

**THE JUNE AND JULY 1981
MIDDLE COLUMBIA RIVER
RECREATIONAL FISHERIES
BONNEVILLE TO MCNARY DAMS**

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The June and July 1981
Middle Columbia River Recreational Fisheries
Bonneville to McNary Dams

INTRODUCTION

In June and July 1981 the Oregon Department of Fish and Wildlife (ODFW) and Washington Department of Fisheries (WDF) initiated a joint sampling program to measure the angler effort and catch between Bonneville and McNary dams. The species supporting recreational fisheries were summer steelhead, white sturgeon, shad, walleye, channel catfish, and smallmouth bass. June and July were selected for this pilot program because this time frame would include the period of heaviest angling effort and all species warranting sampling would be present.

METHODS

Sampling Area

The area sampled extends 147 miles from river mile 145 at Bonneville Dam to river mile 292 at McNary Dam which includes the Bonneville, The Dalles, and John Day pools. The middle Columbia was divided into six sections with two sections in each pool (Table 1 and Figure 1). Each section was further divided into three categories: main channel, side channel, and ponds.

Sampling Procedure

Both weekend and weekday aerial counts were made of boats and bank anglers in all sections and categories. Four flights were made each month. Simultaneous to the flights, ground counts of anglers were made every 2 hours in one or more sections. Angler interviews were made throughout the month to obtain angler type, average angler-day length, and catch/angler hour. Estimates of angler effort and catch were hand calculated from the angler counts and interview data.

RESULTS

Angler Effort

Oregon and Washington anglers made 19,000 trips to fish in the middle Columbia in June and July. Of the total trips, 15,800 (83%) were in the main channel, 1,500 (8%) were in side channels, and 1,700 (9%) were in ponds. Because of limited manpower and small numbers of anglers in the side channels and ponds, these categories were not sampled. Anglers in these unsampled categories were mostly warmwater fishermen. Tables 2 and 3 present angler trips for each section by category for June and July.

Of the 15,800 anglers in the main channel, 11,400 (72%) were included in the sampling program. Oregon bank anglers in Sections 14 and 16, Washington bank anglers in Sections 12 and 14, and boats in Section 14 were sampled in June.

Oregon bank anglers in Section 14 and 16, Washington bank anglers in Sections 11, 12, 14, and 16, and boats in Sections 14 and 16 were sampled in July. The remaining main channel sections or parts of sections were not sampled due to limited manpower, inaccessibility, and small numbers of anglers. Unsampled anglers in these sections were mostly sturgeon fishermen.

Of the 11,400 anglers included in the sample, 7,200 (63%) were Oregon anglers and 4,200 (37%) were Washington anglers. Oregon bank anglers outnumbered Washington bank anglers 5,100 (62%) to 3,200 (38%) and Oregon boat anglers outnumbered Washington boat anglers 2,100 (67%) to 1,000 (33%).

Angler Catch

Of the total trips, 6,000 (52%) were for sturgeon angling and 1,200 sturgeon of legal size were caught. Angler trips for walleye numbered 2,400 (21%) and 2,200 walleye were caught. Angler trips for shad numbered 2,200 (19%) and 11,300 shad were caught and kept. Minor fisheries (8%) included: 500 summer steelhead anglers with a catch of 200, 200 smallmouth bass anglers with a catch of 300, and 100 channel catfish anglers with a catch of 11. Steelhead fishing was closed to Oregon anglers.

Tables 4, 5, and 6 present angler trips and catch by state and section for the sampled sections in the main channel category for June and July. Section 14 was the most popular and successful angling area on the middle Columbia. Forty-two percent of the total main channel angling effort and the major portion of all catches occurred here.

Biological Data

Tables 7 and 8 present length frequencies of angler-caught sturgeon and walleye. The mean length of 43.8" from middle Columbia sturgeon compares closely to the 1977-81 mean of 43.2" from lower Columbia angler-caught sturgeon.

WDF mark sampled 18 summer steelhead. One adipose-CWT mark was observed and the tag was from the 1978 brood at Ringold Hatchery.

ACKNOWLEDGMENTS

Stephen Williams and Michael Black of ODFW and Joe Hymer of WDF gathered interview data and Mel Collins and Donald Bennett of ODFW made aerial counts. Ken Hall, Chief of the Biometrics Section for ODFW, offered guidance on data calculations. Senior Trooper David Boitz of the Oregon State Police, Game Division, piloted an OSP aircraft on most flights.

Table 1. Middle Columbia River Recreational Angling Sampling Sections.

No.	Name	Description	River Miles
11	Lower Bonneville Pool	Bonneville Dam upstream to Hood River Bridge	25 (145-170)
12	Upper Bonneville Pool	Hood River Bridge upstream to The Dalles Dam	22 (170-192)
13	Lower The Dalles Pool	The Dalles Dam upstream to east Miller Island	15 (192-207)
14	Upper The Dalles Pool	East Miller Island upstream to John Day Dam	9 (207-216)
15	Lower John Day Pool	John Day Dam upstream to Irrigon grain elevator	63 (216-279)
16	Upper John Day Pool	Irrigon grain elevator to McNary Dam	13 (279-292)
Total River Miles			147 (145-292)

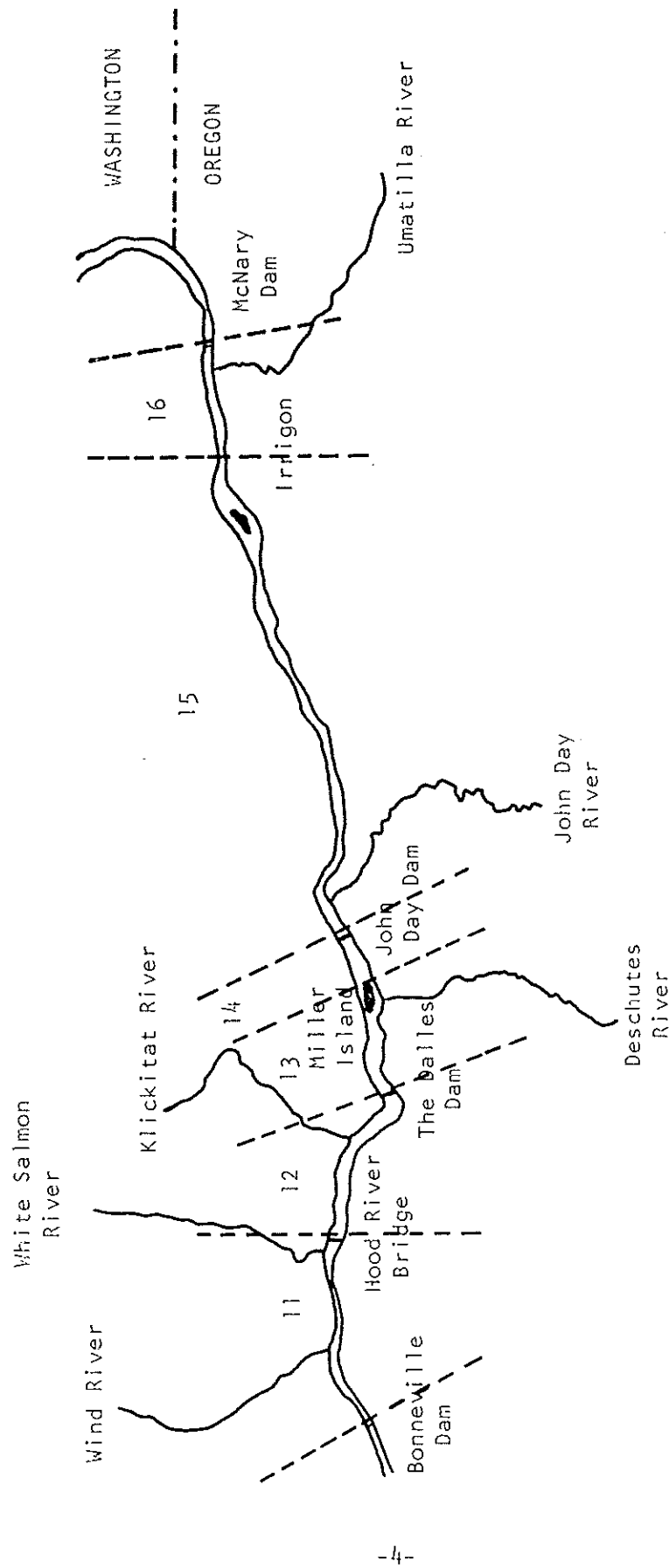


Figure 1. Middle Columbia River Recreational Angling Sampling Sections

Table 2. Angler Trips by Fishery, Category, and Section on the Middle Columbia River, June 1981.

Fishery Category	Section						Total
	11	12	13	14	15	16	
<u>OR Bank</u>							
Main Ch.	217	175	0	1,562	42	1,384	3,380
Side Ch.	17	42	0	50	0	33	142
Ponds	50	75	58	17	0	375	575
Total	284	292	58	1,629	42	1,792	4,097
<u>WA Bank</u>							
Main Ch.	42	525	325	615	8	151	1,666
Side Ch.	17	0	0	0	92	29	138
Ponds	141	100	125	0	58	0	424
Total	200	625	450	615	158	180	2,228
<u>Boat</u>							
Main Ch.	162	443	232	698	93	357	1,985
Side Ch.	70	0	0	0	140	179	389
Ponds	0	0	117	0	0	0	117
Total	232	443	349	698	233	536	2,491
<u>Total</u>							
Main Ch.	421	1,143	557	2,875	143	1,892	7,031
Side Ch.	104	42	0	50	232	241	669
Ponds	191	175	300	17	58	375	1,116
GRAND TOTAL	716	1,360	857	2,942	433	2,508	8,816

Table 3. Angler Trips by Fishery, Category, and Section on the Middle Columbia River, July 1981.

Fishery Category	Section						Total
	11	12	13	14	15	16	
<u>OR Bank</u>							
Main Ch.	320	160	0	1,172	40	987	2,679
Side Ch.	0	30	10	10	30	30	110
Ponds	30	0	80	0	0	50	160
Total	350	190	90	1,182	70	1,067	2,949
<u>WA Bank</u>							
Main Ch.	180	620	340	1,037	50	193	2,420
Side Ch.	0	0	0	0	30	30	60
Ponds	20	0	120	0	20	0	160
Total	200	620	460	1,037	100	223	2,640
<u>Boat</u>							
Main Ch.	312	480	264	1,476	192	933	3,657
Side Ch.	24	24	0	96	312	192	648
Ponds	48	24	120	0	72	0	264
Total	384	528	384	1,572	576	1,125	4,569
<u>Total</u>							
Main Ch.	812	1,260	604	3,685	282	2,113	8,756
Side Ch.	24	54	10	106	372	252	818
Ponds	98	24	320	0	92	50	584
GRAND TOTAL	934	1,338	934	3,791	746	2,415	10,158

<u>June and July</u>							
<u>Total</u>							
Main Ch.	1,233	2,403	1,161	6,560	425	4,005	15,787
Side Ch.	128	96	10	156	604	493	1,487
Ponds	289	199	620	17	150	425	1,700
GRAND TOTAL	1,650	2,698	1,791	6,733	1,179	4,923	18,974

Table 4. Catch and Trips in Sampled Sections in the Main Channel of the Middle Columbia River, June 1981.

Fishery Section	Summer		Steelhead		Sturgeon		Shad		Walleye		Channel Catfish		Smallmouth Bass		Total Trips		
	Trips		Catch		Trips		Catch		Trips		Catch		Trips			Catch	
	Trips	Catch	Trips	Catch	Trips	Catch	Trips	Catch	Trips	Catch	Trips	Catch	Trips	Catch			
OR Bank																	
Sec. 14	0	0	643	67	809	4,724	76	9	10	11	24	54	24	54	1,562		
Sec. 16	0	0	983	34	290	1,086	22	0	0	0	89	113	89	113	1,384		
OR Boat																	
Sec. 14	0	0	80	7	0	0	500	835	0	0	0	0	0	0	580		
Total	0	0	1,706	108	1,099	5,810	598	844	10	11	113	167	113	167	3,526		
WA Bank																	
Sec. 12	0	0	525	77	0	0	0	0	0	0	0	0	0	0	525		
Sec. 14	125	7	406	57	65	0	19	15	0	0	0	0	0	0	615		
WA Boat																	
Sec. 14	0	0	16	2	0	0	102	171	0	0	0	0	0	0	118		
Total	125	7	947	136	65	0	121	186	0	0	0	0	0	0	1,258		
Total																	
Sec. 12	0	0	525	77	0	0	0	0	0	0	0	0	0	0	525		
Sec. 14	125	7	1,145	133	874	4,724	697	1,030	10	11	24	54	24	54	2,875		
Sec. 16	0	0	983	34	290	1,086	22	0	0	0	89	113	89	113	1,384		
GRAND TOTAL	125	7	2,653	244	1,164	5,810	719	1,030	10	11	113	167	113	167	4,784		

Table 5. Catch and Trips in Sampled Sections in the Main Channel of the Middle Columbia River, July 1981.

Fishery Section	Summer						Channel		Smallmouth		Total Trips											
	Steelhead		Sturgeon		Shad		Walleye		Catfish			Bass										
	Trips	Catch	Trips	Catch	Trips	Catch	Trips	Catch	Trips	Catch		Trips	Catch									
OR Bank																						
Sec. 14	0	0	516	21	460	4,451	151	39	0	0	45	143	1,172									
Sec. 16	0	0	306	0	499	1,031	91	86	91	0	0	0	987									
OR Boat																						
Sec. 14	0	0	312	82	0	0	721	680	0	0	0	0	1,033									
Sec. 16	0	0	221	13	25	0	172	39	25	0	25	0	468									
Total	0	0	1,355	116	984	5,482	1,135	844	116	0	70	143	3,660									
WA Bank																						
Sec. 11	158	73	22	4	0	0	0	0	0	0	0	0	180									
Sec. 12	0	0	620	205	0	0	0	0	0	0	0	0	620									
Sec. 14	247	112	763	388	12	0	15	22	0	0	0	0	1,037									
Sec. 16	0	0	193	180	0	0	0	0	0	0	0	0	193									
WA Boat																						
Sec. 14	0	0	134	35	0	0	309	291	0	0	0	0	443									
Sec. 16	0	0	221	12	24	0	172	39	24	0	24	0	465									
Total	405	185	1,953	824	36	0	496	352	24	0	24	0	2,938									
Total																						
Sec. 11	158	73	22	4	0	0	0	0	0	0	0	0	180									
Sec. 12	0	0	620	205	0	0	0	0	0	0	0	0	620									
Sec. 14	247	112	1,725	526	472	4,451	1,196	1,032	0	0	45	143	3,685									
Sec. 16	0	0	941	205	548	1,031	435	164	140	0	49	0	2,113									
GRAND TOTAL	405	185	3,308	940	1,020	5,482	1,631	1,196	140	0	94	143	6,598									

Table 6. Catch and Trips in Sampled Sections in the Main Channel of the Middle Columbia River, June and July 1981.

Fishery Section	Summer		Sturgeon		Shad		Walleye		Channel Catfish		Smallmouth Bass		Total Trips
	Trips	Catch	Trips	Catch	Trips	Catch	Trips	Catch	Trips	Catch	Trips	Catch	
	<u>June and July</u>												
Total	73	4	0	0	0	0	0	0	0	0	0	0	180
Sec. 11	0	282	0	0	0	0	0	0	0	0	0	0	1,145
Sec. 12	372	659	1,346	9,175	1,893	2,062	10	11	69	197	69	197	6,560
Sec. 14	0	239	838	2,117	457	164	140	0	138	113	138	113	3,497
Sec. 16													
GRAND TOTAL	530	1,184	2,184	11,292	2,350	2,226	150	11	207	310	207	310	11,382

Table 7. Length Frequencies of Angler-Caught White Sturgeon by Pool on the Middle Columbia River, June and July 1981.

Total Length (in.)	Number Sampled			Total
	Bonneville Pool	The Dalles Pool	John Day Pool	
36	1	7	2	10
37	1	12		13
38	1	10		11
39		14		14
40		10	1	11
41	1	3		4
42		5		5
43		5	1	6
44		7		7
45	1	2		3
46		3		3
47		8		8
48		6		6
49		3		3
50		1	1	2
51		1		1
52		4		4
53		3		3
54		2		2
55		1		1
56		2		2
57		1		1
58				
59				
60		2	1	3
61				
62		2		2
63				
64				
65				
66				
67				
68				
69				
70	1			1
71				
72		1		1
<hr/>				
n	6	115	6	127
total in.	267	5,033	265	5,565
\bar{x}	44.5	43.8	44.2	43.8
median	--	42	--	42
mode	--	39	--	39
% > 48"	--	25.2	--	25.2
% > 60"	--	4.4	--	5.5

Table 8. Length Frequency of Angler-Caught Walleye in The Dalles Pool on the Middle Columbia River, June and July 1981.

Fork Length (cm)	Number Sampled
30	
1	
2	3
3	11
4	6
5	
6	20
7	10
8	9
9	4
40	1
1	9
2	3
3	
4	2
5	
6	8
7	4
8	1
9	
50	4
1	11
2	3
3	2
4	8
5	4
6	4
7	5
8	9
9	
60	
1	6
> 62	8

n	155
total cm.	7,097
\bar{x}	45.8
median	44
mode	36