# DEVELOPMENT AND MANAGEMENT OF COMMERCIAL FISHING PRACTICES IN FORT PECK RESERVOIR

Segment 6 Report July 1, 1987 - June 30, 1988

U.S. Department of Commerce, NOAA
National Marine Fisheries Service
Commercial Fisheries Research and Development Act
Project No. 1-162-R
Funding: PL 88-309

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#### INTRODUCTION

The purpose of this study is to collect and evaluate information on the relative abundance, distribution, and reproductive success of commercial, forage, and sport fish populations in Fort Peck Reservoir.

The specific objectives for this segment were:

- (1) Monitor and evaluate commercial harvest in Fort Peck Reservoir.
- (2) Evaluate the success of recent forage fish introductions, and the effect of cisco on the commercial and sport fisheries.
- (3) Determine the distribution and relative abundance of commercial, sport fish, and other species.
- (4) Determine spawning success of commercial, sport fish, and forage fish species. Monitor spring spawning adults of various fish species in the Big Dry and lower Missouri River arms.

A map of the reservoir with general study areas is listed in Figure 1.

### METHODS

Frame traps, 4-x 6-foot with 1-inch square mesh, were used to sample fish in spring. Leads, 50 feet long with 1- or 1 1/2-inch square mesh sizes, were attached to shore. Traps were usually checked every two to three days, depending on number of fish captured. Fish were fin-clipped to indicate previous capture. Selected species of fish were sexed, weighed, and total lengths (T.L.) measured; all species were identified and counted.

Experimental gill nets, 125-x 6-foot, were used to monitor fish distribution and composition in late summer and early fall. Each net contained five panels, 25 feet in length, with 3/4-, 1-, 1 1/4-, 1 1/2-, and 2-inch square mesh sizes.

Vertical gill nets, 100-x 6-foot, with 1/2-inch monofilament mesh, were set at various locations throughout the reservoir to capture young-of-year cisco. Adult cisco spawners were taken with a 300-x 8-foot nylon gill net, with 1.7/8-inch mesh.

Spawning success of various fish species was determined by sampling in late summer/early fall with 100- x 10-foot beach seines with 1/4- and 3/16-inch square mesh sizes.

#### TRAPPING

Spring trapping for spawning adult fish in the Big Dry and lower Missouri Arm was conducted from April 6 - May 13, for a total of 208 trap-days.

In the upper Big Dry Arm, frame traps were run for a total of 120 trap-days. The average number of game fish caught per day was 9.3 (Table 1). Average weights, lengths and ranges of captured game fish are shown in Table 2. No statistics on rough fish species were gathered in upper Big Dry in 1987.

Walleye continue to be the most abundant game fish taken during spring trapping in the upper Big Dry Arm (Appendix Table 1). The average number of walleye captured in 1987 was 8.6 per trap-day. Males made up 68 percent of the population; females 30 percent; immatures and unknowns 2 percent. Male walleye averaged 1.22 pounds and females 2.94 pounds. This was a slight increase in weight from 1986 for females, which averaged 2.43 pounds. Males averaged 1.31 pounds in 1986.

Northern pike were the second most abundant game fish captured, averaging 0.3 fish per trap-day. This number was down significantly from 1986, when the average number captured was 1.7 per trap-day (Appendix Table 1). The average weight for males was 3.14 pounds, and 11.5 pounds for females. Due to the small sample size, these averages are probably not representative of the true average weights of the population.

Sauger numbers continued to be low as in previous sampling years, while the catch rate for burbot increased slightly (Appendix Table 1).

Frame traps were fished a total of eight trap-days in the middle Big Dry (Table 1). The catch rate for all fish species combined was 6.3. Walleye were the most abundant game fish captured, averaging 2.1 per trap-day. The average weight of female walleye was 3.02 pounds, and 1.5 pounds for males. The catch rate for northern pike averaged 1.0 fish per trap-day. Carp were the most abundant nongame fish, averaging 1.5 per trap-day.

In the lower Big Dry Arm, traps were fished a total of 32 trap-days (Table 1). The average daily catch for all fish species combined was 9.4 per trap-day. As in the other trapping locations, walleye were the dominant game fish, averaging 2.9 fish per trap-day. Female walleye averaged 2.06 pounds, and males averaged 1.14 pounds. Northern pike were caught at a rate of 1.2 per trap-day. Carp were the most abundant nongame fish, with 3.3 fish taken each trap-day.

Traps in the lower Missouri Arm were fished for 48 trap-days, averaging 12.4 fish per trap-day (Table 1). Walleye were the most common game fish species taken, with 1.3 fish per trap-day. Male walleye averaged 1.25 pounds, and females averaged 2.84 pounds. The catch rate for northerns was 0.7 fish per trap-day. Carp were the dominant rough fish species, with an average of 5.6 fish captured per trap-day.

No traps were fished in the middle and upper portions of the Missouri Arm.

Table 2. Average weights, lengths, and ranges for game fish taken by frame traps in the upper Big Dry Arm, 1987.

Species (Sex)	No.	Ave. Total Length Ave. Total Weigh (inches) (pounds)
Walleye (M)	152	16.0 (11.2-22.1) 1.22 (0.20-3.75
Walleye (F)	94	19.8 (16.2-30.0) 2.94 (0.84-9.50
Walleye (Unk)	4	14.1 (11.7–17.8) 0.63 (0.32–1.20
Sauger (M)	2	13.8 (13.7-13.9) 0.54 (0.13-0.9)
Sauger (F)	0	
Sauger (Unk)	2	14.3 (14.2-14.5) 0.51 (0.21-0.80
Northern pike (M)	7	23.1 (19.9–27.2) 3.14 (1.98–5.30
Northern pike (F)	3	33.8 (32.0-36.0) 11.50 (9.60-13.2
Northern pike (Unk)	2	32.2 (26.5–38.0) 11.90 (5.0–18.80
Burbot	0	
Rainbow (Unk)	The state of the s	15.8 1.65

Fish captured by 125-foot experimental gill nets in Fort Peck Reservoir, 1987. Table 3,

VARIABLE DE L'ARTE DE L'AR	UBD <sup>2</sup>	**************************************	LBD <sup>3</sup>		4 WI	4	MMA 5	A5	UMA6	16	T <sub>o</sub> T	Total
Species	No. Fish	No./ Net Day	No. Fish	No./ Net Day	No. Fish	No./ Net Day	No. Fish	No./ Net Day	No. Fish	No./ Net Day	No. Fish	No./ Net Day
WE	75	5.0	34	٥.1	48	3,2	88	4.2	32	2.7	277	3.4
Ŋ	9	7.0	<del></del> 1	1.7	12	0.8	10	0.5	,	0.1	09	0.7
SG	~	0,1	71	0.0	22	 	121	ക്	76	8,1	259	3.2
ΔX	13	0.9	2	0,1	9	0.4	31	1.5	88	7.3	140	1.7
E CE	197	13.0	71	3,9	5	3.4	112	5,3	253	21.0	789	8.4
S	7	0.3	10	9.0	22	m v	17	0.7		0.1	5	0.6
RC	24	\$	ന	0.2	0	Althor statis models	e)	ਂ	14	2"	777	0.5
SB	M	e:0	7	٥.4	2	0.1	0	mich vided selve	,1	0.1	15	0.2
υ l	120	0,8	45	2.5	47	3,1	91	4.3	125	10.4	428	5,3
SR	7	0.3	6	0.5	7	0,3	40	1.9	67	0.0	124	Ŋ
ဗ	28	0.1	m	0.2	<del>,</del> ;	.0 .1		<0.1	77	2.2	77	9.0
FD	7	ر ن ن	gmoj	<u>.</u>	0	Atom sangueros	0	100 and 100 an	· (r		<u>~</u>	000
SS	0	saves salinia wylwy	0	state stress seems	0	AND MINER HARD	2	0,1	) C	4	2	
LS	0	enter whose springs	0	After hardens after her	0	ODDA STRE 4440	С		77	3	1 77	;;
œ	0	VENTA NAME AND DE	0	MANAGEMENT CONTRACTOR	C	noor man volu	) С	+000 000 ann		) <u>-</u>	·	;;
CI	8	2.0	25	1.4	33	2.2	71	3,4	97	, co	256	. c.
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Totals	512	34.1	258	14.3	248	16.5	284	27.8	808	67.3	2,410	29.7
	,											
No. Net Days	ays 15		<u></u>		5		23		12		∞	
1WE - walleye	leye		RC	- river ca	river carnsucker	N-000-0-000 cloth handle management and the control of the control	<b>Ригинина и пинатир ладиния д колодијаладија (пр.)</b>	1	ahoval nosa	o stiff		-cilladdratorio-dramana
*	northern pike		SB	- smallmou	smallmouth buffalo			SI	longnose s	sucker	<u>.</u>	
	sauger		ပင်	- carp	;			1	black crappie	ppie		
	tow perch		ž.	- shorthea	shorthead redhorse	sucker		1	cisco			
0 1	golueye white sucker		3 돈	- channel cattish - freshwater drum	cattish er drum			İ	paddlefish	c		
ţ			}									
2Upper Big Dry: 3Lower Big Dry: 4Lower Missouri	Big Dry: Big Dry: Missouri Arm:	Big Dry Cr., N Box Cr., Lost Spillway, Bear	Cr., Nelson Lost Cr., N	Nelson Cr., Short Cr., I Cr., N. Fork Rock Cr., ar Cr., Duck Cr.	rt Cr., Lo ock Cr., S	Lonetree Cr., S. Fork Rock	, McGuire Cr k Cr.	Š				
<pre>&gt;Mid Missouri Arm: OUpper Missouri Arm</pre>	SMid Missouri Arm: OUpper Missouri Arm:	Pines, Soda Ca	Ked.	· †Ö	r., Gilber Ishell Riv	Gilbert Cr., Hell	Cr.,	Snow Cr., Sur	Sutherland Cr,	, , ,		
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#### BEACH SEINING

To sample the abundance of YOY fish and forage fish, 185 seine hauls were made in bays throughout the reservoir. Table 5 shows a summary of seining activity in the fall of 1987. A total of 18,184 fish were sampled.

Twenty-three seine hauls in the upper Big Dry captured a total of 1,750 fish. The most common fish species were emerald shiner and yellow perch. Each comprised 25% of the total catch. Buffalo sp. ranked second in abundance, with 20%. Spottail shiners dropped from 30% in 1986, to only 8% in 1987.

In the lower Big Dry, 2,665 fish were captured in 45 seine hauls. Spottail shiners comprised 60% of the total population sampled. Emerald shiners made up nearly 30% of the total. Yellow perch YOY, contributed only 4%.

A total of 6,685 fish were taken in 48 hauls in the lower Missouri Arm. Spottail shiners were the most dominant species, comprising 91% of the total catch. Yellow perch YOY made up 5% of the population. Emerald shiners followed, with 3%.

Beach seining in the middle Missouri produced a total of 3,500 fish in 42 hauls. The most common species was spottail shiners, contributing 64% to the total catch. Yellow perch YOY followed, with 17%. Emerald shiners made up 12% of the total number captured.

In the upper Missouri Arm, 27 hauls caught 3,582 fish. Emerald shiners were most common, making up 51% of the total sampled. Yellow perch YOY comprised 18%. Silvery/plains minnows contributed nearly 15%. They were followed by carp YOY, which made up 11%.

Numbers of game fish YOY captured by seining declined from 1986. The catch rate for walleye, reservoir-wide, dropped from 0.5, to 0.1 in 1987. This decrease in YOY is difficult to explain with the number of walleye fry stocked in 1987 having been doubled from the previous year.

Northern pike YOY also appeared to decrease slightly from 1986. The number taken per haul was less than 0.1, and in 1986 it was 0.4. Lack of submerged vegetation during the early spring is probably the cause of poor reproduction. No stocking of northern pike fry or fingerlings occurred in 1987.

The catch rate for smallmouth bass YOY remained relatively high in 1987. Smallmouth were captured at a rate of 0.8 fish per haul. These young are the result of natural reproduction, as no stocking has occurred since 1982.

Goldeye reproduction appeared to drop dramatically from 1986, when 9.6 YOY where taken per seine haul reservoir-wide. No YOY goldeye were taken, at any location, while beach seining in 1987.

Table 5. Continued

BM - brassy minnow FM - fathead minnow	now PK - plains killifish			ST - spottail shiner	LD - longnose dace	SB - stickleback
SMB - smallmouth bass CI - cisco	SM - silvery/plains minnow	SS - sand shiner	CR - black/white crappie	CS - common shiner	FC - flathead chub	
Bsp - smallmouth/bigmouth buffalo SMB - smallmouth bass LC - lake chub CI - cisco	C - carp	SR - shorthead redhorse sucker	GS - green sunfish	FD - freshwater drum	RB - rainbow trout	
WE - walleye  NP - northern pike	SC - sauger	YP - yellow perch	GE - goldeye	WS - white sucker	RC - river carpsucker	

Stone House, Big Dry Cr. Bay, Nelson Cr., Lone Tree, McGuire Cr., Box Cr., S. & N. Fork Rock Cr., Rock Cr. Park, Box Elder Cr., Sandy Arroyo Cr., Spring Cr. Bear Cr., Duck Cr., Catfish Bay, Sturgeon Bay, Spillway Bay. Pines, Gilbert Cr., Crooked Cr., Hell Cr., Sutherland Cr., Timber Cr., Blackfoot Cr., Fourchette Cr., Devils Cr., Musselshell, Grooked Cr., Soda Cr. 2Upper Big Dry; 3Lower Big Dry; 4Lower Missouri; 5Nid Missouri; 6Upper Missouri;

Total pounds (round weight) of commercial species harvested from Fort Peck Reservoir by commercial fishermen, 1957 - 1987. Table 6.

1957         15,308         7,200         1,500         24,008           1958         15,036         7,200         1,500         25,837         100         17         107         22,115.70           1956         26,433         11,500         25,837         100         17         1,570         22,115.70           1960         26,435         11,500         950         610         22,215         22,215         20         18,370 </th <th>Year</th> <th>Buffalo Sp.</th> <th>River Carpsucker</th> <th>Carp (</th> <th>Carp &amp; R.1 Carpsucker</th> <th>Channel<sup>2</sup> Catfish</th> <th>Goldeye</th> <th>Freshwater Drum</th> <th>Sucker sp.</th> <th>Total</th>	Year	Buffalo Sp.	River Carpsucker	Carp (	Carp & R.1 Carpsucker	Channel <sup>2</sup> Catfish	Goldeye	Freshwater Drum	Sucker sp.	Total
176,091         —         25,837         100         17         107         —         62         —         1,875         62         —         62         —         1,875         62         —         62         —         1,875         62         —         62         —         1,875         62         —         62         —	1957	15,308		1,500	NAME AND ADDRESS OF THE PARTY O	with these stone	OPEN PARRIE-ANNIA	10000 NINE MEEN	SECULATIVE AND A	24,008
154,770         2,687         13,850         462         —         1,875         62           15,936         30         —         385         — <t< td=""><td>1958</td><td>176,091</td><td>~</td><td>2000 0000 0000 E000</td><td>25,837</td><td>100</td><td>177</td><td>107</td><td>-0.00-000-004</td><td>202,152</td></t<>	1958	176,091	~	2000 0000 0000 E000	25,837	100	177	107	-0.00-000-004	202,152
15,950         50         585         —         585         —         —         587         —         <	1959	154,770	2,687	13,850	****	462	0000 Texas 2000	1,875	62	173,706
15,950   950   610     22,215       15,576   49   688     1400   13,666     1,350     1,400	1960	26,435	11,500	50	polide shalle vicins	585	Manage and an analysis and an	debts tome stems	suppor chromaspape	38,570
130,842         —         22,215         — <t< td=""><td>1961</td><td>15,950</td><td>950</td><td>610</td><td>seem mem rejes</td><td>790</td><td>SHIPW SOME SEPTIM</td><td>distry stores with-</td><td>9800 NYWWEA</td><td>18,300</td></t<>	1961	15,950	950	610	seem mem rejes	790	SHIPW SOME SEPTIM	distry stores with-	9800 NYWWEA	18,300
263,696         3,440         5,707         15,576         49         688         —           145,706         3,775         1,012         —         1,492         —         1,350         —           266,142         —         1,400         —         22,935         16,879         —         1,350         —           266,142         —         —         22,935         16,879         56,050         4,012         —           266,142         —         —         33,775         10,066         56,050         4,012         —           452,230         —         —         —         35,775         10,066         56,050         4,012         —           323,648         64,718         13,719         —         4,503         199,279         1,625           437,308         49,731         8,944         —         10,619         68,384         19,287         56           477,025         49,731         8,944         —         10,619         68,384         19,287         56           477,025         40,327         10,992         —         10,619         68,384         19,287         141           546,657         13,445	1962	130,842	district services of the servi	AND NOW HIND	SHAVE RICHIE VANS	22,215	comm woman mighty	abote dollar Autor	WARR SOOT LIVES	153,057
145,706         3,775         1,012         —         7,492         —         1,350         —           266,142         —         1,400         —         22,935         16,666         56,050         4,012         —           266,142         —         —         35,775         10,066         56,050         4,013         —           389,083         —         —         35,775         10,066         56,050         4,013         —         55,445         1,625           432,230         —         —         —         100,774         7,749         53,318         5,445         1,625           437,303         49,731         8,944         —         100,774         13,746         186,310         8,018         141           279,831         31,658         1,403         —         13,746         186,310         8,018         141           474,025         40,327         10,992         —         13,746         186,310         8,018         141           546,657         13,045         3,975         —         2,704         130,061         8,018         141           6,512         —         —         1,092         —         2,704	1963	263,696	3,440	5,707	occor motio sama	15,576	67	688	CONTR. SOAN. clesso	289,156
184,003         —         1,400         —         550         —           266,142         —         —         22,935         16,879         —         55,050         4,012         —           389,083         —         —         35,775         10,066         56,050         4,012         —           452,230         —         —         —         —         9,774         7,749         53,318         5,401         —           323,648         64,718         13,719         100,774         7,749         53,318         5,445         1,625           279,831         31,658         11,403         —         10,619         68,384         19,287         56           279,831         31,658         11,403         —         10,619         68,384         19,287         56           279,831         31,658         11,403         —         1,403         11,429         1429           474,025         40,327         10,992         —         1,011         93,825         94           546,657         13,045         3,975         —         2,704         130,061         8,018         141           540,580         16,719         —	1964	145,706	3,775	1,012	coors major soom	7,492		1,350	de desident	159,335
266,142         ————————————————————————————————————	1965	184,003	und when ween	1,400	provi sanos proje	11,666	4000-billion water	550	entes coos sente	197,619
389,083       ————————————————————————————————————	1966	266,142	reddit whose bearin	Amount ASANA decidals	22,935	16,879	42	2,581	0100 MAN 0000	308,579
452,230           100,774         7,749         53,318         5,445         1,625           432,348         64,718         13,719          4,503         199,279         11,759         186           437,338         49,731         8,944          10,619         68,384         19,287         56           279,831         31,658         1,403          10,992          10,186         10,287         141           474,025         40,327         10,992          2,704         186,310         9,228         141           546,657         13,045         3,975          2,704         130,061         8,018            274,001         6,512          1,011         93,825         94            274,01         6,512          1,011         93,825         94            402,543         8,560          105,929          11,186             243,930         8,500           105,919           11,186          11,186         <	1967	389,083	Hebble module unner	Bean ANNO GARA	35,775	10,066	56,050	4,012	Mobile relevor ribinals	986, 565
323,648       64,718       13,719	1968	452,230			100,774	7,749	53,318	5,445	1,625	621,141
437,308       49,731       8,944       —       10,619       68,384       19,287       56         279,831       31,658       1,403       —       13,746       186,310       8,019       1,429         474,025       40,327       10,992       —       8,060       61,830       9,228       141         546,657       13,045       3,975       —       2,704       130,061       8,018       —         376,850       16,719       —       —       1,011       93,825       94       —         274,091       6,512       —       —       1,011       93,825       94       —         402,543       8,456       —       —       121,868       —       —         402,543       8,500       —       —       121,868       —       —         243,166       6,075       —       —       105,919       —       —         224,200       12,862       4,475       —       244,322       301       —         260,389       6,473       20,788       —       244,322       301       —         111,464       1,876       5,060       —       208,736       —       — </td <td>1969</td> <td>323,648</td> <td>64,718</td> <td>13,719</td> <td>derrar name active</td> <td>4,503</td> <td>199,279</td> <td>11,759</td> <td>186</td> <td>617,812</td>	1969	323,648	64,718	13,719	derrar name active	4,503	199,279	11,759	186	617,812
279,831       31,658       1,403       —       13,746       186,310       8,019       1,429         474,025       40,327       10,992       —       8,060       61,830       9,228       141         546,657       13,045       3,975       —       2,704       130,061       8,018       —         376,850       16,719       —       —       1,011       93,825       94       —         274,931       6,456       —       —       123,299       —       —         402,543       8,456       —       —       112,868       —       —         243,166       6,075       —       —       105,919       —       —         224,200       12,862       —       —       105,919       —       —         224,200       12,862       —       —       258,780       —       —         260,389       6,473       20,788       —       244,322       301       —         111,464       1,876       5,662       —       —       208,736       —         44,113       64,113       —       —       20,733       —       20,733         12,115       47	1970	437,308	49,731	8,944	area anna aona	10,619	68,384	19,287	56	594,329
474,025       40,327       10,992       —       8,060       61,830       9,228       141         546,657       13,045       3,975       —       2,704       130,061       8,018       —         376,850       16,719       —       —       2,704       130,061       8,018       —         402,543       8,456       —       —       91,358       —       —         243,900       12,862       —       —       121,868       —       —         243,166       6,075       —       —       105,919       —       —         224,200       12,862       4,475       —       258,780       —       —         260,389       6,473       20,788       —       244,322       301       —         123,100       4,357       —       —       228,780       —       —         111,464       1,876       5,060       —       —       208,736       91       —         64,113       636       —       —       222,163       —       —       222,163       —         12,115       47       —       —       —       222,163       —       —	1971	279,831	31,658	I,403	ANNA Avela nabela	13,746	186,310	8,019	1,429	522,396
546,657       13,045       3,975       —       2,704       130,061       8,018       —         376,850       16,719       —       —       1,011       93,825       94       —         274,091       6,512       —       —       91,358       —       —         402,543       8,456       —       —       91,358       —       —         243,930       8,500       —       —       121,868       —       —         224,200       12,862       4,475       —       258,780       —       —         224,200       12,862       4,475       —       258,780       —       —         260,389       6,473       20,788       —       244,325       509       —         113,464       1,876       5,060       —       —       208,736       —         64,113       636       —       —       222,163       —         12,115       47       103       —       222,163       —         4,526       500       —       222,163       —       —         12,115       47       —       —       295,120       —         12,115       4	1972	474,025	40,327	10,992	erin alun eren	8,060	61,830	9,228	141	604,603
376,850         16,719         —         —         1,011         93,825         94         —           274,091         6,512         —         —         688         129,299         —         —           402,543         8,456         —         —         91,358         —         —           243,930         8,500         —         —         91,358         —         —           243,166         6,075         —         —         105,919         —         —           224,200         12,862         —         —         258,780         —         —           260,389         6,473         20,788         —         244,322         301         —           123,100         4,357         —         —         208,736         —         —           111,464         1,876         5,060         —         —         295,120         —           64,113         636         —         —         222,163         —         —           4,526         500         —         —         295,120         —         —           4,526         500         —         —         —         —         —	1973	546,657	13,045	3,975	HEAVE, STORES GRAVE	2,704	130,061	8,018	store entre entre	704,460
274,091       6,512       —       688       129,299       —         402,543       8,456       —       —       91,358       —       —         343,930       8,500       —       —       91,358       —       —         243,166       6,075       —       —       105,919       —       —         224,200       12,862       —       —       258,780       —       —         260,389       6,473       20,788       —       244,322       301       —         123,100       4,357       —       —       244,322       301       —         64,113       636       —       —       403,628       91       —         12,115       47       103       —       —       295,120       —         4,526       500       —       —       295,120       —       —         4,526       500       —       —       222,163       —       —         4,526       500       —       —       222,163       —       —         4,526       500       —       —       —       —       —         12,115       4,526       500	1974	376,850	16,719	2000s 2004 NOSS	ann own tries	1,011	93,825	96	STATE OF STATE	788,499
402,543       8,456       —       91,358       —       —         343,930       8,500       —       —       121,868       —       —         243,166       6,075       —       —       105,919       —       —         224,200       12,862       —       —       258,780       —       —         224,200       12,862       —       258,780       —       —       258,780       —         260,389       6,473       20,788       —       244,322       301       —         111,464       1,876       5,060       —       —       403,628       91         64,113       636       —       —       295,120       —         12,115       47       103       —       —       295,120         4,526       500       —       —       —       —         4,526       500       —       —       —       —         12,115       47       103       —       —       —       —         4,526       500       —       —       —       —       —         4,526       500       —       —       —       —       <	1975	274,091	6,512		NAME AND DESCRIPTION	688	129,299	White clean wave	come concentration	410,590
343,930     8,500     —     121,868     —       243,166     6,075     —     105,919     —       224,200     12,862     —     258,780     —       178,777     8,454     5,662     —     258,780       260,389     6,473     20,788     —     244,322     301       123,100     4,357     5,060     —     208,736     —       111,464     1,876     5,060     —     295,120     —       64,113     636     —     —     295,120     —       12,115     47     103     —     295,120     —       4,526     500     —     —     295,120     —       4,526     500     —     —     —       200,788     —     —     295,120     —       12,115     47     103     —     —       4,526     500     —     —     —       4,526     500     —     —     —       200,788     99,250     136,911     3,779,416     73,925     3,499	1976	402,543	8,456	anne eccu simple	BOTO MAIN POLES	PRISE VERNE WARM	91,358	description and the same	Section and display	502,357
243,166       6,075       4,475       —       105,919       —       —       258,780       —       —       258,780       —       —       258,780       —       —       258,780       —       —       —       258,780       —       —       —       258,780       — <td>1977</td> <td>343,930</td> <td>8,500</td> <td>HARRIE MANN WINNE</td> <td>name and arres</td> <td>simply ANADO Wasse</td> <td>121,868</td> <td>SEAS WITH AND</td> <td>cloud to pre-mount</td> <td>474,298</td>	1977	343,930	8,500	HARRIE MANN WINNE	name and arres	simply ANADO Wasse	121,868	SEAS WITH AND	cloud to pre-mount	474,298
224,200     12,862     4,475      258,780        178,777     8,454     5,662      356,755     509        260,389     6,473     20,788      244,322     301        123,100     4,357      208,736         111,464     1,876     5,060      208,736     91       64,113     636      295,120        12,115     47     103      295,120       4,526     500       222,163       4,526     500          4,526     500          4,526     500          103       129,990        1     6,900,989     310,498     99,250     185,321     134,911     3,779,416     73,925     3,499	1978	243,166	6,075	WHIS OFFICE WIND	SAM BEEN BOND	anni avvi spira	105,919	soor sooms sool to	tems contrates	355,160
178,777     8,454     5,662     —     356,755     509     —       260,389     6,473     20,788     —     244,322     301     —       123,100     4,357     —     208,736     —     —       111,464     1,876     5,060     —     403,628     91     —       64,113     636     —     —     295,120     —       12,115     47     103     —     222,163     —       4,526     500     —     —     222,163     —       4,526     500     —     —     222,163     —       1     6,900,989     310,498     99,250     185,321     134,911     3,779,416     73,925     3,499	1979	224,200	12,862	4,475	And the section of Code	may may then	258,780		Action on the Contract of the	500,317
260,389     6,473     20,788     —     244,322     301     —       123,100     4,357     —     208,736     —     —       111,464     1,876     5,060     —     403,628     91     —       64,113     636     —     —     295,313     11     —       12,115     47     103     —     222,163     —       4,526     500     —     —     222,163     —       1     6,900,989     310,498     99,250     185,321     134,911     3,779,416     73,925     3,499	1980	178,777	8,454	5,662		mean double-double	356,755	209	STATE COLOR PRINT	
123,100     4,357       111,464     1,876     5,060     —     403,628     91     —       64,113     636     —     —     295,120     —       12,115     47     103     —     222,163     —       4,526     500     —     —     222,163     —       1     6,900,989     310,498     99,250     185,321     134,911     3,779,416     73,925     3,499	1981	260,389	6,473	20,788		department of the stands	244,322	301	ATTER CEAD SIND	Ç 4
111,464 1,876 5,060 403,628 91 846,113 636 362,313 11 295,120 222,163	1982	123,100	4,357	AND MICH. MICH.	tink amb reas	Adhelic Array, Saltan	208,736	delice address address	\$1000. 4W04 #3304	
64,113     636     —     362,313     11       12,115     47     103     —     295,120       4,526     500     —     222,163       1     6,900,989     310,498     99,250     185,321     134,911     3,779,416     73,925     3,499	1983	111,464	1,876	5,060	daste dande dande	-UPA- OFFE dawn	403,628	91	Ottone whose steps.	522,119
12,115 47 103 295,120 222,163 6,900,989 310,498 99,250 185,321 134,911 3,779,416 73,925 3,499	1984	64,113	989	the street of the space	Anna district district	0000 8000 000	362,313	;	man department	427,073
12,115 47 103 222,163 129,990 6,900,989 310,498 99,250 185,321 134,911 3,779,416 73,925 3,499	1985	100000 umage steam	White states with	ties movuma	AGAN datas weren	men destroyed	295,120	gene acted gibbs	****	295,120
4,526     500       6,900,989     310,498     99,250     185,321     134,911     3,779,416     73,925     3,499	1986	12,115	47	103	stan shee speci	William WANTA report to	222,163	dwa (whi mire	NAME AND DESCRIPTIONS	234,428
6,900,989 310,498 99,250 185,321 134,911 3,779,416 73,925 3,499	1987	,52	200	weeks mean special and service special	Harry water (AMV)	communications and the second second section of the second section sec	129,990	THE PERSON NAMED OF T	name drive more constitution of the cons	135,016
	Total	6,900,989	T1	99,250	185,321	134,911	3,779,416	73,925	3,499	11,487,809

Not differentiated by commercial fishermen when reported. Not allowed as commercial species after June 30, 1975.

sample size of northerns, average weight comparisons between years is inappropriate. Stocking of 100,000 northern pike fingerlings is anticipated in the spring of 1988, to supplement poor natural spawning.

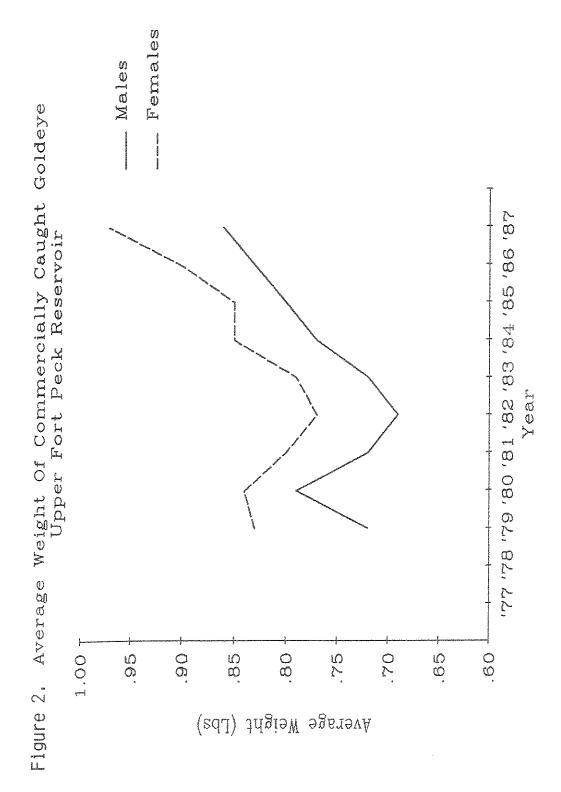
Table 9. Percent of game fish stomachs containing cisco. Fish captured in gill nets, Fort Peck Reservoir, 1987.

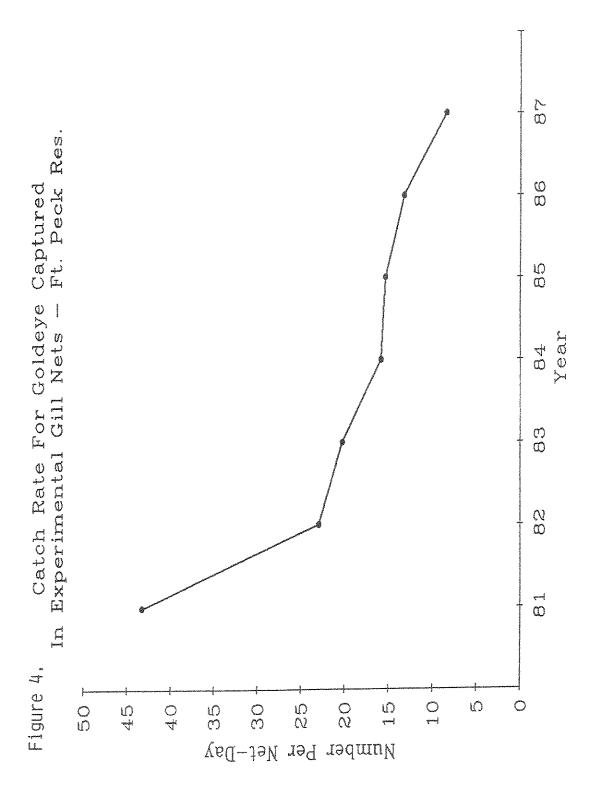
		Percent Number	Stomachs	Containing Number	g Cisco	Number
Region	Walleye	Sampled	No. Pike	Sampled	Sauger	Sampled
Upper Big Dry	лаван гараа	(0)	Saulie volum	(0)	_	( 0)
Lower Big Dry	15	(34)	13	(31)	O	( 17)
Lower Missouri	15	(48)	0	(12)	0	( 22)
Middle Missouri	2	(88)	2	(10)	read .	(121)
Upper Missouri	9	(32)	0	(1)	0	( 97)

The relative abundance of sauger increased slightly according to both frame trap and gill net sampling. The catch rate for sauger captured in traps was 0.24 per trap-day in 1987, and 0.18 per trap-day in 1986. Sauger were caught in gill nets at a rate of 3.2 per net-day during 1987, and 2.5 per net-day in 1986. Reservoir-wide, the average size of sauger increased from 0.52 pounds in 1986, to 0.70 pounds in 1987. This increase in size may also be attributed to more abundant forage, as stated earlier.

The annual, reservoir-wide, experimental gill net survey continues to show that the goldeye, the primary commercial fish, is still the most abundant fish species in Fort Peck. The goldeye, in past years, has made up nearly 50% of the annual gill net catch. This proportion, however, dropped to only 28% in 1987. The number of adult goldeye taken per net-day also continued to decline, as it has since 1981 (Figure 4). Harvest by commercial fishermen is assumed to be responsible for the long term decline in abundance of adult goldeye.

A comparison of capture rates for YOY cisco taken in vertical gill nets during 1986 and 1987, indicates that the reproductive success of cisco in 1987 was poor. The reason for the small '87 year-class is not obvious, however, there are two theories which merit consideration. In spring 1986, nearly 14 million cisco fry were released into the reservoir to augment natural spawning that occurred in fall 1985; no plants were made in 1987. In addition to the cisco stocking in 1986, the reservoir was ice covered for 3.5 months during the winter of 1985-1986; the main body of the





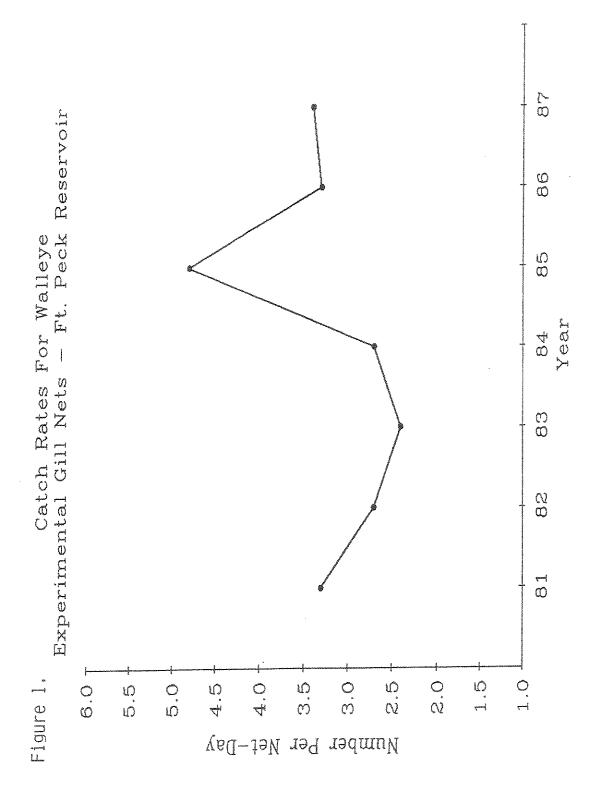


Table 1. Continued

Date		00	В	Species <sup>1</sup> BLB	BB statement of the sta			Total <sup>2</sup> Fish	Trap- Days
1987	e e e e e e e e e e e e e e e e e e e	one man	32 (0.3)	door man	accorporate	1 (<0.1)	***	1,113	120
1986	104 (1.0)	29 (0.3)	6 (<0.1)	2 (<0.1)	2 (<0.1)	2 (<0.1)	tops sales	2,501 (24.5)	102
1985	74 (0.8)	(0.0)	(0.1)	(0.2)	3 (<0,1)		(<0.1)	2,888 (29.8)	7.0
1984	5 (<0.1)	15 (0.2)	8 (0.1)	the man	War steen	1 (<0.1)	Nove emiliary in the control of the	1,069	96
1983	26 (0.2)	28 (0.3)	13 (0.1)	1 (<0.1)	1 (<0.1)		3 (<0.1)	1,703 (16.1)	106
1982	151 (1.7)	16 (0.2)	$11 \\ (2.2)$		4 (<0.1)	2 (<0.1)	elen avu	2,037 (22.9)	80
1981	114 (0.8)	16 (0.1)	44 (0.3)	ine and	over mer.	Tool politic	C	1,374 (9.8)	140
1980	(0.1)	and and	70 (0.7)	and some	more east.	Proc. was		2,222 (22.9)	97
1979	(1.6)	COA Maga	30	ôre )	them they	Notes - State	***	1,261 (16.8)	7.5
1978	265	3 (<0.1)	(0.0)	28 (0.3)	7 (0.1)	1 (<0.1)	falls were	3,522 (43.2)	8
1977	1	36 (0.1)	46 (0.2)	377 (1.3)	e e e e e e e e e e e e e e e e e e e	***	22 (0.1)	4,070 (13.8)	295
IWE - wa SG - sa YP - ye NP - no ZMav inc	WE - walleye SG - sauger YP - yellow perch SR NP - northern pike SB Amay include more	11111	river carpsucker white sucker shorthead redhorse smallmouth buffalo	sucker str cedhorse sucker buffalo	GE - 66 GE - 86 CC - cb	carp goldeye channel catfish burbot	BLB BB 1 RT FD	- black bullhead - bigmouth buffalo - rainbow trout - freshwater drum	Thead buffalo rout

2May include more species than those listed; less than 0,1 fish caught per trap-day,