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MINNESOTA DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF FISH AND WILDLIFE  
ENVIRONMENT SECTION

Progress Report on the Prairie Island Creel  
Survey March 1 - November 23, 1975

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By:  
Scott P Gustafson  
and  
Paul J Diedrich  
May, 1976





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#### 2.5.3.1 Introduction

##### 2.5.3.1.1 Scope

This report includes results of the third season of creel survey on a portion of the Mississippi River near Red Wing, Minnesota, in the vicinity of the Prairie Island Nuclear Generating Plant. This creel survey is designed to monitor the sport fishery in the Prairie Island area and is part of a study to determine effects of the plant on fish and fishing.

##### 2.5.3.1.2 General

Data collected include information on sport fishing success, pressure, and harvest, as well as information about characteristics of anglers and fishing trips. Fishing regulations in 1975 were essentially the same as described by Naplin and Gustafson (1975). Angling for most species is open year-round on the Minnesota-Wisconsin boundary waters of the Mississippi River. Intensive fishing occurs in tailwaters of Lock and Dam 3 during March and April.

##### 2.5.3.2 Materials and Methods

The 1975 creel survey was conducted between March 1 and November 23, 1975, inclusive. Although some winter ice angling and darkhouse spearing occurs in the area, the winter season was not surveyed.

#### 2.5.3.2.1 Study Area

For the creel survey, the Mississippi River and its backwaters in the Prairie Island area were divided into six sections (Figure 2.5.3-1). The six sections are described as follows:

Section 1 - Sturgeon Lake

Section 2 - Main channel from Brewer Lake cut  
downstream to the plant intake

Section 3 - Main channel and backwaters from the  
plant intake downstream to Lock and  
Dam 3

Section 4 - Tailwaters of Lock and Dam 3 to Highway  
63 bridges on the main channel (at Red  
Wing) and the back channel (Wisconsin  
channel)

Section 5 - Wisconsin channel and all backwaters  
from Highway 63 to Bay City Flats  
(head of Lake Pepin)

Section 6 - Main channel from Highway 63 to the  
head of Lake Pepin

#### 2.5.3.2.2 Counts and Interviews

The six sections were visited in rotation taking care not to create a pattern that would cause biases in pressure and harvest estimates. Data collection was done the same as in 1974. Instantaneous counts of fishing boats and anglers, bank anglers, launch anglers, runabouts, sailboats, canoes, waterskiers, overnight camps, wind, weather, and water and air temperature were recorded for each section.

If anglers were present, as many as possible were interviewed in the time allotted for each sector. Data recorded from interviews included species of fish sought, time spent fishing, number and species of fish caught, trip status (complete or incomplete at time of contact), residence, distance traveled, age, sex, fishing method, and type of lure or bait used by the angler interviewed.

If no anglers were present, the clerk waited at least one hour before making a count in the next section. If numerous anglers were present, no more than four hours were spent in any one section, insuring that data were collected from at least two sections each day during periods of heavy fishing pressure.

#### 2.5.3.2.3 Calculations

##### 2.5.3.2.3.1 Fishing Pressure

Because of observed differences in fishing pressure, angler-count data were divided into two strata (week days and weekend days), and angling pressure estimated for each stratum. Holidays (Memorial Day, Fourth of July, and Labor Day) were included with weekend days.

Estimates of fishing pressure in each section in man-hours are made in the following manner:

Number of anglers counted on weekend days X Daylight hours in weekends	=	Estimated man-hours fished = A
Number of weekend counts		during weekends

Number of anglers counted on weekdays X Daylight hours in weekdays	=	Estimated man-hours fished = B
Number of weekday counts		during weekdays

A + B = total estimated man-hours fished during survey period.



Night fishing pressure was assumed to be zero (Hawkinson, 1974).

#### 2.5.3.2.3.2 Fishing Success

Fishing success is measured as fish caught per man-hour of angling (fish/m-h). Information from angler interviews is used to determine fishing success.

Two basic catch rate figures were calculated. The "overall catch rate" is the total number of fish caught by interviewed anglers divided by the total number of man-hours those anglers spent fishing. This method does not account for differences in catch rates regarding species of fish the angler is seeking. A second method is used to account for this bias. "Preference species catch rate" or "sought catch rate" is calculated by dividing the number of fish of a particular species caught by anglers seeking that species by the number of man-hours those anglers spent fishing for that species.

#### 2.5.3.3 Results and Discussion

##### 2.5.3.3.1 Fishing pressure

Total estimated fishing pressure for the 1,601 hectares surveyed was 111,717 man-hours or 69.8 man-hours per hectare. This represents about a 1/3 decline in fishing pressure from 1974.

In 1975, most estimated fishing pressure was by boat anglers with weekend days receiving considerably higher pressure (man-hours/day) than weekdays (Tables 2.5.3-1 and 2.5.3-2).

Fishing pressure is expressed as number of man-hours spent fishing in a given period of time.

Section 4 had the highest fishing pressure of the six sections surveyed (Table 2.5.3-3). March and April angling in this section accounted for one-half of the total pressure for the entire study area during the 1975 survey. There are a number of reasons for the popularity of spring fishing below Lock and Dam 3:

1. The fishing is good and is highly publicized
2. The area is accessible and easy to fish
3. Migratory fishes such as saugers, walleyes, and white bass concentrate in the tailwaters below the dam

During the survey fishing pressure in Sections 1, 2, and 3 was very low (only 1.2 - 2.6 man-hours per hectare). These areas were not censused from December through April; no fishing pressure was recorded in them during June or November (Table 2.5.3-4). There are excellent fishing opportunities (in Sections 1, 2, and 3), but these are not well known.

Estimated fishing pressure during the 1975 March-April season below Lock and Dam 3 showed a marked decrease from 1974 after experiencing a steady increase from 18,378 man-hours in 1971 to 93,594 man-hours in 1974. Sternberg (1975) suggests that the decrease in 1975 may have occurred because of the declining aesthetic quality of the sport fishery at Lock and Dam 3. Additional years of data will be required to determine if a trend toward declining fishing pressure during the spring season exists.

Although there was a decline in 1975, fishing pressure was still considerable below Lock and Dam 3 during the spring season, with 64 man-hours per hectare. This is considerably higher than the average fishing pressure of seven man-hours per hectare for the spring walleye fishery (of selected walleye lakes) in Minnesota (Kucera, unpub).

#### 2.5.3.3.2 Fishing Success

The catch rate for preferred species and the catch rate for anglers seeking a certain species, indicate the quality of fishing for each species in 1975 (Tables 2.5.3-5 and 2.5.3-6). Section 6 appears to be the "best" place for fishing for walleyes and saugers (0.52 fish/hr). Section 4 was best for white bass (1.6 white bass/hr).

For the years 1973-1975, preference species catch rates May 1 - November 23 for walleyes and saugers have remained about the same. Mixed species catch rates show slightly increasing trends over the three years.

Total overall catch rates (Table 2.5.3-7) are used to calculate estimated harvests.

Overall catch rate = 
$$\frac{\text{Number of fish caught by interviewed anglers}}{\text{Man-hours spent fishing by interviewed anglers.}}$$

This measure of fishing success does not take angler preference into account.

Overall catch rates for March and April sauger angling were lower in 1975 than during the seven previous years. The catch rate in 1975 was 0.236 fish per man-hour compared to 0.336



in 1974 and 0.437 in 1973 (Table 2.5.3-8). March and April information previous to 1975 was from a creel survey done by the Minnesota Department of Natural Resources (Sternberg 1974).

#### 2.5.3.3.3 Angling Harvest

Angler harvest is estimated from overall catch rate and estimated fishing pressure (Naplin and Gustafson, 1975). An estimated 15,042 saugers and 3,187 walleyes were taken in March and April 1975 in Section 4 (Table 2.5.3-9). These estimates are roughly half of the estimated 1974 March and April harvest in Section 4 (Table 2.5.3-10). However, 1975 harvest during these months was close to the median harvest for 1968-1974. Future years' data will show whether the 1975 drop in catch rates and the resulting drop in harvest during March and April develop into a trend.

As mentioned earlier, Section 4 was the only section surveyed during March and April. As in the previous two years, harvests of saugers and walleyes in Sections 1 through 3 were very low compared with Sections 4 through 6. Estimated harvests in Sections 1 through 3 tend to vary widely from year to year because of the low fishing pressure in these areas. Sometimes catch rates of one or two fishing parties may determine estimated catch rates in Sections 1, 2, and 3.

Estimated harvest of white bass in Section 4 has dropped each year since 1973. The 1973 harvest was 11,951 compared with 8,336 in 1974 and 5,776 in 1975. In Section 5, white bass harvest fluctuated between 1973 and 1975, but did not show a decreasing trend.

Mean weights of angler-caught saugers and walleyes in 1975 were equal to or greater than mean weights during recent years (Table 2.5.3-11). In 1975, the mean weight of saugers was 0.59 kg (1.30 lb), which is greater than the mean weight during six of the last eight years. The mean weight of walleyes was 0.91 kg, which is greater than the mean weight during four of the past eight years.

#### 2.5.3.3.4 Species Composition

Species composition of the anglers catch May 1 - November 23, 1975 was similar to that of 1973 and 1974 (Table 2.5.3-12). Saugers made up the largest percentage (33.3 percent) of the catch in the Prairie Island vicinity during this period followed by white bass (29.61 percent), walleyes (15.74 percent), and crappies (two species combined totaling 9.11 percent). Together, these species comprise 87 percent of the catch. These four species make up a similar percentage of the catch in 1973 and 1974, except that crappies increased from 0.46 percent of the catch in 1974 to 9.11 percent in 1975.

The March and April catch in Section 4 is dominated by sauger (81.54 percent) and walleye (17.40 percent). This species composition is roughly similar to that found in previous years during March and April.

#### 2.5.3.3.5 The Angler

A typical angler in the study area was a man 25 years of age or older who traveled less than 50 miles to fish for sauger and walleye. During the period May 1 - November 23, 1975,

88.65 percent of the anglers were males, but during March and April 98.21 percent of the anglers were males (Table 2.5.3-13). Most anglers (58.19 percent) in the Prairie Island vicinity, May 1 - November 23, 1975, traveled 25 miles or less to fish (Table 2.5.3-14). This is a higher percentage of local anglers than during the same period of 1974.

Sauger and walleye were the most sought-after species. Over 65 percent of the anglers were seeking sauger or walleye in the period May 1 - November 23, 1975 (Table 2.5.3-15). More than 23 percent were seeking any species that would bite. During this period only 5.6 percent of anglers were seeking white bass, yet white bass comprised about 24.8 percent of the fish harvested during this time.

Fishing style used most often by anglers in the study area was still fishing with natural bait (Table 2.5.3-16). The second most popular method was trolling with natural bait. Table 2.5.3-17 is a summary of fishing methods by section.

#### 2.5.3.4 Summary

A creel survey was conducted on the Mississippi River and its backwaters in the Prairie Island vicinity March 1 - November 23, 1975. The purpose of this survey was to monitor the sport fishery in this area. Estimated fishing pressure May 1 - November 23, was 47,134 man-hours, down about one-third from the estimated pressure of 1974 and down one-half from 1973. Estimated pressure during March and April, 1975 was 64,583 man-hours, showing the importance of the fishery below Lock and Dam 3. Preferred species catch rates are good indicators



of the quality of fishing. For the years 1973-1975, preference catch rates for sauger and walleye May through November have remained about the same. Overall catch rates for sauger during March and April were lower in 1975 than during these same months of 1973 and 1974. Walleye catch rates during these months are about the same as those of 1973 and 1974.

Although harvests of saugers and walleyes in March and April was down from the last two years, the fish were as large or larger than mean weights since 1968. The number of white bass harvested May 1 - November 23 in Section 4 has decreased by 30 percent each year since 1973. Species composition of the catch is similar to that of 1973 and 1974, except that crappies became a more prominent group in 1975.

Overall, there are indications that the quality of fishing has declined slightly during March and April. Fewer but larger walleye and sauger were caught during this period. This may be the result of a strong year class of sauger and walleye maturing and beginning to pass out of the fishery. Fishing success during May through November has declined for white bass, increased for crappies, and remained constant for saugers and walleyes. Additional years of data will show whether these changes in the fishery will become long-term trends.

A higher percentage of local anglers was noted in 1975. The typical anglers was a man 25 years of age or older who fished for saugers and walleyes with natural bait.

#### 2.5.3.5 Acknowledgements

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Naplin, R L, and S P Gustafson, Minnesota Department of Natural Resources, 1975. 1974 progress report on the Prairie Island creel survey. Pages 717 - 753, in 1974 Annual Report for the Prairie Island Nuclear Generating Plant near Red Wing, MN., Northern States Power Co, Minneapolis, MN.

Sternberg, R B, 1974. Assessment of continuous walleye-sauger fishing at Lock and Dam No. 3 and 4 of the Mississippi River, 1968-74. Minnesota Department of Natural Resources, Division of Fish and Wildlife, Investigational Report No. 332.





FIGURE 2.5.3-1 CREEEL SURVEY AREAS IN THE PRAIRIE  
ISLAND GENERATING PLANT AREA

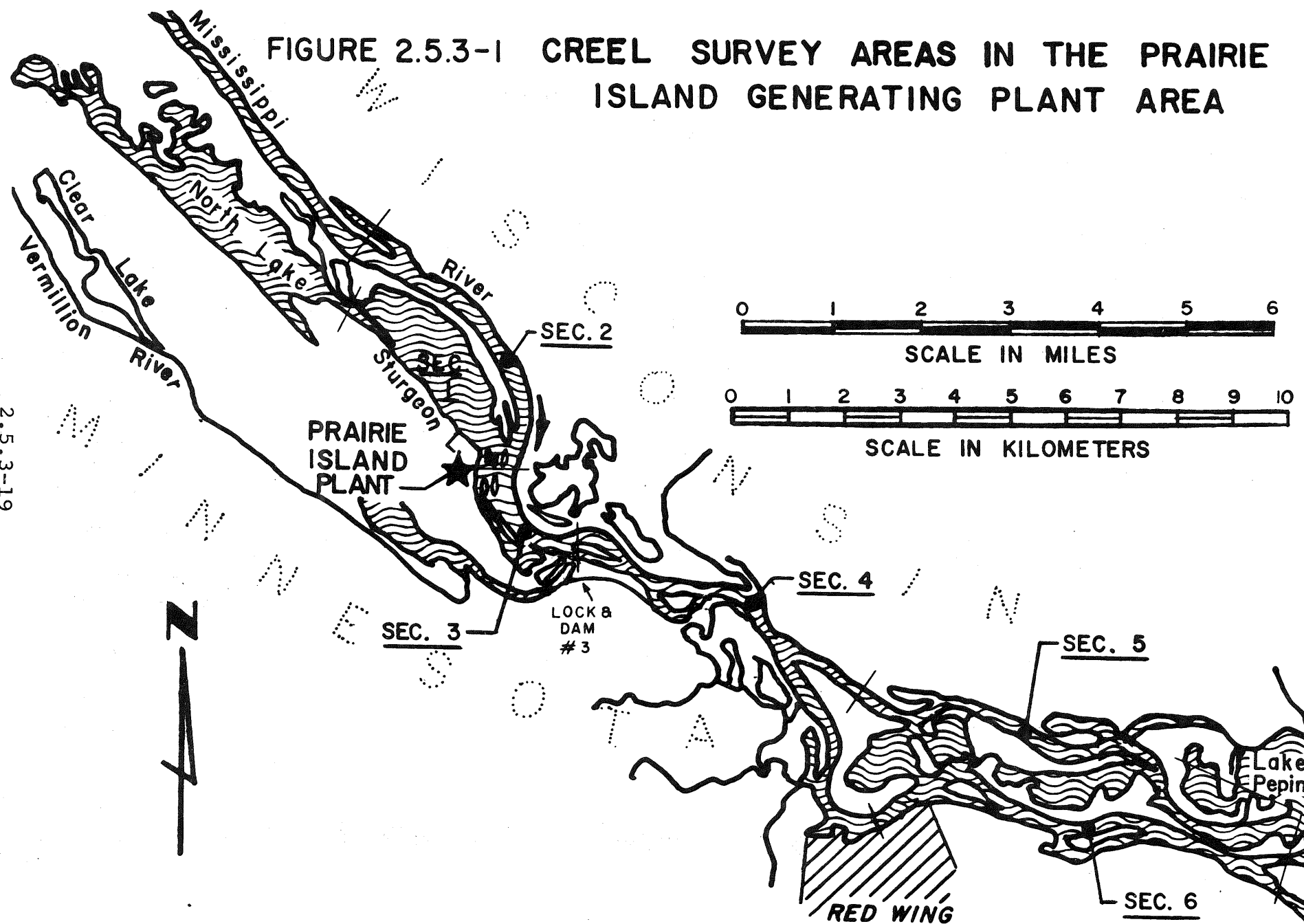


Table 2.5.3-1 Estimated man-hours of fishing pressure for boat and bank anglers by section and season in the Prairie Island vicinity, 1975.

Estimated Man-Hours							
Section	1	2	3	4	5	6	Total
Area (hectares)	324	180	83	257	516	241	1,601
Boat anglers							
Spring (Mar.-Apr.)	*	*	*	63737	162	0	63899
Summer (May-Aug.)	297	0	99	7084	13409	1574	22463
Fall (Sept.-Nov.)	60	187	113	15196	3547	656	19759
Total	357	187	212	86017	17118	2230	106121
Bank anglers							
Spring	*	*	*	0	0	684	684
Summer	37	0	0	2215	395	1563	4210
Fall	0	0	0	623	0	79	702
Total	37	0	0	2838	395	2326	5596
All anglers							
Spring	*	*	*	63737	162	684	64583
Summer	334	0	99	9299	13804	3137	26673
Fall	60	187	113	15819	3547	735	20461
1975 Total	394	187	212	88855	17513	4556	111717

\* Indicates no counts were made

Table 2.5.3-2 Estimated fishing pressure for weekend days and weekdays in the Prairie Island vicinity,  
March 1-November 23, 1975

Section	1	2	3	4	5	6	Total
Area of Sections (hectares)	324	180	83	257	516	241	1,601
Weekend man-hours*	286	99	212	44174	10826	2533	58575
Weekday man-hours	108	88	0	42681	6687	1578	53142
Total man-hours	394**	187**	212**	86855	17513***	4111	111717
Man-hours per hectare	1.2	1.0	2.6	338.0	33.9	17.1	69.8

Total weekend daylight hours: 1,100.5

Total weekday daylight hours: 2,453.7

\* Includes holidays.

\*\* No counts were made during March and April in Sections 1, 2, and 3.

\*\*\* No counts made during March in Section 5.

2.5.3-21

Table 2.5.3-3 Estimated man-hours of fishing pressure for March-November 1973-1975 in the Prairie Island vicinity, by section and season

Period	Sections						Total
	1	2	3	4	5	6	
1975							
Spring (Mar.-Apr.)	*	*	*	63737	162	684	64583
Summer (May-Aug.)	334	0	99	9299	13804	3137	26673
Fall (Sept.-Nov.23)	60	187	113	15819	3547	735	20461
Total	394	187	212	88855	17513	4556	111717
1974							
**Spring (Mar.-Apr.)	*	*	*	93594	*	*	93594
Summer (May-Aug.)	644	493	153	18027	16692	4862	40871
Fall (Sept.-Nov.23)	168	203	0	28085	422	363	29241
Total	812	124	153	139708	17114	5225	163706
1973							
**Spring (Mar.-Apr.)	*	*	*	80430	*	*	80430
Summer (May 10-Aug.)	160	613	500	28773	21391	11152	62589
Fall (Sept.1-Nov.5)	40	257	0	12437	5489	1198	19421
Total	200	870	500	121640	26880	12350	162440
1972							
**Spring (Mar.-Apr.)	*	*	*	44031	*	*	44031
1971							
**Spring (Mar.-Apr.)	*	*	*	18378	*	*	18378

\* Indicates no counts were made

\*\* From Sternberg (1975)

Table 2.5.3-4 Estimated fishing pressure for all anglers by section and month in the Prairie Island vicinity, March 1-November 23, 1975

Estimated Man-Hours							
Section	1	2	3	4	5	6	Total
Area (hectares)	324	180	83	257	516	241	1,601
Month:							
March	-	-	-	20,031	-	239	20,270
April	-	-	-	43,706	162	445	44,313
May	37	0	99	2,228	2,413	1,425	6,202
June	0	0	0	1,898	6,656	954	9,508
July	87	0	0	2,444	3,911	270	6,712
August	210	0	0	2,729	824	478	4,241
September	0	88	113	5,129	902	0	6,232
October	60	99	0	6,096	1,678	199	8,132
November 1-23	0	0	0	4,594	967	536	6,097

2.5.3-23



Table 2.5.3-5 Catch rates of preferred species for interviewed anglers fishing in the Prairie Island vicinity by section. March-November 1975. Fish per man-hour and (in parentheses) man-hours fished for each species

Species	Sections						Total	
	1	2	3	4	5	6		
Northern pike	- ( 0 )	- ( 0 )	- ( 0 )	0 ( 2.3)	- ( 0 )	- ( 0 )	0 ( 2.3)	
Catfish	- ( 0 )	- ( 0 )	- ( 0 )	0.660 ( 16.7)	0.890 ( 4.5)	- ( 0 )	0.710 ( 21.2)	
White bass	- ( 0 )	- ( 0 )	- ( 0 )	1.630 (145.3)	0.970 ( 30.0)	- ( 0 )	1.520 ( 175.3)	
Sunfish*	- ( 0 )	- ( 0 )	- ( 0 )	- ( 0 )	1.400 ( 31.5)	- ( 0 )	1.400 ( 31.5)	
Smallmouth bass	- ( 0 )	- ( 0 )	- ( 0 )	- ( 0 )	- ( 0 )	- ( 0 )	- ( 0 )	
Crappies	- ( 0 )	- ( 0 )	- ( 0 )	( 29.5)	1.720 ( 97.4)	0 ( 1.5)	1.310 ( 128.4)	
Panfish**	- ( 0 )	- ( 0 )	- ( 0 )	0.890 ( 4.5)	1.890 ( 9.0)	- ( 0 )	1.560 ( 13.5)	
Walleye/Sauger	1.210 (16.5)	2.000(1.0)	.250 (4.0)	0.310 (9200.2)	0.290 (1036.5)	0.520 (197.1)	0.320 ( 455.3)	
Mixed**	- ( 0 )	0 (3.0)	- ( 0 )	0.770 (581.8)	0.650 ( 146.6)	0.190 (100.1)	0.680 ( 831.5)	
Total	1.210 (16.5)	0.500(4.0)	0.250 (4.0)	0.360 (9980.3)	0.490 (1355.5)	0.410 (298.7)	1.000 (1659.0)	

\* Bluegill, pumpkinseed, green and hybrid sunfish

\*\* Sunfish, crappies, perch and bullheads

\*\*\* Fishing for any fish that will bite

Table 2.5.3-6 Comparison of catch rates of preferred species for interviewed anglers in the Prairie Island vicinity, 1973-1975

Species Sought	Fish per man-hour (hours spent seeking by interviewed fishermen)							
	1973 May 10- November 5		1974 April 30- December 3		1975 March-April (Section 4 only)		1975 May 1-November 23 (All sections)	
Northern pike	0	( 0.5)	0	( 1.0)	-	( 0 )	0	( 2.3)
Catfish	0.41	( 67.5)	0.56	( 25.2)	-	( 0 )	0.71	( 21.2)
White bass	3.47	( 52.0)	1.88	( 3.2)	-	( 0 )	1.52	( 175.3)
Sunfish	0.88	( 68.5)	0.68	( 23.5)	-	( 0 )	1.40	( 31.5)
Smallmouth bass	0.67	( 3.0)	0.50	( 2.0)	-	( 0 )	-	( 0 )
Largemouth bass	0.40	( 5.0)	-	( 0 )	-	( 0 )	-	( 0 )
Crappies	0.37	( 13.5)	0.23	( 26.5)	-	( 0 )	1.31	( 128.4)
Panfish	0.44	( 22.5)	-	( 0 )	-	( 0 )	1.56	( 13.5)
Sauger/Walleye	0.42	(2503.5)	0.48	(2157.9)	0.285	(7795.9)	.41	(2636.4)
Roughfish	0	( 3.0)	-	( 0 )	-	( 0 )	-	( 0 )
Mixed	0.58	(2342.0)	0.65	(1738.4)	-	( 0 )	0.68	( 831.5)
Total	1.00	(5081.0)	1.00	(3417.0)	0.285	(7795.9)	1.00	(3840.1)

Table 2.5.3-7 Overall catch rates for interviewed anglers in the Prairie Island vicinity, 1975. Catch/man-hour with number caught by interviewed anglers in parentheses

Section	Mar.-Apr. Only	March-November 23, 1975						Total
	4	1	2	3	4	5	6	
Hrs. Surveyed	7,795.9	16.5	4.0	4.0	9,980.3	1,355.5	298.7	11,659.0
Estimated Man-hours	63,737	394	187	212	88,855	17,513	4,556	111,717
Species:								
Mooneye/goldeye	-	-	-	-	** tr (2)	-	-	tr (2)
Northern pike	0.002 (14)	-	-	-	0.002 (20)	0.004 (6)	-	0.002 (26)
Carp	-	-	-	-	0.001 (7)	0.009 (12)	0.010 (3)	0.002 (22)
Brown bullhead	-	-	-	-	tr (1)	0.003 (4)	-	tr (5)
Channel catfish	-	-	-	-	0.003 (26)	0.005 (7)	-	0.003 (33)
Flathead catfish	-	-	-	-	tr (4)	0.001 (1)	-	tr (5)
Burbot	-	-	-	-	tr (2)	-	-	tr (2)
White bass	tr (1)	0.061 (1)	-	0.250	0.065 (650)	0.047 (64)	0.044 (13)	0.063 (729)
Rock bass	-	-	-	-	tr (2)	0.002 (3)	-	tr (5)
Sunfish	0.001 (6)	-	-	-	0.004 (39)	0.068 (92)	-	0.012 (131)
Smallmouth bass	-	-	-	-	0.002 (24)	0.001 (2)	-	0.002 (26)
Largemouth bass	-	-	-	-	-	0.003 (4)	-	tr (4)
Crappies	tr (3)	-	-	-	0.003 (35)	0.142(192)	-	0.019 (227)
Yellow perch	-	-	-	-	-	0.001 (2)	-	tr (2)
Sauger	0.236(1,842)	0.788(13)	-	-	0.248(2,472)	0.075(102)	0.248 (74)	0.228(2,661)
Walleye	0.050 (393)	0.424 (7)	0.500(2)	0.250 (1)	0.052 (516)	0.163(221)	0.110 (33)	0.067 (780)
Freshwater drum	-	-	-	-	0.004 (41)	0.001 (2)	0.050 (15)	0.005 (58)
Overall estimated harvest	0.290(2,259)	1.273(21)	0.500(2)	0.500(2)	0.385(3,841)	0.527(714)	0.462(138)	0.405(4,718)

\*None were caught by interviewed anglers

\*\*0 <trace (tr) <.001

Table 2.5.3-8 Overall catch rates for  
sauger and walleye during  
March and April in Section  
4, 1968-1975

Year	Walleye	Sauger
1968*	0.186	0.313
1969	0.083	0.377
1970	0.156	0.302
1971	0.103	0.335
1972	0.089	0.436
1973	0.055	0.437
1974	0.060	0.336
1975	0.050	0.236

\*Catch rates for 1968-1974 are taken from  
Sternberg (1974)

Table 2.5.3-9 Estimated numbers of fish harvested in the Prairie Island vicinity by season and section, 1975. Based upon overall catch rates and estimated man-hours

Section	Mar.-Apr. only	March - November 23, 1975						Total
	4	1	2	3	4	5	6	
Hrs. Surveyed	7795.9	16.5	4.0	4.0	9980.3	1355.5	298.7	
Estimated man-hours	63737	394	187	212	88855	17513	4556	111717
Species:								
Mooneye/goldeye	0*	0	0	0	0	0	0	0
Northern pike	127	0	0	0	177	70	0	223
Carp	0	0	0	0	89	158	46	293
Brown bullhead	0	0	0	0	0	53	0	53
Channel catfish	0	0	0	0	267	88	0	355
Flathead catfish	0	0	0	0	0	18	0	18
Burbot	0	0	0	0	0	0	0	0
White bass	0	24	0	53	5776	823	200	6876
Rock bass	0	0	0	0	0	35	0	35
Sunfish	64	0	0	0	355	1190	0	1545
Smallmouth bass	0	0	0	0	177	18	0	195
Largemouth bass	0	0	0	0	0	53	0	53
Crappies	0	0	0	0	267	2487	0	2754
Yellow perch	0	0	0	0	0	18	0	18
Sauger	15042	310	0	0	22036	1313	1130	24789
Walleye	3187	167	94	53	4620	2855	501	8290
Freshwater drum	0	0	0	0	355	18	228	601
Overall estimated harvest	18420	501	94	106	34119	9197	2105	46122

\*None were caught by interviewed anglers

Table 2.5.3-10 Estimated numbers of walleyes and sauger harvested during March and April in Section 4, 1968-1975

Year	No. Walleyes	No. Saugers
1968	4,389	6,955
1969	297	1,323
1970	5,874	13,332
1971	1,835	6,629
1972	3,048	21,103
1973	4,115	35,755
1974	6,049	36,514
1975	3,187	15,042

\*Estimates for 1968-1974 are taken from Sternberg (1974).



Table 2.5.3-11 - Mean weights of angler-caught fish of three major game species in the Prairie Island vicinity, 1968-1975\*. Mean weight in kilograms with number weighed in parentheses.

Species:	<u>Y E A R</u>							
	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>
White bass	-**	-	-	-	-	0.54 (26)	0.62 (56)	0.53(122)
Sauger	0.40(592)	0.35(342)	0.41(1,246)	0.58(663)	0.44(988)	0.39(414)	0.59(1,431)	0.59(811)
Walleye	0.99(360)	0.83 (81)	0.95 (646)	0.89(205)	1.29(193)	0.56(693)	0.75 (375)	0.91(217)

\*1968-1974 data on saugers and walleyes is from Sternberg (1974) and includes only fish caught during March and April

\*\*Hyphen (-) indicates no fish weighed

Table 2.5.3-12 Species composition of fish harvested in the Prairie  
Island vicinity, 1973-1975 (March and April excluded)

Species	Percentage		
	1973 May 10- November 5	1974 April 30- December 3	1975 May 1- November 23
Sturgeon	0.04	tr	0
Gar	0.04	tr	0
Mooneye	0.04	tr	0.08
Northern pike	0.60	1.01	0.49
Carp	0.88	1.17	0.89
Suckers and redhorse	0.04	tr	0
Brown bullhead	tr	0.34	0.20
Channel catfish	tr	1.05	1.34
Flathead catfish	2.99	0.08	0.20
Burbot	0	0	0.08
White bass	30.38	24.02	29.61
Rock bass	0.11	0.80	0.20
Sunfish	3.23	2.01	5.08
Smallmouth bass	0.21	0.42	1.06
Largemouth bass	0.07	0.13	0.16
Crappies	1.90	0.46	9.11
Yellow perch	0.21	tr	0.08
Sauger	39.38	49.54	33.31
Walleye	15.86	14.38	15.74
Freshwater drum	4.04	4.61	2.36

\* .01 trace (tr) ≤ .05

Table 2.5.3-13 Fishermen of each age group and sex fishing in the Prairie Island vicinity 1975

Dates	Group	Ages								Total	No. interviewed
		0-12	13-15	16-17	18-24	25-34	35-44	45-64	65+		
Mar. 1- Nov. 23, 1975	% Male	6.61	2.28	0.10	7.34	24.82	23.54	26.13	3.85	94.68	3612
	% Female	0.63	0.10	0.00	0.42	0.92	1.23	1.60	0.42	5.32	203
	% Total	7.23	2.39	0.10	7.76	25.74	24.77	27.73	4.27	100.00	3815
May 1- Nov. 23- 1975	% Male	10.14	2.98	0.07	6.38	13.62	19.08	27.66	8.72	88.65	1250
	% Female	1.35	0.07	0.00	0.71	1.42	2.70	3.97	1.13	11.35	160
	% Total	11.49	3.05	0.07	7.09	15.04	21.77	31.63	9.86	100.00	1410
Mar. 1- Apr. 30, 1975	% Male	4.53	1.87	0.12	7.90	31.39	26.15	25.24	1.00	98.21	2362
	% Female	0.21	0.12	0.00	0.25	0.62	0.37	0.21	0.00	1.79	43
	% Total	4.74	2.00	0.12	8.15	32.02	26.53	25.45	1.00	100.00	2405

Table 2.5.3-14 Distance travelled by anglers fishing in the Prairie Island vicinity, 1975

Distance travelled (miles)	Percentage of anglers						Total	Mon.1-Nov. 23 1975	Mar.1-Apr.30, 1975
	May 1-November 23, 1975							All sections	Section 4 only
	SECTIONS							Total	
	1	2	3	4	5	6			
0-25	73.33	100.00	50.00	44.65	72.51	77.97	58.19	42.28	31.63
26-50	26.67	-	7.37	12.06	19.77	-	10.24	21.08	28.32
51-75	-	-	-	11.05	8.83	2.26	9.36	22.27	30.92
76-100	-	-	-	1.05	0.25	-	0.65	2.39	3.56
101-150	-	-	-	6.14	1.62	-	3.86	2.93	2.32
151-200	-	-	50.00	15.96	3.73	-	10.01	5.40	2.29
201+	-	-	-	13.77	1.00	-	7.68	3.64	0.96
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table 2.5.3-15 Percentage of fishermen and number (in parentheses) seeking each species of fish in the Prairie Island area, 1975

Species	May 1-November 23, 1975**							Mar. 1-Nov. 23, 1975
	Sections							All sections
	1	2	3	4	5	6	Total	Total
Northern pike	-*	-	-	0.40 (3)	-	-	0.21 (3)	0.08 (3)
Catfish	-	-	-	1.20 (9)	0.38 (2)	-	0.78 (11)	0.29 (11)
White bass	-	-	-	9.73 (73)	1.14 (6)	-	5.60 (79)	2.07 (79)
Sunfish	-	-	-	-	2.27 (12)	-	0.85 (12)	0.31 (12)
Crappies	-	-	-	0.80 (6)	7.95 (42)	0.88 (1)	3.48 (49)	1.29 (49)
Panfish	-	-	-	0.27 (2)	0.76 (4)	-	0.43 (6)	0.16 (6)
Sauger/walleye	100.00 (11)	50.00 (2)	100.00 (4)	59.87 (449)	73.67 (389)	58.41 (66)	65.32 (921)	87.17 (3322)
Mixed	-	50.00 (2)	-	27.73 (208)	13.83 (73)	40.71 (46)	23.33 (329)	8.63 (329)
Total	100.00 (11)	100.00 (4)	100.00 (4)	100.00 (750)	100.00 (528)	100.00 (113)	100.00 (1410)	100.00 (3811)

\* Hyphen (-) indicates no anglers were seeking these species.

\*\* During March and April, 1975 in Section 4, 100.00% of the anglers were seeking saugers and walleyes.

Table 2.5.3-16 Percentages of anglers in the Prairie Island vicinity using each combination of bait and method, March 1-November 23, 1975

Bait type	Method				
	Still	Trolling	Casting	Jigging	Mixed
Artificial	0.55	1.44	2.91	1.42	0
Natural	65.13	15.38	0.73	0	0.18
Prepared	0.13	0	0	0	0
Mixed	4.72	4.96	1.15	1.21	0.08
Total	70.53	21.77	4.80	2.62	0.26

Table 2.5.3-17 Percentages of fishermen utilizing various fishing methods in the Prairie Island vicinity, March 1-November 23, 1975

Method	Section						Total
	1	2	3	4	5	6	
Still	33.33	0	0	73.40	60.64	46.02	70.53
Trolling	66.67	0	0	18.72	35.03	41.59	21.78
Casting	0	50.00	100.00	4.64	3.20	12.39	4.80
Jigging	0	50.00	0	2.92	1.13	0	2.62
Mixed	0	0	0	0.32	0	0	0.26



