31		776	
AVERAGE AGE		38.2		47.8		38.6

Table 3

## TOTAL NUMBER OF ANGLERS BY AGE

Age	Male	Female	Total	Age	Male	Female	Total	Age	Male	Female	Total
4	5	-	5	30	19	-	19	55	4	1	5
6	1	-	1	31	19	-	19	56	7	1	8
7	1	-	1	32	23	-	23	57	12	1	13
8	2	-	2	33	23	1	24	58	6	1	7
9	8	-	8	34	10	-	10	59	12	1	13
10	7	-	7	35	16	1	17	60	3	1	4
11	10	-	10	36	19	-	19	61	7	-	7
12	11	-	11	37	17	-	17	62	6	3	9
13	7	-	7	38	17	2	19	63	21	-	21
14	11	-	11	39	14	-	14	64	18	-	18
15	8	-	8	40	9	-	9	65	5	-	5
16	15	-	15	41	11	-	11	66	3	-	3
17	11	-	11	42	14	-	14	67	12	-	12
18	13	-	13	43	6	1	7	68	11	-	11
19	16	1	17	44	17	1	18	69	2	-	2
20	10	-	10	45	6	3	9	70	4	-	4
21	7	-	7	46	10	-	10	71	8	-	8
22	10	1	11	47	7	1	8	72	6	-	6
23	12	1	13	48	10	-	10	73	2	-	2
24	11	-	11	49	4	-	4	74	4	-	4
25	15	-	15	50	8	-	8	75	3	-	3
26	22	-	22	51	6	1	7	76	3	-	3
27	18	1	19	52	5	3	8	77	4	-	4
28	20	-	20	53	3	1	4	79	2	-	2
29	18	-	18	54	13	2	15	80	3	1	4
								82	2	-	2
TOTAL								745	31	776	

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	.1	Mower	2	.3	Illinois	36	4.6
Buffalo	11	1.4	Winona	67	8.6	Iowa	9	1.2
Chippewa	1	.1	Houston	4	.5			
Clark	4	.5	Olmstead	20	2.6			
Crawford	2	.3	Dakota	3	.4			
Dane	14	1.8						
Dodge	3	.4						
Eau Claire	2	.3						
Jackson	19	2.4						
Kenosha	6	.8						
La Crosse	83	10.7						
Milwaukee	47	6.1						
Monroe	4	.5						
Polk	1	.1						
Racine	6	.8						
Rock	12	1.5						
Rusk	1	.1						
Trempealeau	405	52.2						
Vernon	1	.1						
Walworth	1	.1						
Washington	1	.1						
Waukesha	3	.4						
Waushara	2	.3						
Winnebago	2	.3						
<b>TOTAL</b>	<b>635</b>	<b>81.7</b>	<b>TOTAL</b>	<b>96</b>	<b>12.4</b>	<b>TOTAL</b>	<b>45</b>	<b>5.8</b>

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	546	74	8	1	25	20	96	6	0
Percent	70.4	9.5	1.0	0.1	3.2	2.6	12.4	0.8	0.0

Table 6

ANGLER ORIGIN AND WATERS FISHED

Angler Origin	Wisconsin Statutory Waters	Minnesota Statutory Waters
Wisconsin	321	314
Illinois	6	30
Iowa	3	6
Minnesota	32	64
Totals	362	414

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	% <sup>2/</sup>
	No. Hours	% <sup>1/</sup>	No. Hours	%	No. Hours	%	No. Hours	%	No. Hours	%		
March	1,085	41.4	62	2.4	31	1.2	1,178	45.0	1,442	55.0	2,620	17.5
April	8,953	72.7	2,724	22.1	639	5.2	12,316	100.0	0	0.0	12,316	82.5
Total Hours	10,038	67.2 <sup>3/</sup>	2,786	18.7	670	4.5	13,494	90.3	1,442	9.7	14,936	100.0

<sup>1/</sup> Percentage by type of fishing for month.

<sup>2/</sup> Percentage by month for the two month period.

<sup>3/</sup> 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	1,546.6	153.0	13.5	1,713.1	152.5	1,865.6
Total Anglers Contacted	465	67	5	535	42	577
Average Hours Fished	3.3	2.3	4.5	3.2	3.6	3.2

Table 9

CATCH PER MAN-HOUR BY MONTH

	March	April	Total
Hours Fished	600.0	1,733.1	2,333.1
Fish Caught	303	1,169	1,472
Catch Per Man-Hour	0.5050	0.6750	0.6310

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	46	21.7	237	42.0	283	36.5
Still Fishing <u>1/</u>	166	78.3	327	58.0	493	63.5
TOTAL	212		564		776	
FISHING LURE						
Worms	-	-	10	1.8	10	1.3
Minnows	80	37.7	340	60.3	420	54.1
TOTAL LIVE BAIT	80	37.7	350	62.1	430	55.4
Jigs	14	6.6	19	3.4	33	4.3
Flies	2	0.9	5	0.9	7	0.9
Sonar	25	11.8	107	19.0	132	17.0
Other Artificials	13	6.1	2	0.4	15	1.9
TOTAL ARTIFICIALS	54	25.4	133	23.7	187	24.1
Artificial with live bait attached	78	36.8	81	14.4	159	20.5

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
Northern Pike	16	-	-	4	20	31	-	-	31	47	-	-	4	51
White Bass	-	-	-	-	-	56	-	-	56	56	-	-	-	56
Yellow Perch	5	-	-	-	5	347	2,975	-	3,322	352	2,975	-	-	3,327
Sauger	135	-	-	610	745	2,450	89	47	2,586	2,585	89	47	610	3,331
Walleye	213	-	-	248	461	1,997	207	142	2,346	2,210	207	142	248	2,807
Largemouth Bass	16	-	-	-	16	38	-	-	38	54	-	-	-	54
Rock Bass	-	-	-	-	-	-	20	-	20	-	20	-	-	20
White Crappie	-	-	-	-	-	13	-	-	13	13	-	-	-	13
Black Crappie	-	-	-	-	-	205	29	-	234	205	-	29	-	234
Projected Number of Fishermen	315	70	-	397	782	2,705	1,090	142	3,937	3,025	1,160	142	397	4,724
Projected Number of Fish	385	-	-	862	1,247	5,137	3,320	189	8,646	5,522	3,320	189	862	9,893
Projected Hours Fished	1,085	62	31	1,442	2,620	8,953	2,724	639	12,316	10,038	2,786	670	1,442	14,936

Ice fishing predominated during March and accounted for 55.0 percent of the total fishing hours. In April anglers used a boat 72.7 percent of the time and fished from the bank or the barge the remainder of the time (Table 7).

April was the most active and most productive fishing month and accounted for 82.5 percent of the total hours and a catch rate of 0.6750 fish per man-hour. The overall catch rate for March and April was 0.6310 fish per man-hour (Table 9).

Casting and still fishing were the only two methods of fishing used. Casting was used 36.5 percent of the time, and still fishing 63.5 percent of the time (Table 10).

Live bait was used 55.4 percent and artificial baits 24.1 percent of the time. Artificial lures with live bait attached were used 29.5 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 88.3 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 776 fishermen and 41 "instantaneous" angler counts reveals that during the 14,936 hours spent fishing in the tailwaters of Pool 7 in March and April, 1972, a total of 9,893 fish were caught at a rate of 0.6624 fish per man-hour (Table 11).

Anglers spent 2,620 hours fishing during March to catch 1,247 fish at a catch rate of 0.5050 fish per man-hour. April anglers were more successful and caught 8,646 fish in 12,316 hours at a catch rate of 0.6745 fish per man-hour (Table 11).

#### The Catch (composition)

The most abundant species in the overall catch was sauger which made up 40.3 percent of the catch. Next in abundance was walleye (30.8 percent) followed by yellow perch (24.4 percent) (Table 12).

Projected data indicates that a total of 6,138 walleye and sauger were caught during the months of March and April in the Pool 7 tailwater area. This figure represents 29.6 percent of the total walleye and sauger caught during a twelve month 1967-68 Pool 7 creel census period. March anglers caught 1,206 walleye and sauger at a catch rate of 0.4603 fish per man-hour. April anglers caught the remaining 4,932 at a rate of 0.4005 fish per man-hour (Table 11).

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
Northern Pike	4	0.0067	5	0.0029	9	0.0039
White Bass	-	-	9	0.0052	9	0.0039
Yellow Perch	1	0.0017	358	0.2066	359	0.1539
Sauger	188	0.3133	405	0.2337	593	0.2542
Walleye	107	0.1783	346	0.1996	453	0.1942
Largemouth Bass	3	0.0050	6	0.0035	9	0.0039
Rock Bass	-	-	2	0.0012	2	0.0009
White Crappie	-	-	2	0.0012	2	0.0009
Black Crappie	-	-	36	0.0208	36	0.0154
Total Fish Caught	303	-	1,169	-	1,472	-
Fish Per Man-Hour	-	0.5050	-	0.6745	-	0.6309
Total Hours Fished	600.0	-	1,733.1	-	2,333.1	-

March anglers caught 1,226 large game fish at a rate of 0.4680 fish per man-hour. April anglers caught 5,001 large game fish at a rate of 0.4061 fish per man-hour (Table 11).

#### The Catch (rates for various methods and baits)

Bank fishing produced the highest catch rate of any type of fishing (1.1845 fish per man-hour). Boat fishermen caught fish at a rate of 0.5460 fish per man-hour and ice anglers registered 0.5979 fish per man-hour (Table 13).

Still fishing was the most productive method and yielded 0.6793 fish per man-hour as compared to 0.5979 for ice fishing and 0.5507 for casting (Table 14).

Anglers using flies had the highest catch rate of 1.0233 fish per man-hour. Fishermen using live bait averaged 0.7033 fish per man-hour, while those using artificial baits averaged 0.4665 fish per man-hour (Table 15).

Anglers using sonars caught walleye and sauger at a rate of 0.3562 fish per man-hour, or 0.0922 fish per man-hour less than the rate for all baits combined. Walleye taken with sonars averaged 0.8 inches shorter than those taken with other baits. Sauger taken with sonars averaged 0.8 inches longer than those taken with other baits. Neither figure represents a significant difference. About six 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).

One interesting but presently unexplainable difference exists between the sonar catch and the catch with other baits. The proportion of sauger to walleye was 0.62/1.00 for sonar caught fish. The proportion of sauger to walleye caught with all other baits was 1.31/1.00. Data indicates that either walleye tend to prefer the sonar or that sauger tend to avoid it. There are considerably more sauger than walleye in Pool 7, however, more walleye are caught with sonar than are sauger. This information makes doubtful the possibility that random snagging with a sonar is a major factor influencing the harvest of walleye and sauger.

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

The 1972 spring sauger fishery in the Pool 7 tailwaters was primarily dependent upon three year classes. Over half (57.3 percent) of the sauger creel were three year old fish. Only 0.5 percent of the sauger were over four years old (Table 17).

Nearly sixty percent (58.9 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. Nearly two-thirds (64.1 percent) of the sauger catch was smaller than 13.0 inches during March and April, 1972 (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								
Northern Pike	8	0.0048	-	-	-	-	1	0.0026	9	0.0039
White Bass	9	0.0054	-	-	-	-	-	-	9	0.0039
Yellow Perch	57	0.0345	302	1.0615	-	-	-	-	359	0.1539
Sauger	421	0.2548	9	0.0316	1	0.0741	162	0.4230	593	0.2542
Walleye	363	0.2197	21	0.0738	3	0.2222	66	0.1723	453	0.1942
Largemouth Bass	9	0.0054	-	-	-	-	-	-	9	0.0039
Rock Bass	-	-	2	0.0070	-	-	-	-	2	0.0009
White Crappie	2	0.0012	-	-	-	-	-	-	2	0.0009
Black Crappie	33	0.0200	3	0.0105	-	-	-	-	36	0.0154
Total Fish Caught	902		337		4		229		1,472	
Catch Per Man-Hour		0.5460		1.1845		0.2963		0.5979		0.6309
Total Hours Fished	1,652.1		284.5		13.5		383.0		2,333.1	

Table 14

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

SPECIES	CASTING		STILL FISHING		ICE FISHING <u>1/</u>		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
Northern Pike	6	0.0068	3	0.0021	1	0.0026	9	0.0039
White Bass	5	0.0057	4	0.0027	-	-	9	0.0039
Yellow Perch	37	0.0422	322	0.2212	-	-	359	0.1539
Sauger	207	0.2360	386	0.2651	162	0.4230	593	0.2542
Walleye	208	0.2371	245	0.1683	66	0.1723	453	0.1942
Largemouth Bass	7	0.0080	2	0.0014	-	-	9	0.0039
Rock Bass	-	-	2	0.0014	-	-	2	0.0009
White Crappie	2	0.0023	-	-	-	-	2	0.0009
Black Crappie	11	0.0125	25	0.0172	-	-	36	0.0154
Total Fish Caught	483	0.5507	989	0.6793	229	0.5979	1,472	0.6309
Total Hours Fished	877.1		1,456.0		383.0		2,333.1	

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		SOMAR		OTHER ARTIFICIAL		TOTAL ARTIFICIAL		MULTIPLE LIVE AND ARTIFICIAL	
	No. Fish Man-Hour	Fish Per Man-Hour	No. Fish Man-Hour	Fish Per Man-Hour								
Northern Pike	-	-	2	0.0930	1	0.0026	-	-	3	0.0059	3	0.0057
White Bass	1	0.0144	-	-	4	0.0106	-	-	5	0.0098	-	-
Yellow Perch	-	-	14	0.6511	-	-	-	-	14	0.0274	9	0.0172
Sauger	30	0.4341	3	0.1395	52	0.1372	14	0.3456	99	0.1941	184	0.3524
Walleye	17	0.2460	3	0.1395	83	0.2190	4	0.0987	107	0.2098	120	0.2298
Largemouth Bass	-	-	-	-	4	0.0106	-	-	4	0.0078	2	0.0038
Rock Bass	-	-	-	-	-	-	-	-	-	-	-	-
White Crappie	-	-	-	-	2	0.0053	-	-	2	0.0039	-	-
Black Crappie	4	0.0578	-	-	-	-	-	-	4	0.0078	1	0.0019
Total Fish Caught	52	0.7525	22	1.0233	146	0.3852	18	0.4444	238	0.4665	319	0.6111
Total Hours Fished	69.1		21.5		379.0		40.5		510.1		522.0	

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
Northern Pike	-	-	3	0.0023	3	0.0023	9	0.0039
White Bass	-	-	4	0.0031	4	0.0031	9	0.0039
Yellow Perch	4	0.2286	332	0.2587	336	0.2583	359	0.1539
Sauger	-	-	310	0.2415	310	0.2383	593	0.2542
Walleye	1	0.0571	225	0.1753	226	0.1737	453	0.1942
Largemouth Bass	-	-	3	0.0023	3	0.0023	9	0.0039
Rock Bass	-	-	2	0.0016	2	0.0015	2	0.0009
White Crappie	-	-	-	-	-	-	2	0.0009
Black Crappie	-	-	31	0.0242	31	0.0238	36	0.0154
Total Fish Caught	5	0.2857	910	0.7090	915	0.7033	1,472	0.6309
Total Hours Fished	17.5		1,238.5		1,301.0		2,333.1	

Table 16

LENGTH DISTRIBUTION OF WALLEYE AND SAUGER TAKEN WITH SONARS<sup>1/</sup>  
IN POOL 7 TAILWATERS

Length (inches)	Walleye	Sauger
7.0 - 7.9	-	-
8.0 - 8.9	1	-
9.0 - 9.9	-	2
10.0 - 10.9	2	11
11.0 - 11.9	13	9
12.0 - 12.9	21	11
13.0 - 13.9	6	4
14.0 - 14.9	7	8
15.0 - 15.9	9	4
16.0 - 16.9	10	2
17.0 - 17.9	6	-
18.0 - 18.9	2	-
19.0 - 19.9	2	-
20.0 - 20.9	2	1
21.0 - 21.9	1	-
22.0 - 22.9	1	-
23.0 - 23.9	1	-
TOTAL	84	52
Average Size (inches)	14.5	12.6
Average size of fish taken by other methods (inches)	12.4	13.2

<sup>1/</sup> 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 <sup>1/</sup>						TOTAL
	Number of Sauger by Age and Length						
	I	II	III	IV	V	VI	
7.0 - 7.9	1	-	-	-	-	-	1
8.0 - 8.9	-	5	-	-	-	-	5
9.0 - 9.9	-	22	3	-	-	-	25
10.0 - 10.9	-	67	45	-	-	-	112
11.0 - 11.9	-	12	110	-	-	-	122
12.0 - 12.9	-	23	92	-	-	-	115
13.0 - 13.9	-	-	67	30	-	-	97
14.0 - 14.9	-	-	14	58	-	-	72
15.0 - 15.9	-	-	9	19	-	-	28
16.0 - 16.9	-	-	-	10	-	-	10
17.0 - 17.9	-	-	-	3	1	1	5
18.0 - 18.9	-	-	-	-	-	-	-
19.0 - 19.9	-	-	-	-	-	-	-
20.0 - 20.9	-	-	-	-	-	1	1
Total Fish	1	129	340	120	1	2	593
Percent of Total	0.2	21.8	57.3	20.2	0.2	0.3	100.0
Estimated Mean Size (inches)	7.5	10.7	12.2	14.7	17.5	19.5	12.4

<sup>1/</sup> 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.	%
7.0 - 7.9	-	-	2	0.6	2	0.4	-	-	1	0.3	1	0.2
8.0 - 8.9	1	0.9	5	1.4	6	1.3	3	1.6	2	0.5	5	0.8
9.0 - 9.9	3	2.8	2	0.6	5	1.1	8	4.3	17	4.2	25	4.2
10.0 - 10.9	13	12.0	30	8.7	43	9.5	29	15.4	83	20.5	112	18.9
11.0 - 11.9	27	25.2	72	20.8	99	21.9	37	19.7	85	21.0	122	20.6
12.0 - 12.9	28	26.1	100	28.9	128	28.2	29	20.7	76	18.8	115	19.4
13.0 - 13.9	9	8.4	32	9.2	41	9.0	41	21.8	56	13.8	97	16.4
14.0 - 14.9	10	9.3	24	6.9	34	7.5	19	10.1	53	13.1	72	12.1
15.0 - 15.9	8	7.5	28	8.0	36	7.9	7	3.7	21	5.2	28	4.7
16.0 - 16.9	6	5.6	22	6.4	28	6.1	3	1.6	7	1.6	10	1.7
17.0 - 17.9	1	0.9	15	4.3	16	3.5	2	1.1	3	0.7	5	0.8
18.0 - 18.9	-	-	3	0.9	3	0.7	-	-	-	-	-	-
19.0 - 19.9	-	-	3	0.9	3	0.7	-	-	-	-	-	-
20.0 - 20.9	-	-	3	0.9	3	0.7	-	-	1	0.3	1	0.2
21.0 - 21.9	1	0.9	2	0.6	3	0.7	-	-	-	-	-	-
22.0 - 22.9	-	-	2	0.6	2	0.4	-	-	-	-	-	-
23.0 - 23.9	-	-	1	0.3	1	0.2	-	-	-	-	-	-
24.0 - 24.9	-	-	-	-	-	-	-	-	-	-	-	-
25.0 - 25.9	-	-	-	-	-	-	-	-	-	-	-	-
26.0 - 26.9	-	-	-	-	-	-	-	-	-	-	-	-
27.0 - 27.9	-	-	-	-	-	-	-	-	-	-	-	-
28.0 - 28.9	-	-	-	-	-	-	-	-	-	-	-	-
29.0 - 29.9	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	107		346		453		188		405		593	
Average Length (inches)	12.7		13.3		13.2		12.5		12.4		12.4	
Average Weight (pounds)	0.87		0.96		0.90		0.77		0.69		0.71	

The 1972 spring walleye fishery in the Pool 7 tailwaters was dependent upon two year classes. Nearly eighty percent (76.4 percent) of the walleye creeled were in the two year old (41.5 percent) or three year old (34.9 percent) class. Nearly 16 percent of the catch was four years old or older, and about eight percent of the total catch was comprised of one year old walleyes. "Lunker fish," those 20.0 inches and over, comprised 2.0 percent of the catch, with ages ranging from five to eight years old (Table 19).

Over 50 percent (50.1 percent) of the walleye were between 11.0 inches and 12.9 inches long. Over 60 percent (62.4 percent) were under 13.0 inches in length (Table 18).

The sauger fishery remains dependent primarily upon one year class, three year old fish (Table 20).

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 <sup>1/</sup> and Length								
	I	II	III	IV	V	VI	VII	VIII	
7.0 - 7.9	2	-	-	-	-	-	-	-	2
8.0 - 8.9	6	-	-	-	-	-	-	-	6
9.0 - 9.9	5	-	-	-	-	-	-	-	5
10.0 - 10.9	22	17	4	-	-	-	-	-	43
11.0 - 11.9	-	79	20	-	-	-	-	-	99
12.0 - 12.9	-	80	48	-	-	-	-	-	128
13.0 - 13.9	-	12	29	-	-	-	-	-	41
14.0 - 14.9	-	-	31	3	-	-	-	-	34
15.0 - 15.9	-	-	18	10	4	-	-	-	36
16.0 - 16.9	-	-	8	14	3	3	-	-	28
17.0 - 17.9	-	-	-	6	6	4	-	-	16
18.0 - 18.9	-	-	-	1	1	1	-	-	3
19.0 - 19.9	-	-	-	-	1	1	1	-	3
20.0 - 20.9	-	-	-	-	1	2	-	-	3
21.0 - 21.9	-	-	-	-	-	1	2	-	3
22.0 - 22.9	-	-	-	-	-	-	-	2	2
23.0 - 23.9	-	-	-	-	-	-	-	1	1
TOTAL FISH	35	188	158	34	16	16	3	3	453
Percent of Total	7.7	41.5	34.9	7.5	3.5	3.5	0.7	0.7	
Estimated Mean Size (inches)	9.8	12.0	15.2	16.3	17.2	17.6	20.8	22.8	13.8

<sup>1/</sup> 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.

Table 20

## COMPARATIVE AGE COMPOSITION OF THE MARCH - APRIL WALLEYE AND SAUGER CATCH FOR 1969, 1970, 1971 and 1972

Years	WALLEYE											Total
	Percentage of Catch by Age											
	Ages											
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	
1969	0.8 <sub>1</sub> / (2) <sub>1</sub>	27.5 (76)	47.1 (130)	7.9 (22)	4.9 (14)	6.5 (17)	2.0 (6)	1.4 (4)	1.1 (3)	0.4 (1)	0.4 (1)	100.0 (276)
1970	1.1 (2)	11.6 (21)	37.9 (69)	21.4 (39)	10.4 (19)	12.6 (23)	2.7 (5)	1.1 (2)	0.6 (1)	0.6 (1)	0.0 (0)	100.0 (182)
1971	4.6 (30)	44.4 (290)	32.8 (214)	2.6 (17)	4.6 (30)	6.6 (43)	2.3 (15)	1.1 (7)	0.4 (3)	0.4 (3)	0.2 (1)	100.0 (653)
1972	7.7 (35)	41.5 (188)	34.9 (158)	7.5 (34)	3.5 (16)	3.5 (16)	0.7 (3)	0.7 (3)	0.0 (0)	0.0 (0)	0.0 (0)	100.0 (453)

Years	SAUGER								Total
	Percentage of Catch by Age								
	Ages								
	I	II	III	IV	V	VI	VII	VIII	
1969	0.0 (0)	28.0 (58)	64.7 (134)	5.8 (12)	0.5 (1)	1.0 (2)	0.0 (0)	0.0 (0)	100.0 (207)
1970	0.0 (0)	8.5 (50)	57.6 (339)	33.6 (198)	0.0 (0)	0.0 (0)	0.3 (2)	0.0 (0)	100.0 (589)
1971	0.0 (0)	26.1 (126)	54.5 (262)	18.0 (87)	1.2 (6)	0.2 (1)	0.0 (0)	0.0 (0)	100.0 (482)
1972	0.2 (1)	21.8 (129)	57.3 (340)	20.2 (120)	0.2 (1)	0.3 (2)	0.0 (0)	0.0 (0)	100.0 (593)

1/ Figures in parenthesis are actual numbers of fish caught in a particular age group.

## SUMMARY

1. A special creel census was conducted in the tailwaters of Pool 7 of the Mississippi River from March 1 to April 30, 1972. 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.
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 776 fishermen of which 96.0 percent were men were contacted during the census. The average age of all anglers was 38.6 years.
4. Fishing in the tailwaters of Pool 7 during March and April was primarily a local sport with 81.7 percent of the anglers residing within 50 miles of the area.
5. Projected data indicates that 4,724 fishing trips were made to the tailwaters of Pool 7 during March and April, 1972, and a total of 14,936 hours were spent fishing.
6. Ice fishing predominated during March and accounted for 55.0 percent of the total fishing hours. April anglers used a boat 72.7 percent of the time and fished from the bank or the barge the remainder of the time.
7. April was the most active and most productive month with 82.5 percent of the total fishing hours and a catch rate of 0.6750 fish per man-hour.
8. Still fishing and casting were the only methods of fishing used. Still fishing was used 63.5 percent of the time, and casting was used 36.5 percent of the time.
9. Anglers contacted were fishing for walleye and sauger 88.3 percent of the time.
10. March anglers caught 1,226 large game fish at a rate of 0.4680 fish per man-hour. April anglers caught 5,001 large game fish at a rate of 0.4061 fish per man-hour.
11. Bank fishing produced the highest catch rate of any type of fishing (1.1845 fish per man-hour).
12. Anglers using flies had the highest catch rate of 1.0233 fish per man-hour.
13. Anglers using sonars caught walleye and sauger at a rate of 0.3562 fish per man-hour which is 0.0922 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 six 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 0.62/1.00 for sonar caught fish and 1.31/1.00 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 three year classes.
19. Nearly sixty percent of the sauger caught were between 10.0 and 12.9 inches.
20. Nearly two-thirds 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 sixty percent of the walleye caught were under 13.0 inches long.
23. Over fifty percent of the walleye caught were between 11.0 and 12.9 inches long.
24. "Lunker" walleye, those 20.0 inches and over, comprised 2.0 percent of the catch and their ages ranged from five to eight years old.
25. As a general observation, it appears that the walleye population in Pool 7 is stable.

Figure 1. General Mississippi River Map

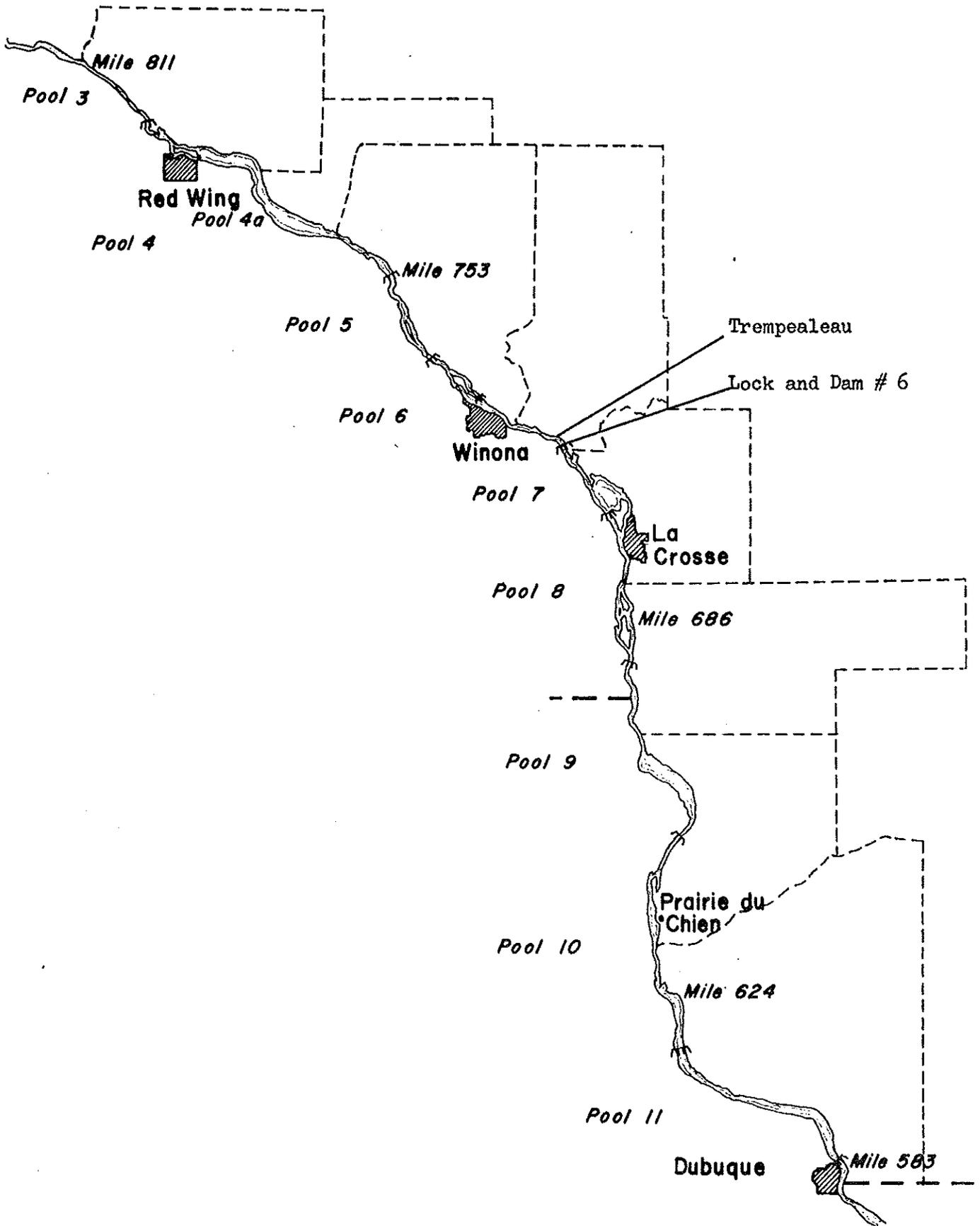


Figure 2.

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 -----



## ACKNOWLEDGEMENTS

The following personnel of the Wisconsin Department of Natural Resources contributed to the planning and success of the creel census:

Willis Fernholz	-	Area Fisheries Manager
James Luhm	-	Creel Census Clerk

2-13-73

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