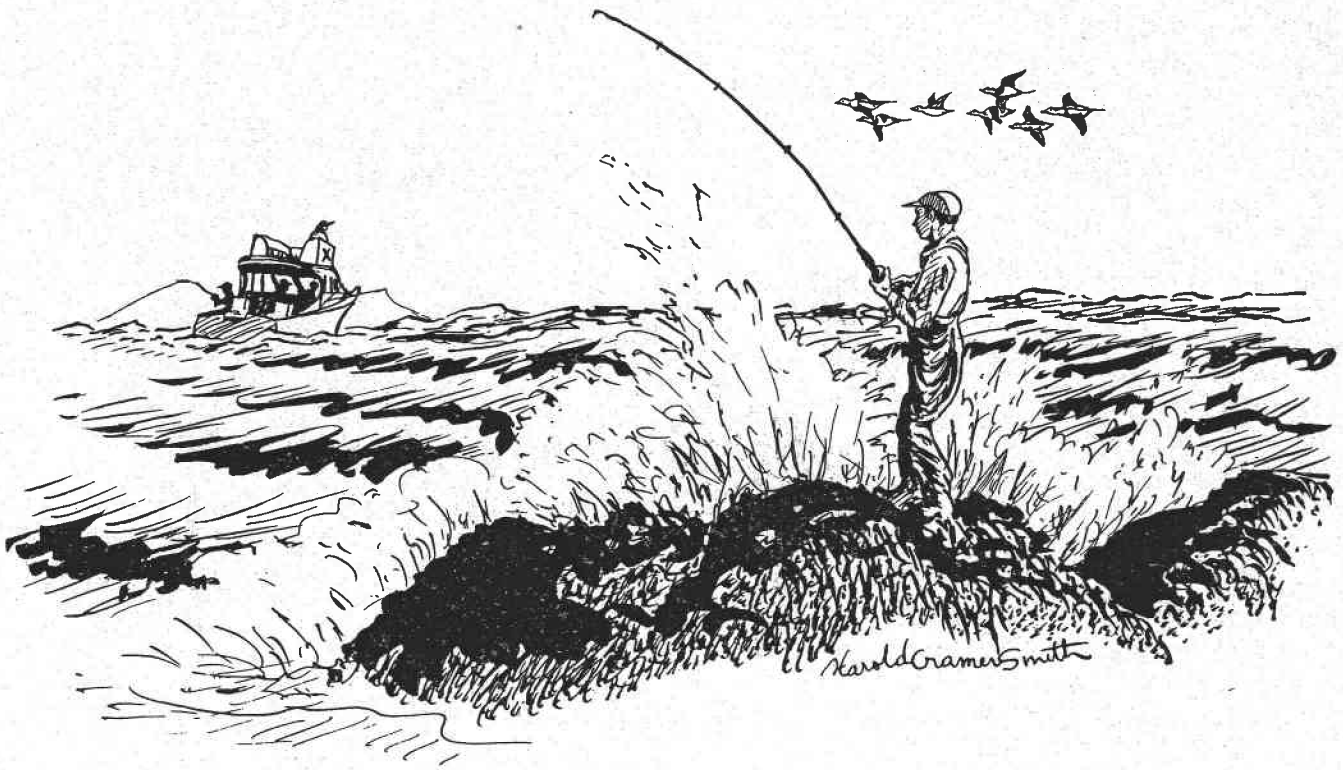
1969

Annual Report

OREGON STATE GAME COMMISSION

FISHERY DIVISION



1969
ANNUAL REPORT
FISHERY DIVISION

EDITORS:

C. J. CAMPBELL & F. E. LOCKE

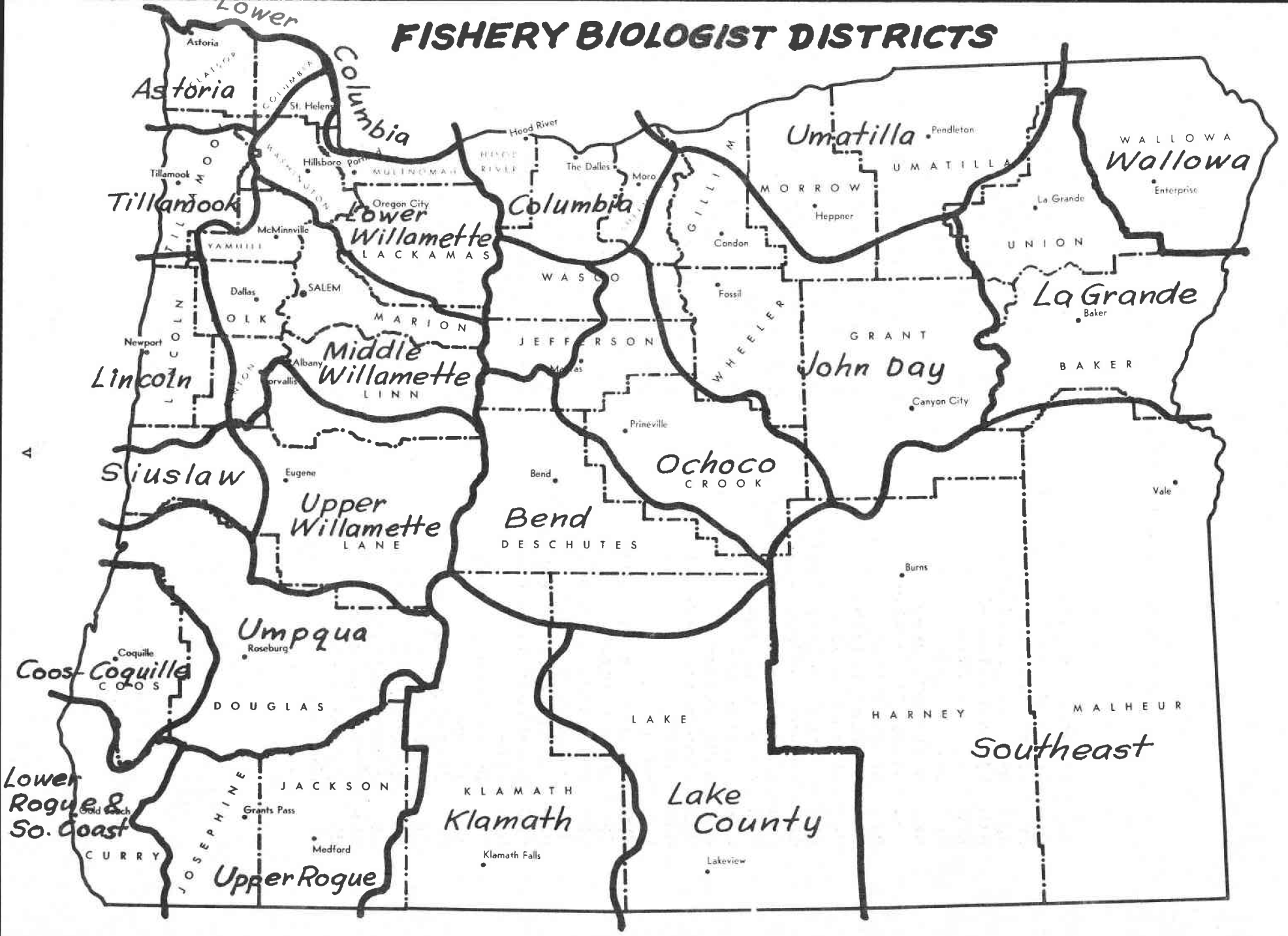
OREGON STATE GAME COMMISSION

1634 S.W. Alder Street
P. O. Box 3503
Portland, Oregon 97208

John W. McKean
Director

TABLE OF CONTENTS

FISHERY BIOLOGIST DISTRICTS



F I S H A B B R E V I A T I O N S

AS	Atlantic salmon
B	bullhead catfish
BC	black crappie
Bg	bluegill sunfish
BlB	black bullhead
BlC	blue catfish
Br	brown trout
BrB	brown bullhead
BSu	bridgelip sucker
BT	brook trout
CC	channel catfish
Ch	chinook salmon
ChF	chinook salmon (fall)
ChJ	chinook salmon (jack)
ChR	chinook salmon (summer)
ChS	chinook salmon (spring)
Clm	chiselmouth
Co	coho salmon
CoJ	coho salmon (jack)
Cot	cottid
Cp	carp
CRC	Columbia River chub
CS	chum salmon
CSu	coarsescale sucker
Ct	cutthroat trout
CtB	blackspotted cutthroat
CtS	cutthroat (sea-run)
D	dace
DV	Dolly Varden trout
F	flounder
FC	flathead catfish
Gf	goldfish
Gr	greenling (ocean)
GS	green sunfish
GSg	green sturgeon
GT	golden trout
K	kokanee
Lam	lamprey
LB	largemouth bass
Lc	lingcod (ocean)
LT	lake trout
MSu	mountain sucker
Mt	madtom
Mu	mullet
P	perch (ocean)
Pk	pumpkinseed sunfish
Pm	peamouth
PS	pink salmon
R	rockfish
Rb	rainbow trout
RbF	rainbow trout (fall)
RbS	rainbow trout (spring)
Ro	roach
RsS	redside shiner
SB	smallmouth bass
Sg	sturgeon
Sh	shad
Skb	stickleback
So	sole (ocean)
Sq	squawfish
SS	sockeye salmon
St	steelhead
StB	striped bass
StS	steelhead (summer)
StW	steelhead (winter)
Su	sucker
Tc	tomcod (ocean)
WC	white crappie
Wf	whitefish
Wm	warmouth bass
WSg	white sturgeon
YB	yellow bullhead
YP	yellow perch

UMPQUA DISTRICT

Jerry A. Bauer and Ronald L. McDivitt

The number of anadromous fish passing through the counting facility at Winchester Dam on the North Umpqua River for the years 1960 through 1969 is shown in Table 1. Excellent runs of spring chinook and summer steelhead were recorded at Winchester in 1969. Returning hatchery fish made a substantial contribution to the spring chinook and summer steelhead runs in the North Umpqua in 1969. Approximately 72 percent of the spring chinook and 45 percent of the summer steelhead observed at Winchester were marked hatchery returns.

Coho spawning ground counts on Tenmile Lake tributaries for the years 1955 through 1969 are presented in Table 2.

Fish population sampling data collected with trap nets and gill nets are shown in Table 3.

Table 4 shows creel data collected at Diamond Lake for the years 1965 through 1969. The catch rate for the 5-year period has remained quite stable at just over 0.5 fish per hour. Fish food production has not ranged much above or below 75 pounds per acre in the past 5 years.

Table 1

Fish Counts at Winchester Dam, North Umpqua River,
1960 through 1969

Species	Fish Counts by Year									
	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
Spring Chinook										
Adults	3,594	4,711	5,626	9,222	5,792	8,631	5,967	4,146	4,992	17,753
Jacks	456	542	924	1,798	3,011	3,099	1,302	4,890	4,720	3,024
Total	4,050	5,253	6,550 /1	11,020	8,803	11,730	7,269	9,036	9,712 /2	20,777
Fall Chinook										
Adults	70	72	99	121	279	85	268	401	108	250
Jacks	1	18	5	64	93	97	36	318	16	13
Total	71	90	104	185	372	182	304	719	124	263
Coho Salmon										
Adults	215	389	419	569	841	1,979	649	622	1,414	464
Jacks	131	142	129	658	325	283	268	673	233	99
Total	346	531	548	1,227	1,166	2,262	917	1,295	1,647	563
Summer Steelhead	2,732	3,141	3,072 /1	4,827	2,900	5,428	6,185	4,818	5,178 /2	14,931
Winter Steelhead	6,138	5,192	7,734 /1	5,847	7,726	9,472	9,935	8,589	9,863	8,122
Coastal Cutthroat	48	106	306	308	142	420	796	2,364	2,200	1,031 /2

/1 Affected by loss of grate.

/2 Affected by dam being open for repairs.

Table 2

Comparative Coho Spawning Ground Count Data on Selected Tributaries of Tenmile Lakes, 1955 through 1969 /1

Year	Miles Surveyed	Number of Adults	Total Salmon	Percent Jacks	Adults per Mile	Salmon per Mile
1955	10.25	2,647	3,555	26	258.2	346.8
1956	9.75	1,446	2,425	40	148.3	248.7
1957	10.00	1,391	1,895	27	139.1	189.5
1958	8.00	877	1,584	46	109.6	198.0
1959	6.25	612	830	26	97.9	132.8
1960	7.00	403	1,444	72	57.6	206.3
1961	9.75	1,672	2,717	39	171.5	278.7
1962	9.75	1,973	3,156	38	202.4	323.7
1963	10.50	1,336	3,114	57	127.2	296.6
1964	17.25	2,889	4,855	41	167.5	281.4
1965	17.25	1,890	2,845	34	109.6	164.9
1966	16.70	1,825	2,952	38	109.3	176.8
1967	17.10	1,715	3,448	50	100.3	201.6
1968	17.05	1,055	1,418	25	61.9	83.2
1969	17.10	933	2,280	60	54.6	133.3

/1 Includes Fish Commission data for all years.

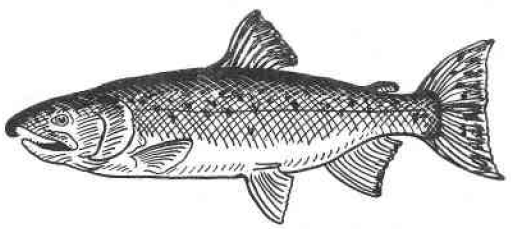


Table 3

Summary of Trap-Net and Gill-Net Collections, Umpqua District, 1969

Water	Date	Number Nets Set Trap	Number Nets Set Gill	Species	Number Fish Taken	Percent of Total	Average Size (Inches)	Number of Fish by One-Inch Size Groups (Fork Length) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Canyonville Pond	10/29	1		BC	47	1.7	3.9	12	23				1	2	2	6	1										
				BrB	2,752	98.3	5.78				975	1,175	284	22	75	184	23	9	2	1	2						
Diamond Lake	10/17		4	Rb	121	100.0	10.23						2	5	22	41	28	3	11	3	3	3					
Eel Lake	3/27		3	Ct	3	75.0	7.3							2	1												
				K	1	25.0	4.0				1																
	12/8-9		4	Ct	37	74.0	9.5								13	22	2										
				Rb	9	18.0	8.5							1	4	2	2										
				K	4	8.0	7.3							3	1												
Fords Pond	10/30	1		BC	23	21.3	3.6		11	9		2				1											
				Bg	8	7.4	4.5		2	2		3		1													
				BrB	75	69.4	8.46				2	11	11	13		9	22	7									
				YP	2	1.9	8.5								2												
Hemlock Meadows	10/22		2	K	8	34.8	7.0						3	5													
				Rb	15	65.2	10.8								1	1	5	8									
Lake Marie	12/2		2	YP	14	87.5	7.0						4	10													
				Rb	2	12.5	11.2											2									
Lemolo Reservoir	10/24		4	Br	49	28.0	11.47						8	2	6	4	4	5	7	4	2	2	1			1	3
				Rb	126	72.0	8.56							31	60	28	2	4	1								
Loon Lake	12/15	5/1	4	Ct	33	31.7									9	5	9	7	3								
				Rb	7	6.7											3	1	3								
				BrB	2	1.9													2								
				LB	1	1.0													1								
				CSu	46	44.3											1	6	4	3	10	6	5	6	5		
				Sq	15	14.4									1	1	3	2	3	2	1	1	1				

Table 3 (continued)

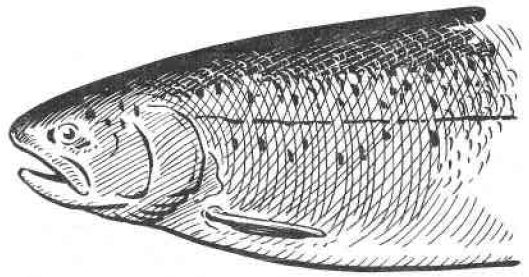
Water	Date	Number Nets Set Trap	Number Nets Set Gill	Species	Number Fish Taken	Percent of Total	Average Size (Inches)	Number of Fish by One-Inch Size Groups (Fork Length) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
North Tenmile Lake	3/-26	1		Ct	517	36.4	8.1						15	137	165	175	25										
				Rb	651	45.9	7.7					10	45	159	377	60											
				Co	249	17.5	5.5					180	44	25													
				BrB	1	0.1	12.0												1								
				Bg	1	0.1	4.8					1															
	3/27		3	Ct	22	22.4	9.0								8	9	5										
				Rb	76	77.6	8.0						5	26	25	20											
Saunders Lake	12/9	5/1	2	Rb	2	66.7	6.0					1	1														
				Cot	1	33.3																					
South Tenmile Lake	3/-26	1		Ct	225	20.1	7.7						18	61	130	16											
				Rb	384	34.4	6.9					4	110	230	35	5											
				Co	508	45.5	5.5					263	245														
	3/27		3	Ct	22	48.9	7.8						4	3	8	7											
				Rb	23	51.1	6.4					4	10	4	5												
	10/21-24	2		Ct	31	4.6	6.2					3	20	8													
				Rb	638	95.4	7.7					10	14	244	289	57	24										
Stewart Park Pond	10/28		1	BC	3	12.5	6.2					2		1													
				BrB	3	12.5	10.2								1		1	1									
				RsS	2	8.3	5.45					2															
				Sq	16	66.7	9.5							2	5	3	3	3									
Toketee Reservoir	10/22		2	Br	46	55.4	10.05						1		4	17	19	3	1					1			
				Rb	37	44.6	7.33						8	14	15												

/1 Hoop pockets.

Table 4

Summary of Diamond Lake Catch Statistics,
1965 through 1969

Year	Number Angler Trips	Total Trout Caught	Poundage	Average Weight of Fish (Pounds)	Catch per Acre (Pounds)	Fish per Hour	Fish per Angler Trip
1965	139,460	413,727	320,469	0.77	110.8	0.64	2.97
1966	133,676	317,599	253,652	0.80	87.7	0.53	2.38
1967	131,940	322,889	247,103	0.77	85.7	0.51	2.45
1968	105,891	264,694	213,392	0.81	73.8	0.61	2.50
1969	122,881	349,860	251,613	0.72	87.0	0.63	2.85



ROGUE AND SOUTH COAST DISTRICTS

William I. Haight and Arvo G. Riikula

Anadromous fish counts at Gold Ray Dam on the Rogue River are shown in Table 5. A record run of 61,232 spring chinook was counted in 1969. The number of summer steelhead was also considerably above the 20-year average.

Age determination of spring chinook from the lower Rogue confirmed previous studies that most of the run is composed of 4-year-old fish, with relatively few of the 3- and 5-year fish entering the river. The catch rate for summer steelhead anglers fishing the lower Rogue for the years 1965 through 1969 is shown in Table 6.

Fall chinook spawning ground counts are shown in Table 50.

The spring chinook salmon in the lower Rogue River were caught at a rate of 24.3 hours per fish in 1969, while in the three previous years the catch rate was about 40 hours per fish.

The offshore salmon catches from Brookings and Gold Beach are included in Table 47.

Winter steelhead were caught on the middle Rogue at a rate of 13.3 hours per fish, while on the lower Rogue the rate was 15.3 hours per fish. Creel data for the steelhead fishery in the Rogue and South Coast streams are included in Table 48.

Fish population sampling data are presented in Table 7.

Howard Prairie continued to produce trout at an average catch rate of over 1.5 fish per hour; however, the growth rate for trout in this impoundment declined in 1969.

Creel data for resident fish of the district are shown in Table 46.

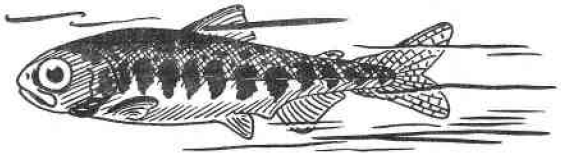


Table 5

Anadromous Fish Counts,
Gold Ray Dam, Rogue River,
1950 through 1969

	Spring Chinook		Coho		Steelhead	
Year	Number	Percent Jacks	Number	Percent Jacks	Summer Run	Winter Run
1950	16,767	18.8	2,007	11.8	3,570	9,667
1951	21,111	25.0	2,738	8.4	2,630	6,608
1952	18,488	23.0	320	2.2	3,954	11,550
1953	33,558	13.8	1,453	9.2	3,266	11,143
1954	25,785	21.6	2,138	10.8	2,352	7,599
1955	16,550	17.7	480	9.6	1,123	5,251
1956	29,952	13.7	421	5.4	2,358	9,370
1957	18,770	16.9	1,075	7.2	1,316	5,045
1958	15,716	13.1	732	11.5	1,099	3,888
1959	14,707	19.9	371	4.8	905	4,755
1960	26,217	23.8	1,851	5.1	1,323	7,535
1961	33,035	17.8	232	0.8	1,391	9,604
1962	32,651	17.0	457	0.0	2,702	11,005
1963	41,527	17.5	3,835	8.3	1,336	9,801
1964	38,437	16.2	168	0.0	555	6,629
1965	49,488	17.0	428	2.5	1,637	7,571
1966	32,588	10.7	178	0.0	900	12,980
1967	16,483	20.7	89	0.0	1,608	6,343
1968	22,997	37.4	149	0.0	557	7,264
1969	61,232	12.5	506	0.0	5,672	7,134

Table 6

Summer Steelhead Census, Lower Rogue River,
1965 through 1969

Year	Steelhead	Angler-Days	Fish per Angler	Hours per Fish
1965	7,226	17,369	0.42	4.9
1966	5,284	15,863	0.33	6.0
1967	4,933	12,516	0.39	6.0
1968	12,599	17,083	0.74	2.3
1969	14,709	26,184	0.56	3.9
AVERAGE	8,950	17,803	0.50	4.6

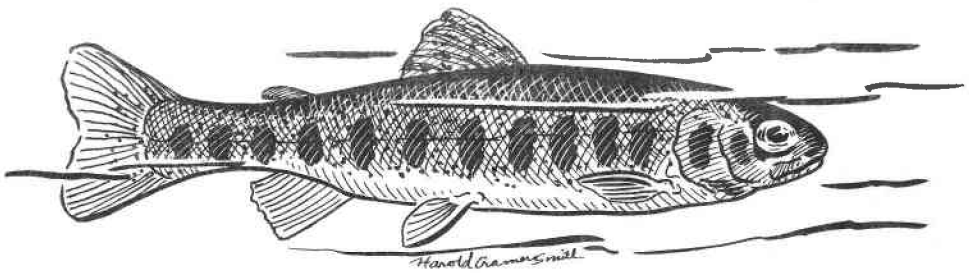


Table 7

Summary of Gill-Net Collections, Rogue District Lakes, 1969

Lake	Date	Number Nets Set	Species	Number Fish Taken	Percent of Total	Number of Fish by One-Inch Size Groups															
						3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Agate Reservoir	9/10	2	Rb	8	6.7							5	2		1						
			BC	94	79.0	1			28	65											
			BrB	10	8.4					1		1	4	3	1						
			BSu	7	5.9								3	3	1						
Babyfoot Lake	8/15	2	BT	8	80.0			2	5	1											
			Rb	2	20.0									1	1						
East Tannen Lake	8/7	1	BT	11	100.0				9	2											
Emigrant Reservoir	10/14	3	Rb	4	1.0				3		1										
			BC	327	76.9		2	38	206	73	7	1									
			Bg	2	0.5		1	1													
			LB	3	0.7					3											
			BrB	35	8.2					10	13	7	5								
			Ro	52	12.2				29	23											
			BSu	2	0.5					1				1							
Fish Lake	7/29	3	BT	31	3.0			2	1	4	2		9	8	5						
			Rb	36	3.5			23	10												
			Ro	966	93.5		8	633	268	42	15										
	10/24	3	Rb	15	1.9						8	6		1							
			BT	739	93.3			1	2	12	176	186	92	164	82	23	1				
			Ro	38	4.8			1	28	8	1										
Howard Prairie Reservoir	10/8	4	Rb	495	77.6			1	3	165	281	11	21	12			1				
			BrB	143	22.4		4	74	32	3	7	17	5	1							
Hyatt Lake	10/16	2	Rb	76	55.1					1	23	28	2	12	9	1					
			BT	62	44.9						4	8	26	23	1						

Table 7 (continued)

Lake	Date	Number Nets Set	Species	Number Fish Taken	Percent of Total	Number of Fish by One-Inch Size Groups															
						3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Lower Squaw Lake	10/2	3	Rb	21	21.2				9	8	3							1			
			Ct	33	33.3					2	8	1		3	6	9	2	2			
			Bg	4	4.0			1	3												
			BC	26	26.3		1	6	8	5	2	2	2								
			BrB	15	15.2			2	2	2	4	3	2								
Miller Lake	8/14	2	BT	31	100.0				3	12	12	2	1	1							
Selmac Lake	4/17	3	Rb	1	0.4				1												
			Bg	7	3.1	1	1		3	1	1										
			BC	56	24.6				15	39	2										
			BrB	149	65.4				12	49	57	17	7	6	1						
			Ro	14	6.1			6	8												
			BSu	1	0.4														1		
Tannen Lake	8/7	2	BT	22	100.0				2	5		8	5	2							
Upper Squaw Lake	10/2	2	Rb	11	15.7				9	2											
			Ct	17	24.3				3	7	3	3	1								
			BrB	42	60.0		3	27	5	5		2									
Willow Creek Reservoir	10/10	3	Rb	61	42.7					3	28	21	4	5							
			K	81	56.6							1	3	14	57	6					
			Ct	1	0.7						1										

UPPER WILLAMETTE DISTRICT

Wernald H. Christianson and Ralph L. Swan

Fish population data for Upper Willamette District waters are shown in Table 8.

Creel data for lakes and streams in the district are included in Table 46.

Catch per unit of effort for McKenzie River guided parties has remained near 1.0 trout per hour for the past 10 years. Data from guide reports for the years 1960 through 1969 are shown in Table 9.

The estimated angling effort and catch rate for Clear Lake are shown in Table 10. The catch over a 10-year period has not ranged much above or below 0.5 trout per angler.

The average catch rate for anglers fishing spring chinook on the lower McKenzie River was approximately 18 hours per fish.

Table 8

Summary of Gill-Net Collections, Upper Willamette District, 1969

Water	Date	Number Gill Nets Set	Species	Number Fish Taken	Percent of Total	Average Size (Inches)	Number of Fish by One-Inch Size Groups (Fork Length)															
							4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Blue River Reservoir	7/15	3	Rb	38	86.3	10.7						2	28	7	1								
			Ct	5	11.4	6.7			5														
			Co	1	2.3	4.0	1																
	11/15	3	Rb	3	3.0	10.2						1	2										
			Ct	18	17.8	8.2			2	9	3	2	1		1								
			Co	80	79.2	6.3		6	73	1													
Campers Lake	8/28	1	BT	13	100.0	9.4					2	7	2	1	1								
Cottage Grove Reservoir	2/27	2	Ct	1	16.7	9.2						1											
			Co	3	50.0	8.4					3												
			BrB	2	33.3	6.7			2														
	10/30	3	Ct	13	9.7	8.9			2	1	4	2	3	1									
			Rb	4	3.0	12.1								2	2								
			LB	18	13.4	4.3	18																
			Ch	45	33.6	6.8	3	5	19	14	2		2										
			Co	12	9.0	8.6			1	1	5		5										
			BrB	36	26.8	7.3	1		8	20	7												
			CSu	6	4.5	11.5						1	1	1	3								
Cougar Reservoir	4/4	4	Rb	63	72.5	9.2			8	13	9	12	12	3	5				1				
			Co	17	19.5	6.8			14	2		1											
			DV	1	1.1	31.5																	1
			Wf	6	6.9	9.2			1	1	1	2				1							
Dexter Reservoir	10/28	1	Rb	1	2.3	12.5									1								
			CSu	9	20.9	14.6									1	4		1	3				
			Sq	33	76.8	10.5				2	5	2	10	11	2	1							
Dorena Reservoir	2/28	2	Co	5	35.7	8.2				1	2	2											
			Rb	4	28.6	10.2						1	3										
			Ct	1	7.1	9.1						1											
			CSu	4	28.6	15.6												2	2				

Table 8 (continued)

Water	Date	Number Gill Nets Set	Species	Number Fish Taken	Percent of Total	Average Size (Inches)	Number of Fish by One-Inch Size Groups (Fork Length)															
							4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Dorena Reservoir (continued)	10/30	2	Rb	14	8.1	11.2				1	1			10	2								
			Co	24	13.9	9.7						18	6										
			LB	2	1.2	7.7				1	1												
			Ct	3	1.7	10.0						2	1										
			BrB	122	70.5	7.4		1	1	116	4												
			CSu	8	4.6	15.7										1		3	4				
Fall Creek Reservoir	11/20	1	Rb	1	11.1	10.0							1										
			St	2	22.2	9.3						2											
			Ch	6	66.7	7.5				6													
Fern Ridge Borrow Pit No. 2	12/19	1	LB	2	11.1	11.5						1				1							
			WC	14	77.8	5.3	10	3					1										
			CSu	2	11.1	16.3												1		1			
Fern Ridge Reservoir	1/9	4	CSu	70	49.3	11.2					1	3	39	9	11	6	1						
			Cp	24	16.9	10.2					5	5	6	5	3								
			BrB	21	14.8	7.8		1	5	7	4	1	3										
			LB	4	2.8	9.5					1		3										
			WC	18	12.7	8.1			2	12	1	1	1	1									
			Bg	4	2.8	9.8	1	3															
			Sq	1	0.7	11.0								1									
	2/21	2	WC	4	25.0	8.4				1	2	1											
			BrB	4	25.0	8.7					2	1	1										
			Cp	4	25.0	10.8							2	1	1								
			CSu	4	25.0	10.9							2	1	1								
Fir Lake	8/5	1		0																			
Gold Lake	7/3	1	BT	18	58.1	9.2			3	2	2	1	5	1	2	1	1						
			Rb	13	41.9	10.0		1			1	2	3	1	2	2		1					

Table 8 (continued)

Water	Date	Number Gill Nets Set	Species	Number Fish Taken	Percent of Total	Average Size (Inches)	Number of Fish by One-Inch Size Groups (Fork Length)														20 & Over
							4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
Goodpasture Island Pond No. 1	5/8	1	CSu	12	35.4	11.8					1	2	2	3		2	1	1					
			Bg	7	20.6	6.7			6		1												
			Wf	1	2.9	10.1							1										
			Sq	1	2.9	6.7			1														
			WC	2	5.9	8.4					2												
			Ct	3	8.8	10.3							3										
			LB	7	20.6	10.9							4	2	1								
			ChS	1	2.9	6.2			1														
Goodpasture Island Pond No. 6	5/8	1	BrB	14	8.9	7.4		1	2	8	3												
			CSu	5	3.2	16.5								1					2		1	1	
			WC	81	51.6	6.7			80			1											
			Sq	1	0.6	11.1								1									
			Cp	1	0.6	10.1							1										
			BrB	20	12.8	9.6				2	6	6	2	2	2								
			Bg	35	22.3	5.3	8	27															
Hills Creek Reservoir	3/12	5	Rb	36	40.0	10.2			4	12	6	1	1	1		1	4	2	1	2		1	
			St	22	24.4	12.3					1	1		4	8	6	2						
			Ct	5	5.6	9.2			1		1	2	1										
			BrB	1	1.1	9.5						1											
			CSu	23	25.6	13.2					1			2	3	10	4	3					
			DV	3	3.3	16.1												1	1	1			
	10/28	3	Rb	36	54.6	10.3		1	5	8	5	1	1	1	5	4	1	3					1
			DV	1	1.5	14.4											1						
			BrB	4	6.1	7.0		2		1		1											
			RsS	2	3.0	4.6	2																
			CSu	23	34.8	13.1			1			1		4	1	9	6	1					
Marie Lake	8/7	1	BT	4	100.0	6.8			2	2													
Neet Lake	8/6	1		0																			
Nanack Lake	8/8	2		0																			
Paddock Lake	8/6	1	BT	11	100.0	10.9						1	3	7									

Table 8 (continued)

Water	Date	Number Gill Nets Set	Species	Number Fish Taken	Percent of Total	Average Size (Inches)	Number of Fish by One-Inch Size Groups (Fork Length)															
							4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Pepsi Lake	8/9	1		0																			
Reflection Lake	8/5	1		0																			
Rockpile Lake	8/7	1	BT	8	100.0	6.3		2	6														
Ruth Lake	8/6	1	BT	7	100.0	9.0					3	4											
Sapphire Lake	7/27	1	BT	3	100.0	12.3								2		1							
Spruce Lake	8/5	1		0																			
Sunrise Lake	8/5	1	BT	2	100.0									1	1								
Sunset Lake	8/5	1		0																			
Waldo Lake	7/27	2	BT	15	93.7	7.6		1	4	3	6	1											
			K	1	6.3	9.6						1											
	9/12	2	BT	2	40.0	8.3					2												
			K	3	60.0	13.3									1	2							
	10/1	10	K	171	58.4	11.9					1	14	25	53	36	26	11	4	1				
			BT	115	39.2	8.3		2	24	26	28	19	12	1	2				1				
			Rb	7	2.4	6.7		3	2		2												
Willamette River Sloughs Station No. 2A	5/15	1	CSu	29	60.3	11.6			2	1	3	2	6	5	1	3	1	1	1	3			
			Sq	3	6.3	17.3														3			
			WC	13	27.1	6.6		2	9	1				1									
			Cp	2	4.2	11.1						1			1								
			Clm	1	2.1	5.9		1															

Table 8 (continued)

Water	Date	Number Gill Nets Set	Species	Number Fish Taken	Percent of Total	Average Size (Inches)	Number of Fish by One-Inch Size Groups (Fork Length)														
							4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Willamette River Sloughs (continued)																							
Station No. 2A	9/25	1	CSu	27	90.0	14.5					1		2		2	4	6	4	5	3			
			Sq	1	3.3	10.5							1										
			CRC	2	6.7	11.1							1		1								
Station No. 3A	5/15	1	CSu	56	74.7	12.7					1	14	2	3	8	8	8	2	4	6			
			BrB	1	1.3	8.5					1												
			Sq	3	4.0	9.9					1	1	1										
			CrC	1	1.3	8.8					1												
			Clm	12	16.0	10.6				2		1	2	4	3								
			WC	2	2.7	10.6						1		1									
	9/25	1	CSu	3	18.5	10.9					2	1											
			BrB	1	6.3	8.1					1												
			Sq	1	6.3	8.4					1												
			Clm	1	6.3	10.2							1										
			WC	8	50.0	6.4	2		4	2													
			Cp	1	6.3	14.8											1						
			Gf	1	6.3	13.4										1							
Station No. 6A	5/15	1	CSu	15	33.3	12.5					1	1		2	6	2	2				1		
			Sq	7	15.6	10.0			1	1	1		1		1	2							
			CRC	4	8.9	7.9			1	1	2												
			Clm	11	24.4	10.1			1	1	1		3	4	1								
			WC	1	2.2	7.8				1													
			Cp	3	6.7	9.5			1				1	1									
			RaS	4	8.9	5.3		4															
Wolf Lake	7/2	1	Ct	1	3.3	8.2					1												
			BT	29	96.7	9.8			1	4	4	10	6	1	1			1	1				

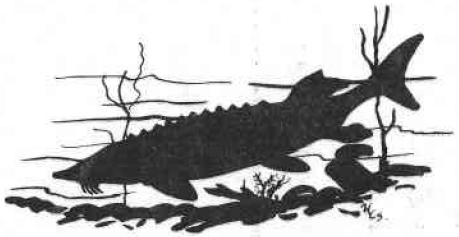


Table 9

Comparison of Catch, McKenzie River Guides,
1960 through 1969

Year	Angler Trips	Number Anglers	Hours Fished	Number Trout	Number 14-Inch Rainbow	Fish per Angler	Fish per Hour
1960	228	452	3,345	3,243	74	7.2	0.97
1961	261	483	3,496	3,094	98	6.4	0.89
1962	300	608	4,330	4,121	121	6.8	0.95
1963	348	657	4,234	5,247	79	8.0	1.24
1964	417	755	4,250	5,881	152	7.8	1.38
1965	412	760	5,025	4,617	203	6.1	0.92
1966	406	864	5,096	4,400	246	5.1	0.86
1967	380	712	4,811	4,807	165	6.8	1.00
1968	315	581	4,086	4,302	75	7.4	1.05
1969	95	182	1,282	1,407	30	7.7	1.10
10-Year Mean						6.9	1.03

Table 10

Comparison of Catch, Clear Lake (McKenzie River),
1960 through 1969

Year	Estimated Anglers	Estimated Catch	Fish per Angler	Fish per Hour
1960	7,595	18,853	2.5	0.45
1961	8,720	22,918	2.6	0.47
1962	10,600	42,371	4.0	0.60
1963	8,713	27,518	3.2	0.53
1964	7,196	24,069	3.3	0.64
1965	7,383	21,501	2.9	0.48
1966	8,378	30,046	3.6	0.83
1967	7,071	19,645	2.8	0.54
1968	10,628	29,532	2.8	0.57
1969	15,330	40,858	2.7	0.58
10-Year Mean			3.0	

MIDDLE WILLAMETTE DISTRICT

J. J. Wetherbee

The presence of fry and yearling steelhead in a number of west-side tributaries of the middle Willamette River indicates that some success is being obtained through stocking surplus adult fish. Steelhead reproduction was also noted above the Foster-Green Peter complex on the South and Middle Santiam Rivers.

A total of 817 spring chinook migrated over Foster Dam. Some chinook spawned in the river below Foster Dam.

Anglers fishing Detroit Reservoir experienced one of the most successful seasons (1.0 fish per hour) since the fishery began in 1954.

A comparison of the catch at Detroit Reservoir for the period 1954 through 1969 is shown in Table 11. Net sets made in September had an average catch of 68 rainbow trout per net.

Foster and Green Peter Reservoirs provided a catch rate of 0.8 and 1.06 fish per hour, respectively.

Population inventories for reservoirs by gill-net sampling are shown in Table 12. Creel data for district waters are included in Table 46.

Observations on the rehabilitated area of Thomas Creek indicated a substantial reinfestation of rough fish in the lower 8 miles of the treated section. Fingerling trout released following chemical treatment made good growth but were apparently not present in sufficient numbers to attract many anglers.

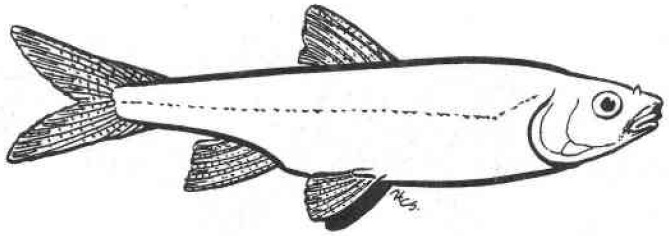


Table 11

Comparison of Catch, Detroit Reservoir,
1954 through 1969

Year	Number Anglers Checked	Total Fish	Fish per Angler	Fish per Hour	Estimated Number Anglers	Estimated Catch
1954	3,559	9,868	2.77	0.54	49,062	131,796
1955	4,022	5,689	1.41	0.39	61,738	87,050
1956	2,446	3,381	1.38	0.39	64,787	89,406
1957	2,029	4,254	2.10	0.44	91,660	147,332
1958	1,452	2,546	1.75	0.42	97,950	171,412
1959	2,514	6,157	2.45	0.69	108,753	259,847
1960	2,808	3,817	1.36	0.39	134,331	227,639
1961	1,332	2,269	1.70	0.51	137,186	246,881
1962	1,413	2,512	1.78	0.56	/1	/1
1963	2,437	4,807	1.97	0.54	141,717	310,500
1964	3,188	6,965	2.18	0.55	134,303	293,549
1965	1,461	3,870	2.65	0.72	/1	/1
1966	751	2,211	2.94	0.71	/1	/1
1967	957	1,924	2.01	0.58	/1	/1
1968	1,100	4,388	3.99	0.55	/1	/1
1969	1,038	3,535	3.41	1.00	/1	/1

/1 No estimate made.

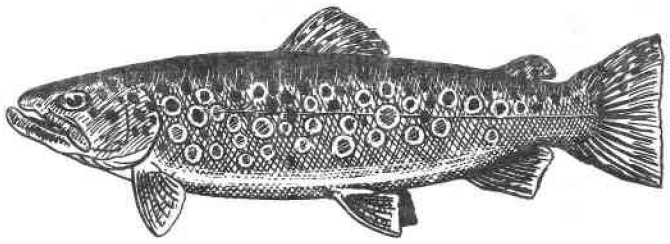
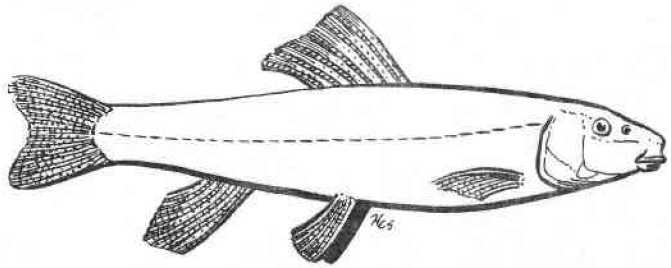


Table 12

Summary of Gill-Net Collections, Middle Willamette District, 1969

Water	Date	Number Nets Set	Species	Number Fish Taken	Percent of Total	Number of Fish by One-Inch Size Groups (Fork Length Measurements)															
						4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Detroit Reservoir	9/6	3	Rb	204	97.1		14	55	20	5	29	50	24	7								
			BrB	6	2.9			3	2	1												
Foster Reservoir	4/4	4	Rb	15	15.6			2			1	4	1	3		1	3					
			St	26	27.1			4	13	2	6	1										
			Bg	6	6.3	3	3															
			RsS	1	1.0	1																
			CSu	48	50.0			5	1	33	9											
	8/13	3	Rb	10	11.0		6	4														
			St	1	1.1					1												
			RsS	3	3.3	1	2															
			Bg	12	13.2	9	3															
			CSu	65	71.4			4	3	11	34	10	3									
Green Peter Reservoir	4/4	4	Rb	27	38.0					2	15	7	1	1	1							
			SS	10	14.1						7	3										
			St	25	35.2		1	7	12	3	2											
			Ct	8	11.3				8													
			CSu	1	1.4											1						



LOWER WILLAMETTE DISTRICT

Julius B. Massey

The adult steelhead run past Marmot Dam on the Sandy River was calculated to be 3,181 fish. The 10-year average is 3,533 fish. About 33 percent of the steelhead passing through Marmot in 1969 were marked. There were 81 spring chinook and 1,281 coho estimated to have passed over Marmot Dam. Steelhead were taken by anglers at a rate of 13.3 hours per fish.

The lower Willamette sport catch of spring chinook was estimated to be 16,300 fish. The calculated total run was considered to be about 52,600 fish. Calculated Willamette spring chinook runs for the years 1946 through 1969 are shown in Table 13.

Anglers fishing Timothy Lake caught fish at a rate of 0.5 fish per hour. About 64 percent of the catch was kokanee.

Data obtained in sampling 19 Cascade lakes are presented in Table 14.

Creel data from district trout waters are included in Table 46.

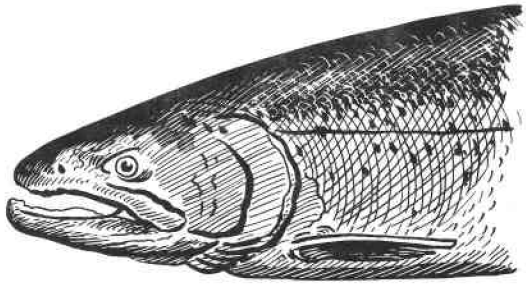


Table 13

Calculated Willamette River Spring Chinook Runs,
1946 through 1969

Year	Lower Willamette Sport Fishery Harvest	Willamette Falls Escapement	Clackamas River /1 Escapement	Calculated Total Run	Sport Catch as Percent of Run
1946	12,600	53,000	3,000	68,600	18
1947	12,000	45,000	2,000	59,000	20
1948	8,300	30,000	1,800	40,100	21
1949	9,100	27,000	1,750	37,900	24
1950	8,800	14,500	1,500	24,800	35
1951	13,300	34,300	2,000	49,600	27
1952	12,500	52,200	2,800	67,500	19
1953	16,400	76,400	4,000	96,800	17
1954	11,500	31,100	1,800	44,400	26
1955	9,000	22,000	1,500	32,500	28
1956	16,000	58,600	3,000	77,600	21
1957	11,500	39,300	2,000	52,800	22
1958	15,500	45,200	2,100	62,800	25
1959	18,500	31,900	3,000	53,400	35
1960	8,000	14,400	1,800	24,200	33
1961	6,400	18,900	2,200	27,500	23
1962	9,100	26,100	3,000	38,200 /2	24
1963	13,600	30,500	4,000	48,100 /2	28
1964	18,600	36,300	3,500	58,400	32
1965	9,000	29,100	3,000	41,100	22
1966	12,800	28,200	3,000	44,000	29
1967	15,200	56,200	3,000	74,400	20
1968	13,500	31,500	2,000	47,000 /2	29
1969	16,300	33,700	2,500	52,600 /2	31
AVERAGE	12,400	36,000	2,500	51,000	25

/1 The Clackamas River escapement is estimated on the basis of limited field observations, North Fork Dam counts, and the number of spring chinook returning to Eagle Creek National Fish Hatchery.

/2 Includes losses at Willamette Falls of 113 salmon in 1962, 220 salmon in 1963, an estimated 500 in 1968, and 117 in 1969.

Table 14

Summary of Gill-Net Collections, Lower Willamette District, 1969

Water	Date	Number Nets Set	Species	Number Fish Taken	Percent of Total	Number of Fish by One-Inch Size Groups (Fork Length)															
						4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Averill Lake	8/28	1	BT	8	100.0				1	2	5											
Big Slide Lake	8/27	1	BT	10	100.0		1	2	2	4	1											
Brook Lake	8/15	1	BT	13	100.0			1	1	4	5	2										
Clear Lake	7/10	2	BT	4	100.0								2	1			1					
Cottonwood Meadows Lake	7/11	2	BT	16	100.0			1	6	6	2		1									
Frazier Lake	7/11	1	BT	14	100.0		1	4	6	3												
Lenore Lake	8/27	/1	BT	18	100.0			2	14	2												
Lower Lake	8/26	2	Rb	4	25.0					2	2											
			BT	12	75.0			8	1		2	1										
Mirror Lake	8/22	1	BT	4	100.0				3						1							
Nippon Lake	8/14	1	BT	6	100.0			2	1		2			1								
Red Lake	8/28	1	BT	8	100.0				1	1	2	2	2									

Table 14 (continued)

Water	Date	Number Nets Set	Species	Number Fish Taken	Percent of Total	Number of Fish by One-Inch Size Groups (Fork Length)															
						4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Squaw Lake	8/22	1	BT	7	100.0		2	3	1		1											
Surprise Lake No. 1	7/18	2	BT	22	100.0				2	6	8	6										
Timothy Lake	5/15	4	Rb	4	3.8		1		1		2											
			Ct	15	14.2			2		3	2	1	2					2				3
			BT	84 /2	79.2		1	16	9	11	9	12	6	4	3	4	4	1	2	2		
			K	3	2.8			2	1													
Tubb Lake	8/14	/1	BT	7	100.0	5	2															
Upper Big Slide Lake	8/27	/1	BT	10	100.0			5	4	1												
Wall Lake	8/27	1	BT	1	100.0							1										
Welcome Lake	8/28	1	BT	16	100.0		2	9	2	1	2											
Williams Lake	7/10	1	BT	9	56.2								5	4								
			Ct	7	43.8							3	1	3								

/1 Angling.
/2 Part of sample was destroyed by crayfish.

LA GRANDE DISTRICT

Duane C. West

Steelhead spawning ground counts are shown in Table 15. A comparison of chinook spawning ground counts for the years 1965 through 1969 are presented in Table 16. Creel data for resident species are included in Table 46.

A statistical creel sampling program in Haines Pond No. 1 revealed that 3,078 anglers caught 5,404 trout and 1,300 bullhead catfish in 1969. Creel data show that a high percentage of the legal and fingerling trout planted are caught by anglers.

Results of fish population sampling with gill nets are shown in Table 17.

Eagle Lake was chemically treated in early fall to eliminate lake trout. Net sets following chemical treatment with Antimycin-A indicated that the treatment was successful.

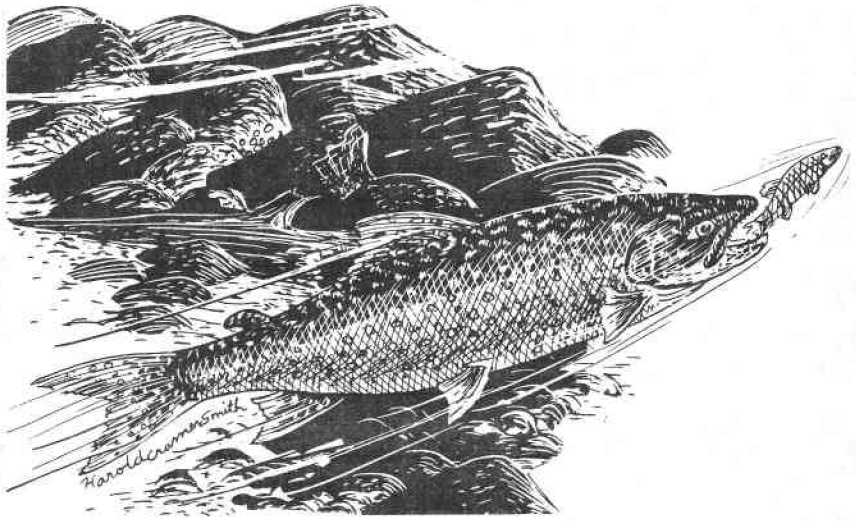


Table 15

Steelhead Redd Counts, La Grande District, 1969

Stream	Date	Miles	Steelhead	Redds	Redds per Mile 1968	Redds per Mile 1969
Bear Creek	5/29	2.0	0	3	0.0	1.5
Burnt Corral Creek	5/29	1.0	0	2	10.0	2.0
Chicken Creek	5/8	2.5	1	2	0.0	0.8
Clarks Creek	5/27	1.0	0	3	2.7	3.0
Five Points Creek	5/26	16.0	0	31	4.8	1.9
Fly Creek	5/28	4.0	0	8	6.5	2.0
Grande Ronde River /1 (Vey Meadows)	6/5-13	2.0	0	0	17.5	0.0
Indian Creek	5/27	2.0	0	4	6.9	2.0
McCoy Creek	5/5	2.5	2	11	2.9	4.4
Meadow Creek	6/6	7.0	0	21	0.8	3.0
Phillips Creek	4/28	2.5	7	11	1.0	4.4
South Fork Spring Creek (Grande Ronde River)	4/23	2.0	0	8	0.0	4.0
Spring Creek (Trib. to Willow Creek)	4/22	1.0	0	5	1.7	5.0
Willow Creek	4/28	2.0	1	5	5.2	2.5
TOTAL		47.5	11	114		
AVERAGE					4.6	2.4

/1 River was high and muddy.

Table 16

A Five-Year Comparison
of Spring Chinook Spawning Ground Counts,
La Grande District,
1965 through 1969

Stream	Redds per Mile				
	1965	1966	1967	1968	1969
Grande Ronde River	15.1	19.0	12.0	14.5	22.8
Sheep Creek	16.0		2.4	2.9	17.6
Catherine Creek /1	5.2	1.6	3.0	5.6	9.4
Catherine Creek	8.4	9.6	17.4	8.9	24.8
North Fork Catherine Creek			11.9	5.0	14.3
South Fork Catherine Creek			7.7	3.5	9.5
Minam River /1	10.0	9.2	3.3	11.6	10.9
Upper Minam River	6.0	5.9	10.6	5.0	17.7
Indian Creek				3.3	0.7

/1 Fish Commission of Oregon survey.

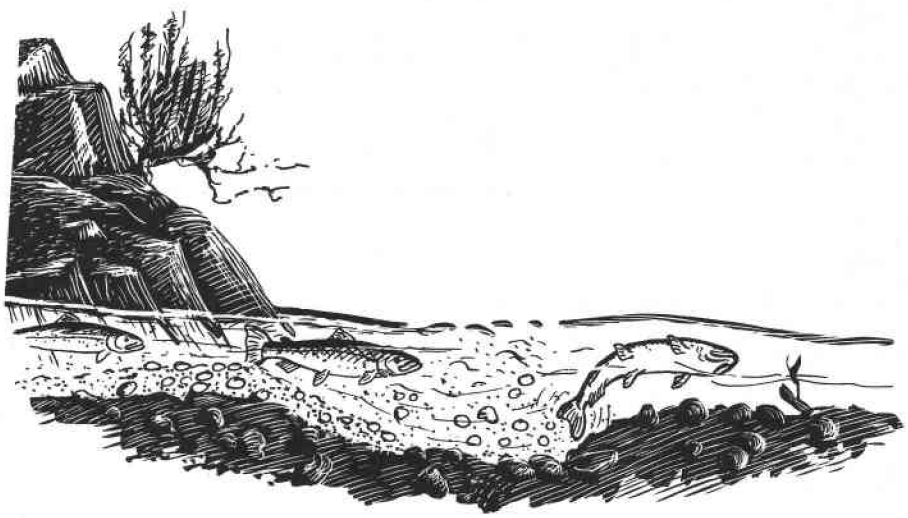


Table 17

Summary of Gill-Net Collections, La Grande District, 1969

Water	Date	Number Nets Set	Species	Number Fish Taken	Percent of Total	Average Size (Inches)	Number of Fish by One-Inch Size Groups (Fork Length)											
							4	5	6	7	8	9	10	11	12	13	14	15	16 & Over
Balm Creek Reservoir	10/28/69	2	Rb	111	100.0			2	13	71	23	2							
	9/18/68	1	Rb	25	100.0			1	21	1		2							
Eagle Lake	7/16/69	2	LT	8	80.0										2	1	2	1	2
			BT	2	20.0				1						1				
	8/5/66	2	BT	16	84.2				6	2	3	1		2	2				
			LT	3	15.8					1		1							1
Hells Canyon Reservoir	4/4/69	2	CC	126	77.3			1		3	12	18	23	20	18	9	6	9	7
			BSu	2	1.2													1	1
			CSu	2	1.2														2
			Cp	2	1.2										2				
			Clm	24	14.8					2	5	3	11	1	2				
			Sq	6	3.7						1	1		1	3				
			Rb	1	0.6								1						
Higgins Reservoir	11/7/69	1	Rb	154	78.1			7	29	41	40	23	8	1	3	1		1	
			Ct	8	4.1						2	2		1		1		1	1
			BSu	35	17.8				8	6	5	1	6	4	1	2	2		
	4/19/67	1	Rb	5	7.9								1		1		1	1	1
			Ct	3	4.8						1	1							1
			BT	1	1.6											1			
			Su	54	85.7								54						
Long Creek Reservoir	11/7/69	1	Rb	25	100.0					2	6	11	1		2		1		2
Morgan Lake	9/30/69	2	Rb	228	89.1			4	30	128	56	2	6	2					
			BT	28	10.9								7	15	5		1		
	10/1/68	2	Rb	168	65.1				6	52	74	28	6	2					
			BT	90	34.9						1	21	56	12					

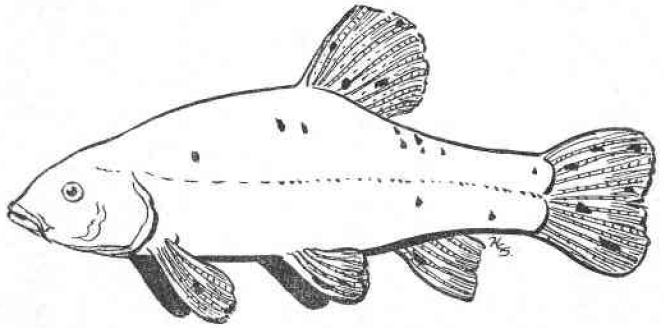
Table 17 (continued)

Water	Date	Number Nets Set	Species	Number Fish Taken	Percent of Total	Average Size (Inches)	Number of Fish by One-Inch Size Groups (Fork Length) 4	5	6	7	8	9	10	11	12	13	14	15	16 & Over
Phillips Reservoir	11/4/69	3	Rb	143	59.9						4	40	36	4	6	24	16	11	2
			Ct	8	3.3								1	1	2	4			
			Co	20	8.4			6	3	1	1	4	5						
			CSu	15	6.3					1	6			6		1			1
			BSu	13	5.4			2	1		2	3	3	1		1			
			Sq	40	16.7				7	7	20	5	1						
	10/3/68	2	Rb	233	85.7				2	18	91	104	18						
			Ct	6	2.2						5	1							
			Clm	1	0.4					1									
			Sq	11	4.0			4	6	1									
			Su	21	7.7				8	11	1	1							
Pondosa Pond	4/17/69	1	Rb	21	87.5			1	1	7	7	2	3						
			BSu	3	12.5							1	1	1					
	10/1/65	1	Rb	50	100.0		1	2	14	16	4	1	3	5	4				
Thief Valley Reservoir	4/8/69	4	Rb	3	7.0								1		1	1			
			CSu	20	46.5						2	1	4	5	2	2	1		3
			BSu	3	7.0					1	2								
			Clm	16	37.2			6	9	1									
			Sq	1	2.3						1								
	10/2/68	2	Rb	109	36.6						1	15	50	18	3	5	10	6	1
			Su	98	32.9				5	7	18	18	13	6	6	3		5	17
			Clm	23	7.7			2	11	8	2								
			Sq	68	22.8				5	18	33	11	1						
Unity Reservoir	9/26/69	3	Rb	139	19.4				13	44	42	20	9	6	4			1	
			Co	18	2.5				1	12	5								
			BSu	25	3.5	/1													
			RsS	44	6.1	/2													
			Ro	490	68.5	/3													
	9/26/68	3	Rb	170	37.9				12	24	7	26	69	28	4				
			Co	17	3.8			1	4	8	3	1							
			Ro	231	51.6	/4													
			Su	27	6.0	/5													
			RsS	3	0.7	/6													

Table 17 (continued)

Water	Date	Number Nets Set	Species	Number Fish Taken	Percent of Total	Average Size (Inches)	Number of Fish by One-Inch Size Groups (Fork Length)											
							4	5	6	7	8	9	10	11	12	13	14	15	16 & Over
Vogel Pond	4/3/69	1	Rb	38	82.6					3	13	12	6	3	1				
			BrB	7	15.2								4	3					
			BSu	1	2.2					1									
	3/28/68	1	Rb	4	50.0							2	2						
			BrB	4	50.0						1	2	1						

/1 Average length 9.5 inches.
/2 Average length 3.5 inches.
/3 Average length 6.8 inches.
/4 Range from 5.0 to 8.5 inches.
/5 Range 7.8 to 13.0 inches.
/6 Range 3.4 to 4.7 inches.



WALLOWA DISTRICT

Kenneth L. Witty

Creel data on the steelhead fishery in four district streams for the period 1967 through 1969 are shown in Table 18.

Based on information obtained by boat and car counters and creel sampling, it is estimated that 1,271 boat trips were made in the Snake River above the Oregon-Washington border. The catch from an estimated 5,586 angler-days was 1,322 steelhead, 8 chinook, 88 trout, 3,875 smallmouth bass, 156 channel catfish, 312 black crappie, and 12 sturgeon. From 70 to 90 percent of the boats observed in the study area were registered in Idaho.

There were slightly fewer steelhead redds observed in 1969 than were counted in the parent run of 1965. Steelhead spawning ground data for Wallowa County for the years 1960 through 1969 are shown in Table 19.

Chinook spawning ground data for the period 1961 through 1969 are presented in Table 20.

Creel sampling data for Wallowa County waters are included in Table 46.

The Wallowa Lake catch data for the period 1956 through 1969 are shown in Table 21.

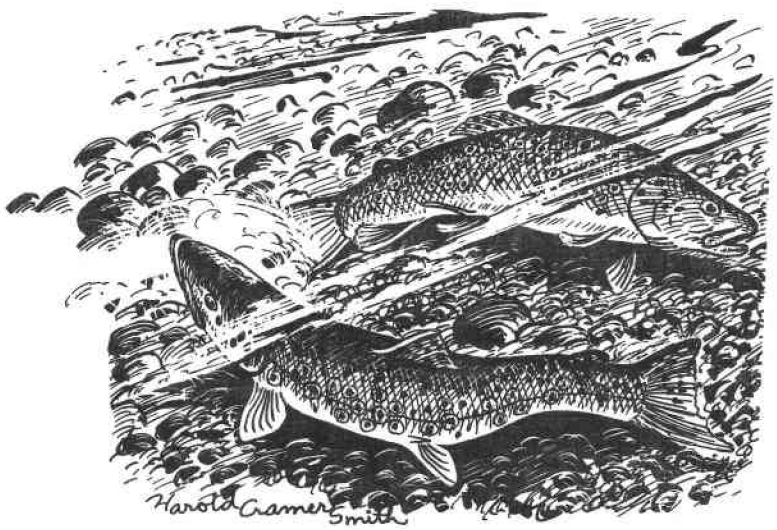


Table 18

Steelhead Creel Census from Four Streams in Wallowa County
with a Comparison of Hours per Fish,
1967 through 1969

Stream	Period Covered	Total Fish	Type of Angler	Total Anglers	Hours Fished	Fish per Angler	Hours per Fish 1967	Hours per Fish 1968	Hours per Fish 1969
Grande Ronde River Section 1	January 1 to April 1	25	Bank	92	302	0.27	9.63	17.61	12.08
	June 1 to December 31	13	Bank	36	145	0.36	14.21	18.12	11.15
Imnaha River	January 1 to March 31	62	Bank	337	1,249	0.18	8.78	17.67	20.15
	June 1 to December 31	30	Bank	94	345	0.32			11.50
Snake River Section 1	January 1 to March 31	38	Bank	189	817	0.20	10.18	17.43	21.50
	September 1 to December 31	156	and Boat	338	1,534	0.46		13.12	9.83
Wallowa River	January 1 to March 31	1	Bank	18	35	0.06	14.22	23.57	35.00

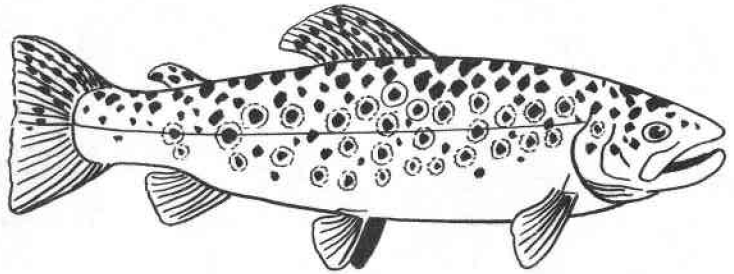


Table 19

Annual Spawning Ground Counts for Steelhead in Wallowa County, 1960 through 1969

Year	Streams in Sample	Miles Checked	Steelhead	Steelhead Redds	Redds per Mile
1960	4	21	46	29	1.38
1961	8	15	11	106	7.07
1962	10	44	108	143	3.25
1963	6	12	58	84	7.00
1964	6	46	7	197	4.28
1965	33	128	110	582	4.55
1966	26	123	226	1,214	9.87
1967	20	104	138	1,102	10.60
1968	27	109	35	366	3.36
1969	31	117	89	524	4.48

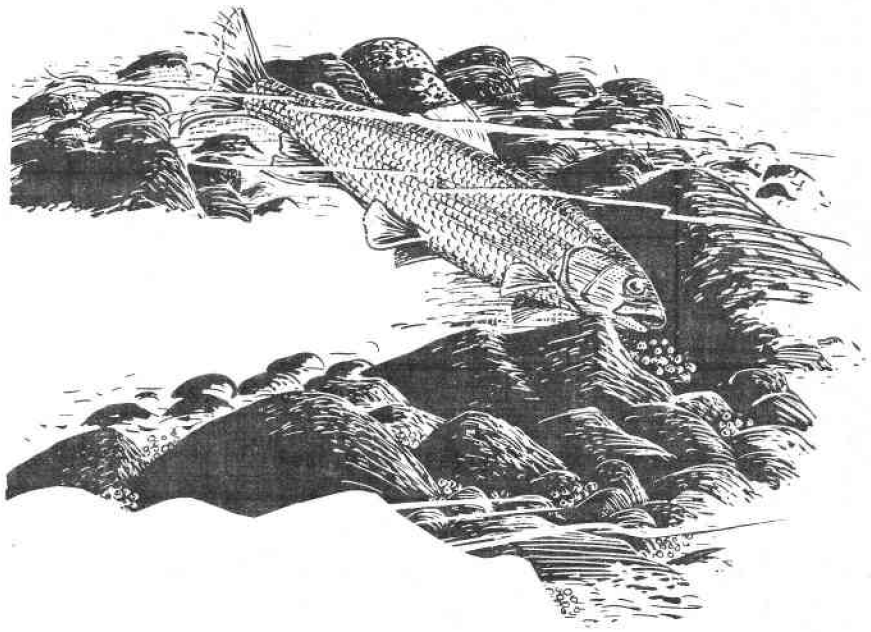


Table 20

Annual Spawning Ground Counts of Chinook within an Index Unit
on some Wallowa County Streams,
1961 through 1969

Stream	Counts by Year								
	1961	1962	1963	1964	1965	1966	1967	1968	1969
Bear Creek				17 (24)	12 (15)	8 (12)	21 (11)	40 (40)	47 (23)
Big Sheep Creek				43 (40)	19 (26)	83 (61)	58 (30)	43 (36)	7 (30)
Hurricane Creek			8 (33)	41 (28)	8 (17)	0 (1)	5 (3)	41 (20)	7 (9)
Imnaha River /1	282 (221)	383 (248)	175 (133)	461 (260)	264 (189)	460 (223)	575 (215)	694 (241)	741 (302)
Lick Creek				12 (14)	4 (25)	52 (47)	48 (30)	41 (34)	1 (4)
Lostine River /2	43 (44)	78 (53)	143 (97)	224 (335)	85 (102)	295 (187)	313 (177)	306 (128)	177 (108)
Spring Creek				11 (20)	3 (6)	10 (6)	1 (4)	2 (1)	0 (1)
Wallowa River			10 (41)	25 (35)	20 (32)	16 (14)	7 (15)	28 (11)	13 (17)
Wenaha River			32 (186)	98 (167)	26 (79)	335 (278)	193 (185)	129 (128)	181 (254)

NOTE: Redd counts are shown in parentheses.

/1 Fish Commission of Oregon counts.
/2 Oregon Game Commission and Fish Commission of Oregon counts.

Table 21

A Comparison of Total Catch Estimates, Wallowa Lake, 1956 through 1969

Year	Angler Hours	Total Catch	Rainbow	Kokanee	Lake Trout	Dolly Varden	Whitefish
1956		46,020	32,356	13,190	0	474	
1958		42,862	32,263	9,843	756	0	
1959		30,295	25,770	3,821	504	200	
1961		16,501	15,282	934	285	0	
1963		11,800	10,795	303	654	48	
1965	38,840	24,546	19,030	5,190	241	0	85
1966	57,326	41,127	27,797	13,223	45	46	16
1967	53,399	46,277	28,277	18,000	0	0	21
1968	35,405	31,002	15,775	15,198	0	0	29
1969	31,869	32,629	14,182	18,423	0	24	0

SOUTHEAST DISTRICT

Larry E. Bisbee

Fish population data collected by trap net and gill net for district waters are shown in Table 22.

Creel data obtained for district streams, lakes, and reservoirs are included in Table 46.

A comparison of angler success for district waters for the period 1965 through 1969 is shown in Table 23. The overall catch rate for the Southeast District has remained at a high level of about 1.0 fish per hour.

Table 24 shows a comparison of size distribution of channel catfish taken with trap nets in upper Brownlee Reservoir for the period 1965 through 1969. The percentage of fish over 14 inches in length has remained less than one percent for the past 4 years.

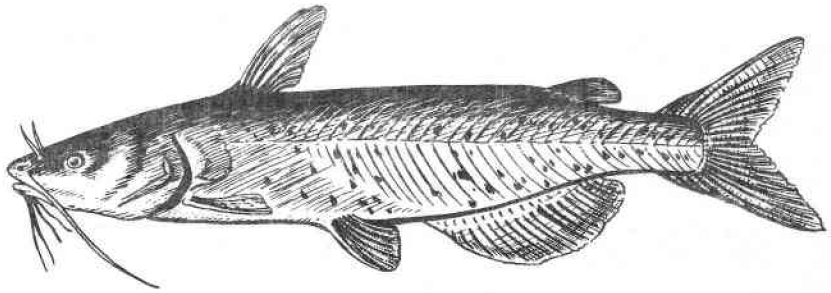


Table 22

Summary of Trap-Net and Gill-Net Collections, Southeast District, 1969

Water	Date	Number Nets Set: Trap	Number Nets Set: Gill	Species	Number Fish Taken	Percent of Total	Average Size (Inches)	Number of Fish by One-Inch Size Groups (Fork Length): 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Antelope Reservoir	10/22	1		Rb	65	56.5	9.7							3	20	27	11	4								
				BSu	21	18.3	8.6			1		1	1	3	2	5	4	4								
				Clm	17	14.8	4.1		2	8		1	5	1												
				CSu	5	4.3	12.4								1		1				1	2				
				Sq	4	3.5	1.8	2	1	1																
				BlB	3	2.6	7.9		1								1	1								
			2	Rb	70	64.8	9.4						3	6	21	22	11	3			1	2	1			
				CSu	25	23.2	12.3								3	1	1	6	2	2	3	6	1			
				BSu	9	8.3	9.8								2	1	3	3								
				Sq	3	2.8	7.7						1		1	1										
				Clm	1	0.9	6.0						1													
Beulah Reservoir	10/24	1		Rb	56	58.9	10.6							3	6	13	17	8	4		4	1				
				RsS	32	33.7	1.2	23	7	2																
				BSu	7	7.4	7.3						2	3	1		1									
			3	Rb	65	80.2	11.5							1	4	9	11	16	11	3	6	4				
				BSu	10	12.4	6.4					2	3	4	1											
				Sq	3	3.7	6.0					1	1	1												
				Wf	2	2.5	6.1						2													
				CSu	1	1.2	8.0								1											
Brownlee Reservoir, upper	7/11	3		CC	456	82.8	6.4			9	134	213	29	6	8	7	17	11	17	2	1		1	1			
				Cp	38	6.9	16.0						1	3						2	8	6	9		3	3	3
				CSu	29	5.3	9.9	10						1					1	4	3	2	4	2	2		
				BC	6	1.1	7.1	1						1	3	1										
				BlB	6	1.1	7.3					1		3	2											
				Bg	5	0.9	4.6				1	4														
				Clm	3	0.5	3.7	2						1												
				Mt	3	0.5	3.3			2	1															2
				FC	3	0.5	25.5														1					
				BSu	1	0.2	7.0							1												
				SB	1	0.2	7.1							1												
			8	CC	1,157	92.6	7.8				51	455	200	18	59	68	90	105	83	20	7	1				
				CSu	36	2.9	14.9						1		1	1		1	2	3	2	5	9	8	2	1	
				BSu	15	1.2	10.5							2	1	2	1	4	3	1	1					
				Clm	11	0.9	8.0							1	9	1										
				Cp	10	0.8	15.2								1							3	4	1	1		
				Sq	7	0.6	8.3						2	1		2	1	1									
				Sg	3	0.2	31.5																				3
				SB	3	0.2	7.8							2		1										
				BC	3	0.2	7.4						1	1	1											
				FC	3	0.2	7.6							2	1											
				Wf	1	0.1	8.8								1											
				YP	1	0.1	8.3								1											

Table 22 (continued)

Water	Date	Number Nets Set Trap	Number Nets Set Gill	Species	Number Fish Taken	Percent of Total	Average Size (Inches)	Number of Fish by One-Inch Size Groups (Fork Length) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Bully Creek Reservoir	6/2	1		YP	1,645	87.6	3.0			1,630	3	6	2	2			1	1									
				CC	95	5.1	6.1					29	34	26	6												
				BSu	64	3.4	8.0					18	6	3	7	6	16	4	1		3						
				Cp	44	2.3	12.0										2	22	11	1	2	2	2	2			
				Bg	10	0.5	3.0			10																	
				BlB	9	0.5	9.1								2	4	3										
				RsS	7	0.3	2.4	4	3																		
				D	1	0.1	2.0	1																			
				Sq	1	0.1	11.0											1									
				Clm	1	0.1	10.0										1										
Chickahominy Reservoir	10/8	1		Rb	137	100.0	7.6					2	16	92	23		1	1	1	1							
Cottonwood Creek Reservoir	10/11	1		Rb	112	90.3	8.4				2	1	8	18	50	30	3										
				BSu	12	9.7	6.3					1	6	5													
Cow Lake, upper	10/21	1		RsS	33	78.6	1.2	31	1	1																	
				BSu	4	9.5	6.3						3	1													
				Sq	3	7.1	5.3				1	1		1													
				CSu	1	2.4	13.0													1							
				Rb	1	2.4	5.1					1															
			4	BSu	74	43.0	6.6					4	41	16	7	1	2	2	1								
				CSu	40	23.2	13.5									1	5	2	1	7	11	6	7				
				Sq	37	21.5	6.8					2	11	17	7												
				RsS	13	7.6	4.1				12	1															
				Rb	8	4.7	11.9									1	3	2			1			1			
Delintment Lake	10/29	1		Rb	2	100.0	11.3										1	1									
Littlefield Reservoir	9/24		1	Rb	94	100.0	9.0							14	31	39	6	1	2			1					
Malheur Reservoir	10/17	1		Rb	61	91.0	9.5			3		1	6	1	8	14	10	13	3	2							
				BSu	4	6.0	5.5		1	1					1	1											
				RsS	2	3.0	3.5			1	1																
			3	Rb	123	91.1	9.9						2	10	25	39	8	19	19	1							
				BSu	12	8.9	9.3							1	3	2	4	1	1								

Table 22 (continued)

Water	Date	Number Nets Set Trap	Number Nets Set Gill	Species	Number Fish Taken	Percent of Total	Average Size (Inches)	Number of Fish by One-Inch Size Groups (Fork Length) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Malheur River, South Fork	5/14		2	BSu	45	54.9	9.1					2	2	6	7	9	8	6	3	1	1						
				Rb	9	11.0	9.7							3	1	2		1	1	1							
				YP	8	9.8	5.1				2	6															
				CSu	6	7.3	13.0											1	2	1		2					
				BrB	6	7.3	8.2					1	2		2	1											
				BlB	4	4.9	8.3						1		2	1											
				Clm	2	2.4	8.5								1	1											
				Sq	1	1.2	14.0														1						
				RsS	1	1.2	3.0			1																	
Morrison Reservoir	10/1		1	Rb	62	100.0	9.2							3	17	29	13										
Owyhee Reservoir	9/25	4		BC	1,674	48.9	6.9	164		5		5	41	1,059	372	28											
				YP	824	24.1	2.4	499		314	2		3	5	1												
				Cp	432	12.6	14.1							2			2	12	23	90	163	97	25	12	1		5
				BlB	370	10.8	8.9			2	14	7	20	22	28	134	104	35	4								
				CC	53	1.6	10.3						10	3		6	13	9	4	1	5	2					
				BSu	25	0.7	11.8						1					7	8	9							
				CSu	23	0.7	13.0							1	3	1			2	6	2	1	5	1	1		
				LB	9	0.3	6.3				3	5	1														
				Clm	6	0.2	8.0				1				1	4											
				Sq	4	0.1	15.2											1				1		1	1		
			16	BC	199	35.3	7.4	5		5	2		8	125	48	6											
				YP	169	30.0	7.0					19	48	73	28	1											
				Sq	76	13.5	12.5							3	4	1	5	11	13	13	11	6	6	2	1		
				Clm	23	4.1	8.1						2	5	6	8	2										
				BlB	20	3.5	8.7				3		1	2	2	6	4	2									
				LB	18	3.2	6.5					5	8	5													
				CSu	18	3.2	12.4								4	1			5	1	2	2	1	1	1		
				Cp	15	2.7	12.7									1			6	3	4	1					
				BSu	14	2.5	11.3						1				1	4	6	2							
				CC	9	1.6	11.8					1	1				1	1		1	2	2					
				Co	2	0.4	7.9							1	1												
Owyhee River, lower	11/13	2		CSu	400	60.8	3.9		2	133	212	29	12	7	3	1									1		
				RsS	90	13.7	3.0		9	79	2																
				BC	82	12.5	4.8			3	14	62	3														
				BSu	29	4.4	7.3					7	10	4	2	1			2	1	2						
				Clm	15	2.3	5.7			4		3	4	1		2	1										
				BlB	14	2.1	7.5					4	3	3	1	1		1	1								
				YP	13	2.0	5.2		2		1	4	4	2													
				Sq	11	1.7	3.6			5	5	1															
				Cp	2	0.3	6.0						2														
				Bg	1	0.2	4.5				1																

Table 22 (continued)

Water	Date	Number Nets Set Trap	Number Nets Set Gill	Species	Number Fish Taken	Percent of Total	Average Size (Inches)	Number of Fish by One-Inch Size Groups (Fork Length) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Owyhee River, lower (continued)	11/13		9	CSu	146	33.9	9.8					4	12	34	35	20	7	1			2	1	13	9	5	3	
				BSu	71	16.5	8.7					7	17	12	8	5	1	4	3	4	4	3	3				
				Rb	51	11.8	8.5						10	19	3	6	7	5		1							
				Sq	48	11.1	5.7				1	27	12	2	5	1											
				BC	37	8.6	5.9				1	24	4	8													
				Clm	27	6.3	6.9					4	11	3	3	5	1										
				BlB	25	5.8	7.9				2		2	5	11	5											
				Cp	15	3.5	11.9							2	4	2			1				4	2			
				CC	7	1.6	11.7								1			1	5								
				RsS	2	0.5	4.0				2																
				Co	1	0.2	6.4						1														
				YP	1	0.2	6.0						1														
Owyhee River, upper	6/10		2	Clm	43	89.5	8.8							1	14	20	7	1									
				Sq	3	6.3	12.8								1				1	1							
				Co	1	2.1	7.2							1													
				BSu	1	2.1	11.0											1									
Pole Creek Reservoir	10/17		1	Rb	47	100.0	8.5						3	7	25	12											
Warm Springs Reservoir	9/15	2		YP	214/1	81.1	9.1	1		20	41	56	21	20	12	18	24	1									
				BrB	31	11.7	5.0			4	13	8	2		1	1	1		1								
				RsS	9	3.4	2.0		9																		
				CSu	4	1.5	3.5			2	2																
				Sq	3	1.1	14.0														3						
				CC	1	0.4	7.1							1													
				SB	1	0.4	6.6						1														
				LB	1	0.4	2.6		1																		
			6	YP	333	64.2	8.4				2	45	43	47	34	70	84	7	1								
				CSu	145	28.0	13.5							2	1	3	14	18	8	19	22	19	23	11	4	1	
				Sq	21	4.1	13.6									1			2	7	5	5	1				
				BSu	10	1.9	8.8						1	3	2		1	2		1							
				Clm	2	0.4	8.0							1		1											
				CC	2	0.4	8.5						1					1									
				RsS	2	0.4	5.0					2															
				SB	1	0.2	4.5				1																
				BrB	1	0.2	10.7										1										
				Rb	1	0.2	10.2										1										
Yellow Jacket Lake	8/8	1		Rb	22	100.0	7.7						10	6	2		2		2								

/1 Does not include an estimated 250,500 fingerling (833.5 pounds) taken in one net set.

Table 23

A Comparison of Angler Success for Lake and Stream Angling
in Southeast District, 1965 through 1969

	Stream Angling				Lake and Reservoir Angling				Average for all Methods	
	Trout		Warm-Water Game Fish		Trout		Warm-Water Game Fish			
Year	Fish per Angler	Fish per Hour	Fish per Angler	Fish per Hour	Fish per Angler	Fish per Hour	Fish per Angler	Fish per Hour	Fish per Angler	Fish per Hour
1965	4.9	1.40	1.3	0.56	3.4	0.80	5.1	1.39	3.7	0.92
1966	4.1	1.65	1.1	0.44	5.2	1.10	6.6	1.74	5.5	1.08
1967	4.4	1.55	1.8	0.67	3.9	0.88	6.1	1.14	4.3	1.11
1968	4.4	1.60	2.0	0.59	3.6	0.67	8.9	2.21	4.7	1.06
1969	4.5	1.87	2.5	0.87	3.7	0.83	4.6	0.98	4.0	1.02

Table 24

A Comparison of Size Distribution of Channel Catfish Taken with Nets in Upper Brownlee Reservoir above Hibbard Creek, 1965 through 1969

Fork Length (Inches)	July 12 to 13, 1965		July 12 to 13, 1966		July 14 to 15, 1967		July 9 to 10, 1968		July 11 to 13, 1969		Total	Percent of Total
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent		
1			20	3.2			1	0.1			21	0.5
2	2	0.7	246	39.5	16	3.7	249	22.1			513	12.6
3			2	0.3	11	2.5	250	22.2	9	0.6	272	6.7
4	3	1.1	21	3.4	21	4.9	38	3.4	185	11.5	268	6.6
5	6	2.1	23	3.7	44	10.3	29	2.6	668	41.3	770	18.9
6	80	28.0	19	3.0	44	10.3	77	6.9	229	14.2	449	11.0
7	70	24.5	28	4.5	29	6.8	114	10.2	24	1.5	265	6.5
8	27	9.4	42	6.7	19	4.4	38	3.4	67	4.2	193	4.8
9	40	14.0	108	17.3	56	13.1	56	5.0	75	4.6	335	8.2
10	29	10.1	69	11.1	89	20.7	85	7.6	107	6.6	379	9.3
11	17	5.9	30	4.8	64	14.9	94	8.4	116	7.2	321	7.9
12	2	0.7	13	2.1	24	5.6	70	6.2	100	6.2	209	5.1
13	2	0.7	1	0.2	10	2.3	18	1.6	22	1.4	53	1.3
14 to 21	8	2.8	1	0.2	2	0.5	3	0.3	11	0.7	25	0.6
TOTAL	286		623		429		1,122		1,613		4,073	

LAKE COUNTY DISTRICT

Henry E. Mastin

Creel data for district trout waters for the period 1954 through 1969 are shown in Table 25. The catch per hour in 1969 was slightly over 1.0 fish per hour. Creel data for specific waters in 1969 are included in Table 46.

Results of fish population sampling with nets are shown in Table 26. There appeared to be a complete winterkill at Lofton Reservoir.

Thompson Valley Reservoir, chemically treated in the fall of 1968 and planted with 400,000 fingerling trout, was restocked when population sampling revealed very low survival of the fall plant.

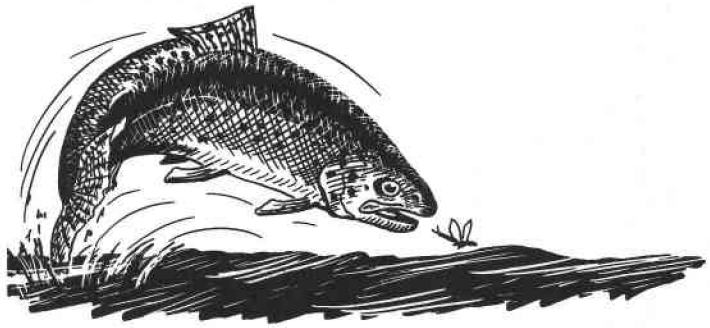


Table 25

A Comparison of Creel Census Data for Lake County Waters for the Years 1954 through 1969

Year	Total Fish	Total Anglers	Total Hours	Fish per Angler	Fish per Hour
1954	3,744	1,174	4,729	3.19	0.79
1955	2,741	885	2,255	3.10	1.22
1956	2,432	640	1,922	3.80	1.27
1957	2,005	542	1,837	3.70	1.09
1958	3,660	1,203	3,963	3.04	0.92
1959	4,188	1,002	3,754	4.18	1.12
1960	3,064	1,013	3,082	3.02	0.99
1961	3,529	839	3,728	4.21	0.95
1962	5,527	1,061	5,122	5.21	1.08
1963	4,977	1,130	5,188	4.40	0.96
1964	3,939	1,306	5,006	3.02	0.79
1965	3,801	991	4,052	3.84	0.94
1966	3,984	1,109	4,189	3.59	0.95
1967	4,145	1,410	4,449	2.94	0.93
1968	4,212	1,227	4,504	3.43	0.94
1969	5,179	1,423	5,070	3.64	1.02
16-Year Average	3,820	1,059	3,928	3.61	0.972

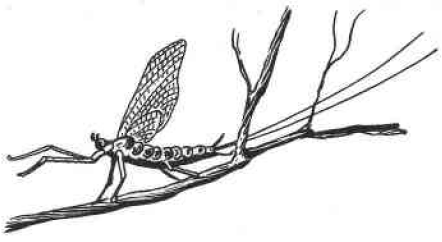


Table 26

Summary of Gill-Net and Trap-Net Collections, Lake County District, 1969

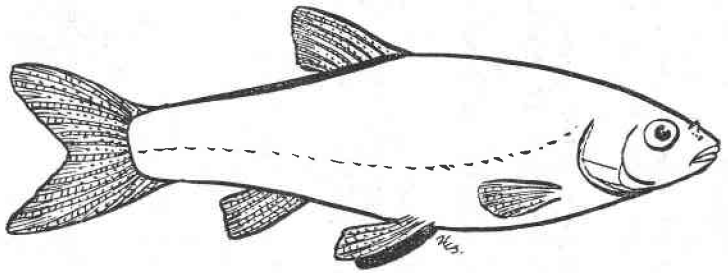
Water	Date	Number Nets Set: Gill	Number Nets Set: Trap	Species	Number Fish Taken	Fish per Net	Percent of Total	Average Size (Inches)	Number of Fish by One-Inch Size Groups (Fork Length): 4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Ana Reservoir	9/12	3		Co	1	0.3	0.8	10.2							1										
				Ro	130	43.3	99.2	/1																	
Big Rock Reservoir	9/7	1		Rb	106	106.0	100.0	7.54			12	69	25												
Campbell Lake	9/23	2		Rb	18	9.0	100.0	8.26	1		5		4	7	1										
Cottonwood Meadows Lake	10/1	2		BT	1	0.5	3.3	16.0													1				
				Rb	26	13.0	86.7	8.73				8	10	2	5	1									
				K	3	1.5	10.0	11.83								3									
Deadhorse Lake	9/24	2		BT	19	9.5	67.9	11.9					1	2	7	3	1		3		1	1			
				Rb	6	3.0	21.4	8.25	1		1		1	2	1										
				K	3	1.5	10.7	7.27				3													
Lofton Reservoir	9/30	2		BT	9	4.5	40.9	10.0					1	3	4	1									
				Rb	13	6.5	59.1	6.3	3		9				1										
Lucky Reservoir	9/9	1		Rb	80	80.0	100.0	7.3	3		21	45	11												
Mule Lake	9/10	2		Rb	61	30.5	100.0	11.5	1				1		4	35	20								
Priday Reservoir	11/6	2		Rb	94	47.0	100.0	8.7			2	12	52	26				1	1						
Slide Lake	9/18	1		BT	15	15.0	100.0	10.2						4	11										

/1 Size range, 4.7 to 8.9 inches.

Table 26 (continued)

Water	Date	Number Nets Set: Gill	Number Nets Set: Trap	Species	Number Fish Taken	Fish per Net	Percent of Total	Average Size (Inches)	Number of Fish by One-Inch Size Groups (Fork Length): 4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Squaw Lake	9/13	2		Rb	21	10.5	100.0	11.5							4	11	6								
Taft Miller Reservoir	10/24	3		Rb	24	8.0	14.9	10.98 /2			3	4	3			1	2	8	3						
				Ro	137	45.6	85.1				137														
Thompson Valley Reservoir	9/29	4		Rb	123	30.8	78.3	7.9		12	20	38	27	11	13	1		1							
				Ro	34	8.5	21.7	4.9	17	17															
			1	Rb	106	106.0	1.4	/3																	
				Ro	7,436		98.6	/4																	
Withers Lake	9/7	1		BT	99	99.0	100.0	7.35		2	56	19	5	11	5	1									

/2 Size range, 5 to 7 inches.
/3 Released lengths similar to gill-net collections.
/4 Most all chub were 2 inches or less.



COLUMBIA DISTRICT

Allan B. Lichens

A summary of upstream migrant salmon counts at Pelton Dam is presented in Table 27.

The sport catch of chinook in the Deschutes River was calculated to be 4,712 fish. These fish were taken by 13,012 anglers fishing a total of 61,944 hours. The average number of chinook salmon redds observed in nine sampling areas was 89.3 redds per mile. Average counts for these areas in 1967 and 1968 were 52.0 and 78.4 redds per mile, respectively.

A summary of steelhead migrants counted at Pelton Dam for the period 1956 through 1969 is shown in Table 28.

The estimated catch for steelhead in Deschutes River for the period 1966 through 1969 is shown in Table 29.

Steelhead counts at Powerdale Dam on Hood River are shown in Table 30.

Creel sampling in the Deschutes River between Pelton Dam and South Junction indicated that approximately 59,000 anglers caught 73,000 trout and 13,000 marked juvenile steelhead.

Creel data on other district waters are included in Table 46.

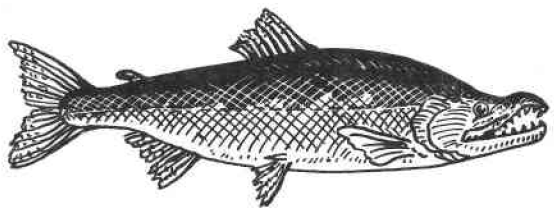


Table 27

Summary of Upstream Migrant Salmon Counts,
Pelton-Round Butte Complex,
1956 through 1969

Year	Chinook			Coho			Sockeye /2
	Adults	Jacks	Total	Adults	Jacks	Total	
1956 /1	59	53	112			0	2
1957	429	125	554			0	30
1958	472	13	485			0	56
1959	410	101	511			0	99
1960	546	194	740			0	41
1961	477	105	582			0	82
1962			467			0	331 /3
1963	196	343	539			0	340
1964	352	245	597			33	2
1965	208	238	446	224	1,447	1,671	0
1966	369	55	424	251	169	420	0
1967	147	459	606	52	998	1,050	53
1968	556	414	970	760	101	861	24
1969	449	298	747	25	18	43	1

/1 Counting began on August 15, 1956.

/2 Marked juveniles were included in the counts from November 1960 through June 1961.

/3 Included 309 adipose-marked fish.

Table 28

Summary of Upstream Migrant Steelhead Counts, Pelton-Round Butte Complex, 1956-57 through 1968-69

Year /1	Steelhead		
	Wild	Marked	Total
1956-57	310	13	323
1957-58	1,560	59	1,619
1958-59	1,142		1,142
1959-60	521		521
1960-61	480		480
1961-62	354		354
1962-63	377		377
1963-64	264		264
1964-65	429		429
1965-66	434		434
1966-67	287		287
1967-68	186	89	275
1968-69	230	145	375

/1 The annual steelhead migration is considered to commence on June 1. Counting was initiated on August 15, 1956.

Table 29

Expanded Steelhead Catch Data by Area, Deschutes River, 1966 through 1969

Area	Year	Number Anglers	Hours Fished	Steelhead	Hours per Fish	Fish per Angler
Mouth to Kloan	1966	2,952	13,654	868	15.7	0.29
	1967	7,136	39,299	2,339	16.8	0.33
	1968	9,073	41,389	4,167	9.9	0.46
	1969	10,494	51,833	3,362	15.4	0.32
Webb's Access Road	1966	2,522	12,193	404	30.2	0.16
	1967	4,573	15,406	755	20.4	0.17
	1968	2,362	11,309	642	17.6	0.27
	1969	3,962	17,866	1,019	17.5	0.26
TOTALS AND AVERAGES	1966	5,474	25,847	1,272	20.3	0.23
	1967	11,709	54,705	3,094	17.7	0.26
	1968	11,435	52,698	4,809	11.0	0.42
	1969	14,456	69,699	4,381	15.9	0.30

Table 30

Powerdale Trap Counts, Hood River,
1962 through 1969

Year /1	Steelhead						Additional Species			
	Summer									
	Wild	Marked	Winter	Unclassified	Total	Tagged	Coho	Chinook	Cutthroat	Miscellaneous
1962 /2	330	220	587		1,137	770	255	33	8	
1963	449	161	47	910	1,567	1,111	143	53	37	29
1964	260	91	95	962	1,408	126	346	52	17	23
1965 /3	223	51	232	540	1,046	107	130	2	27	8
1966	356	533	244	1,424	2,557	261	330	38	57	4
1967	196	177	87	695	1,155	115	257	54 /4	101	62
1968	344	591	93	433	1,461		285	33 /4	134	21
1969	210	130	28	1,196	1,564		174	8	177	26

/1 Calendar year.

/2 Partial escapement only.

/3 Fish passage interrupted due to the 1964-65 flood and subsequent construction.

/4 In previous reports, chinook counts for 1967 and 1968 included chinook in the 8- to 10-inch category. Since these fish were not considered "sea-run", they have been deleted.

LOWER COLUMBIA DISTRICT

William E. Hosford

Catch data for the lower Columbia River fishery have been released in two special reports: (1) "An Evaluation of the Spring Sport Fishery on the Lower Columbia River in 1969" by Ted Fies and Richard R. Simons, and (2) "An Evaluation of the Summer and Fall Sport Fishery on the Lower Columbia River in 1969" by Ted Fies.

The sport catch on the lower Columbia River by Oregon and Washington anglers for the period March through September 1969 was estimated to be 16,998 chinook salmon, 6,411 chinook jack salmon, 13,677 steelhead, 7,756 cutthroat, 402 adult coho, 3,082 coho jack salmon, 5,543 sturgeon, and 5,908 shad. Table 31 shows the estimated catch by period for the lower Columbia River.

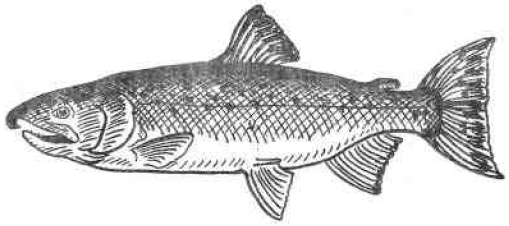


Table 31

Total Estimated Sport Catch and Angler Effort
by Washington and Oregon Anglers on the Lower Columbia River,
March through September 1969

Month	Area	Angler Trips	Chinook		Steelhead	Cutthroat	Coho		Sturgeon	Shad
			Adults	Jacks			Adults	Jacks		
March	Washington	16,300	2,049		955					
	Oregon	30,559	3,033		635					
	Subtotal	46,859	5,082		1,590	145 /1			155 /1	
April	Washington	18,107	1,623		201					
	Oregon	34,082	6,709		600					
	Subtotal	52,189	8,332		801	61 /1			272 /1	
May	Washington	9,737	543	1,379	861	696			563	
	Oregon	10,559	1,097	799	201	74			1,468	
	Subtotal	20,296	1,640	2,178	1,062	770			2,031	
June	Washington	10,150	117	1,125	1,270				257	1,429
	Oregon	9,147	338	174	286	9			346	4,132
	Subtotal	19,297	455	1,299	1,556	9			603	5,561
July	Washington	16,273	111	253	2,786	234			195	262
	Oregon	19,701	171	164	2,790	117			203	85
	Subtotal	35,974	282	417	5,576	351			398	347
August	Washington	13,126	29	360	1,192	3,462		29	589	
	Oregon	4,873	64	253	1,091	1,169	13	27	321	
	Subtotal	17,999	93	613	2,283	4,631	13	56	910	
September	Washington	10,153	256	553	222	684	105	1,294	833	
	Oregon	18,598	859	1,341	582	1,105	302	1,732	341	
	Subtotal	28,751	1,115	1,894	804	1,789	407	3,026	1,174	
TOTAL		221,365	16,999	6,401	13,672	7,756	420	3,082	5,543	5,908

/1 Insufficient data to separate by state.

BEND DISTRICT

James D. Griggs

A summary of gill-net and trap-net fish collections in district waters is shown in Table 32.

The average catch rate for anglers fishing Crane Prairie Reservoir was only 0.21 fish per hour. One 18.5-pound rainbow was caught on July 12. The percentage of roach in net samples has remained relatively stable over a period of years.

The roach population in Davis Lake continues to increase with a corresponding decline in the production of fish food organisms.

The goal of having 90 percent of the trout at East Lake exceed 10 inches in length at the start of the fishing season was not reached in 1969. A reduction in stocking rates apparently was responsible for an increase in the production of bottom organisms. Food production in 1968 was estimated to be 55 pounds per acre; while in 1969, sampling indicated that over 200 pounds per acre were present.

Atlantic salmon in Hosmer Lake were caught at a rate of 0.68 fish per hour. Most of the fish hooked and released were between 16 and 20 inches in length.

The average catch rate for anglers fishing Paulina Lake was 0.72 fish per hour. Stocking rates were reduced substantially in 1969 in order to increase the growth of trout and increase angling pressure.

Wickiup Reservoir produced poor fishing in 1969. The catch rate was only 0.23 fish per hour.

Coho were taken in good numbers as compared with kokanee, brown trout, and rainbow trout.

Other creel data for district waters are included in Table 46.

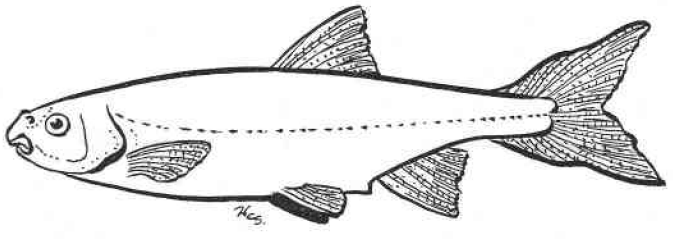


Table 32

Summary of Gill-Net and Trap-Net Collections, Bend District, 1969

Water	Date	Number Nets Set: Gill	Number Nets Set: Trap	Species	Number Fish Taken	Percent of Total	Length Range (Inches)	Number of Fish by One-Inch Size Groups (Fork Length): 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Big Cultus Lake	5/28	4		LT	10	23.8																		2	3	4	1
				Co	1	2.4														1							
				Rb	4	9.5							2		1	1											
				Wf	27	64.3								1	1	5	3	5	6	2	3	1					
	10/23	4		LT	29	26.1														4	3	3	4	8	2		5
				Rb	23	20.7						1	1	2	4	9	4	1	1								
				BT	2	1.8								1					1								
				Wf	57	51.4										10	8	24	11	1	3						
Big Lava Lake	5/15		1	BT	255	95.8					1	1	22	20	3	14	70	103	14	4	2	1					
				Rb	1	0.4														1							
				Ro	10	3.8	/1																				
	9/24	2		BT	121	93.8									2	12	25	19	30	24	7	2					
				Ro	8	6.2						5	2	1													
Crane Prairie Reservoir	6/25	4		Rb	30	6.0						5	2			3	1	3	2	7	1	2	2	2			
				K	14	2.8								1			1	7	5								
				Co	16	3.2						12	4														
				BT	6	1.2							1	2		3											
				Wf	3	0.6												1		1	1						
				Ro	429	86.2	/2																				
Davis Lake	4/29	4		K	1	1.1																				1	
				Co	3	3.2											1		2								
				Rb	45	49.5						1	11	3	1			3	2	3	4	7	3	5	2		
				Wf	19	20.9							1		4	4	2	3	2	1		2					
				Ro	23	25.3					13	9	1														
	7/9	3		Rb	19	35.8						1			1	2	1		1			2	2	1	1	5	2
				Co	12	22.6						8	3	1													
				Wf	3	5.7												1	1			1					
				Ro	19	35.9						5	12	1	1												
	10/14		1	Rb	10	4.8					1	1	1	1		1	3						1		1		
				Ro	200	95.2	/1																				
Deer Lake	7/25	2		BT	44	100.0							2	5	11	12	5	2	1	1	3	1	1				

/1 Size range, 3 to 5 inches.
/2 Size range, 3 to 9 inches.

Table 32 (continued)

Water	Date	Number Nets Set Gill	Number Nets Set Trap	Species	Number Fish Taken	Percent of Total	Length Range (Inches)	Number of Fish by One-Inch Size Groups (Fork Length) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
East Lake	5/21		1	Rb	122	89.1								1	10	15	11	5	14	16	11	16	13	5	4		1
				BT	13	9.5									1	1	2	3	4	1	1						
				Ro	1	0.7										1											
				Br	1	0.7																					1
	5/21	2		Rb	73	72.3								2	8	14	4	5	6	10	7	8	6	2			1
				BT	24	23.8							1			2	6	4	8		2		1				
				Ro	4	3.9						2	2														
	5/22		1	Rb	108	85.0								1	6	14	7	9	10	16	11	12	9	5	2	3	3
				BT	15	11.8												7	1	3	4						
				Ro	4	3.2						2	2														
	6/26	2		Rb	5	6.4										1		1	1	2							
				BT	37	47.5								2	1	4	8	7	8	5	2						
				Br	3	3.8										1											2
				Ro	33	42.3						5	6	9	9	2	2										
	7/23	2		Rb	9	1.9						4							2		2		1				
				BT	53	11.2							2	2	3	2	5	13	11	8	2	4		1			
				Ro	410	86.9	/3																				
	10/7		1	Rb	2	1.4								2													
				BT	140	97.2	/4																				
				Ro	2	1.4	/5																				
Elk Lake	6/19	4		BT	51	87.9						3	4	9	6	2	5	14	5		1	2					
				Rb	2	3.5									1	1											
				K	1	1.7									1												
				AS	4	6.9							2	2													
	7/11	/6		BT	10	43.5							1	1	5	1		1	1								
				K	11	47.8							1	2	4	4											
				AS	2	8.7								2													
	10/8		1	BT	230 /7	99.6						1			3	10	15	15	10	3		1					
				K	1	0.4											1										
Hosmer Lake	10/15-10/17		1	AS	34	69.4																3	7	13	2	3	6
				BT	15	30.6								3	4	1		3	1	2			1				
Irish Lake	6/27	2		BT	14	100.0							1	7	1	1			2	1				1			

/3 Size range, 4 to 12 inches.
/4 Size range, 8 to 16 inches.
/5 Size range, 4 to 5 inches.
/6 Mono nets.
/7 Only 58 lengths recorded.

Table 32 (continued)

Water	Date	Number Nets Set Gill	Number Nets Set Trap	Species	Number Fish Taken	Percent of Total	Length Range (Inches)	Number of Fish by One-Inch Size Groups (Fork Length) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Little Cultus Lake	6/24	2		BT	40	87.0						1	8	3	13	9	2	3	1								
				Rb	6	13.0								1	2	2	1										
Little Lava Lake	8/20		1	Rb	11	3.1					1	6	3			1											
				BT	6	1.7									2	2	1	1									
				Ro	341	95.2	/2																				
North Twin Lake	5/14	4		K	3	4.5									2	1											
				Rb	63	95.5									2	13	25	10	4								9
Paulina Lake	5/20	2		Rb	53	51.0							2	12	18	11	4	2	2	1	1						
				Ro	51	49.0						12	15	13	7	3	1										
	5/22		1	Rb	29	15.8						1	3	13	7	3	1	1									
				Ro	155	84.2		1			5	120	19	9	1												
	6/26	2		Rb	63	65.6							1	2	14	16	17	12	1								
				Ro	33	34.4					1	3	3	8	15	3											
	7/23	2		Rb	25	3.7									1	9	9	4	2								
				Ro	645	96.3	/8																				
	10/7		1	Rb	46	80.7					1	7	19	13		1	2	1	2								
				Ro	11	19.3	/9																				
Round Lake	8/28	2		Rb	1	6.3					1																
				BT	15	93.7									2	2	4	3	2	2							
South Twin Lake	4/23		1	Rb	196	96.6							4	24	48	65	24	16	1	5	3	1	1	2	1	1	
				Ro	7	3.4	/9																				
	9/5		1	Rb	13	41.9						1	8	2	1			1									
				Ro	18	58.1	/10																				
	10/9		1	Rb	10	9.1							4	6													
				Ro	100	90.9	/1																				

/1 Size range, 3 to 5 inches.
/2 Size range, 3 to 9 inches.
/8 Size range, 4 to 9 inches.
/9 Size range, 3 to 6 inches.
/10 Size range, 2 to 5 inches.

Table 32 (continued)

Water	Date	Number Nets Set Gill	Number Nets Set Trap	Species	Number Fish Taken	Percent of Total	Length Range (Inches)	Number of Fish by One-Inch Size Groups (Fork Length) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Sparks Lake	7/10	3		BT	121	98.4						5	43	20	15	5	1	9	6	6	9	1	1				
				AS	2	1.6						2															
Suttle Lake	4/22	/6		K	9	100.0				1	2	6															
	4/23	4		Br	13	20.3												1	2	1			1	2	1	2	3
				Wf	51	79.7						1	2	9	10	13	10	4	2								
	5/9	/6		K	5	100.0					2	3															
	5/12	/6		K	18	48.6					2	8	5	1	1	1											
				Br	3	8.1														1			1		1		
				Wf	16	43.3								2	6	7	1										
	7/2	/6		K	35	55.5					3	22	10														
				Br	2	3.2															1		1				
				Wf	26	41.3								4	16	4	1		1								
	10/14		1	Br	1	0.6													1								
				K	161 /11	99.4							3	11	1												
Taylor Lake	6/27	2		BT	18	100.0							1	5	5	1	2	1		2					1		
Three Creek Lake	6/24	2		Rb	18	90.0						1	6	6	5												
				BT	2	10.0							2														
	9/10-11		1	BT	9	30.0						1	2	2	2	1					1						
				Rb	21	70.0				2	3	4	3	2	5	1	1										
Todd Lake	8/5	2		BT	22	100.0							2	2	2	9	2	2	2	1							
Wickiup Reservoir	6/27	2		Rb	3	4.0						2			1												
				Br	3	4.0						1			1												1
				Co	5	6.7						1	2	1	1												
				K	2	2.7												2									
				Wf	30	40.0											2	1	8	8	5	5	1				
				Ro	32	42.6						3	5	11	8	4	1										

/6 Mono nets.
/11 Only 15 lengths recorded.

Table 32 (continued)

Water	Date	Number Nets Set: Gill	Number Nets Set: Trap	Species	Number Fish Taken	Percent of Total	Length Range (Inches)	Number of Fish by One-Inch Size Groups (Fork Length): 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Wickiup Reservoir (continued)	7/8	4		Co	31	7.4						1	17	7	6												
				Br	7	1.7							2								1					2	2
				Wf	28	6.7										1	3	4	6	3	4	4	1	2			
				Ro	355	84.2	/12																				
	8/14	2		Rb	1	0.2								1													2
				Br	3	0.5															1						
				K	1	0.2													1								
				Co	4	0.7											2	1	1								
				Wf	10	1.7									2			2	2		2	1	1				
				Ro	563	96.7	/13																				

/12 Size range, 4 to 8 inches.
/13 Size range, 5 to 11 inches.

KLAMATH DISTRICT

Wendell H. Stout

Creel data for district waters are included in Table 46.

Fish populations of various district waters obtained by netting are shown in Table 33. Approximately 28 percent of the kokanee caught at Crescent Lake in 1969 were marked hatchery fish. The average size of the kokanee in July was 10.6 inches in length, while at maturity in late September they were 12.3 inches in length.

Creel data for Klamath Lake anglers show that trout were taken at an average rate of 0.20 fish per hour; however, more than one-half of the trout caught were over 16 inches in length.

The fish food organisms in Lake of the Woods showed an increase over that recorded in the previous two years. Production over the period 1967 through 1969 has increased from 8.8 to 19.3 to 30.4 pounds are acre, respectively.

A systematic creel sampling program for the lower Williamson River and Spring Creek was undertaken in 1969. Life history data of wild trout and the contribution of hatchery fish will be obtained in the study. Approximately 38 percent of the anglers interviewed in the study were nonresidents. The catch rate for the study area was 0.28 fish per hour. It was estimated that 4,088 anglers fished a total of 13,624 hours to catch 3,808 trout in the period June 21 through September 12.

The water temperature in Klamath River reached a maximum of 79° F. on several occasions. The dissolved oxygen concentration was found to vary from less than one milligram per liter to supersaturation in a 24-hour period.

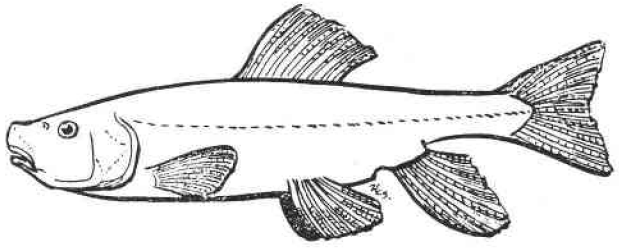


Table 33

Summary of Gill-Net and Trap-Net Collections, Klamath District, 1969

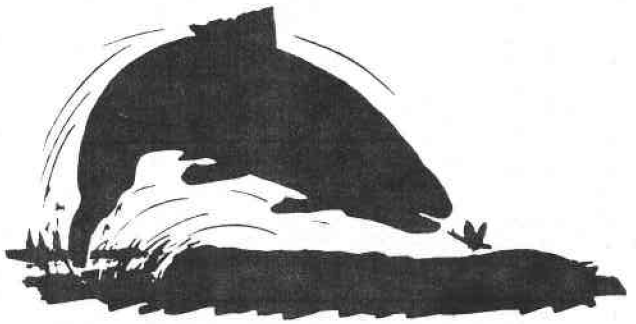
Water	Number Nets Set: Gill	Number Nets Set: Trap	Species	Number Fish Taken	Percent of Total	Average Size (Inches)	Number of Fish by One-Inch Size Groups (Fork Length): 4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Badger Lake	1		BT	16	100.0	9.2				1	7	6	1		1								
Bumphead Reservoir	2		WC	110	91.7	5.6	57	39	14														
			BC	1	0.8	6.3			1														
			LB	9	7.5	9.4						9											
Clover Lake	1		BT	22	100.0	7.6			15			3	3	1									
Fourmile Lake	4		BT	30	35.7	8.7			1	2	17	8	2										
			K	54	64.3	7.1			18	36													
Gerber Reservoir /1	1	1	YP	271	61.2	7.9	16	70	86	43	10	4	1										
			WC	79	17.8	10.0		5	1	3	6	12	4										
			BrB	60	13.5	6.7	14	22	10	1			2	7	2								
			BC	22	5.0	9.7			4		1	5											
			CSu	11	2.5	15.9										2	1	2			2		
Lake of the Woods /1	4		K /2	558	90.7	8.7					69	435	4										
			K /3	11	1.8	9.6					1	9		1									
			BT	38	6.2	8.8			6	4	10	12	5	1									
			BrB	8	1.3	6.3		4	3			1											
Miller Lake	4		Rb	66	71.0	8.6		2	30	8	5	10	2	3	4			1					1
			K	27	29.0	9.2			3		6	12	5	1									
Mystic Lake	4		BT	61	100.0	7.4			23	31	7												

/1 Not all of population sample measured.
/2 British Columbia kokanee.
/3 Montana kokanee.

Table 33 (continued)

Water	Number Nets Set Gill	Number Nets Set Trap	Species	Number Fish Taken	Percent of Total	Average Size (Inches)	Number of Fish by One-Inch Size Groups (Fork Length) 4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Odell Lake /4		/5	K-I	224	61.2	6.2 /6																	
			K-II	110	30.1	9.5 /7																	
			K-III	14	3.8	12.6 /8																	
			Ro	7	1.9	5.3 /9																	
			Wf	6	1.6	9.7 /10																	
			LT	5	1.4	26.1																	5
Squaw Lake	2		BT	71	100.0	9.6		1	9	11	15	12	3	5	2	7	4	2					
Willow Valley Reservoir	3		WC	223	57.5	6.0	58	25	81	36	15	6		2									
			BC	10	2.6	7.0			1	4	3	2											
			Bg	23	5.9	6.5		2	12	9													
			Ro	132	34.0	9.0																	
Woodpecker Lake	1		BT	6	100.0	13.2									2	4							

/4 Data from Research Division.
/5 Curtain net.
/6 Size range, 5 to 7 inches.
/7 Size range, 8 to 10 inches.
/8 Size range, 11 to 14 inches.
/9 Size range, 4 to 8 inches.
/10 Size range, 6 to 12 inches.



OCHOCO DISTRICT

Richard G. Herrig

Fish population composition and length frequency inventories in district waters are shown in Table 34.

Antelope Flat Reservoir had a severe winterkill because of a low minimum pool (75 acre-feet). A new diversion canal and a renegotiated minimum pool agreement for 250 acre-feet should lessen the possibility of future overwinter losses of trout.

The catch rate for anglers fishing Lake Billy Chinook was 0.43 fish per hour. Rainbow and kokanee provided approximately 60 percent and 35 percent of the catch, respectively.

The trout fishery at Lake Simtustus was good until June. There was a considerable loss of rainbow trout due to Ceratomyxa.

The catch rate for anglers fishing Ochoco Reservoir was 0.82 fish per hour. Most of the trout entering the creel were between 10 and 14 inches in length.

The catch rate at Prineville Reservoir was 0.33 fish per hour. The catch rate for 1968 was also 0.33 fish per hour. About 39 percent of the catch at Prineville Reservoir was warm-water game fish.

The first brown trout recorded for Prineville Reservoir was taken December 12 in an experimental gill net and weighed 9 pounds 2 ounces.

The catch rate for trout anglers fishing Crooked River below Prineville Reservoir was 0.38 fish per hour.

Haystack Reservoir was chemically treated to remove roach and suckers.

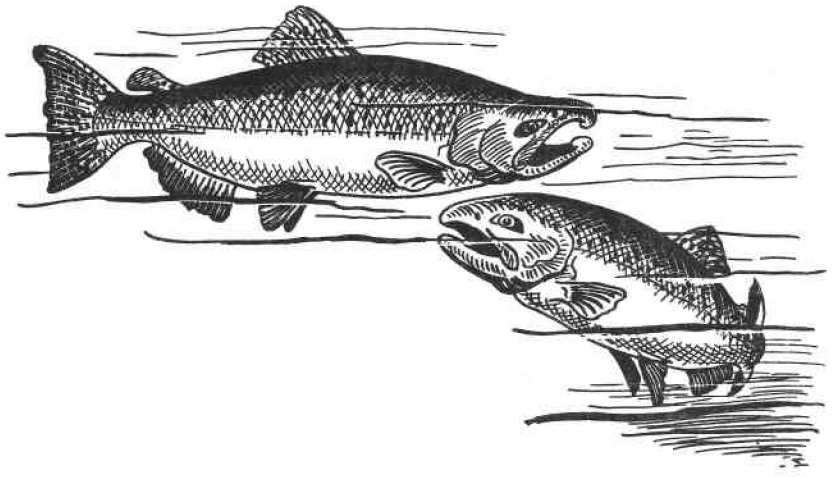


Table 34

Summary of Gill-Net Collections, Ochoco District, 1969

Water	Date	Number Nets Set	Species	Number Fish Taken	Fish per Net	Percent of Total	Number of Fish by One-Inch Size Groups (Fork Length) 4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Antelope Flat Reservoir	5/6	2		0 /1																			
Haystack Reservoir	7/31	2	K	2	1.0	0.7				2													
			BrB	2	1.0	0.7	1									1							
			Su	17	8.5	6.3			3	3	3	4	2	2									
			Ro	251 /2	125.5	92.3																	
	11/17	3	Br	1	0.3	1.2												1					
			Su	82	27.3	95.3			55	4	9	8	2	2	2								
			Ro	3	1.0	3.5				1	2												
Ochoco Reservoir	5/20	1	Rb	73	73.0	100.0	9	15	5	33	7	3	1										
	7/23	2	Rb	78	39.0	86.7	9	30	1	2	14	20	2										
			Su	12	6.0	13.3	9	2	1														
	11/18	2	Rb	126	63.0	99.2	1	1	3	9	45	24	24	19									
			Su	1	0.5	0.8				1													
Pelton Reservoir (Lake Simtustus)	3/11	4	Rb	5	1.3	4.3					1	1	1	1	1								
			Ch	1	0.3	0.9						1											
			DV	1	0.3	0.9														1			
			Su	56	14.0	48.3				1	1	9	9	10	14	6	1	1	3			1	
			Sq	43	10.8	37.0			1	9	10	4	6	2	3			3	2	2		1	
			Clm	10	2.5	8.6					2	3	4	1									
	12/12	3	Rb	2	0.7	1.9							2										
			Ch	9	3.0	8.4					7	2											
			Su	56	18.7	52.3				1	1	2	6	15	5	20	3		2	1			
			Sq	30	10.0	28.0				3	1	5	9	2	4	2	1	1		2			
			Clm	5	1.7	4.7					2	1		1	1								
			/3	5	1.7	4.7																	

/1 No fish taken -- winterkill.
/2 Twenty-four pounds.
/3 Unidentified rough fish.

Table 34 (continued)

Water	Date	Number Nets Set	Species	Number Fish Taken	Fish per Net	Percent of Total	Number of Fish by One-Inch Size Groups (Fork Length)														
							4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Prineville Reservoir	4/25	3	Rb	30	10.0	46.9			2	1	4		1	5	2	4	8	3					
			BrB	5	1.7	7.8					1		1	2	1								
			LB	2	0.7	3.1	1		1														
			SB	1	0.3	1.6					1												
			Su	13	4.3	20.3					2	2	1	5	2			1					
			Sq	5	1.7	7.8					3		1		1								
			Clm	8	2.7	12.5			1	3	4												
	7/8	4	Rb	9	2.3	21.4				3		1	2	1	1		1						
			LB	2	0.5	4.8	1				1												
			Su	28	7.0	66.6					1	2	3	1	5	4	5	3	3	1			
			Sq	2	0.5	4.8								1				1					
			Clm	1	0.3	2.4						1											
	12/10	4	Rb	103	25.8	78.0	1		14	2		5	49	23	4	2	3						
			Br	1	0.2	0.8																	1
			BrB	4	1.0	3.0								2	1	1							
			Su	23	5.8	17.4								4	3	1		5	3	4	3		
			Sq	1	0.2	0.8									1								
Round Butte Reservoir (Lake Billy Chinook)	3/5	4	Rb	11	2.8	10.6					2	4	2	1	1		1						
			K	2	0.5	1.9									2								
			Ch	1	0.3	1.0			1														
			DV	2	0.5	1.9							1										
			Su	65	16.2	62.5							8	16	21	13	4		2	1			1
			Sq	2	0.5	1.9									1				1				
			Clm	20	5.0	19.2				1	17	2											
			Cot	1	0.3	1.0	1																
	8/17	4	Rb	7	1.8	2.7							3	3					1				
			Br	1	0.3	0.4											1						
			Wf	3	0.8	1.2								2	1								
			Su	168 /4	42.0	65.1																	
			Sq	24 /4	6.0	9.3																	
			Clm	31 /4	7.8	12.0																	
			/3	24 /4	6.0	9.3																	
	11/25	3	Rb	9	3.0	7.1			1	2		2	3		1								
			DV	7	2.3	5.5						2		2			1	1					1
			Wf	9	3.0	7.1						1	3	5									
			Su	81	27.0	63.8					2	1	8	28	21	12	3	3	2	1			
			Sq	6	2.0	4.7								1	3	2							
			Clm	10	3.3	7.9				1	2	3	4										
			/3	5	1.7	3.9																	
Walton Lake	5/7	1	Rb	34	34.0	100.0					1	12	10	3	5	3							

/3 Unidentified rough fish.
/4 Net measured.

JOHN DAY DISTRICT

James A. Hewkin

Steelhead creel data for district streams are included in Table 48.

Steelhead spawning ground inventory in district streams for the period 1959 through 1969 is shown in Table 35.

A spring chinook spawning ground survey for the years 1959 through 1969 is presented in Table 36.

Creel data for trout waters in the district are included in Table 46.

Fish population inventory data are presented in Table 37.

A 35-mile section of the North Fork John Day River was chemically treated in August. Suckers, redside shiners, dace, cottids, and lamprey were destroyed.

The lower 23 miles of Long Creek, tributary to the Middle Fork John Day River, were treated in July. Eight species of nongame fish were destroyed in the section treated.

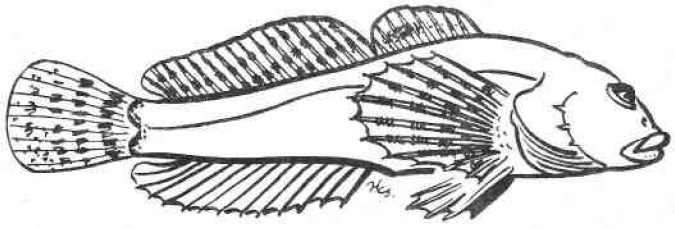


Table 35

Comparative Steelhead Spawning Density on Some Streams in John Day District

Stream	Average Number of Redds per Mile Surveyed, by Year										
	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
Bear Creek (Wheeler)	9.0	3.3	3.0	4.0	2.3	3.0	4.8	11.7	18.0	14.5	6.2
Beaver Creek						4.0		18.5		4.5	7.5
Beech Creek								24.4	12.8	3.7	4.4
Beech Creek, East Fork				3.3				31.1	13.7	5.1	11.5
Black Canyon Creek											17.1
Bridge Creek							9.6	8.4		5.0	
Cable Creek					2.3	6.4	4.7	11.5	2.8	6.6	
Camas Creek					7.0	6.0	4.0	12.0	11.1	4.4	9.2
Camp Creek								21.6	11.3	6.0	4.0
Canyon Creek	4.0	2.2	6.3	4.0	10.2	12.7	5.3	13.6	25.8	15.1	9.7
Cottonwood Creek	3.0	5.0	6.5	4.0	8.5	1.5	8.5	7.5	14.0	0.0	2.0
Deep Creek									13.3	2.0	
Deer Creek											16.0
Fields Creek	11.6	2.1	2.4	2.0	8.4	5.6	2.4	28.4	12.0	0.0	2.4
Indian Creek							7.0	15.0	8.0		11.0
Kahler Creek							10.5	10.5	5.2	0.0	1.0
Lick Creek										9.0	
Lone Rock Creek						2.6	0.7	2.6			
Long Creek									4.8		
McClellan Creek				6.0				39.6	14.0	0.8	5.2
Murderers Creek		19.3	4.9	21.4	2.2	10.8	16.8	24.8	11.1	0.2	14.5
Olive Creek											10.0
Owing Creek							2.4	6.6	23.6	0.8	5.7
Parrish Creek	10.5	4.0	15.5	6.5	7.0	7.5	2.5	16.5	0.0	0.0	5.5
Rancheria Creek							11.0	12.0	6.6		4.0
Reynolds Creek			9.6	6.7	9.8	10.0	5.8	5.2	7.8	4.8	10.2
Riley Creek	9.0	16.0	7.0	8.0	19.0	10.0	4.0	24.0	11.3	0.0	3.3
Rudio Creek										2.6	
Tex Creek		21.6	17.2	3.2	2.0	2.0	37.5	22.4	10.0	1.2	14.0
Vance Creek							11.0	12.0	9.0		4.0
Wall Creek									9.6		10.5
Wind Creek											36.0
AVERAGE	7.8	9.2	8.0	6.3	7.1	6.3	8.2	16.5	10.8	3.9	9.0

Table 36

A 12-Year Summary of Chinook Salmon Spawning Density, John Day District, 1959 through 1969

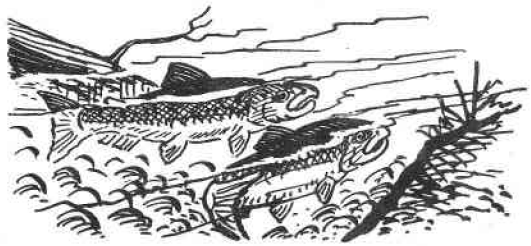
Year	Bull Run Creek	Clear Creek	Granite Creek	John Day River	John Day River Middle Fork	John Day River North Fork	Average Spawning Density
1959	/1	4.3	6.0	0.3	0.0	/1	2.6
1960	/1	16.3	10.0	0.7	3.2	/1	7.5
1961	/1	3.3	5.3	3.0	1.1	/1	3.2
1962	2.0	49.7	44.2	12.2	2.8	/1	22.2
1963	7.0	29.2	26.4	0.8	0.4	/1	12.7
1964	10.0	49.7	34.8	1.3	3.6	7.8	17.8
1965	7.5	16.7	24.4	5.8	3.7	8.1	11.0
1966	0.3	43.5	31.0	9.3	6.5	10.3	16.8
1967	6.0	38.5	19.4	7.1	1.7	5.5	13.0
1968	6.4	60.5	50.2	0.7	0.4	8.8	14.4
1969	15.6	13.7	16.8	9.3	4.8	20.5	13.3

/1 No survey.

Table 37

Summary of Gill-Net Collections, John Day District, 1969

Water	Season	Number Nets Set	Species	Number Fish Taken	Percent of Total	Average Size (Inches)	Number of Fish in One-Inch Size Groups											
							6	7	8	9	10	11	12	13	14	15	16	17
Bull Prairie Lake		2	BT	33	97.0	8.7	2	7	7	4	8	4	1					
			Rb	1	3.0	7.4		1										
Magone Lake	spring	3	BT	35	76.1	7.9		15	14	5						1		
			Rb	11	23.9	8.2	1		5	5								
	fall	3	BT	5	55.6	8.2		1	2	2								
			Rb	4	44.4	6.2	3	1										
Olive Lake		3	BT	74	74.0	10.6		5	8	11	10	17	10	3	6	2	1	1
			Rb	8	8.0	11.0		1		3		1		1			2	
			K	15	15.0	9.4			1	6	8							
			Ct	2	2.0	8.0			2									
			Cot	1	1.0													



ASTORIA DISTRICT

Warren M. Knispel

Creel data for anglers fishing the lower Columbia River and Pacific Ocean for salmon from Oregon ports are included in Table 47.

Catch data for north coast steelhead streams are included in Table 48.

Approximately 67 percent of the steelhead caught in the Necanicum River were marked hatchery fish.

Creel data on district waters are included in Table 46.

TILLAMOOK DISTRICT

David N. Heckeroth

Offshore salmon catch data are included in Table 47.

Salmon anglers fishing Tillamook Bay caught fish at a rate of about 23 hours per fish, which is similar to the past 5-year average.

Catch data for anglers fishing winter steelhead in Tillamook District streams are included in Table 48.

Summer steelhead in the Nestucca River were taken at an average rate of 13.8 hours per fish, which was a slight increase in the number of hours required to catch summer-run fish as compared with the years 1966 through 1968.

Creel data for the trout fishery in district streams are included in Table 46.

LINCOLN DISTRICT

John D. Fortune

Steelhead smolts planted in the upper Alsea River produced more adult steelhead to the angler than did a similar plant of smolts in the lower river. Approximately 84 percent of the adult steelhead trapped at the hatchery on the North Fork Alsea River were marked fish.

Results of an underwater survey of adult summer steelhead in the Siletz River conducted for the years 1960 through 1969 are shown in Table 38. Summer steelhead smolts planted in the lower Siletz River produced a higher percentage of returnees to the angler than did smolts planted in the North Fork of Siletz River. About 72 percent of the summer steelhead trapped in the Siletz Falls ladder were marked hatchery fish.

Coho spawning ground counts are included in Table 49.

The catch rate for anglers fishing summer steelhead between June 1 and November 15 on the Siletz River was 22 hours per fish.

The offshore salmon catch data for Yaquina and Depoe Bays are included in Table 47.

The results of gill-net sampling in Devils Lake are shown in Table 39.

Creel data for district waters are included in Table 46.

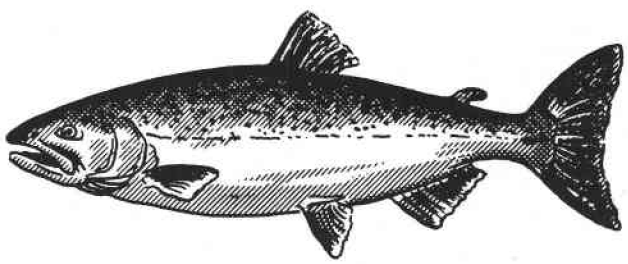


Table 38

Summer Steelhead Underwater Survey, Siletz River, 1960 through 1969

Year	Number Fish Observed		Percent Marked Steelhead
	Summer Steelhead	Chinook	
1960	443	24	33
1961	515		80
1962	284	52	48
1963	473	76	58
1964	264	23	73
1965	519	14	81
1966	867	4	93
1967	634	12	93
1968	249	5	76
1969	653	7	78 /1

/1 Marked percent recorded through trap; no mark observations were made during the count.

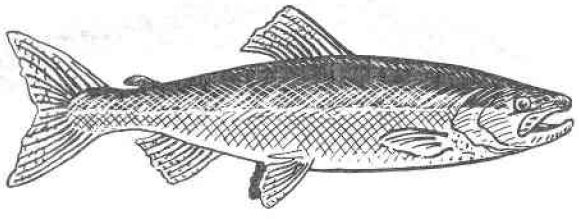
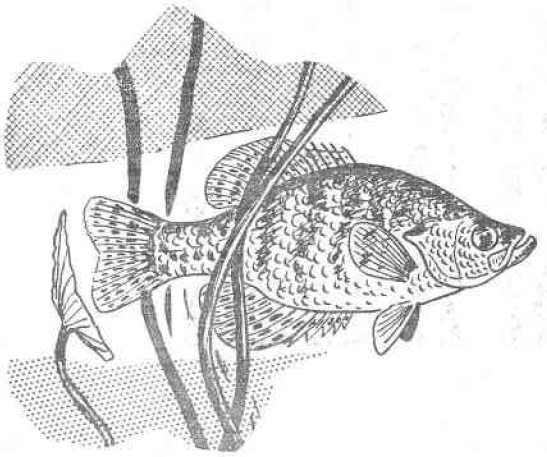


Table 39

Composition and Length Frequency of Catch by Five Gill Nets
in Devils Lake, Lincoln District,
November 13, 1969

Species	Number Fish Caught	Percent of Total	Number of Fish by One-Inch Size Groups										
			5	6	7	8	9	10	11	12	13	14	20 & Over
Rb	29	38.2				1		9	13	3	2	1	
Ct	1	1.3						1					
Co	1	1.3											1
LB	4	5.3			1	1		1			1		
WC	1	1.3						1					
BrB	35	46.0		3		2	3	15	11	1			
Cot	5	6.6	5										



COOS-COQUILLE DISTRICT

Edward H. Schwartz

Chinook salmon spawning ground surveys on the Coos River system indicated an increase over that recorded for 1968; however, the Coquille system showed a decrease.

Coho spawning ground data show an average of 39 fish per mile in the Coos River system and 22 fish per mile in the Coquille system.

In the Coos Bay offshore salmon fishery, an estimated 34,096 anglers caught 29,311 salmon. Creel data for the Coos Bay offshore fishery is included in Table 47.

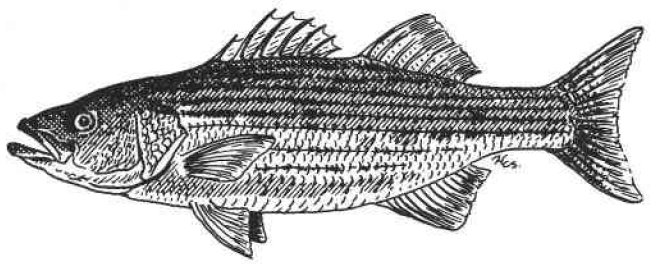
Anglers fishing salmon in the lower Coquille River had a catch rate of 26 hours per fish.

Steelhead anglers on the Coos and Coquille River systems had a catch rate of about 18 hours per fish.

Shad anglers on the Coos River system had a catch rate of 0.37 fish per hour.

Striped bass in Coos Bay were taken at a low rate of 0.13 fish per hour.

Creel data for district trout waters are included in Table 46.



SIUSLAW DISTRICT

James H. Hutchison

Data on the offshore salmon fishery out of Siuslaw Bay are included in Table 47.

The calculated total angling effort and catch for the Siuslaw Bay troll fishery for the period 1949 through 1969 are shown in Table 40. Approximately 25 percent of the cutthroat trout caught in the tidewater fishery were marked hatchery trout.

Steelhead anglers interviewed on Siuslaw River and Lake Creek reported a catch rate of 13 hours per fish. The observed hatchery steelhead contribution was 62 percent. Creel data for other district streams are included in Table 48.

Spawning ground counts for coho salmon are included in Table 49.

Creel data on the trout fishery of district waters are included in Table 46.

Table 41 shows results of fish population sampling with gill nets on twelve district waters.

Invertebrate fish food organism sampling at Siltcoos Lake revealed an average weight per acre of 121 pounds.

Seven gabions were placed in the Siuslaw River through a cooperative agreement between the Oregon Game Commission and Bureau of Land Management.

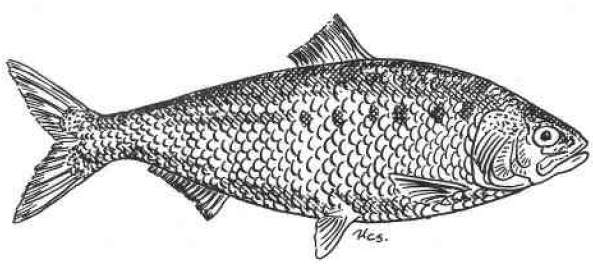


Table 40

Calculated Total Angling Effort and Catch,
Siuslaw Bay Troll Fishery,
1949 through 1969

Year	Boat-Days	Calculated Catch				Fish per Boat
		Cutthroat	Coho	Chinook	Jacks	
1949	5,869		2,900	240	660	
1950	3,803		989	38	570	
1951	2,771		1,672	43	671	
1952	2,849		1,713	61	678	
1953	4,979		2,501	221	1,158	
1954	6,363		3,881	318	3,117	
1955	5,030		2,515	50	1,358	
1956	4,154		1,994	29	2,035	
1957	10,637		7,552	308	7,020	
1958	14,148	11,362	5,660	398	8,307	1.82
1959	14,730	13,339	6,777	1,614	5,324	1.84
1960	7,268	9,961	1,243	239	1,774	1.82
1961	5,551	5,000	1,998	140	1,002	1.47
1962	6,418	10,684	1,019	217	1,212	2.05
1963	7,788	14,634	1,209	319	3,089	2.47
1964	11,257	16,200	3,807	397	2,881	2.07
1965	7,330	6,344	1,652	161	2,420	1.44
1966	7,969	5,698	1,004	83	582	0.92
1967	9,669	7,714	2,056	228	2,934	1.34
1968	9,554	9,853	1,718	346	1,296	1.38
1969	9,980	7,030	1,137	429	1,644	1.03
AVERAGE	7,495	9,818	2,619	280	2,368	2.00

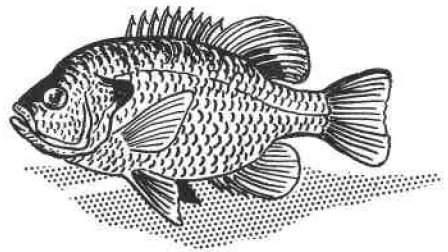
Table 41

Summary of Gill-Net Collections, Siuslaw District, 1969

Water	Date	Number Nets Set	Species	Number Fish Taken	Fish per Net	Average Size (Inches)	Number of Fish by One-Inch Size Groups (Fork Length)														
							4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Alder Lake	3/4	1	Rb	1	1.0	12.0									1								
Buck Lake	5/5	1	Rb	2	2.0	15.5												1	1				
Dune Lake	3/4	1		0																			
Erhart Lake	3/3	1		0																			
Lost Lake	3/3	2	Rb	1	0.5	12.1									1								
Nott Lake	3/3	3	Ct	3	1.0	12.6									1	2							
Perkins Lake	3/3	2	Ct	1	0.5	17.4														1			
Siltcoos Lagoon	3/3	1	BC	3	3.0	7.6				1	2												
			Bg	4	4.0	7.0				4													
			BrB	6	6.0	8.8							3	3									
			LB	4	4.0	12.0							1		2			1					
Siltcoos Lake	8/27	10	BC	48	4.8	7.8		2	13	1	13	12	4	2	1								
			Bg	72	7.2	5.5	13	28	16	4	7	4											
			BrB	42	4.2	11.3						3	3	18	14	4							
			Co	1	0.1	8.0					1												
			Ct	14	1.4	11.6						1	4	2	3		2	1		1			
			LB	10	1.0	11.6					2	2	3				2					1	
			Rb	6	0.6	13.4									2	1	3						
			StB	1	0.1	20.5																	1
			YP	14	1.4	7.3		4	2		5	2		1									

Table 41 (continued)

Water	Date	Number Nets Set	Species	Number Fish Taken	Fish per Net	Average Size (Inches)	Number of Fish by One-Inch Size Groups (Fork Length)															
							4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Tahkenitch Lake	9/3	10	BC	5	0.5	6.8			2	1	1	1											
			Bg	332	33.2	5.5	64	89	98	74	7												
			BrB	2	0.2	12.5								1			1						
			LB	19	1.9	9.8			2		3	4	4	2	1	1	1	1					
			WC	56	5.6	8.9				1	16	24	12	3									
			Wm	14	1.4	6.1	1	5	3	3	2												
			YP	26	2.6	8.1				2	14	9		1									
Triangle Lake	6/19	4	Bg	57	14.3	5.7	8	17	19	13													
			BrB	20	5.0	7.7			1	6	10	3											
			Ct	12	3.0	8.2				5	1	5	1										
			Pk	5	1.3	5.0		4	1														
			Sq	1	0.3	12.5										1							
			Su	7	1.8	14.7									1	1	1	1	2	1			
			YP	30	7.5	6.7			15	9	4	2											
Woahink Lake	9/2	5	Ct	1	0.2	8.0					1												
			K	15	3.0	8.7					2	13											
			LB	2	0.4	9.9					1				1								
			Rb	9	1.8	12.1								4	2	2	1						
			Sq	9	1.8	14.8								1	1		3		2			2	
			Su	3	0.6	17.2														2	1		
			YP	3	0.6	10.3							2	1									
			StW	1	0.2	25.0																	1



UMATILLA DISTRICT

Michael P. Golden

Flooding of the John Day pool practically eliminated the steelhead and salmon fisheries in the Umatilla District.

An estimated 1,900+ steelhead passed over Threemile Dam on the Umatilla River.

Although trout angling in the Umatilla River was good, there has been a definite increase in the number of undesirable species since the area was rehabilitated in 1967.

Jubilee Lake produced a catch rate of over one fish per hour, but the growth of trout was disappointing.

Creel data for resident fish are included in Table 46.

Results of fish population sampling with gill nets are shown in Table 42.

The John Day pool produced excellent smallmouth bass angling. John Day River Arm, Willow Creek, and Threemile Canyon were popular fishing areas.

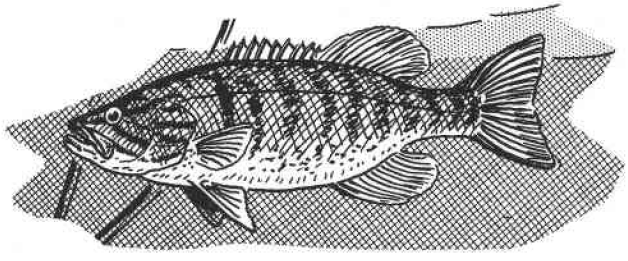


Table 42

Summary of Gill-Net Collections, Umatilla District, 1969

Water	Date	Number Gill Nets Set	Species	Number Fish Taken	Fish per Net	Percent of Total	Average Size (Inches)	Number of Fish by One-Inch Size Groups (Fork Length) 4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 & Over
Cold Springs Reservoir	9/29	2	Rb	11	5.5	7.0	17.10							1						2	3	5		
			LB	64	32.0	40.5	5.47	3	54	7														
			BrB	74	37.0	46.8	5.81	1	46	27														
			Cp	4	2.0	2.5	/1																	
			Su	5	2.5	3.2	/2																	
Jubilee Lake	5/23	2	Rb	40	20.0	100.0	7.8		10	4	3	5	15	2	1									
	11/7	2	Rb	13	6.5	100.0	6.2		3	10														
Lake Umatilla, John Day Arm	8/13	3	StS	2	0.6	0.8	28.3 /3																	
			SB	3	1.0	1.1	9.2		1						2									
			CC	3	1.0	1.1	9.8						2		1									
			WC	2	0.6	0.8	8.3					2												
			Wf	2	0.6	0.8	10.5							1	1									
			Sh	2	0.6	0.8	16.0												1		1			
			BrB	1	0.3	0.4	7.5				1													
			Su	88	29.3	33.5	/4																	
			Sq	103	34.3	39.3	/5																	
			Clm	39	13.0	14.9	/6																	
			Cp	15	5.0	5.7	/7																	
			RsS	2	0.6	0.8	/8																	
McKay Reservoir	5/1	3	Rb	6	2.0	8.7	11.7					1	1			1	3							
			LB	1	0.3	1.4	9.4						1											
			Su	48	16.0	69.6	/9																	
			Sq	14	4.6	20.3	/10																	
	10/31	3	Rb	12	4.0	8.5	11.8							1	7	3	1							
			LB	32	10.7	22.7	5.64	1	24	6	1													
			BrB	11	3.7	7.8	5.61		9	2														
			Bg	1	0.3	0.7	6.9			1														
			Su	82	27.3	58.2	/5																	
			Sq	3	1.0	2.1	/11																	

/1 Fish range 11 to 13 inches.
/2 Fish range 11 to 16 inches.
/3 One fish 30 inches and 9 pounds; one fish 26.5 inches and 7 pounds.
/4 Fish range 4 to 18 inches.
/5 Fish range 6 to 18 inches.
/6 Fish range 6 to 13 inches.
/7 Fish range 6 to 19 inches.
/8 Fish range 4 to 5 inches.
/9 Fish range 7 to 17 inches.
/10 Fish range 7 to 16 inches.
/11 Fish range 10 to 11 inches.

WARM-WATER GAME FISH

Ralph A. Grenfell

Adult largemouth bass were removed from the St. Paul Ponds when they were found to be heavily parasitized with the bass tapeworm. Young largemouth collected at Valsetz Lake will be held at St. Paul for brood stock.

Warm-water fish distribution for state waters is shown in Table 43.

Dissolved oxygen concentrations in a number of oxbow lakes adjacent to the Willamette River show much of the water below the thermocline will not support fish in midsummer. The dissolved oxygen concentrations below the thermocline in most oxbow lakes drops to zero by late summer.

The fish population of the Willamette River between Peoria and Albany was sampled with gill nets. The numbers and species taken in 216 hours of gill-net sampling are shown in Table 44.

Table 45 shows the results of 348 gill-net hours of fishing the Yamhill River. No channel catfish were taken in the Yamhill River.

Small channel catfish were taken at all nine gill-net stations on the Willamette River between Molalla River and lower Rock Island, indicating natural reproduction in the lower river.

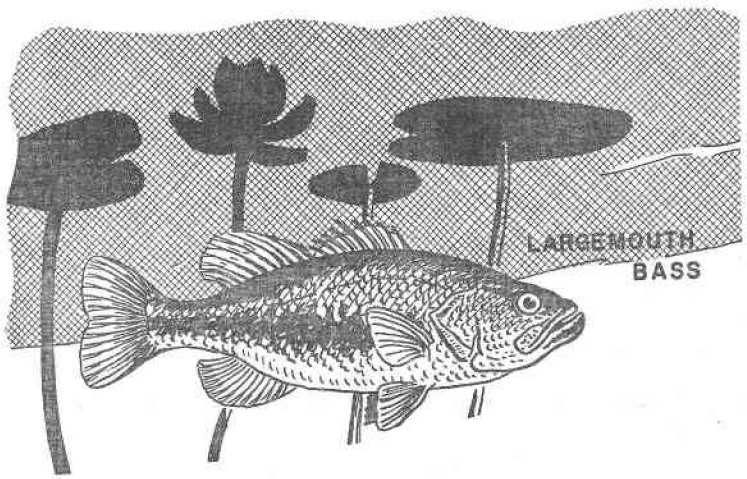


Table 43

Warm-Water Game Fish Stocking Record, 1969

Region	Watershed Stocked	Date	Species	Number Stocked	Size (Inches)
I	Erhart Lake	6/13	LB	30	6 to 9
	Lost Lake	6/13	LB	57	6 to 9
	Perkins Lake	6/13	LB	47	6 to 9
III	Lapine Junction railroad pond	11/6	BC	10	10
IV	Boardman Pond	6/12	LB	25	6 to 9
			Bg	25	4 to 9
	Cold Springs Reservoir	6/11	LB	878	6 to 9
			Bg	261	4 to 9
			WC	732	4 to 10
	Messner Ponds				
	No. 1 (small)	6/12	LB	20	6 to 9
			WC	20	4 to 10
	No. 2 (large)	6/12	LB	40	6 to 9
			WC	40	4 to 10
V	Chewaucan River	11/6	LB	30	10
	Warm Springs Reservoir	7/14	CC	1,198	4 to 17
	Jones Pond	3/27	CC	32	9 to 24

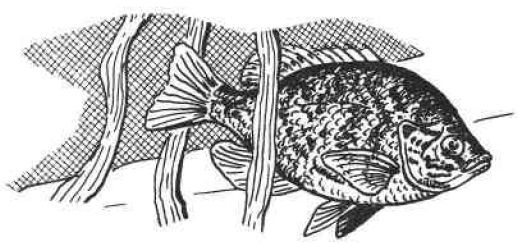


Table 44

Gill-Net Catch in the Willamette River, Peoria to Albany, 1969

Species	Number of Fish	Length Range (Inches)	Average Length (Inches)
CSu	126	6.6 to 18.9	12.9
Clm	115	5.7 to 12.5	9.5
Sq	67	5.8 to 18.4	11.0
CRC	16	6.9 to 11.2	9.1
Cp	16	8.6 to 23.6	16.1
Cot	3	5.3 to 6.1	5.7
RsS	2	4.8 to 5.1	4.9
WC	81	4.3 to 10.4	7.1
B	16	6.7 to 11.2	9.2
Bg	7	3.5 to 6.1	5.5
Wm	3	3.9 to 8.5	4.7
Ct	2	9.2 to 9.7	9.5
LB	1	10.3	10.3
BC	1	8.6	8.6

Table 45

South Fork Yamhill River Gill-Net Catch, June 19 to July 3, 1969

Species	Number of Fish	Length Range (Inches)	Average Length (Inches)
Sq	66	6.3 to 14.4	9.6
CSu	57	8.1 to 17.2	11.1
B	12	5.2 to 10.2	8.1
WC	6	6.0 to 8.7	7.9
Wm	4	4.6 to 6.2	6.1
LB	1	13.0	13.0
Ct	1	11.0	11.0
Clm	1	11.3	11.3
Cp	1	8.4	8.4

Table 46

Statewide Creel Census Summary for Streams, Lakes, and Reservoirs, 1969

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
STREAMS															
Abiqua Creek	2	Rb	2	43	10						55				
		Ct		2							2				
											57	45	97	1.3	0.59
Ana River	13	Rb	51	110	35	5					201				
		Co	3								3				
											204	46	133	4.4	1.53
Bear Creek	12	Rb	11	59	10	3					83				
		BT	1								1				
											84	39	61	2.2	1.38
Big Fall Creek	2	Rb	38	144	90	4					276				
		Ct	2								2				
		Wf			3						3				
											281	175	464	1.6	0.61
Big Luckiamute River	2	Rb		21	26	1					48				
		Ct	13	6	1						20				
											68	39	78	1.7	0.87
Blitzen River	12	Rb	20	37	193	306	22	9	2		589	132	367	4.5	1.60
Breitenbush River	2	Rb		26	7						33				
		Ct		1							1				
											34	27	65	1.3	0.52
Calapooia River	2	Rb	7	29	15	2	1				54				
		Ct		3							3				
		StW	1							11	12				
											69	122	276	0.6	0.25

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
STREAMS (continued)															
Camas Creek	13	Rb	27	83	1						111	37	111	3.0	1.00
Canyon Creek	6	Rb	15	30	3	1					49	26	73	1.9	0.67
Chewaucan River	13	Rb	47	220	437	3					707				
		B	52								52				
											759	199	598	3.8	1.27
Clackamas River	3	Rb	32	396	209		2				639				
		St								122	122				
		Co								1	1				
											762	729	3,072	1.0	0.25
Collawash River	3	Rb	7	52	17	1					77				
		BT					1				1				
											78	71	209	1.1	0.37
Coquille River, East Fork	17	Rb		46	179	6					231				
		Ct	1	28	64		2	1			96				
											327	124	527	2.6	0.62
Coquille River, South Fork	17	Rb		84	174	2					260				
		Ct		3	10	1					14				
											274	75	265	3.7	1.03
Crooked River, Lower	5	Rb	16	213	95	74	22	15	13	16	464	369	1,213	1.3	0.38
Dairy Creek	13	Rb	57	109	158	1					325				
		BT	29	12							41				
											366	94	233	3.9	1.57

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
STREAMS (continued)															
Dairy Creek, East Fork	2	Rb	6	52	75	1					134				
		Ct	7	15	8						30				
		BB		10	4						14				
											178	89	222	2.0	0.80
Dairy Creek, West Fork	2	Rb	2	2	1						5				
		Ct	24	7	4						35				
											40	26	94	1.5	0.43
Deep Creek	13	Rb	20	64	98						182	29	83	6.3	2.19
Deschutes River, Sec. 1 (Maupin area)	5	Rb	103	347	332	124	24	6	2		938				
		St								3	3				
		Wf				2	1				3				
											944	465	2,155	2.0	0.44
Deschutes River, Sec. 1 (Webb's Road)	5	Rb	13	7	3	13	3	2	4		45				
		St								1	1				
		Wf		5		1					6				
											52	94	267	0.6	0.19
Deschutes River, Sec. 2 (Trout Creek-South Junction)	5	Rb	270	738	1,085	598	206	58	10	3	2,968				
		St								9	9				
		DV		1	1						2				
		Ch	1	1				1	2	1	6				
		Wf			18	23		1	1		43				
											3,028	1,690	6,484	1.8	0.47
Deschutes River, Sec. 2 (Warm Springs Mecca)	5	Rb	279	1,170	1,345	389	235	86	20	5	3,529				
		St								5	5				
		K			2	1					3				
		DV	1	1	2	1		3			8				
		Ch	30	1					5	1	37				
		Wf			23	29	8				60				
											3,642	2,525	7,536	1.4	0.48

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
STREAMS (continued)															
Deschutes River, Sec. 4	5	Rb	4	251	49	2				2	308				
		Br	3	8	5	8	4	2			30				
		Wf		5	4						9				
											347	275	605	1.3	0.57
Drake Creek	13	Rb	34	29							63	36	76	1.8	0.83
Eagle Creek	3	St								21	21				
		Co					3			6	9				
		Ct				1					1				
											31	122	358	0.3	0.09
Elder Creek	13	Rb	48		22						70				
		BT		5	39	19	2				65				
											135	48	197	2.8	0.69
Emigrant Creek	12	Rb	58	39	67	32	1				197	71	135	2.8	1.46
Fall Creek	2	Rb	4	7	5	2					18	36	82	0.5	0.22
Fall River	5	Rb		43	47						90				
		BT	7	4							11				
		Br	2	1							3				
		Wf		1							1				
											105	38	99	2.8	1.06
Gales Creek	2	Rb	26	7	42					1	76				
		Ct	15	7	3		3				28				
											104	87	241	1.2	0.43
Hills Creek	2	Rb		38	121	12	1	3	4	10	189				
		Ct	5	2	1						8				
											197	107	339	1.8	0.58

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
STREAMS (continued)															
Hood River, East Fork	4	Rb	13	113	18						144				
		Ct	1								1				
											145	71	155	2.0	0.94
John Day River, South Fork	6	Rb	27	52	94	8					181				
		Sq		1							1				
											182	50	140	3.6	1.30
Klamath River	14	Rb	19	55	9	3	2	2			90				
		LB		1	2						3				
		WC	16								16				
		BrB	5	12							17				
											126	82	144	1.5	0.88
Link River	14	Rb				2		2		4	8	47	78	0.2	0.10
Little Luckiamute River	2	Rb	2	20	42						64				
		Ct	2	5	1						8				
											72	56	85	1.3	0.85
Little Malheur River	10	Rb	7	9	38	49	1				104	35	104	3.0	1.00
Little North Santiam River	2	Rb	12	47	35	2					96				
		Ct	6	2							8				
		Wf			2	1					3				
											107	74	128	1.4	0.84
Long Tom River	2	Ct	1	6	7	5					19				
		LB		2	3						5				
		WC	21	13	1	1					36				
		Bg	10								10				
		BrB	48	2							50				
		Co	1								1				
		Cot	1								1				
											122	92	117	1.3	1.04

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
STREAMS (continued)															
Lost Creek	3	Rb	2	15	9						26	27	68	1.0	0.38
Lost River	14	LB			1	3					4				
		WC	37	3	2						42				
		YP	63	32							95				
		BrB	36	31							67				
											208	174	207	1.2	1.00
Lostine River	8	Rb	6	27							33				
		BT	25								25				
											58	27	90	2.1	6.44
Malheur River, Sec. A	10	Rb	37	100	262	52	3				454	109	255	4.2	1.78
Malheur River, Middle Fork	10	Rb	68	123	112	60	4				367				
		DV	1								1				
		Wf			4						4				
											372	91	326	4.1	1.14
Malheur River, North Fork	10	Rb	21	33	110	95	1	2			262	100	226	2.6	1.16
Malheur River, South Fork	10	Rb	4	68	235	108	32	1			448				
		BrB	1	2	3						6				
											454	89	338	5.1	1.34
McKay Creek	7	Rb	4	26	116	154	1				301	103	347	2.9	0.87

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
STREAMS (continued)															
McKenzie River	2	Rb	46	292	129	14					481				
		Ct		1	1						2				
		DV						1			1				
		ChS	6	5							11				
		Wf		2	3	1					6				
		StS	28	36							64				
											565	427	1,227	1.3	0.46
McKenzie River, South Fork	2	Rb	22	26	14	3					65				
		Ct	10	1							11				
		DV				1					1				
		Wf			1						1				
		Co	2								2				
											80	39	114	2.1	0.70
Metolius River	5	Rb	2	96	61	7					166				
		DV		2		4	2		2		10				
		Br		8	5	1					14				
											190	169	354	1.1	0.54
Mohawk River	2	Rb	3	37	14					1	55				
		Ct			1						1				
											56	37	104	1.5	0.54
Molalla River	2	Rb	10	30	14						54				
		St								6	6				
		Ct	8	3							11				
											71	72	152	1.0	0.47
Mosby Creek	2	Rb	8	23	6	1					38				
		Ct	2	6	2						10				
											48	31	118	1.5	0.41
Necanicum River	1	Ct		149							149	43	91	3.5	1.64

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
STREAMS (continued)															
Nehalem River	1	Ct		365	26	9					400	120	244	3.3	1.64
North Santiam River	2	Rb	53	208	148	2					411				
		Ct	12	3							15				
		St								11	11				
											437	227	460	1.9	0.95
North Umpqua River	16	Rb	8	402	1,701	457					2,568				
		Ct			4	2	1				7				
		Br			1	2					3				
											2,578	1,805	3,811	1.4	0.68
Owyhee River, Sec. B	11	Rb		79	61	1			1		142				
		BC	1								1				
		BlB	2								2				
											145	67	164	2.2	0.88
Powder River	9	Rb	43	32	12						87				
		Ct		1							1				
											88	48	102	1.8	0.86
Row River	2	Rb	1	23	9	2					35				
		Ct		1							1				
		BrB	1	1							2				
		Co		16							16				
											54	40	87	1.4	0.62
Salmon Creek	2	Rb	5	44	134	3		1			187				
		Ct	9	2							11				
											198	78	223	2.5	0.89
Salmon River	3	Rb	6	55	24						85	55	77	1.5	1.10

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
STREAMS (continued)															
Salt Creek	2	Rb	20	17	86	18	1	1			143				
		Ct	8	1							9				
											152	56	178	2.7	0.85
Sandy River	3	St							1	134	135				
		Ch								2	2				
		Co					1			2	3				
											140	632	1,801	0.2	0.08
Scappoose Creek, North Fork	3	Rb	6	27							33				
		Ct	11	7	2						20				
		St	11								11				
											64	29	108	2.2	0.59
Sharps Creek	2	Rb	7	32	20	1					60				
		Ct	14	14	1						29				
											89	31	96	2.9	0.93
Smith River	16	Rb			137						137				
		Ct		30	45	11					86				
											223	76	213	2.9	1.05
Spring Creek	14	Rb	29	1,167	901	32					2,129				
		BT	74	10	2			2			88				
											2,217	1,216	2,742	1.8	0.80
South Coos River	17	Rb	1	20	22						43				
		Ct		16	42	2		1			61				
											104	74	198	1.4	0.53
South Santiam River	2	Rb	15	120	188						323				
		Ct		4							4				
		Ch	1								1				
											328	144	273	2.3	1.20

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
STREAMS (continued)															
Summit Creek	10	Rb	57	11	1						69				
		BT	24	12	1						37				
											106	25	44	4.2	2.41
Thomas Creek	2	Rb	16	13							29				
		Ct		2							2				
											31	27	37	1.1	0.84
Trout Creek, No. 1	12	Rb	105	24	22	10					161	31	80	5.2	2.01
Tualatin River	2	Rb	3	3	12						18				
		Ct	3	4							7				
		C	11								11				
		B		6							6				
											42	108	278	0.4	0.15
Tumalo Creek	5	Rb	10	113	5						128				
		BT	5								5				
											133	72	122	1.8	1.09
Umatilla River	7	Rb	326	348	433	82	40	1	3		1,233				
		DV	1								1				
		BrB	3								3				
		Wf			3						3				
											1,240	759	1,694	1.6	0.73
Walla Walla River	7	Rb	91	111	87	4					293				
		DV	11	3	2	1		4	1		22				
											315	123	249	2.6	1.27
Wiley Creek	2	Rb	2	3							5				
		Ct	1								1				
		St								2	2				
											8	29	43	0.3	0.19

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
STREAMS (continued)															
Willamette River, Coast Fork	2	Rb	3	61	35						99				
		Ct	41	44	6						91				
		ChS	1	2	1						4				
		LB		1							1				
		SB			1						1				
		Bg	4								4				
		BrB	30								30				
		Co		2	1						3				
											233	147	307	1.6	0.76
Willamette River, Middle Fork	2	Rb	17	282	584	113	3	1	8	1	1,009				
		Ct	17	5							22				
		StW		2						4	6				
		DV						1		1	2				
		ChS								5	5				
		Wf		1	4	1					6				
		BrB		1							1				
		Clm			3						3				
											1,054	401	1,305	2.6	0.81
Willamette River, North Fork	2	Rb	12	84	61	8					165				
		Ct	11	9	1						21				
		Wf				1					1				
											187	91	280	2.1	0.67
Williamson River	14	Rb	101	1,157	1,375	213	236	176	60	125	3,443				
		BT	77	13	2			2			94				
		Mu							6	58	64				
											3,601	4,255	13,932	0.8	0.26
Wood River	14	Rb	4	15	31	9					59				
		BT	1			1					2				
		Br				1	1		3		5				
											66	32	104	2.1	0.63

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
LAKES AND RESERVOIRS															
Agate Reservoir	15	Rb			1						1				
		LB		1							1				
		BrB		2	4						6				
											8	70	201	0.1	0.04
Agency Lake	14	Rb	1	1	4	9	8	14	18	20	75				
		Br					1		1		2				
		YP				63					63				
		BrB				4					4				
											144	133	607	1.1	0.24
Ann Lake	2	BT	16	33	93	49	2				193	66	249	2.9	0.78
Antelope Reservoir	11	Rb	28	24	12	21	47	19	1		152				
		Ct			4	56	6				66				
											218	176	669	1.2	0.33
Badger Lake	5	Rb	13	70	27						110				
		BT		7							7				
											117	77	239	1.5	0.49
Bibby Pond	2	Rb	1	17	13						31				
		LB			1						1				
											32	79	129	0.4	0.25
Big Creek Reservoir	18	Rb		80				3			83				
		Co		5							5				
											88	53	111	1.7	0.79
Big Cultus Lake	5	Rb	1								1				
		LT				1		2	11	1	15				
											16	29	149	0.6	0.11

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
LAKES AND RESERVOIRS (contd.)															
Big Lava Lake	5	BT	8	87	473	144	9				721	204	790	3.5	0.91
Blair Lake	2	BT	8	9	26	21	4	3			71	33	135	2.2	0.53
Blue Lake	5	Rb	2	86	50	1					139				
		BT			1						1				
		K	8								8				
											148	71	201	2.1	0.74
Blue River Reservoir	2	Rb		39	77	2	4	10	7		139				
		Ct	2	2							4				
											143	66	200	2.2	0.72
Bradley Lake	17	Rb		11	36	4					51				
		Ct		2							2				
											53	57	159	0.9	0.33
Bull Prairie Reservoir	6	Rb	668	134	30	1					833				
		BT	106	218	48	5					377				
		K	1	2							3				
											1,213	548	1,387	2.2	0.87
Burns Gravel Pond	12	Rb	1	23	100	26	1				151				
		Ct						1			1				
		LB	1								1				
											153	61	105	2.5	1.46
Campbell Lake	13	Rb	54	152	285						491	208	774	2.4	0.63
Canyon Creek Meadows Reservoir	6	Rb	1	2	2	1	1				7				
		Ct		4	3						7				
		BT		10	6	2					18				
											32	28	87	1.1	0.37

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
LAKES AND RESERVOIRS (contd.)															
Carmen Reservoir	2	Rb	1	10	105	1	1				118				
		BT			1						1				
											119	145	332	0.8	0.36
Carter Lake	18	Rb		153	40					17	210	116	382	1.8	0.55
Chickahominy Reservoir	12	Rb	52	4	10	11					77	35	112	2.2	0.69
Clear Lake	2	Rb	7	201	349	27	2				586				
		BT	1	8	11	3	1				24				
											610	240	976	2.5	0.63
Clear Lake	5	Rb	41	5	28	16	5			2	97				
		BT					1	1			2				
											99	54	179	1.8	0.55
Coffenbury Lake	1	Rb		171	3					1	175	85	267	2.1	0.66
Collins Lake	3	Rb	8	18	10						36				
		BT	1		1						2				
											38	26	68	1.5	0.56
Cottage Grove Reservoir	2	Rb	1	4	14	8	1				28				
		Ct		3	3						6				
		Ch	38	56	28						122				
		SB	2				2				4				
		BrB	25	8							33				
		LB	8		1						9				
		Co	12	29	4						45				
											247	113	260	2.2	0.95

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
LAKES AND RESERVOIRS (contd.)															
Cottonwood Meadows Lake	13	Rb	17	162	204	7	3				393				
		BT		29		1			1		31				
		K		7							7				
											431	115	389	3.7	1.11
Cottonwood Reservoir	13	Rb	81	32							113	31	85	3.6	1.33
Cougar Reservoir	2	Rb	14	155	112	15	6	2		2	306				
		Co	179	32							211				
											517	196	698	2.6	0.74
Crane Prairie Reservoir	5	Rb	28	41	49	49	27	7	2	6	209				
		BT	16	27	8	5	5				61				
		K		2	9	4					15				
		Wf		2						2	4				
		Co	2	1	5	3					11				
											300	389	1,431	0.8	0.21
Crescent Lake	5	Rb					1				1				
		K	9	148	193	91	6				447				
		LT					1			2	3				
											451	315	952	1.4	0.47
Davis Lake	5	Rb		4	9	7	10	25	39	36	130				
		K				1					1				
		Wf					3				3				
		Co					1				1				
											135	156	672	0.9	0.20
Deadhorse Lake	13	Rb	156	244	666	23					1,089				
		BT	5	23	18			1			47				
		K	33	12	1						46				
											1,182	316	1,473	3.7	0.80

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
LAKES AND RESERVOIRS (contd.)															
Delintment Lake	12	Rb		9	50	127	18				204	92	372	2.2	0.55
Detroit Reservoir	2	Rb	597	1,591	1,232	52	2	1			3,475				
		Co	38	33	2						73				
		K			6	3					9				
		Ch	2	3	2						7				
		BrB		2	1						3				
											3,567	1,038	3,535	3.4	1.01
Devils Lake	5	Rb	2	110	25						137				
		BT	2								2				
											139	61	198	2.3	0.70
Devils Lake	18	Rb		57	70	15	5				147				
		Ct						1			1				
		YP				1					1				
		BrB			18						54	/1			
											203	173	479	1.2	0.42
Dog Lake	13	Rb						1	1	2	4				
		Bg		7							7				
		YP	23	15	20						58				
		B					15				15				
		BB				1	9		1		11				
		C		6		15					21				
											116	35	201	3.3	0.58
Dorena Reservoir	2	Rb	54	115	59	8	1				237				
		Ct	3	7							10				
		LB	108	2	2	1					113				
		BrB	39	11			1				51				
		Co	26	9	1						36				
											447	239	570	1.9	0.78

/1 Size of 36 fish is unknown.

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
LAKES AND RESERVOIRS (contd.)															
Drews Reservoir	13	Rb	1	2	1	1					5				
		YP	20								20				
											25	38	90	0.7	0.28
East Lake	5	Rb	73	342	970	607	187	20	5	2	2,206				
		BT		27	162	230	54	2			475				
		Br		1	1	4	3	1	1	4	15				
											2,696	1,780	7,116	1.5	0.38
Eckman Lake	18	Rb		42	2	1					45				
		Ct		31	7		1				39				
											84	36	78	2.3	1.08
Eel Lake	17	Rb			97						97	67	293	1.4	0.33
Elbow Lake	18	Rb		50	9						59				
		Bg	1								1				
											60	51	86	1.2	0.70
Elk Lake	3	Rb	2	1							3				
		BT	37	25							62				
		K	6	26							32				
											97	48	158	2.0	0.61
Elk Lake	5	Rb		2	1						3				
		BT	6	48	29	10	2				95				
		K	14	98	1						113				
		AS	28	5							33				
											244	71	281	3.4	0.87
Fall Creek Reservoir	2	Rb	121	364	90	3	1				579				
		Ch	9	1	1						11				
											590	451	1,045	1.3	0.56

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
LAKES AND RESERVOIRS (contd.)															
Faraday Lake Reservoir	3	Rb	3	14	5						22	28	71	0.8	0.31
Fern Ridge Borrow Pit	2	Rb	16	38	3		3	5	1	2	68				
		Ct	1								1				
		WC	12	1							13				
		BrB	4								4				
											86	108	296	0.8	0.29
Fish Lake	12	Rb	9	79	345	214	8				655				
		BT	1	2	3	1	1				8				
											663	156	616	4.3	1.08
Fish Lake	15	Rb	27	27	8	8					70				
		BT	2	29	26	8					65				
											135	83	261	1.6	0.52
Foster Reservoir	2	Rb	63	87	11	3	23	11		5	203				
		St	76	272	4						352				
		Ch	18	3							21				
		SS		7	15						22				
		Co	1	7							8				
		Bg	9								9				
											615	235	749	2.6	0.82
Fourmile Lake	14	BT		1	3						4				
		K	14	73							87				
											91	26	57	3.5	1.60
Frog Lake	5	Rb	22	269	73						364	149	446	2.4	0.82
Gold Lake	2	Rb		4	14	11	15	3	1		48				
		BT	9	30	70	25	5				139				
											187	102	675	1.8	0.28

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
LAKES AND RESERVOIRS (contd.)															
Green Peter Reservoir	2	Rb	210	332	181	24	1	1			749				
		SS	1	50	755	17					823				
		Ch	23	25							48				
		St		18	8						26				
		Ct		1							1				
											1,647	415	1,559	4.0	1.06
Haines Pond No. 1	9	Rb	38	151	66						255				
		BrB	1	3	2						6				
											261	92	225	2.8	1.16
Haines Pond No. 2	9	Rb	73	31	1						105				
		BrB		1	2						3				
											108	40	52	2.7	2.08
Harriet Lake	3	Rb	5	20	4						29	30	90	1.0	0.32
Hat Rock Pond	7	Rb	43	129							172				
		SB	4	5							9				
		Bg	1								1				
		BC	1								1				
											183	172	416	1.1	0.44
Haystack Reservoir	5	Rb		2	3	1	1				7				
		BrB		4	1						5				
											12	25	93	0.5	0.13
Hells Canyon Reservoir	8	Rb		5	29	17	4	3			58	65	164	0.9	0.35
Higgins Reservoir	9	Rb	5	45	111	48	5	3			217				
		BT		1							1				
											218	66	278	3.3	0.78

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
LAKES AND RESERVOIRS (contd.)															
Hills Creek Reservoir	2	Rb	8	86	90	64	28	15	5	9	305				
		St			3	2	15	2			22				
		BrB	9	5	3	2					19				
		Co	1								1				
											347	343	1,242	1.0	0.28
Horse Lake	2	Rb		1			1				2				
		BT	134	98	101	29					362				
											364	102	390	3.6	0.93
Hosmer Lake	5	BT		3	5	2	14	1		1	26				
		AS			13	39	86	78	74	56	346				
											372	110	547	3.4	0.68
Howard Prairie Reservoir	15	Rb	223	5,602	448	25	2				6,300				
		BrB	3	83	8						94				
											6,394	1,027	3,787	6.2	1.69
Hyatt Lake	15	Rb	78	236	399	80	1				794				
		BT	2	17	13	1	2				35				
											829	230	697	3.6	1.19
Jubilee Lake	8	Rb	570	321	77	2					970	258	818	3.8	1.19
Kingsley Reservoir	4	Rb	1	68	23						92				
		BT		1							1				
											93	52	134	1.8	0.69
Kinney Lake	8	Rb		86	18						104				
		DV				1					1				
											105	42	76	2.5	1.38

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
LAKES AND RESERVOIRS (contd.)															
Klamath Lake	14	Rb	3	6	11	47	41	43	33	35	219				
		YP	20	7							27				
		Mu								3	3				
											249	358	1,264	0.7	0.20
Krumbo Reservoir	12	Rb		11	114	56	43	16	17	6	263	185	821	1.4	0.32
Lake of the Woods	14	Rb	19								19				
		BT		2							2				
		K		43							43				
											64	35	68	1.8	0.94
Leaburg Lake	2	Rb		16	17	1					34	31	96	1.1	0.35
Lemolo Reservoir	16	Rb	373	1,839	69						2,281				
		Br	21	79	194	66	13	5	4	2	384				
		K				45					45				
											2,710	464	1,706	5.8	1.59
Lemolo Reservoir, No. 2	16	Rb		18	10						28				
		Br		8	10	21	1	1			41				
		K				12					12				
											81	41	176	2.0	0.46
Linton Lake	2	BT	5	7	10	3					25				
		Br		3	7	6	4				20				
											45	31	132	1.5	0.34
Lofton Reservoir	13	Rb	1	246	55						302				
		BT		14							14				
											316	91	326	3.5	0.97

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
LAKES AND RESERVOIRS (contd.)															
Loon Lake	16	Rb			49						49				
		Ct		12	12						24				
											73	33	128	2.2	0.57
Lost Lake	2	Rb	181	119	10	15	17	3			345				
		BT	13	11	8	18	6	1			57				
											402	162	514	2.5	0.78
Lost Lake	4	Rb	4	137	56						197				
		Br		1	1						2				
		BT	1								1				
		K		1							1				
											201	93	206	2.2	0.98
Lost Lake	18	Rb		58	14						72	47	80	1.5	0.90
Lower Empire Lake	17	Rb		3	6						9	40	117	0.2	0.08
Lower Squaw Lake	15	Rb	2	22	29	9					62				
		Ct		27	20						47				
											109	35	161	3.1	0.68
Magone Lake	6	Rb	41	32	12						85				
		BT	37	187			1				225				
		K			4						4				
											314	84	259	3.7	1.21
Malheur Reservoir	10	Rb	182	1,639	1,104	320	32	3			3,280	653	3,708	5.0	0.89
Marie Lake	17	Rb			147						147	72	393	2.0	0.37

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
LAKES AND RESERVOIRS (contd.)															
Marion Lake	2	Rb	28	96	89	37	23	2			275				
		BT	29	108	91	34	2				264				
		Ct	2	2		2					6				
											545	192	791	2.8	0.69
McKay Reservoir	7	Rb	2	1	17	29	13	14			76				
		LB	163								163				
		Bg		14							14				
											253	138	361	1.8	0.70
McNary Pond	7	Rb	9	186	28						223				
		BC		20							20				
		LB		1							1				
		Bg	2								2				
											246	124	288	2.0	0.85
Mercer Lake	18	Rb		4	1	1					6				
		Ct		1	1						2				
		St								1	1				
		YP	10	6							16				
											25	27	58	0.9	0.43
Miller Lake	14	Rb	293	76	23	5	1			1	399				
		K	51	380	103	3					537				
											936	352	1,048	2.7	0.89
Morgan Lake	8	Rb	132	670	209	18	3				1,032				
		BT	1	80	76	6	3				166				
											1,198	710	2,779	1.7	0.43
Munsel Lake	18	Rb		115	33	5				18	171				
		BrB		1							1				
		K		2	6						8				
		Co				2	3	1			6				
		YP	2								2				
											188	84	356	2.2	0.53

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
LAKES AND RESERVOIRS (contd.)															
North Fork Reservoir	3	Rb	47	153	109	2	2				313				
		St	2								2				
											315	416	1,169	0.8	0.27
North Powder Pond, No. 1	9	Rb		26	11						37	31	56	1.2	0.66
North Powder Pond, No. 2	9	Rb		11	8						19	26	33	0.7	0.58
Ochoco Reservoir	5	Rb		24	106	160	24				314	126	385	2.5	0.82
Olalla Reservoir	18	Rb		77	73	2		3	7		162	64	193	2.5	0.84
Olallie Lake	5	Rb	11	276	112	9	1				409				
		BT	4	4	3	1					12				
		K	14	9							23				
											444	286	936	1.6	0.47
Olive Lake	6	Rb	3	12	8						23				
		Ct	1	2							3				
		BT	47	14	1		1				63				
		K		8							8				
											97	45	154	2.2	0.63
Paulina Lake	5	Rb	220	2,615	910	50	6	1			3,802	1,446	5,248	2.6	0.72
Pelton Reservoir (Lake Simtustus)	5	Rb	12	44	35	4	2			1	98				
		K			5	43					48				
		Ch	2								2				
		DV	1	1							2				
		Wf			1	1					2				
											152	136	480	1.1	0.32

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
LAKES AND RESERVOIRS (contd.)															
Phillips Reservoir	9	Rb	66	182	307	637	471	119	14		1,796				
		Ct		4	1	3	2				10				
		Co		5	3						8				
											1,814	1,631	4,916	1.1	0.37
Pole Creek Reservoir	10	Rb	12	304							316	64	185	4.9	1.71
Prineville Reservoir	5	Rb	113	94	73	114	99	14			507				
		LB	13	36	10	9	1				69				
		SB	12	23	3	4	2				44				
		BrB	22	62	109	17	1				211				
											831	787	2,493	1.1	0.33
Rock Creek Reservoir	5	Rb	58	214	59	8	2	1			342	161	493	2.1	0.69
Roslyn Lake	3	Rb	4	63	39		1				107	150	407	0.7	0.26
Roulet Pond	8	Rb	9	54	14	2					79	27	50	2.9	1.58
Round Butte Reservoir (Lake Billy Chinook)	5	Rb	77	423	776	119	27	4		4	1,430				
		K	10	31	96	659	37	1			834				
		DV	24	45	6	2	6	2	1	5	91				
		Br	1		2	2					5				
		Ch	1	9	2						12				
		Co	1				2	7			10				
		St					2				2				
		Wf			6	1					7				
		LB					1				1				
											2,392	1,339	5,548	1.8	0.43
Rowe Creek Reservoir	6	Rb		20	41	13					74	35	123	2.1	0.60

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
LAKES AND RESERVOIRS (contd.)															
Smith River Reservoir	2	Rb	1	77	48	2					128				
		BT		1							1				
											129	52	177	2.5	0.73
Soda Springs Reservoir	16	Rb		8	19	5					32				
		Br			7	10	2				19				
		BT									5				
											56	57	151	1.0	0.37
South Twin Lake	5	Rb		32	29	4	1				66	31	109	2.1	0.61
Sparks Lake	5	BT	22	100	52	17		2			193				
		AS		14	10	2		1	6	1	34				
											227	58	204	3.9	1.11
Squaw Lake	17	Rb		21	88	14					123	62	131	2.0	0.94
Strawberry Lake	6	Rb	2	21	6	3	6	1			39				
		BT			2	4	7	2	1		16				
											55	38	146	1.4	0.38
Sunset Lake	1	Rb		110						21	131	99	368	1.3	0.36
Suttle Lake	5	Rb	28	611	363	29	2				1,033				
		K	35	12	5						52				
		Br	1	9	18	11	3	3	1	3	49				
		Wf		2	2						4				
											1,138	544	2,088	2.1	0.55
Tenmile Lakes	17	Rb		750	150						900				
		Ct		200	42						242				
											1,142	238	867	4.8	1.32

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
LAKES AND RESERVOIRS (contd.)															
Timothy Lake	3	Rb	133	38	11	3					185				
		Ct	17	14	3	2	2		1	2	41				
		BT	50	54	18	9	8	2	1		142				
		K	417	239	2						658				
											1,026	732	2,072	1.4	0.50
Timpanogas Lake	2	Rb		16	7	1					24				
		BT	5	35	13						53				
											77	36	123	2.1	0.63
Trailbridge Reservoir	2	Rb	5	112	124	6	3				250				
		Ct	1								1				
		DV		1							1				
		BT		1							1				
											253	121	522	2.1	0.48
Trillium Lake	3	Rb	49	95	47						191	122	349	1.6	0.55
Unity Reservoir	9	Rb	69	162	106	30		1			368				
		Co	2	1	2	3	1				9				
											377	148	464	2.5	0.81
Upper Empire Lake	17	Rb		10	10	1					21	35	118	0.6	0.18
Upper Marilyn Lake	2	BT	1	4	18	20	11	1			55	26	140	2.1	0.39
Upper Squaw Lake	15	Rb	18	31							49				
		Ct	4	126							130				
											179	27	75	6.6	2.39

Table 46 (continued)

Water	Watershed	Species	Number of Fish by Two-Inch Size Groups 6-8	8-10	10-12	12-14	14-16	16-18	18-20	20 & Over	Total Fish	Total Anglers	Total Hours Fished	Fish per Angler	Fish per Hour
LAKES AND RESERVOIRS (contd.)															
Valsetz Lake	18	Ct		4	6	3					31 /2				
		St			5	1					9 /3				
		Br									2 /4				
		LB	15	15							33 /3				
		BrB	1								1				
											76	116	336	0.7	0.23
Waldo Lake	2	Rb			2						2				
		BT		1							1				
											3	32	132	0.1	0.02
Walton Lake	5	Rb		18	42	8		2			70	50	156	1.4	0.45
Weston Highway Pond	7	Rb	30	187	140	5					362	56	150	6.5	2.41
Wickiup Reservoir	5	Rb	13	10	1	3	2	3	1	1	34				
		BT		1	1		1				3				
		K		4	4						8				
		Br	1	4	1	1	2	1	3	3	16				
		Wf			3	1					4				
		Co	39	97	6	6	3				151				
											216	263	922	0.8	0.23
Wild Horse Lake	12	Ct	1	17	78	53	2	1			152	38	178	4.0	0.85
Willow Creek Reservoir	15	Rb	235	592	66	5			1		899				
		K	4	91	21	3					119				
											1,018	235	795	4.3	1.28
Yellow Jacket Lake	12	Rb	37	164	601	186	25	2			1,015				
		K			6	5	1				12				
											1,027	254	883	4.0	1.16

/2 Size of 18 fish is unknown.
/3 Size of 3 fish is unknown.
/4 Size of fish is unknown.

Table 47

Summary of Calculated Oregon Offshore Salmon Catch, 1969

Fishery	Angler Trips	Number Salmon Taken			Total Salmon	Fish per Angler
		Coho	Chinook	Pinks		
Brookings	14,338	3,289	3,801	31	7,121	0.50
Cape Kiwanda	15,608	10,433	466	266	11,165	0.72
Columbia River Mouth /1	49,793	50,329	9,972	851	61,152	1.23
Coos Bay	43,096	23,337	5,794	180	29,311	0.68
Depoe Bay	38,420	26,647	537	1,008	28,192	0.73
Garibaldi	12,082	8,743	499	118	9,360	0.77
Gold Beach	12,341	1,707	3,016	3	4,726	0.38
Siuslaw Bay	15,462	8,981	782	51	9,814	0.63
Winchester Bay	60,510	58,303	4,451	700	63,454	1.05
Yaquina Bay	56,216	28,219	1,874	635	30,728	0.55
TOTAL	317,866	219,988	31,192	3,843	255,023	
AVERAGE						0.802

/1 Oregon side only.

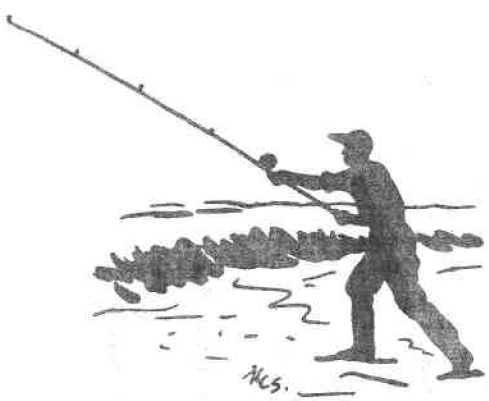


Table 48

Steelhead Catch Data, 1968-69

Stream	Number Anglers Interviewed	Hours Fished	Total Steelhead	Hours per Steelhead
Abiqua Creek	21	42	2	21.0
Applegate River	90	246	7	35.1
Big Creek (Clatsop County)	48	100	14	7.1
Big Elk River (Yaquina)	44	122	5	24.4
Chetco River	276	859	38	22.6
Coos River, South	78	383	11	34.8
Coquille River	345	1,648	89	18.5
Drift Creek (Alsea)	33	99	6	16.5
Drift Creek (Siletz)	95	312	27	11.6
Elk River	152	335	35	9.6
Euchre Creek	12	18	1	18.0
Floras Creek	16	49	4	12.3
Grande Ronde River	128	447	38	11.8
Hunter Creek	133	272	41	6.6
Imnaha River	431	1,594	92	17.3
John Day River	500	1,351	122	11.1
Kilchis River	62	127	8	15.9
Klaskanine River	18	48	10	4.8
Millicoma River	87	231	18	12.8
Millicoma River, E. Fk.	46	226	12	18.8
Millicoma River, W. Fk.	48	198	17	11.6
Necanicum River	128	357	38	9.4
Nehalem River	295	1,411	162	8.7
Nehalem River, N. Fk.	47	137	19	7.2
Nestucca River	1,213	5,877	649	9.1
Pistol River	104	225	18	12.5
Rogue River	2,024	7,220	506	14.3
Salmon River	286	710	69	10.3
Sandy River	632	1,801	135	13.3
Santiam River, Little N. Fk.	18	15	1	15.0
Santiam River, N. Fk.	25	29	2	14.5
Siletz River	640	2,210	256	8.6
Siuslaw River	1,787	6,162	474	14.0
Sixes River	52	100	6	16.7
Snake River	527	2,351	194	12.1
Trask River	103	285	19	15.0
Umatilla River	105	966	36	26.8
Wallowa River	18	35	1	35.0
Winchuck River	103	231	28	8.3
Wilson River	605	1,632	104	15.7
Yachats River	69	214	12	17.8
TOTAL	11,444	40,675	3,326	
AVERAGE				12.23

Table 49

Coho Spawning Ground Counts /1, 1969

Stream	Miles of Stream Surveyed	Coho			Total Coho per Mile
		Adults	Jacks	Total	
Coos River system	8.05	268	46	314	39.00
Coquille River system	12.00	223	36	259	21.00
Umpqua River system	25.75	267	192	459	17.82
Siletz River system	5.75			41	7.13
Yachats River system	1.75			12	6.85
Siuslaw River system	13.25	151	51	202	15.24
Siltcoos Lake system	4.00	284	81	365	91.25
Tahkenitch Lake system	1.50	247	183	430	286.66

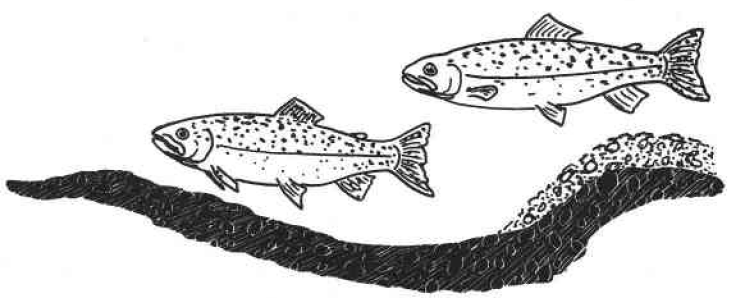
/1 Includes Fish Commission Counts.

Table 50

Fall Chinook Spawning Ground Counts /1, 1969

Stream	Miles of Stream Surveyed	Chinook			Total Chinook per Mile
		Adults	Jacks	Total	
Coquille River system	6.05	108	29	137	22.64
Coos River system	8.00	16	0	16	2.00
South Coast streams	5.25	67	8	75	14.28
Lower Umpqua system	7.25	87	21	108	14.89
Siuslaw River	7.00	25	4	29	7.14

/1 Includes Fish Commission Counts.



HABITAT IMPROVEMENT

Physical and biological stream surveys were continued in most districts.

The inspection and surveillance of gravel removal operations, water-right applications, pollution, and fishways were provided by most district biologists.

Irrigation diversion screens for the protection of downstream migrant salmon, steelhead, and trout were operated in the Rogue River system and in a number of Columbia River tributaries in northeastern Oregon.

Five lakes and reservoirs and three streams were chemically treated to remove undesirable fish in 1969. There was a total of 518 surface acres and 106.2 miles of streams treated. With the exception of the use of Fintrol on Eagle Lake, rotenone was used as the fish toxicant. An expenditure of $32,715 was used in chemical treatment projects.

Pertinent data on the chemical treatment program for 1969 are shown in Table 51.

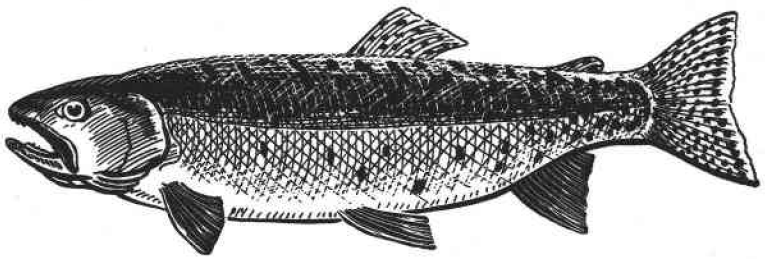


Table 51

Summary of Oregon State Game Commission Fishery Rehabilitation Projects, 1969

Water	Surface Acreage		Water Volume Treated		Miles of Stream Treated	Location by County	Month of Treatment	Chemical Used		Species of Undesirable Fish Removed	Estimated Cost of Total Project	Species of Fish Restocked
	At Treatment	At Normal	Acre-Feet	Cubic Feet per Second				Rotenone (Gallons)	Fintrol (Units)			
Bully Creek Reservoir	430	971	8,000		44.0	Malheur	October	5,755		sucker perch carp	$15,000	rainbow
Cedar Creek (Umpqua)				2	3.0	Lane	August	5		cottid dace	1,500	
Eagle Lake	36	36	1,155			Union	September		30	lake trout	6,000	brook trout
Haystack Reservoir	3	235	15		0.2	Jefferson	October	40		roach sucker	1,500	rainbow
John Day River, North Fork				140	35.0	Grant-Umatilla	August	330		sucker squawfish cottid	4,600	rainbow
Lake of the Woods	4	4	20			Douglas	August	8.5		bullhead catfish	115	rainbow
Long Creek				9	23.0	Grant	July	60		dace sucker redside shiner	1,000	rainbow
Platt I Reservoir	45	146	80		1.0	Douglas	October	100		brown bullhead bluegill	3,000	black bass crappie
TOTAL	518	1,392	9,270	151	106.2			6,298.5	30		$32,715	

FISH PROPAGATION

C. C. Jensen

The following tables cover the fish production data for 1969 at fifteen Oregon Game Commission hatcheries.

Annual egg production by species and hatchery, including exchanges, is shown in Tables 52 and 53. Table 54 summarizes the egg production annually from 1965 through 1969.

Fish production data by hatchery, showing liberations from each station and net pounds produced, are listed in Table 55.

Table 56 presents a comparison of conversion ratios (pounds of food fed as compared to pounds of fish liberated in the same calendar year) from 1965 through 1969.

Average food conversion ratios by species released in 1969 are shown in Table 57. The ratios represent the actual amounts of food fed to each group from the fry to release stage.

Fiscal year expenditures covering salaries, feed, maintenance and supplies, and capital costs are shown in Table 58 for each hatchery. Total costs in 1969 ($1,085,596) are somewhat higher than in the previous year ($883,414) because of salary increases and additional spending for maintenance, supplies, and capital construction. An expenditure for a new earthen pond at Cedar Creek Hatchery (approximately $77,000), financed by Anadromous Fish Act funds, is not included in total costs.

Production costs covering each phase of the operation for the past 12 years are shown in Table 59. Gross rearing costs for 1969 (from financial statements) totaled $0.69 per pound. Total costs, other than depreciation (includes liberation), equaled $0.81 per pound of fish reared. Depreciation of facilities would increase the cost to $0.92 per pound for 1969.

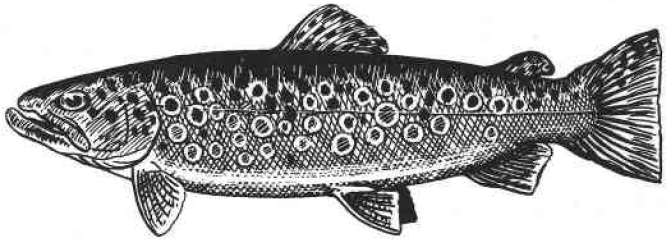


Table 52

Annual Egg Production Showing Contribution from Wild, Hatchery, and Imported Eggs from Other States, 1969

Species	Eggs from Wild Fish	Eggs from Hatchery Brood Fish	Eggs Imported	Eggs Exported
Spring Rainbow	500,000	5,108,500		
Fall Rainbow		20,322,460		1,140,180
Kamloops			55,400	
Cutthroat		2,956,110	494,100	106,310
Brook Trout	5,600,000			2,760,440
Brown Trout			161,200	
Golden Trout		139,490		
Tiger Trout		60,000		
Atlantic Salmon		246,670		
Kokanee	1,301,120		2,151,340	
Winter Steelhead /1	2,365,930			
Summer Steelhead	1,439,560		1,280,540	
Spring Chinook /2	1,461,890			
Fall Chinook /3	3,327,080			
Coho /4	1,526,260			252,000
TOTAL	17,521,840	28,833,230	4,142,580	4,258,930
TOTAL INCOMING EGGS		50,497,650		

/1 Includes 347,800 eggs from Big Creek Hatchery, Fish Commission of Oregon.

/2 Includes 400,500 eggs from Oakridge Hatchery, Fish Commission of Oregon.

/3 Includes 3,000,380 eggs from Big Creek and Bonneville Hatcheries, Fish Commission of Oregon.

/4 From Bonneville, Big Creek, and Trask Hatcheries, Fish Commission of Oregon.

Table 53

Number of Eggs Received at Oregon Egg-Taking Stations, 1969

Hatchery	Rainbow Trout		Cutthroat Trout	Brook Trout	Other Trout	Atlantic Salmon	Kokanee	Steelhead		Chinook Salmon		Coho Salmon	Total
	Spring	Fall						Winter	Summer	Spring	Fall		
Alsea			930,960					2,018,130				523,640	
(Fall Cr., FCO)											963,640		4,436,370
(Bonneville, FCO)													
Bandon			1,270,850										
(Lobster Cr.)											326,700		1,597,550
Butte Falls									268,870	93,470			
(Bonneville, FCO)											329,380		691,720
Cedar Creek			119,610										
(Nestucca)										60,240			
(Big Cr., FCO)											641,580		
(Trask River, FCO)												13,820	835,250
Fall River					60,000 /2								
(East Lake)				5,600,000									5,660,000
Gnat Creek													
(Big Cr., FCO)								347,800				520,000	
(Skamania, Wn.)									546,720				1,414,520
Hood River													
(Calif.)			201,600 /1										
(Round Butte)										581,500			
(Big Cr., FCO)												226,800	1,009,900
Klamath							1,301,120						
(Crescent Lake)													
(Mt. Whitney, Cal.)					161,200 /3								
(Colorado)							523,220						1,985,540
Leaburg		3,797,960	634,690										
(Oakridge, FCO)										400,500			4,833,150
Oak Springs		7,009,000											
(Natches, Wn.)									195,840				
(Somers, Mont.)							1,085,760						8,290,600

Table 53 (continued)

Hatchery	Rainbow Trout Spring	Rainbow Trout Fall	Cutthroat Trout	Brook Trout	Other Trout	Atlantic Salmon	Kokanee	Steelhead Winter	Steelhead Summer	Chinook Salmon Spring	Chinook Salmon Fall	Coho Salmon	Total
Roaring River		9,515,500							260,610				
(Siletz)													
(Strawberry Res., Utah)			292,500										10,068,610
Rock Creek									284,460	326,180			
(Diamond Lake)	500,000												
(Clark Fk., Idaho)	55,400 /5										1,065,780		2,231,820
(Bonneville, FCO)													
Willamette	5,108,500												5,108,500
Wallowa									537,980				537,980
(Oxbow, Idaho)													
Wizard Falls					139,490 /4	246,670							
(Round Butte)									625,620			242,000	
(Trask River, FCO)							542,360						1,796,140
(Somers, Mont.)													
TOTAL	5,663,900	20,322,460	3,450,210	5,600,000	360,690	246,670	3,452,460	2,365,930	2,720,100	1,461,890	3,327,080	1,526,260	50,497,650

/1 Heenan Lake Lahontan.
/2 Tiger trout.
/3 Brown trout.
/4 Golden trout.
/5 Kamloops.

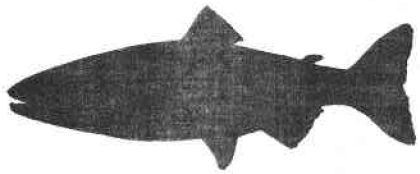


Table 54

Annual Number of Eggs Produced and Imported
from Other States and Countries
from 1965 through 1969

Species	1965	1966	1967	1968	1969
Spring Rainbow	8,521,730	4,684,554	6,480,750	9,294,510	5,608,500
Fall Rainbow	16,308,900	14,820,010	20,501,304	22,947,280	20,322,460
Kamloops Rainbow	389,500	132,600	593,732	88,180	55,400
Cutthroat Trout	1,430,500	1,200,880	2,409,663	1,543,230	3,450,210
Brook Trout	5,363,220	4,867,000	5,146,700	3,296,250	5,600,000
Brown and Tiger Trout	301,300	401,000	424,800	113,400	221,200 /1
Golden Trout	32,940	69,500	128,480		139,490
Winter Steelhead	2,264,830	2,519,536	2,609,771	2,320,680	2,365,930
Summer Steelhead	988,640	2,296,862 /2	2,783,041	1,743,846	2,720,100
Coho Salmon	1,393,500	1,413,000	491,000	1,591,130	1,526,260
Spring Chinook	378,850	408,045	1,011,785	932,730	1,461,890
Fall Chinook	625,520	2,022,480	1,902,464	1,567,740	3,327,080
Atlantic Salmon	747,140	768,420	608,037	230,740	246,670
Kokanee	2,561,050	2,626,320	2,603,886	1,934,910	3,452,460
TOTAL	41,307,620	38,230,207	47,695,413	47,604,626	50,497,650

/1 Includes 60,000 tiger trout eggs.

/2 Approximately 0.7 million eyed and hatched for Idaho.

Table 55

Summary of Annual Fish Production Data for Calendar Year 1969

Hatchery	Pounds of Food Fed		Total Pounds Food Fed	Fish Liberated from Hatcheries		Net Production (Including Transfers In and Out)	
	Brood Fish	Fry, Fingerling, and Yearling Fish		Number	Pounds	Number	Pounds
Alsea	8,439	211,000	219,439	873,368	95,669	1,394,973	94,794
Bandon	8,294	147,624	155,918	537,624	56,746	1,208,930	78,887
Butte Falls		176,811	176,811	957,779	83,800	659,726	87,208
Cedar Creek	1,116	190,790	191,906	530,933	80,202	1,073,559	83,654
Fall River	245	61,266	61,511	2,423,002	58,846	2,370,656	41,895
Gnat Creek		105,953	105,953	452,594	48,592	442,594	48,572
Hood River		69,472	69,472	720,898	40,754	320,585	24,237
Klamath		132,279	132,279	4,904,599	90,657	4,535,862	88,915
Leaburg	40,050	458,710	498,760	2,702,452	279,947	2,496,107	278,202
Oak Springs	70,350	312,225	382,575	4,058,100	185,522	5,198,183	203,828
Roaring River	61,450	163,527	224,977	667,479	145,146	667,479	145,146
Rock Creek		206,129	206,129	1,268,200	116,589	727,080	85,532
Wallowa	70	76,900	76,970	219,416	45,052	130,223	37,581
Willamette	41,360	156,269	197,629	1,244,483	116,530	1,297,358	117,935
Wizard Falls	3,192	220,116	223,308	3,088,319	127,234	3,620,835	158,895
TOTAL	234,566	2,689,071	2,923,637	24,649,246	1,571,286	26,144,150	1,575,281

NOTE: Not shown in table are 68,228 spring chinook weighing 9,814 pounds at Butte Falls, and 60,636 spring chinook weighing 9,885 pounds at Cedar Creek, which were planted early February 1970 rather than in late 1969 as heretofore programmed.

Table 56

Comparison of Conversion Ratios from 1965 through 1969
Computed from Net Pounds of Fish Liberated and Transferred
as Related to Pounds of Food Fed during the Calendar Year

Hatchery	Annual Net Fish Production in Pounds, with Conversion Ratios				
	1965	1966	1967	1968	1969
Alsea	41,948 2.52	56,538 2.82	86,133 1.87	98,771 2.08	94,794 2.23
Bandon	56,900 2.44	74,377 1.92	92,446 1.66	61,990 2.30	78,887 1.87
Butte Falls	46,197 2.49	74,021 1.42	61,567 2.40	112,184 1.85	87,208 2.03
Cedar Creek	61,811 2.16	67,239 2.10	86,481 1.90	104,083 1.88	83,654 2.28
Fall River	9,966 2.90	8,320 3.56	19,456 2.37	13,181 4.85	41,895 1.46
Gnat Creek	47,963 2.13	42,512 1.53	16,829 3.77	45,002 1.87	48,572 2.18
Hood River	22,758 2.24	24,704 2.51	16,088 2.56	18,995 2.06	24,237 2.87
Klamath	43,373 2.09	60,319 2.04	46,681 1.75	68,020 1.62	88,915 1.49
Leaburg	200,877 2.82	254,776 1.70	228,283 2.03	245,834 2.19	278,202 1.65
Oak Springs	166,112 1.74	137,037 1.53	154,711 1.38	159,714 1.71	203,828 1.53
Roaring River	88,210 1.76	97,467 1.66	89,638 1.72	117,210 1.66	145,146 1.13
Rock Creek	42,706 /1	3,536 /1	67,083 1.66	54,222 2.90	85,532 2.41
Wallowa	27,987 2.50	36,778 1.92	31,962 2.49	41,967 1.74	37,581 2.05
Willamette	13,391 /1	85,340 1.70	66,201 1.99	68,612 2.61	117,935 1.33
Wizard Falls	89,532 1.92	91,202 1.74	121,656 1.67	122,183 1.60	158,895 1.39
TOTAL AVERAGE	959,620 2.22	1,114,166 1.85	1,185,415 1.87	1,331,968 1.99	1,575,291 1.71

/1 Out of operation for most of year because of 1964-65 flood.

Table 57

Annual Food Conversion Factors
by Species from 1965 to 1969

Species	Food Conversion Factors by Years				
	1965	1966	1967	1968	1969
Rainbow Trout	1.88	1.74	1.77	1.78	1.77
Kamloops Trout				1.72	2.06
Cutthroat	1.76	1.83	1.79	1.99	1.73
Brook Trout	2.88	2.41	1.82	2.08	2.04
Brown Trout	3.47	4.23	3.94	1.63	
Lake Trout	2.16				
Steelhead	2.45	2.22	2.11	1.95	1.81
Kokanee	2.61	2.66	2.73	1.77	1.99
Atlantic Salmon		2.62	5.50	1.76	
Fall Chinook	2.16 /1	0.95	1.16	1.08	1.25
Spring Chinook		1.80	1.66	1.56	1.80
Coho Salmon	1.92	1.08	1.92	1.74	1.06
AVERAGE	1.97	1.85	1.82	1.80	1.78

NOTE: The above includes data from the fry stage to time of liberation for each group of fish. Weight of fry at start of feeding was not deducted.

/1 Fall and spring chinook are combined for 1965.

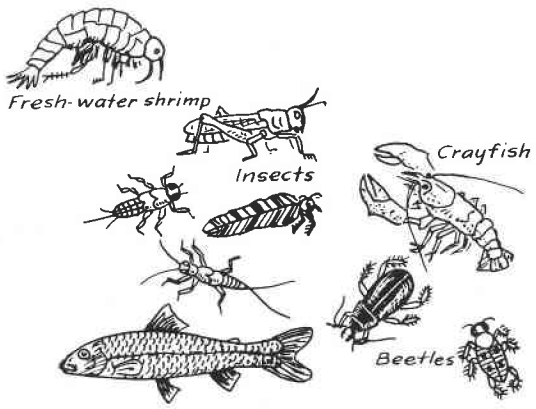


Table 58

Fiscal Year Hatchery Expenditures
as Shown on the June 1969 Financial Statement

Hatchery	Salaries	Feed	Maintenance and Supplies	Capital Expenses	Total Fiscal Costs
Alsea	$ 29,335	$ 23,987	$ 3,830	$ 1,296	$ 58,448
Bandon	28,019	22,454	3,842	950	55,265
Butte Falls	28,912	22,833	4,660		56,405
Cedar Creek	26,515	21,040	3,990	573 /2	52,118
Fall River	22,941	9,257	2,772	5,589	40,559
Gnat Creek	34,489	22,629 /1	10,380	204	67,702
Hood River	22,936	5,405	4,053	1,679	34,073
Klamath	30,152	14,754	5,167	12,000	62,073
Leaburg	51,815	62,594	11,448	285	126,142
Oak Springs	43,324	47,542	9,715	100,407	200,988
Roaring River	27,823	25,349	5,415	40,476	99,063
Rock Creek	34,812	19,979	5,252	3,256	63,299
Wallowa	20,358	6,382	4,549	78	31,367
Willamette	28,778	22,598	5,477	909	57,762
Wizard Falls	38,622	23,263	10,255	8,192	80,332
TOTAL	$468,831	$350,066	$90,805	$175,894	$1,085,596
PERCENT OF TOTAL	43.19	32.25	8.36	16.20	
ENDING JUNE 1968	$441,587	$287,880	$75,893	$ 28,054	$ 833,414
PERCENT OF TOTAL	52.99	34.54	9.11	3.36	

/1 Includes $10,000 obligated in June 1969 for use through April 1970.

/2 An expenditure for an earthen rearing pond (approximately $77,000), financed by Anadromous Fish Act money, not included.

Table 59

Summary of Fiscal Year Production Costs, 1958 through 1969

Year	Gross Pounds of Fish Liberated from Hatcheries	Fiscal Year Costs: Operation /1 Including Capital Expenditures	Fiscal Year Costs: Feed Only /2	Rearing Costs per Pound of Fish: Gross	Rearing Plus Liberation	Estimated Rearing and Liberation Plus Other /3	Feed Only /4	Total Costs Including Depreciation	Average Cost of Food per Pound	Pounds of Food Fed: Fiscal Year: First 6 Months	Pounds of Food Fed: Fiscal Year: Second 6 Months	Pounds of Food Fed: Total for Fiscal Year
1958	706,279	$ 651,455	$267,681	$0.9224	$1.0074		$0.3790		$0.0843	1,306,062	1,869,012	3,175,074
1959	685,773	730,880	267,819	1.0658	1.1508		0.3910		0.0917	1,670,965	1,249,067	2,920,032
1960	729,530	599,645	217,325	0.8220	0.8870		0.2980		0.1004	992,098	1,172,263	2,164,361
1961	951,838	638,106	219,716	0.6704	0.7554		0.2308		0.1006	870,660	1,245,827	2,116,487
1962	939,947	724,807	216,163	0.7711	0.8561		0.2300		0.1068	937,708	1,086,918	2,024,626
1963	1,075,458	983,391	291,531	0.9144	0.9950		0.2700		0.1300 0.1100 /5	944,839	1,278,911	2,223,750
1964	1,076,288	689,237	251,793	0.6403	0.7253	$0.7850	0.2339		0.1121	1,071,511	1,174,614	2,246,125
1965	958,750	728,390	248,295	0.7597	0.8447	0.8865	0.2590	$1.000	0.1136	929,028	1,256,541	2,185,569
1966	1,087,291	682,753	240,651	0.6279	0.7129	0.7441 /6	0.2213	0.830	0.1073	1,067,968	1,174,275	2,242,243
1967	1,184,808	735,573	243,528	0.6208	0.7058	0.7289	0.2055	0.813	0.1021	1,178,328	1,207,078	2,385,406
1968	1,325,123	833,414	287,880	0.6289	0.7039	0.7513	0.2172	0.883	0.1092	1,228,860	1,406,482	2,635,342
1969	1,571,286	1,085,596	350,066 /7	0.6909	0.7562	0.8068	0.2228	0.9182	0.1160	1,433,908	1,584,833	3,018,741

/1 Excludes automotive and related supplies, feed transportation, retirement, salary overhead, postage, and office supplies (except Leaburg and Gnat Creek in 1963, and 1965 through 1969).

/2 Food inventory not deducted.

/3 Includes salary overhead, retirement, feed transportation, and automotive; excludes depreciation of facilities. (Hatcheries evaluated at approximately 7 million dollars in 1968 -- a substantial increase over earlier evaluations.)

/4 Includes brood fish.

/5 Minus inventory.

/6 Corrected from $0.7268 shown for 1966.

/7 Includes $10,000 obligated June 1969 for use through April 1970.

OREGON SALMON AND STEELHEAD SPORT FISHERY

R. O. Koski

Following an excellent salmon fishery in 1968, the total catch in 1969 did not come up to expectations. The estimated catch of 348,793 fish was slightly less than in 1968. The number of anglers participating increased somewhat, which resulted in a small decline in the angler success ratio.

The statewide steelhead catch declined considerably from the previous year. Only 130,432 fish were taken, which was approximately 23,000 less than in 1968.

Sport catch estimates were obtained as usual for statewide totals, as well as sub-areas and specific individual waters. These estimates will vary somewhat from special study totals as only fish over 20 inches in length are recorded on catch cards.

Analysis of the salmon catches by area reveal that the offshore catch decreased about 20,000 fish from the previous year. The Columbia River system estimate was up slightly because of an excellent return to the Willamette River. Catches in most coastal streams were quite similar to those in 1968, except in the Rogue River where the catch more than doubled.

Steelhead returns in most areas were down, involving primarily the winter strain. The north coastal streams were most affected with poor water conditions and a general lack of fish -- factors also apparent in adjoining states. Angler success remained fairly stable in hatchery-stocked streams, especially in those with summer-run fish.

Table 60 presents the analysis of the 1969 record card data and includes a revised catch estimate corrected for nonresponse bias.

Table 61 shows revised total catch figures for a 10-year period. A summary listing the catch of salmon and steelhead by year and stream is available from the Fishery Division.

A total of 295,764 salmon-steelhead license sales was recorded with an additional 31,660 free cards issued to juveniles. Table 62 presents participation by anglers and catch ratios by species for both successful and unsuccessful anglers for each year since 1953.

Table 60

1969 Oregon Salmon and Steelhead Catch

	Salmon	Steelhead	Total
Number anglers receiving tags			327,424
Percent tags returned			23.96
Estimated number anglers not fishing			42,297
Estimates number anglers fishing; no catch			117,894
Estimated number anglers catching both salmon and steelhead			25,111
Estimates number anglers catching fish	142,860	49,484	167,233
Estimated number fish caught	484,457 ± 3,554	157,294 ± 3,659	641,781 ± 3,970
Estimated number fish per angler	1.4796 ± 0.0109	0.4804 ± 0.0112	1.9601 ± 0.0121
Estimated number fish per angler catching	3.39	3.18	3.84
Estimate of catch using alternate method as described in an Evaluation of the Punch Card Method of Estimating Salmon and Steelhead Sport Catch by Hicks and Calvin.			
Estimated number fish caught	348,793 ± 40,909	130,219 ± 31,432	479,012 ± 79,039

Table 61

Revised Total Salmon-Steelhead Catch Figures, 1960 through 1969

Year	Number Cards Issued /1	Percent Cards Returned	Salmon		Steelhead		Total Catch	Percent Deviation
			Catch	Percent Deviation	Catch	Percent Deviation		
1960	172,332	30.75	92,053	-25.5	80,175	-15.7	172,228	-23.6
1961	202,977	27.90	164,362	-26.5	69,613	-16.3	233,975	-23.7
1962	221,364	29.33	175,917	-26.0	106,067	-16.0	281,984	-22.5
1963	236,277	30.87	225,928	-25.4	97,468	-15.6	323,396	-22.7
1964	256,951	20.89	251,774	-29.1	85,954	-17.9	337,728	-26.5
1965	276,003	26.04	348,318	-27.2	111,439	-16.7	459,757	-24.9
1966	288,197	23.48	287,200	-28.2	168,083	-17.3	455,283	-24.5
1967	326,410	20.09	456,896	-30.2	134,040	-18.1	558,059	-24.5
1968	312,063	22.09	350,113	-28.6	153,909	-17.7	504,022	-25.6
1969	327,424	23.96	348,793	-28.0	130,432	-17.2	479,012	-25.3

/1 Includes free juvenile cards. A total of 31,660 free cards was issued in 1969.

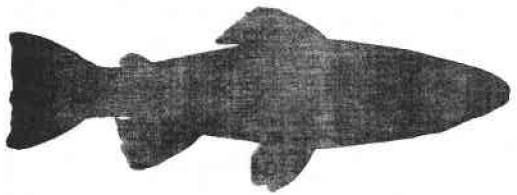


Table 62

Salmon-Steelhead Angler Participation and Catch per Angler /1, 1953 through 1969

Year	Anglers Receiving Tags	Percent Not Fishing	Catch per Angler			
			All Those Fishing		Successful Anglers	
			Salmon	Steelhead	Salmon	Steelhead
1953	173,216	45	0.53	0.51	2.56	3.12
1954	170,879	46	0.57	0.43	2.71	2.97
1955	165,422	50	0.49	0.36	2.66	2.83
1956	166,386	42	0.94	0.50	3.17	3.12
1957	135,230	45	0.96	0.43	3.27	3.07
1958	215,410	48	0.59	0.42	2.57	3.08
1959	285,700	42	0.77	0.42	2.80	3.21
1960 /2	172,332	34	0.85	0.46	2.80	3.22
1961	202,977	30	1.10	0.41	2.98	2.93
1962	221,364	28	1.07	0.57	2.90	3.09
1963	236,277	32	1.28	0.49	3.18	3.00
1964	256,951	26	1.38	0.40	3.06	2.98
1965	276,003	21	1.73	0.48	3.68	3.16
1966	288,197	26	1.38	0.70	3.37	3.61
1967	326,410	7	1.98	0.50	3.85	3.32
1968	312,063	26	1.57	0.60	3.52	3.58
1969	327,424	13	1.48	0.48	3.39	3.18

/1 The nonresponse bias correction factor was not applied to these estimates.

/2 First year for $1.00 charge for punch card.

FISH DISTRIBUTION

R. O. Koski

In 1969, there were increases in stocking of all size classes in all species of fish. The catchable trout program, which was scheduled to conform to the 1964 levels of production, did not quite come up to expectations because of increased steelhead and salmon releases. Approximately 100,000 more legal trout were released than in 1968. Further increases were curtailed in deference to the accelerated production of steelhead and salmon smolts. These were increased by several hundred thousand fish over the 1968 figures. A considerable increase in number of fingerlings stocked also occurred due mainly to restocking of rehabilitated areas.

A total of 25,803,139 fish weighing 1,633,533 pounds was distributed to lakes and streams of the State. The weight total is more than 256,000 pounds over the 1958 total and stands as a new annual record.

Table 63 presents the distribution of fish by species, numbers, and pounds to each watershed of the State.

Distribution of fish to State waters for each hatchery is shown in Table 64. The tabulation by species, strain, numbers, and pounds does not reflect total production which includes rearing of fish for transfers, brood production, or stocks for future years' release. Complete tables appear in the section on propagation.

Fish received on exchange from Hagerman National Fish Hatchery are not shown in Table 64 but are included in other tables in this report. Rainbow trout received from our exchange program with the Bureau of Sport Fisheries and Wildlife numbered 575,740 with a weight of 54,886 pounds.

Table 65 depicts the release of fish by major type and size classes. The increase in numbers of yearlings in each major type is quite noticeable.

A comparison of the numbers and pounds of steelhead and salmon smolts is given in Table 66. Included with subsmolts in the table are grade-out fish, prematurely developed males, and small numbers of fry.

A measure of the attempt to match fish stocking efforts to the everincreasing number of anglers is depicted in Table 67. The pounds of fish stocked per licensed angler has increased, resulting in a new record figure for 1969. Although the data may seem unrealistic insofar as actual fish returned to angler creels, one can see that production is keeping pace with increased pressure.

Table 68 is a summary of the stocking of anadromous fish for a number of years. The increased importance of anadromous fish in the stocking program is apparent.

A comparison of the distribution of anadromous fish and resident types is shown in Table 69. Although coho are included with the other salmon, their use is primarily in inland waters.

Fish transfer activities include the movement of stocks between hatcheries, transplantations of surplus adult stocks, and assistance to other agencies. Table 70 presents a summary of this additional activity. Fourteen large tankers and numerous portable units were used in distribution activities, and 2,397 trips were recorded for releases and 251 loads in transfer work.

The annual stocking of isolated lakes by airplane was delayed until mid-July because of ice conditions and inclement weather. Twelve days of flying were required in the Cascade Mountains, and an additional day in the Wallowa area. A total of 422 lakes was stocked at an average cost of $18.65. A total of 592,816 trout was released by airplane with brook trout and rainbow predominating. A few lakes received cutthroat and golden trout.

Distribution of warm-water fish from the St. Paul hatchery and salvage areas is shown in Table 71.

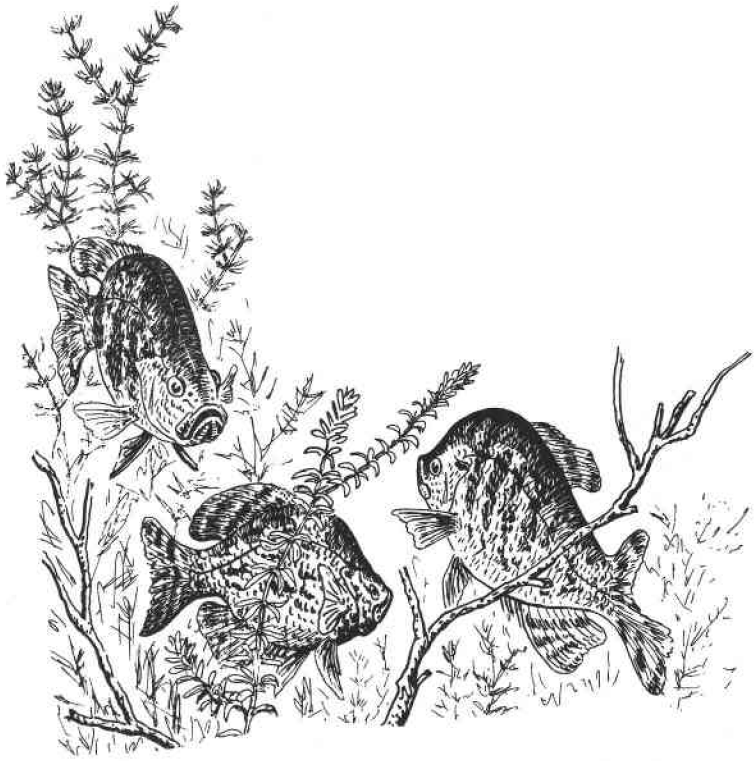


Table 63

Fish Stocking by Watersheds, 1969

Watershed	Rainbow	Cutthroat	Brook Trout	Steelhead		Kokanee	Brown Trout	Chinook		Atlantic Salmon	Coho	Golden Trout	Total
				Summer	Winter			Spring	Fall				
1	22,889	101,534		84,571	477,009			14,208	59,878		13,659		773,748
	15,510.0	21,064.5		12,210.0	63,507.0			740.0	1,166.3		182.0		114,379.8
2	4,515,504	71,922	401,092	118,884	188,120	507,025		513,780			120,980	7,332	6,444,639
	352,906.4	3,275.0	2,248.0	13,616.7	5,082.0	1,476.0		32,750.0			1,900.0	26.0	413,280.1
3	514,511	41,450	52,186	23,780	194,855	49,050						564	876,396
	81,412.0	402.4	304.0	849.0	25,024.0	246.0						2.0	108,239.4
4	69,291		11,475	103,976	37,000								221,742
	20,105.0		51.0	11,957.0	698.0								32,811.0
5	2,994,552	58,916	505,840	289,702		492,560	80,025	504,853		38,826	251,128	4,794	5,221,196
	185,414.9	357.5	1,996.2	32,575.1		1,389.6	1,380.0	19,812.7		1,017.0	2,810.7	17.0	246,770.7
6	392,700		20,855	22,375									435,930
	27,570.0		215.0	350.0									28,135.0
7	391,788			174,341									566,129
	20,424.0			1,206.0									21,630.0
8	203,974		9,200	70,600		50,600							334,374
	41,903.0		31.0	23.0		595.0							42,552.0
9	492,829		7,200								287,646		787,675
	28,169.0		24.0								1,138.0		29,331.0
10	784,314										8,500		792,814
	25,353.2										100.0		25,453.2
11	553,459	66,900									116,350		736,709
	6,377.5	311.5									1,308.7		7,997.7
12	176,273	64,430											240,703
	25,102.0	336.5											25,438.5
13	1,082,365	10,350	997			5,216					75,062		1,173,990
	30,611.0	46.0	4.3			16.0					816.0		31,493.3
14	1,921,555		55,059			99,840							2,076,454
	29,335.0		189.2			199.7							29,723.9
15	681,255	13,711	61,731	230,540	28,388	25,113		12,790	202,173				1,255,701
	58,395.5	4,516.2	249.5	20,701.1	3,998.3	91.0		16.0	3,658.7				91,626.3
16	681,614	20,393	18,988	194,769	65,455	78,102		105,684	91,546				1,256,551
	87,194.3	5,997.9	79.8	31,980.1	8,312.5	282.9		17,221.0	1,006.0				152,074.5
17	889,124	305,054			98,611	50,225							1,343,014
	72,157.5	14,092.8			12,301.7	181.9							98,733.9
18	361,209	145,523		80,108	333,116	345,418							1,265,374
	50,150.0	22,222.0		11,631.0	48,708.0	1,192.0							133,903.0
TOTAL	16,729,206	900,183	1,144,623	1,393,646	1,422,554	1,703,149	80,025	1,151,315	353,597	38,826	873,325	12,690	25,803,139
	1,158,090.3	72,622.3	5,392.0	137,099.0	167,631.5	5,670.1	1,380.0	70,539.7	5,831.0	1,017.0	8,255.4	45.0	1,633,573.3

NOTE: Lower figures denote pounds of fish.

Table 64

Total Release of Fish by Hatchery, 1969 /1

Hatchery	Species	Fish Released by Species		Total Fish Released	
		Number	Pounds	Number	Pounds
Alsea	Ct	86,995	6,230.0		
	StW	786,373	89,438.5	873,368	95,668.5
Bandon	Ct	339,158	24,606.9		
	StS	198,466	32,139.4	537,624	56,746.3
Butte Falls	Rb	768,057	72,659.3		
	ChS	12,790	16.0		
	StS	176,932	11,124.5	957,779	83,799.8
Cedar Creek	Co	13,659	182.0		
	Ct	160,062	37,056.5		
	ChS	14,208	740.0		
	StS	14,496	96.0		
	StW	328,508	42,127.0	530,933	80,201.5
Fall River	AS	7,410	3.0		
	BT	1,078,064	5,113.2		
	Ct	7,904	32.0		
	GT	12,690	45.0		
	K	473,426	1,146.0		
	Rb	843,508	52,507.0	2,423,002	58,846.2
Gnat Creek	StS	195,710	19,629.0		
	StW	256,884	28,963.0	452,594	48,592.0
Hood River	Co	228,574	306.0		
	Ct	79,850	369.0		
	Rb	412,474	40,079.0	720,898	40,754.0
Klamath	Br	80,025	1,380.0		
	BT	66,559	278.8		
	Co	298,896	3,387.7		
	K	393,430	1,463.8		
	Rb	4,065,689	84,146.2	4,904,599	90,656.5
Leaburg	Ct	67,264	3,257.0		
	Rb	2,121,408	243,940.0		
	ChS	513,780	32,750.0	2,702,452	279,947.0
Oak Springs	K	836,293	3,060.3		
	Rb	2,592,440	126,432.3		
	ChS	94,637	7,445.0		
	StS	525,044	46,884.0		
	StW	9,686	1,700.0	4,058,100	185,521.6

Table 64 (continued)

Hatchery	Species	Fish Released by Species		Total Fish Released	
		Number	Pounds	Number	Pounds
Roaring River	Ct	158,950	1,070.9		
	Rb	1,081,677	113,075.0		
	StS	27,573	2,442.7	1,268,200	116,588.6
Rock Creek	ChF	91,546	1,006.0		
	Rb	379,235	112,098.3		
	ChS	105,684	17,221.0		
	StS	49,911	9,417.3		
	StW	41,103	5,403.0	667,479	145,145.6
Wallowa	Rb	148,816	45,029.0		
	StS	70,600	23.0	219,416	45,052.0
Willamette	Rb	1,244,483	116,530.4	1,244,483	116,530.4
Wizard Falls	AS	31,416	1,014.0		
	Co	332,196	4,379.7		
	Rb	2,495,679	96,707.3		
	ChS	94,114	9,789.7		
	StS	134,914	15,343.1	3,088,319	127,233.8
SUBTOTAL				24,649,246	1,571,283.8
Rearing Ponds					
Cape Meares	Ch	59,878	1,166.3		
Indian Creek	ChF	17,928	284.6		
Libby Pond	ChF	184,245	3,374.1		
Round Butte	ChS	316,102	2,578.0	578,153	7,403.0
TOTAL				25,227,399	1,578,686.8

/1 Does not include trout released on exchange program from Hagerman National Fish Hatchery.

Table 65

Comparison of Numbers of Salmon, Steelhead, and Trout Yearlings, and Total Fish Stocked, 1960 through 1969

Year	Fry and Fingerling	Yearlings			Total Fish
		Trout	Steelhead	Salmon	
1960	14,086,171	2,354,859	381,164	103,453	16,925,647
1961	16,436,181	2,458,496	777,464	269,978	19,942,119
1962	19,246,294	2,613,366	881,302	166,432	22,907,394
1963	17,687,240	2,534,146	882,002	235,658	21,339,046
1964	16,960,680	2,216,083	1,198,193	281,424	20,656,380
1965	22,904,746	2,076,077	1,140,431	89,030	26,210,284
1966	16,197,162	2,296,874	1,228,214	89,376	19,811,626
1967	17,194,416	2,211,896	1,281,078	312,473	20,999,863
1968	18,167,543	2,447,667	1,718,430	379,169	22,712,809
1969	20,761,359	2,546,367	1,979,391	516,022	25,803,139

Table 66

1969 Fish Stocking Showing Numbers and Pounds of Anadromous Smolts and Subsmolts by Species

Species	Smolts		Subsmolts		Total	
	Number	Pounds	Number	Pounds	Number	Pounds
Fall Chinook /1			353,597	5,831	353,597	5,831
Spring Chinook	516,022	62,214	635,293	8,326	1,151,315	70,540
SUBTOTAL					1,504,912	76,371
Summer Steelhead	810,038	124,307	583,608	12,792	1,393,646	137,099
Winter Steelhead	1,169,353	164,560	253,201	3,072	1,422,554	167,632
SUBTOTAL					2,816,200	304,731
TOTAL	2,495,413	351,081	1,825,699	30,021	4,321,112	381,102

/1 Fall chinook are for the most part pond reared and are normally released at a size of approximately 4 inches in length.

Table 67

Fish Production per Licensed Angler,
1958 through 1969

Year	Number Anglers	Pounds of Fish Stocked	Pounds of Fish per Angler
1958	400,044	713,806	1.78
1959	440,522	703,007	1.59
1960 /1	451,015	766,310	1.70
1961	474,900	976,917	2.06
1962	504,771	954,838	1.89
1063	531,118	1,093,532	2.06
1964	585,118	1,097,731	1.87
1965	624,412	995,172	1.54
1966	622,332	1,123,183	1.80
1967	648,379	1,224,856	1.89
1968	649,117	1,377,239	2.12
1969	730,640	1,633,573	2.23

/1 Includes daily anglers after 1960.

Table 68

Salmon and Steelhead Stocking Summary,
1955 through 1969

Year	Steelhead		Salmon		Total Fish Stocked	
	Number	Pounds	Number	Pounds	Number	Pounds
1955	268,896	32,739	570,419	31,449	839,315	64,188
1956	306,807	31,873	831,721	19,589	1,138,528	51,462
1957	294,354	21,309	1,436,712	10,420	1,731,066	31,729
1958	345,722	28,065	263,848	10,565	609,570	38,630
1959	372,012	42,123	207,602	22,783	579,614	64,906
1960	416,325	40,021	158,009	14,079	574,334	54,100
1961	1,069,242	68,674	275,122	27,061	1,344,364	95,735
1962	1,221,746	86,087	166,432	37,174	1,388,178	123,261
1963	1,304,464	93,127	271,613	33,432	1,576,077	126,559
1964	1,586,209	135,516	529,592	37,724	2,115,801	173,240
1965	2,026,819	131,548	1,729,021	24,624	3,755,840	156,172
1966	1,886,702	179,163	1,999,588	17,635	3,886,290	196,798
1967	3,190,827	182,358	2,155,286	56,223	5,346,113	238,581
1968	2,296,798	260,308	2,276,638	84,285	4,573,436	344,593
1969	2,816,200	304,731	1,504,912	76,371	4,321,112	381,102

Table 69

Summary of 1969 Fish Stocking,
Releases by Resident and Anadromous Type

Species	Fish Released	
	Number	Pounds
Rainbow /1	16,729,206	1,158,090
Cutthroat	900,183	72,622
Brook Trout	1,144,623	5,392
Golden Trout	12,690	45
Kokanee	1,703,149	5,670
Brown Trout	80,025	1,380
Atlantic Salmon	38,826	1,017
Total Nonanadromous	20,608,702	1,244,216
Steelhead, Summer	1,393,646	137,099
Steelhead, Winter	1,422,554	167,632
Chinook, Fall	353,597	5,831
Chinook, Spring	1,151,315	70,540
Coho	873,325	8,255
Total Anadromous	5,194,437	389,357
TOTAL	25,803,139	1,633,573

/1 Includes exchange fish received from Hagerman National Fish Hatchery.

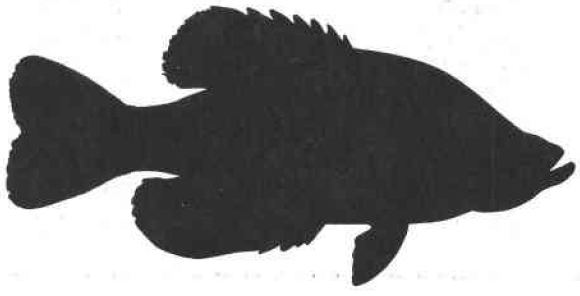


Table 70

Fish Transfers and Courtesy Hauls,
Including Warm-Water Game Fish Releases

Type of Transfer	Number Loads	Number Fish	Pounds Fish
Hatchery	102	3,969,021	88,830
Adult, Coho	52	12,438	104,150
Adult, Steelhead	27	2,490	16,250
SUBTOTAL	79	14,928	120,400
Other /1	56	1,349,888	50,613
Warm-Water Game Fish	14	4,112	390
TOTAL	251	5,337,949	260,233

/1 Includes assistance to Fish Commission of Oregon, federal hatcheries, and fish provided to various research projects.

Table 71

Warm-Water Game Fish Stocking Record, 1969

Region	Water Stocked	Source	Date	Species	Number Stocked	Size (Inches)
I	Erhart Lake	Siltcoos Lake	5/7	BC	29	6-8
	" "	St. Paul Ponds	6/13	LB	30	6-8
	Lost Lake	Tahkenitch Lake	5/2	Bg	57	4-6
	" "	St. Paul Ponds	6/13	LB	57	6-8
	Perkins Lake	Long Tom River	4/8	WC	47	6-8
	" "	St. Paul Ponds	6/13	LB	47	6-8
III	Lapine Junction Railroad Pond	St. Paul Ponds	11/6	BC	10	8-10
IV	Boardman Pond	St. Paul Ponds	6/12	LB, Bg	50	4-6
	Cold Springs Reservoir	" " "	6/11	LB, Bg, WC	1,871	4-12
	McKay Reservoir	Oxbow Reservoir	6/8	BC	496	4-8
	" "	Snake River	6/8	CC	38	10-12
	Messner Pond	St. Paul Ponds	6/12	LB, Bg	120	4-6
V	Chewaucan River	St. Paul Ponds	11/6	LB	30	10-12
	Jones Pond	Snake River	3/27	CC	32	12-16
	Warm Springs Reservoir	Upper Brownlee Reservoir	7/11	CC	1,198	6-8

FISHERY DIVISION EXPENDITURES
(except Federal Aid Activities)
Fiscal Year July 1, 1968 to June 30, 1969

Fish Resource	Expenditures Fiscal Year
Basin Investigations	$ 51,610.34
Fishery Statewide Staff	205,765.73
Fish Distribution	71,894.58
Alsea Hatchery	32,447,97
Bandon Hatchery	48,264.91
Butte Falls Hatchery	39,404.89
Cedar Creek Hatchery	52,117.69
Fall River Hatchery	40,539.36
Hood River Hatchery	34,072.44
Klamath Hatchery	62,073.28
Oak Springs Hatchery	166,106.18
Roaring River Hatchery	98,823.47
Rock Creek Hatchery	63,299.70
Wallowa Hatchery	31,366.83
Willamette Hatchery	57,761.22
Wizard Falls Hatchery	40,672.21
Fishery Habitat Improvement	200,527.15
Sandy River	23.66
Corvallis Screen Plant	28,197.47
Lake and Stream Management	353,495.59
TOTAL	$1,678,464.67

FISHERY DIVISION EXPENDITURES
FEDERAL AID ACTIVITIES

Fiscal Year July 1, 1968 to June 30, 1969

Activity	Expenditures Fiscal Year
DINGELL-JOHNSON PROJECTS	
Fishery Access	$ 20,000.00
Coordination	14,191.90
Fishery Rehabilitation	2,643.35
Fishery Access	9,280.00
Access Maintenance	1,930.25
Stream Flow Requirement	36,158.00
Stream Improvement	43,455.23
Reservoir Research	5,124.61
Umpqua River Research, Winchester	6,121.51
Powder River Rehabilitation	10,889.87
Land Acquisition	32.50
SUBTOTAL	$149,827.22
COLUMBIA RIVER FISHERY PROJECTS	
Gnat Creek Hatchery	$ 66,848.85
Hatchery Evaluation	20,393.06
Northeast Screens	72,204.92
Incubation Channels	1,748.01
SUBTOTAL	$161,194.84
U. S. CORPS OF ENGINEERS PROJECTS	
Leaburg Hatchery	$125,901.84
ANADROMOUS FISH PROJECTS	
Alsea	$ 27,314.55
Cedar Creek	79.81
Butte Falls	8,500.00
Siletz Segment Steelhead	5,167.18
Gold Ray Viewing Chamber	18,718.84
Water Circulation	88,122.32
Cape Meares	5,639.70
SUBTOTAL	$153,542.40
LAND AND WATER CONSERVATION PROJECTS	
Planning	$ 26,779.57
Pine Hollow Impoundment	126,208.40
SUBTOTAL	$152,987.97
TOTAL	$743,454.27

OREGON STATE GAME COMMISSION HATCHERIES
1969

Hatchery	Location	Superintendent
Alsea	Philomath	Paul E. Vroman
Bandon	Bandon	Willis C. Baker
Butte Falls	Butte Falls	James H. Olsen
Cedar Creek	Hebo	Homer B. Clendenen
Diamond Lake	Chemult	John H. Shaw
Fall River	Bend	John K. Susac
Gnat Creek	Clatskanie	Richard A. Evans
Hood River	Hood River	John D. Bliss
Klamath	Chiloquin	Charles F. Grow
Leaburg	Leaburg	Lynn W. Webb
Oak Springs	Maupin	Raymond F. Culver
Roaring River	Scio	William C. Wingfield
Rock Creek	Idleyld Park	John H. Shaw
Wallowa	Enterprise	Kenneth G. Spidell
Willamette	Oakridge	Henry J. Reed
Wizard Falls	Camp Sherman	K. E. (Gene) Morton

CONTRIBUTING PERSONNEL

Name	Title	District or Section
Bauer, Jerry	Aquatic Biologist	Umpqua District
Bisbee, Larry	Aquatic Biologist	Southeast District
Christianson, W. H.	Aquatic Biologist	Upper Willamette District
Fortune, John	Aquatic Biologist	Lincoln District
Goin, Jim	Assistant Controller	Federal Aid Expenditures
Golden, Mike	Aquatic Biologist	Umatilla District
Grenfell, Ralph	Aquatic Biologist	Warm-Water Game Fish
Griggs, Jim	Aquatic Biologist	Bend District
Haight, Bill	Aquatic Biologist	Rogue and South Coast District
Heckeroth, Dave	Aquatic Biologist	Tillamook District
Herrig, Dick	Aquatic Biologist	Ochoco District
Hewkin, Jim	Aquatic Biologist	John Day District
Hosford, Bill	Aquatic Biologist	Lower Columbia District
Hutchison, Jim	Aquatic Biologist	Siuslaw District
Jensen, Chris	Hatchery Coordinator	Fish Propagation
Knispel, Warren	Aquatic Biologist	Astoria District
Koski, R. O.	Aquatic Biologist	Fish Liberation
Lichens, Al	Aquatic Biologist	Columbia District
Massey, Jay	Aquatic Biologist	Lower Willamette District
Mastin, Henry	Aquatic Biologist	Lake County District
McDivitt, Ron	Aquatic Biologist	Umpqua District
Riikula, Arvo	Aquatic Biologist	Rogue and South Coast District
Schwartz, Ed	Aquatic Biologist	Coos-Coquille District
Smith, Harold C.	Staff Artist	Information and Education
Stout, Wendell	Aquatic Biologist	Klamath District
Sumner, Fran	Aquatic Biologist	Scale Analysis
Swan, Ralph	Aquatic Biologist	Upper Willamette District and Rehabilitation
West, Duane	Aquatic Biologist	La Grande District
Wetherbee, Joe	Aquatic Biologist	Middle Willamette District
Witty, Ken	Aquatic Biologist	Wallowa District

TABLE INDEX

TABLE INDEX (continued)

TABLE INDEX (continued)