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MISSISSIPPI RIVER SPECIAL TAILWATER SPORT FISHING CREEL CENSUS
IN POOL 7, MARCH 1, 1969 - APRIL 30, 1969

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INTRODUCTION

A creel census was conducted in the tailwaters of Pool 7 from March 1 to April 30, 1969, to evaluate the fishing pressure and harvest during a two month period previously closed to fishing for large game fish.^{1/} The 1969 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/}

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. Pool 7 is 12 miles long and contains 13,600 acres.

The upper boundary of the pool is Lock and Dam No. 6, 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 fishing for the larger game species. It was in this tailwater area that the 1969 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.

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

METHODS

One man was stationed at the only boat landing located within the tailwater area of Pool 7. In addition to completing creel census forms (figures 2 and 3), lengths and weights of every walleye and sauger in the catch were recorded. Scale samples were taken from the first ten walleye and sauger landed of each size interval (total length): e.g. ten scale samples from walleye 12.0 - 12.9 inches long, ten from walleye 13.0 - 13.9 inches, etc. After ten scale samples were collected for a particular size interval, only length and weight were recorded for other fish of that length. The scales were aged and the data was used to arrive at tables within the results.

^{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 of 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, 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 were achieved.

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, the catch, and relationship of various factors to the catch. These 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 283 fishermen contacted during March and April, 95.8 percent were men. The average age of all anglers was 41.1 years with male anglers averaging 41.0 years and women 43.2 years. Ages ranged from 10 to 83 years, with 8.8 percent of the fishermen 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 with 78.8 percent of the anglers residing within 50 miles of the pool. Wisconsin residents comprised 95.1 percent of the anglers contacted. Trempealeau County contributed the greatest fishing pressure followed by La Crosse, Rock and Milwaukee 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. Of all fishermen contacted, 53.7 percent were fishing in Wisconsin statutory waters (Table 6).

The Angler (method and extent of fishing)

Projection of data collected during the census indicated that 2,574 fishing trips were made to the tailwaters of Pool 7 during March and April 1969, with a total of 8,849 hours spent fishing (Tables 7 and 12).

Boat angling was slightly more popular than ice fishing during March accounting for 51.3 percent of the total fishing hours. April anglers used a boat 70.1 percent of the time while fishing from the bank the remainder of the time (Table 7).

The average length of all types of fishing trips was 3.9 hours, ranging from 2.2 hours for bank fishermen to 4.3 hours for boat fishermen. The average for all open water fishing trips was 4.1 hours while the average ice fishing trip took 3.1 hours (Table 8).

Table 1

AGE COMPOSITION OF ANGLERS

| Age | Male | | Female | | Combined | |
|-----------|------|------|--------|-----|----------|-------|
| | No. | % | No. | % | No. | % |
| Under 12 | 3 | 1.1 | 0 | 0.0 | 3 | 1.1 |
| 12 - 15 | 13 | 4.6 | 1 | 0.3 | 14 | 4.9 |
| 16 - 17 | 6 | 2.1 | 0 | 0.0 | 6 | 2.1 |
| 18 - 24 | 24 | 8.5 | 0 | 0.0 | 24 | 8.5 |
| 25 - 34 | 71 | 25.2 | 1 | 0.3 | 72 | 25.5 |
| 35 - 44 | 36 | 12.7 | 3 | 1.1 | 39 | 13.8 |
| 45 - 64 | 93 | 32.8 | 7 | 2.5 | 100 | 35.3 |
| 65 & over | 25 | 8.8 | 0 | 0.0 | 25 | 8.8 |
| TOTAL | 271 | 95.8 | 12 | 4.2 | 283 | 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 | 198 | 40.3 | 10 | 43.1 | 208 | 40.4 |
| Bank | 15 | 35.1 | 1 | 45.0 | 16 | 35.8 |
| Barge | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Ice | 58 | 45.1 | 1 | 42.0 | 59 | 45.1 |
| TOTAL AVERAGE | 271 | 41.0 | 12 | 43.2 | 283 | 41.1 |

Table 3

TOTAL NUMBER OF ANGLERS BY YEARS OF AGE

| Age | Male | Female | Total | Age | Male | Female | Total | Age | Male | Female | Total |
|-----|------|--------|-------|-----|------|--------|-------|-----|------|--------|-------|
| 10 | 1 | - | 1 | 32 | 5 | 1 | 6 | 53 | 2 | - | 2 |
| 11 | 2 | - | 2 | 33 | 8 | - | 8 | 54 | 10 | - | 10 |
| 12 | 2 | - | 2 | 34 | 7 | - | 7 | 55 | 4 | - | 4 |
| 13 | 1 | - | 1 | 35 | 6 | - | 6 | 56 | 2 | 1 | 3 |
| 15 | 10 | 1 | 11 | 36 | 3 | - | 3 | 57 | 1 | - | 1 |
| 16 | 2 | - | 2 | 37 | 2 | - | 2 | 58 | 9 | - | 9 |
| 17 | 4 | - | 4 | 38 | 5 | - | 5 | 59 | 5 | - | 5 |
| 18 | 3 | - | 3 | 39 | 4 | - | 4 | 60 | 6 | - | 6 |
| 19 | 2 | - | 2 | 40 | 7 | - | 7 | 61 | 2 | - | 2 |
| 20 | 3 | - | 3 | 41 | 2 | - | 2 | 62 | 7 | - | 7 |
| 21 | 2 | - | 2 | 42 | 2 | 1 | 3 | 63 | 6 | - | 6 |
| 22 | 5 | - | 5 | 43 | 4 | 2 | 6 | 64 | 1 | - | 1 |
| 23 | 6 | - | 6 | 44 | 1 | - | 1 | 65 | 8 | - | 8 |
| 24 | 3 | - | 3 | 45 | 4 | 1 | 5 | 67 | 4 | - | 4 |
| 25 | 8 | - | 8 | 46 | 7 | - | 7 | 69 | 2 | - | 2 |
| 26 | 8 | - | 8 | 47 | 6 | 1 | 7 | 70 | 1 | - | 1 |
| 27 | 12 | - | 12 | 48 | 4 | 1 | 5 | 73 | 4 | - | 4 |
| 28 | 7 | - | 7 | 49 | 1 | 3 | 4 | 77 | 1 | - | 1 |
| 29 | 7 | - | 7 | 50 | 4 | - | 4 | 79 | 3 | - | 3 |
| 30 | 6 | - | 6 | 51 | 5 | - | 5 | 83 | 2 | - | 2 |
| 31 | 3 | - | 3 | 52 | 7 | - | 7 | | | | |

Table 4

ORIGIN OF ANGLERS USING TREMPEALEAU LANDING BY STATE AND COUNTY

| WISCONSIN | | | MINNESOTA | | | OTHER STATES | | |
|-------------|-----|------------|-----------|-----|------------|--------------|-----|------------|
| County | No. | % of Total | County | No. | % of Total | State | No. | % of Total |
| Buffalo | 3 | 1.1 | Anoka | 2 | 0.7 | Illinois | 6 | 2.1 |
| Clark | 6 | 2.1 | Winona | 2 | 0.7 | Iowa | 4 | 1.4 |
| Columbia | 2 | 0.7 | | | | | | |
| Crawford | 1 | 0.4 | | | | | | |
| Dane | 3 | 1.1 | | | | | | |
| Dodge | 1 | 0.4 | | | | | | |
| Jackson | 1 | 0.4 | | | | | | |
| Kenosha | 3 | 1.1 | | | | | | |
| La Crosse | 46 | 16.3 | | | | | | |
| Milwaukee | 13 | 4.6 | | | | | | |
| Monroe | 11 | 3.9 | | | | | | |
| Rock | 14 | 4.9 | | | | | | |
| Trempealeau | 162 | 57.2 | | | | | | |
| Waukesha | 1 | 0.4 | | | | | | |
| Wood | 2 | 0.7 | | | | | | |
| TOTAL | 269 | 95.1 | TOTAL | 4 | 1.4 | TOTAL | 10 | 3.5 |

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 | 202 | 21 | 9 | 0 | 2 | 6 | 26 | 17 | 0 |
| Percent | 71.4 | 7.4 | 3.2 | 0.0 | 0.7 | 2.1 | 9.2 | 6.0 | 0.0 |

Table 6

ANGLER ORIGIN AND WATERS FISHED

| Angler Origin | Wisconsin Statutory Waters | Minnesota Statutory Waters |
|---------------|----------------------------|----------------------------|
| Wisconsin | 145 | 124 |
| Minnesota | 2 | 2 |
| Illinois | 4 | 2 |
| Iowa | 1 | 3 |
| TOTAL | 152 | 131 |

Table 7

TOTAL PROJECTED NUMBER OF HOURS OF FISHING BY TYPE AND MONTH

| Month | TYPE OF FISHING | | | | | | | | TOTAL | |
|-------------|-----------------|--------------------|----------------|------|------------------|-------|-----------|------|-----------|-------|
| | Boat | | Bank or Wading | | Total Open Water | | Ice | | No. Hours | % |
| | No. Hours | % ^{1/} | No. Hours | % | No. Hours | % | No. Hours | % | | |
| March | 1,637 | 51.3 | 17 | 0.6 | 1,654 | 51.9 | 1,535 | 48.1 | 3,189 | 36.0 |
| April | 3,969 | 70.1 | 1,691 | 29.9 | 5,660 | 100.0 | 0 | 0.0 | 5,660 | 64.0 |
| TOTAL HOURS | 5,606 | 63.4 ^{2/} | 1,708 | 19.3 | 7,314 | 82.7 | 1,535 | 17.3 | 8,849 | 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 | Total Open Water | Ice | Total All Types |
|-------------------------|-------|------|---------------------|-------|--------------------|
| Total Hours | 860.0 | 34.5 | 894.5 | 170.0 | 1,064.5 |
| Total Anglers Contacted | 202 | 16 | 218 | 54 | 272 |
| Average Hours | 4.3 | 2.2 | 4.1 | 3.1 | 3.9 |

Table 9

CATCH PER MAN HOUR BY MONTH

| | March | April | Total |
|--------------------|-------|-------|---------|
| Hours Fished | 454.0 | 651.0 | 1,105.0 |
| Fish Caught | 258 | 457 | 715 |
| Catch Per Man-Hour | 0.568 | 0.702 | 0.647 |

April was the most active fishing month, with 58.9 percent of the total hours and a catch rate of 0.702 fish per man-hour. In March the fishing was less active and less successful with a catch rate of 0.568 fish per man-hour. The overall catch rate for March and April was 0.647 fish per man-hour (Table 9).

A combination of casting and still fishing was the most popular method of fishing during the census period accounting for 43.5 percent of all angling (Table 10).

Multiple live and artificial baits were used 74.2 percent of the time, artificial baits 14.1 percent, and live bait 11.7 percent. Prepared bait was not observed in use in the tailwater area during the census (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. This was the case with 97.2 percent of the anglers seeking walleye or sauger (Table 11).

The Catch (general information)

Projection of the data obtained from the 283 fishermen contacted and 40 "instantaneous" angler counts revealed that during the 8,849 hours spent fishing in the tailwaters of Pool 7 during March and April, 1969, a total of 6,083 fish were caught at a rate of 0.687 fish per man-hour (Table 12).

Anglers spent 3,189 hours fishing during March to catch 1,823 fish at a catch rate of 0.572 fish per man-hour. April anglers were slightly more successful catching 4,260 fish in 5,660 hours at a catch rate of 0.753 fish per man-hour (Table 12).

The Catch (composition)

The most abundant species in the overall catch was the walleye, which made up 38.6 percent of the catch. Next in abundance were sauger (29.0 percent) and white bass (28.4 percent) (Table 13).

Projected data indicates that a total of 3,566 walleye and sauger were caught during the months of March and April in the Pool 7 tailwater area. This figure represents 17.2 percent of the total walleye and sauger caught during a twelve month 1967-1968 Pool 7 creel census period. March anglers caught 1,787 walleye and sauger with April anglers catching the remaining 1,779 (Table 12).

March anglers caught 1,806 large game fish at a rate of 0.566 fish per man-hour. April anglers caught 1,834 large game fish at a rate of 0.324 fish per man-hour (Table 12).

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 | 30 | 23.1 | 44 | 28.8 | 74 | 26.1 |
| Still fishing ^{1/} | 62 | 47.7 | 24 | 15.7 | 86 | 30.4 |
| Trolling | 0 | 0 | 0 | 0 | 0 | 0 |
| Multiple | 38 | 29.2 | 85 | 55.5 | 123 | 43.5 |
| TOTAL | 130 | | 153 | | 283 | |
| FISHING LURE | | | | | | |
| Worms | 0 | 0.0 | 1 | 0.7 | 1 | 0.4 |
| Minnows | 6 | 4.6 | 21 | 13.7 | 27 | 9.5 |
| Other live bait | 1 | 0.8 | 0 | 0.0 | 1 | 0.4 |
| Multiple live bait | 1 | 0.8 | 3 | 2.0 | 4 | 1.4 |
| TOTAL LIVE BAIT | 8 | 6.2 | 25 | 16.3 | 33 | 11.7 |
| Prepared bait | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Jigs | 16 | 12.3 | 17 | 11.1 | 33 | 11.7 |
| Flies | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Other artificials | 6 | 4.6 | 1 | 0.7 | 7 | 2.5 |
| TOTAL ARTIFICIALS | 22 | 16.9 | 18 | 11.8 | 40 | 14.1 |
| Multiple live and artificial ^{2/} | 100 | 76.9 | 110 | 71.9 | 210 | 74.2 |

^{1/} Includes ice.

^{2/} Includes any combination of live and artificial baits used on the same line.

Table 11

PRIMARY SPECIES SOUGHT

| Species | March | April | Total |
|------------------|-------|-------|-------|
| Walleye & sauger | 130 | 145 | 275 |
| White bass | 0 | 4 | 4 |
| Anything | 0 | 4 | 4 |
| TOTAL | 130 | 153 | 283 |

Table 12

PROJECTED NUMBER OF FISH CAUGHT BY TYPE OF FISHING DURING EACH MONTH

| Species | MARCH | | | | APRIL | | | TOTAL FOR MARCH AND APRIL | | | |
|-------------------------------|-------|-------|-------|-------|-------|-------|-------|---------------------------|-------|-------|-------------|
| | Boat | Bank | Ice | Total | Boat | Bank | Total | Boat | Bank | Ice | Grand Total |
| Carp | - | - | - | - | 19 | - | 19 | 19 | - | - | 19 |
| Bullheads | - | - | - | - | 19 | - | 19 | 19 | - | - | 19 |
| Northern pike | 18 | 1 | - | 19 | 6 | 49 | 55 | 24 | 50 | - | 74 |
| White bass | - | 2 | - | 2 | 1,159 | 1,127 | 2,286 | 1,159 | 1,129 | - | 2,288 |
| Yellow perch | 6 | - | 9 | 15 | 26 | - | 26 | 32 | - | 9 | 41 |
| Sauger | 318 | - | 706 | 1,024 | 464 | - | 464 | 782 | - | 706 | 1,488 |
| Walleye | 553 | 1 | 209 | 763 | 972 | 343 | 1,315 | 1,525 | 344 | 209 | 2,078 |
| Smallmouth bass | - | - | - | - | 6 | - | 6 | 6 | - | - | 6 |
| Black crappie | - | - | - | - | 64 | - | 64 | 64 | - | - | 64 |
| Freshwater drum | - | - | - | - | 6 | - | 6 | 6 | - | - | 6 |
| Projected number of fishermen | 420 | 8 | 495 | 923 | 882 | 769 | 1,651 | 1,302 | 777 | 495 | 2,574 |
| Projected number of fish | 895 | 4 | 924 | 1,823 | 2,741 | 1,519 | 4,260 | 3,636 | 1,523 | 924 | 6,083 |
| Projected hours fished | 1,637 | 17 | 1,535 | 3,189 | 3,969 | 1,691 | 5,660 | 5,606 | 1,708 | 1,535 | 8,849 |
| Projected fish per hour | .5467 | .2353 | .6020 | .5717 | .6906 | .8983 | .7527 | .6486 | .8917 | .6020 | .6874 |

Table 13

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 |
| Carp | - | - | 3 | .0046 | 3 | .0027 |
| Bullheads | - | - | 3 | .0046 | 3 | .0027 |
| Northern pike | 3 | .0066 | 2 | .0031 | 5 | .0045 |
| White bass | - | - | 203 | .3118 | 203 | .1837 |
| Yellow perch | 2 | .0044 | 4 | .0061 | 6 | .0054 |
| Sauger | 135 | .2974 | 72 | .1106 | 207 | .1873 |
| Walleye | 118 | .2599 | 158 | .2427 | 276 | .2498 |
| Smallmouth bass | - | - | 1 | .0015 | 1 | .0009 |
| Black crappie | - | - | 10 | .0154 | 10 | .0090 |
| Drum | - | - | 1 | .0015 | 1 | .0009 |
| TOTAL FISH CAUGHT | 258 | | 457 | | 715 | |
| TOTAL HOURS FISHED | 454.0 | .5683 | 651.0 | .7020 | 1,105.0 | .6471 |

The Catch (catch rates for various methods and baits)

Bank fishing produced the highest catch rate of any type of fishing, 0.899 fish per man-hour. Boat fishermen caught fish at a rate of 0.646 fish per man-hour while ice fishing yielded 0.602 fish per man-hour (Table 14).

Casting was the most productive method yielding 1.113 fish per man-hour as compared to 0.602 for ice fishing and 0.574 for still fishing (Table 15).

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

The 1969 spring sauger fishery in the Pool 7 tailwaters was primarily dependent upon two year classes. Nearly two-thirds (64.7 percent) of the sauger creeled were three year old fish with another 28.0 percent of the catch coming from the two year old fish. Only 7.3 percent of the sauger were over three years old and no one year old fish were creeled (Table 17).

Over eighty percent (83.9) 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. The majority of the sauger catch (86.8 percent) was smaller than 13.0 inches during March and April 1969. The sauger harvest as we know it today could be seriously curtailed under the old size limit restrictions (Table 18).

The 1969 spring walleye fishery in the Pool 7 tailwaters was also primarily dependent upon two year classes. Nearly half (47.1 percent) of the walleye creeled were three year old fish with another 27.5 percent of the catch coming from the two year old fish. Three other year classes were also important to the fishery; the four year olds (7.9 percent), five year olds (4.9 percent), and six year olds (6.5 percent). "Lunker fish," those 20.0 inches and over, comprised 5.4 percent of the catch and ranged from five to eleven years old (Table 19).

Over fifty percent (53.9) of the walleye caught were between 12.0 and 14.4 inches long. Nearly thirty percent (27.8) were under 13.0 inches in length (Table 18).

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

Table 14

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

| SPECIES | BOAT | | BANK | | ICE | | TOTAL | |
|--------------------|----------|-------------------|----------|-------------------|----------|-------------------|----------|-------------------|
| | No. Fish | Fish Per Man-Hour |
| Carp | 3 | .0034 | - | - | - | - | 3 | .0027 |
| Bullheads | 3 | .0034 | - | - | - | - | 3 | .0027 |
| Northern pike | 4 | .0045 | 1 | .0290 | - | - | 5 | .0045 |
| White bass | 180 | .2012 | 23 | .6667 | - | - | 203 | .1837 |
| Yellow perch | 5 | .0056 | - | - | 1 | .0057 | 6 | .0054 |
| Sauger | 126 | .1409 | - | - | 81 | .4602 | 207 | .1873 |
| Walleye | 245 | .2739 | 7 | .2029 | 24 | .1364 | 276 | .2498 |
| Smallmouth bass | 1 | .0011 | - | - | - | - | 1 | .0009 |
| Black crappie | 10 | .0012 | - | - | - | - | 10 | .0090 |
| Freshwater drum | 1 | .0011 | - | - | - | - | 1 | .0009 |
| TOTAL FISH CAUGHT | 578 | .6462 | 31 | .8986 | 106 | .6023 | 715 | .6471 |
| TOTAL HOURS FISHED | 894.5 | | 34.5 | | 176.0 | | 1,105.0 | |

Table 15

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

| SPECIES | CASTING | | STILL FISHING | | MULTIPLE METHODS | | ICE FISHING | |
|--------------------|----------|-------------------|---------------|-------------------|------------------|-------------------|-------------|-------------------|
| | No. Fish | Fish Per Man-Hour | No. Fish | Fish Per Man-Hour | No. Fish | Fish Per Man-Hour | No. Fish | Fish Per Man-Hour |
| Carp | - | - | - | - | 3 | .0057 | - | - |
| Bullheads | - | - | 3 | .0109 | - | - | - | - |
| Northern pike | 1 | .0033 | 1 | .0036 | 3 | .0057 | - | - |
| White bass | 178 | .5894 | 4 | .0145 | 21 | .0398 | - | - |
| Yellow perch | 4 | .0132 | 1 | .0036 | 1 | .0019 | 1 | .0057 |
| Sauger | 35 | .1159 | 95 | .3448 | 77 | .1460 | 81 | .4602 |
| walleye | 111 | .3675 | 54 | .1960 | 111 | .2104 | 24 | .1364 |
| Smallmouth bass | 1 | .0033 | - | - | - | - | - | - |
| Black crappie | 5 | .0166 | - | - | 5 | .0095 | - | - |
| Freshwater drum | 1 | .0033 | - | - | - | - | - | - |
| TOTAL FISH CAUGHT | 336 | 1.1126 | 158 | .5735 | 221 | .4190 | 106 | .6023 |
| TOTAL HOURS FISHED | 302.0 | | 275.5 | | 527.5 | | 176.0 | |

Table 16

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

| SPECIES | WORMS ^{1/} | | MINNOWS | | OTHER LIVE BAIT ^{2/} | | MULTIPLE LIVE BAIT | | TOTAL LIVE BAIT | |
|--------------------|---------------------|--------------|----------|--------------|-------------------------------|--------------|--------------------|--------------|-----------------|--------------|
| | No. Fish | Per Man-Hour | No. Fish | Per Man-Hour | No. Fish | Per Man-Hour | No. Fish | Per Man-Hour | No. Fish | Per Man-Hour |
| Carp | - | - | - | - | - | - | - | - | - | - |
| Bullheads | - | - | - | - | - | - | 3 | .1875 | 3 | .0264 |
| Northern pike | - | - | - | - | - | - | 1 | .0625 | 1 | .0088 |
| White bass | - | - | - | - | - | - | 4 | .2500 | 4 | .0352 |
| Yellow perch | - | - | - | - | - | - | - | - | - | - |
| Sauger | - | - | 10 | .1099 | 4 | 1.3333 | 1 | .0625 | 15 | .1322 |
| Walleye | - | - | 16 | .1758 | 2 | .6667 | 12 | .7500 | 30 | .2643 |
| Smallmouth bass | - | - | - | - | - | - | - | - | - | - |
| Black crappie | - | - | - | - | - | - | - | - | - | - |
| Freshwater drum | - | - | - | - | - | - | - | - | - | - |
| TOTAL FISH CAUGHT | 0 | 0.0 | 26 | .2857 | 6 | 2.0000 | 21 | 1.3125 | 53 | .4670 |
| TOTAL HOURS FISHED | 3.5 | | 91.0 | | 3.0 | | 16.0 | | 113.5 | |

^{1/} Worms include insect larvae.

^{2/} Other live bait includes frogs, adult insects, and all other live animals except worms and minnows.

Table 16 Continued

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

| SPECIES | JIG | | FLY | | OTHER ^{1/} 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 |
| Carp | - | - | - | - | - | - | - | - | 3 | .0034 |
| Bullheads | - | - | - | - | - | - | - | - | - | - |
| Northern pike | 1 | .0095 | - | - | - | - | 1 | .0081 | 3 | .0034 |
| White bass | 51 | .4857 | - | - | - | - | 51 | .4146 | 148 | .1704 |
| Yellow perch | - | - | - | - | - | - | - | - | 6 | .0069 |
| Sauger | 26 | .2476 | - | - | 9 | .5000 | 35 | .2845 | 157 | .1807 |
| Walleye | 27 | .2571 | - | - | 4 | .2222 | 31 | .2520 | 215 | .2475 |
| Smallmouth bass | 1 | .0095 | - | - | - | - | 1 | .0081 | - | - |
| Black crappie | - | - | - | - | - | - | - | - | 10 | .0115 |
| Freshwater drum | - | - | - | - | - | - | - | - | 1 | .0011 |
| TOTAL FISH CAUGHT | 106 | 1.0095 | 0 | 0.0 | 13 | .7222 | 119 | .9675 | 543 | .6252 |
| TOTAL HOURS FISHED | 105.0 | | 0.0 | | 18.0 | | 123.0 | | 868.5 | |

^{1/} Other artificial baits include plugs, spoons, etc.

Table 17

AGE AND LENGTH COMPOSITION OF SAUGER IN THE CATCH

| Inches | AGE | | | | | Total |
|---------------------------------|---|------|------|------|------|-------|
| | Numbers of Fish By Age ^{1/} and Length | | | | | |
| | II | III | IV | V | VI | |
| 8.0 - 8.9 | 2 | - | - | - | - | 2 |
| 9.0 - 9.9 | 3 | 1 | - | - | - | 4 |
| 10.0 - 10.9 | 39 | 26 | - | - | - | 65 |
| 11.0 - 11.9 | 8 | 71 | - | - | - | 79 |
| 12.0 - 12.9 | 6 | 23 | - | - | - | 29 |
| 13.0 - 13.9 | - | 12 | 3 | - | - | 15 |
| 14.0 - 14.9 | - | 1 | 6 | - | - | 7 |
| 15.0 - 15.9 | - | - | 2 | - | - | 2 |
| 16.0 - 16.9 | - | - | - | - | - | - |
| 17.0 - 17.9 | - | - | 1 | - | 1 | 2 |
| 18.0 - 18.9 | - | - | - | 1 | - | 1 |
| 19.0 - 19.9 | - | - | - | - | 1 | 1 |
| Total Fish | 58 | 134 | 12 | 1 | 2 | 207 |
| Percent of Total | 28.0 | 64.7 | 5.8 | 0.5 | 1.0 | 100.0 |
| Estimated Mean Size (inches) | 10.6 | 11.6 | 14.6 | 18.0 | 18.8 | |

^{1/} Ages are estimated from an aged sample of sauger collected during the 1969 and 1970 spring creel census and boom shocking investigations in the tailwaters of Pool 7.

Table 18

LENGTH FREQUENCY OF WALLEYE AND SAUGER IN THE CATCH

| Size Range | Walleye | | | | | | Sauger | | | | | |
|----------------------|---------|------|-------|------|-------|------|--------|------|-------|------|-------|------|
| | March | | April | | Total | | March | | April | | Total | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| 8.5- 8.9 | - | - | - | - | - | - | 2 | 1.5 | - | - | 2 | 1.0 |
| 9.0- 9.4 | - | - | - | - | - | - | 2 | 1.5 | 1 | 1.4 | 3 | 1.4 |
| 9.5- 9.9 | - | - | - | - | - | - | 1 | 0.7 | - | - | 1 | 0.5 |
| 10.0-10.4 | 1 | 0.8 | - | - | 1 | 0.4 | 19 | 14.1 | 20 | 27.8 | 39 | 18.8 |
| 10.5-10.9 | 2 | 1.7 | 1 | 0.6 | 3 | 1.1 | 16 | 11.9 | 10 | 13.9 | 26 | 12.6 |
| 11.0-11.4 | 5 | 4.2 | 7 | 4.4 | 12 | 4.3 | 32 | 23.7 | 13 | 18.0 | 45 | 21.7 |
| 11.5-11.9 | 5 | 4.2 | 7 | 4.4 | 12 | 4.3 | 29 | 21.5 | 5 | 6.9 | 34 | 16.4 |
| 12.0-12.4 | 10 | 8.5 | 7 | 4.4 | 17 | 6.2 | 8 | 6.0 | 7 | 9.7 | 15 | 7.2 |
| 12.5-12.9 | 11 | 9.9 | 21 | 13.3 | 32 | 11.5 | 8 | 6.0 | 6 | 8.3 | 14 | 6.8 |
| 13.0-13.4 | 17 | 14.4 | 22 | 13.9 | 39 | 14.1 | 6 | 4.4 | 4 | 5.6 | 10 | 4.8 |
| 13.5-13.9 | 14 | 11.9 | 26 | 16.5 | 40 | 14.5 | 3 | 2.2 | 2 | 2.8 | 5 | 2.4 |
| 14.0-14.4 | 7 | 5.9 | 14 | 8.9 | 21 | 7.6 | 4 | 3.0 | 1 | 1.4 | 5 | 2.4 |
| 14.5-14.9 | 8 | 6.7 | 6 | 3.9 | 14 | 5.1 | - | - | 2 | 2.8 | 2 | 1.0 |
| 15.0-15.4 | 6 | 5.0 | 10 | 6.3 | 16 | 5.7 | 1 | 0.7 | - | - | 1 | 0.5 |
| 15.5-15.9 | 7 | 5.9 | 8 | 5.1 | 15 | 5.4 | 1 | 0.7 | - | - | 1 | 0.5 |
| 16.0-16.4 | 1 | 0.8 | 7 | 4.4 | 8 | 3.0 | - | - | - | - | - | - |
| 16.5-16.9 | 2 | 1.7 | 6 | 3.8 | 8 | 3.0 | - | - | - | - | - | - |
| 17.0-17.4 | 5 | 4.2 | - | - | 5 | 1.8 | 1 | 0.7 | - | - | 1 | 0.5 |
| 17.5-17.9 | - | - | 1 | 0.6 | 1 | 0.4 | - | - | 1 | 1.4 | 1 | 0.5 |
| 18.0-18.4 | 2 | 1.7 | 3 | 1.9 | 5 | 1.8 | 1 | 0.7 | - | - | 1 | 0.5 |
| 18.5-18.9 | 2 | 1.7 | 4 | 2.5 | 6 | 2.1 | - | - | - | - | - | - |
| 19.0-19.4 | 3 | 2.5 | 2 | 1.3 | 5 | 1.8 | - | - | - | - | - | - |
| 19.5-19.9 | - | - | 1 | 0.6 | 1 | 0.4 | 1 | 0.7 | - | - | 1 | 0.5 |
| 20.0-20.4 | 2 | 1.7 | 2 | 1.3 | 4 | 1.4 | - | - | - | - | - | - |
| 20.5-20.9 | - | - | - | - | - | - | - | - | - | - | - | - |
| 21.0-21.4 | 1 | 0.8 | - | - | 1 | 0.4 | - | - | - | - | - | - |
| 21.5-21.9 | - | - | - | - | - | - | - | - | - | - | - | - |
| 22.0-22.4 | 1 | 0.8 | - | - | 1 | 0.4 | - | - | - | - | - | - |
| 22.5-22.9 | - | - | 1 | 0.6 | 1 | 0.4 | - | - | - | - | - | - |
| 23.0-23.4 | 2 | 1.7 | 2 | 1.3 | 4 | 1.4 | - | - | - | - | - | - |
| 23.5-23.9 | 2 | 1.7 | - | - | 2 | 0.7 | - | - | - | - | - | - |
| 24.0-24.4 | - | - | - | - | - | - | - | - | - | - | - | - |
| 24.5-24.9 | - | - | - | - | - | - | - | - | - | - | - | - |
| 25.0-25.4 | 1 | 0.8 | - | - | 1 | 0.4 | - | - | - | - | - | - |
| 25.5-25.9 | - | - | - | - | - | - | - | - | - | - | - | - |
| 26.0-26.4 | - | - | - | - | - | - | - | - | - | - | - | - |
| 26.5-26.9 | - | - | - | - | - | - | - | - | - | - | - | - |
| 27.0-27.4 | - | - | - | - | - | - | - | - | - | - | - | - |
| 27.5-27.9 | - | - | - | - | - | - | - | - | - | - | - | - |
| 28.0-28.4 | 1 | 0.8 | - | - | 1 | 0.4 | - | - | - | - | - | - |
| Total | 118 | | 158 | | 276 | | 135 | | 72 | | 207 | |
| Ave. length (inches) | 14.7 | | 14.3 | | 14.4 | | 11.6 | | 11.4 | | 11.5 | |
| Ave. weight (pounds) | 1.37 | | 1.09 | | 1.21 | | 0.47 | | 0.46 | | 0.47 | |

Table 19
AGE AND LENGTH COMPOSITION OF WALLEYE IN THE CATCH

| Inches | Age | | | | | | | | | | | Total | | |
|------------------------------|-------------------------------------|------|------|------|------|------|------|------|------|------|------|-------|---|-------|
| | Numbers of Fish By Age I and Length | | | | | | | | | | | | | |
| | I | II | III | IV | V | VI | VII | VIII | IX | X | XI | | | |
| 10.0 - 10.9 | 2 | | | | | | | | | | | | | 4 |
| 11.0 - 11.9 | | 19 | 5 | | | | | | | | | | | 24 |
| 12.0 - 12.9 | | 31 | 18 | | | | | | | | | | | 49 |
| 13.0 - 13.9 | | 24 | 55 | | | | | | | | | | | 79 |
| 14.0 - 14.9 | | | 32 | 3 | | | | | | | | | | 35 |
| 15.0 - 15.9 | | | 16 | 9 | 3 | 3 | | | | | | | | 31 |
| 16.0 - 16.9 | | | 4 | 8 | 2 | 2 | | | | | | | | 16 |
| 17.0 - 17.9 | | | | 2 | 2 | 2 | | | | | | | | 6 |
| 18.0 - 18.9 | | | | | 3 | 5 | | | | | | | | 11 |
| 19.0 - 19.9 | | | | | 3 | 3 | | | | | | | | 6 |
| 20.0 - 20.9 | | | | | 1 | 2 | | | | | | | | 4 |
| 21.0 - 21.9 | | | | | | 1 | | | | | | | | 1 |
| 22.0 - 22.9 | | | | | | | | 1 | | | | | | 2 |
| 23.0 - 23.9 | | | | | | | | 1 | 3 | | | | | 6 |
| 24.0 - 24.9 | | | | | | | | | | | | | 1 | 1 |
| 25.0 - 25.9 | | | | | | | | | | | | | | |
| 26.0 - 26.9 | | | | | | | | | | | | | | |
| 27.0 - 27.9 | | | | | | | | | | | | | | |
| 28.0 - 28.9 | | | | | | | | | | | | | | 1 |
| Total Fish | 2 | 76 | 130 | 22 | 14 | 17 | 6 | 4 | 3 | 1 | 1 | | | 276 |
| Percent of Total | 0.8 | 27.5 | 47.1 | 7.9 | 4.9 | 6.5 | 2.0 | 1.4 | 1.1 | 0.4 | 0.4 | | | 100.0 |
| Estimated Mean Size (inches) | 10.4 | 12.4 | 13.8 | 15.8 | 17.7 | 17.9 | 19.8 | 23.2 | 23.4 | 25.2 | 28.0 | | | |

1/ Ages are estimated from an aged sample of walleye collected during the 1969 and 1970 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, 1969 to April 30, 1969. 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 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 283 fishermen were contacted during the census, of which 95.8 percent were men. The average age of all anglers was 41.1 years.
4. Fishing in the tailwaters of Pool 7 during March and April was primarily a local sport with 78.8 percent of the anglers residing within 50 miles of the area.
5. Projected data indicates that 2,574 fishing trips were made to the tailwaters of Pool 7 during March and April, 1969, with a total of 8,849 hours spent fishing.
6. Boat angling was slightly more popular than ice fishing during March accounting for 51.3 percent of the total fishing hours. April anglers used a boat 70.1 percent of the time while fishing from the bank the remainder of the time.
7. The average length of all completed fishing trips was 3.9 hours, with boat fishing trips longest (4.3 hours) and bank trips shortest (2.2 hours).
8. April was the most active and productive month with 58.9 percent of the total fishing hours and a catch rate of 0.702 fish per man-hour.
9. A combination of casting and still fishing was the most popular method of fishing during the census period accounting for 43.5 percent of all angling.
10. Walleye and sauger were the most sought-after species, with 97.2 percent of the anglers seeking these species.
11. March anglers caught 1,806 large game fish at a rate of 0.566 fish per man-hour. April anglers caught 1,824 large game fish at a rate of 0.324 fish per man-hour.
12. Bank fishing produced the highest catch rate of any type of fishing, 0.899 fish per man-hour.
13. Casting was the most productive method yielding 1.113 fish per man-hour.

14. The spring sauger fishery was primarily dependent upon two year classes, two and three year old fish.
15. The majority of the sauger catch (86.8 percent) was smaller than 13.0 inches. The sauger harvest as we know it today could be seriously curtailed under the old size limit restrictions.
16. The spring walleye fishery was primarily dependent upon two year classes, two and three year old fish, however, three other year classes were also important to the fishery.
17. "Lunker" walleye, those 20.0 inches and over, comprised 5.4 percent of the catch and ranged from five to eleven years old.
18. Over fifty percent of the walleye caught were between 12.0 and 14.4 inches long. Nearly thirty percent were under 13.0 inches in length.
19. As a general observation, it appears that the walleye population in Pool 7 is very stable.

3-26-71
tab

Figure 1. General Mississippi River Map

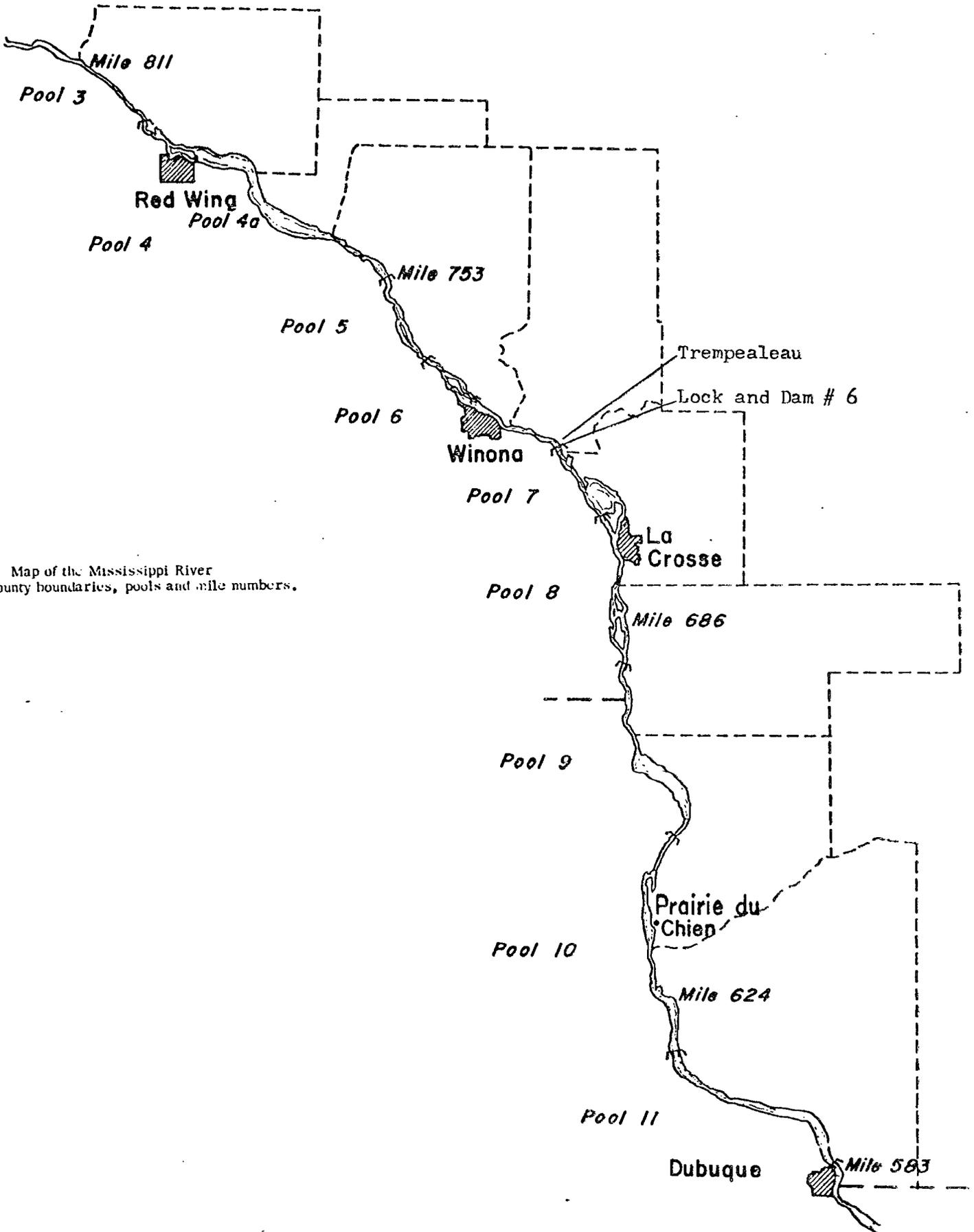


Fig. 1 Map of the Mississippi River with county boundaries, pools and mile numbers.

Figure 2.

Card Type 3
(cc80)

DEPARTMENT OF NATURAL RESOURCES
Division of Conservation

Fi-299

CREEL CENSUS - COVER SHEET

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 -----

Figure 3.

Card Type 1
(cc80)

DEPARTMENT OF NATURAL RESOURCES
Division of Conservation

Fi-258

CREEL CENSUS

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 _____
 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 |
|-----------------|-------|--------|
| 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 | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |