

BIENNIAL REPORT OF THE
FISH COMMISSION
OF THE STATE OF OREGON, 1941



FISHWAY ON BONNEVILLE FISHERIES STATION GROUNDS — ANNUALLY ACCOMMODATING
THOUSANDS OF RETURNING COLUMBIA RIVER SALMON.

BIENNIAL REPORT
OF THE
FISH COMMISSION
OF THE STATE OF OREGON
TO THE
GOVERNOR AND THE FORTY-FIRST
LEGISLATIVE ASSEMBLY
1941



FISH COMMISSION OF THE STATE OF OREGON
Hon. John C. Veatch, Chairman, Portland
Hon. Merle R. Chessman, Astoria
Hon. Robert F. Cronen, Wheeler
M. T. Hoy, Secretary and Master Fish Warden

LETTER OF TRANSMITTAL

Portland, Oregon, July 1, 1940.

TO HIS EXCELLENCY, the GOVERNOR, and the MEMBERS
of the FORTY-FIRST LEGISLATIVE ASSEMBLY.

Gentlemen :

Herewith is transmitted the biennial report of the Fish Commission of the State of Oregon covering the period from July 1, 1938, to June 30, 1940.

FISH COMMISSION of the STATE OF OREGON

John C. Veatch, Chairman.

LETTER OF TRANSMITTAL

Portland, Oregon, July 1, 1940.

FISH COMMISSION OF THE STATE OF OREGON,
Portland, Oregon.

Gentlemen :

In accordance with the provisions of statute, I herewith submit for your consideration financial statement for the department covering the period July 1, 1938, to June 30, 1940. This statement includes all receipts and disbursements of the Fish Commission during the above period.

Respectfully submitted,

M. T. HOY,
Master Fish Warden.

HATCHERY FUND

STATEMENT OF RECEIPTS AND DISBURSEMENTS

For Biennial Period Ended June 30, 1940

	RECEIPTS	
	Fiscal Year Ended June 30, 1939	Fiscal Year Ended June 30, 1940
Licenses:		
Gillnet	\$ 8,430.00	\$ 8,310.00
Setnet	3,945.00	4,447.50
Trap	800.00	1,025.00
Seine	1,696.80	1,952.40
Troll	140.00	112.50
Boatpuller	897.50	795.00
Retail Fish Dealer and Peddler	6,050.00	5,935.00
Wholesale Fish Dealer	3,475.00	3,500.00
Broker	150.00	200.00
Shellfish Canner	282.66	248.64
Salmon Canner	150.00	225.00
Reduction Plant	200.00	250.00
Bagnet	635.00	310.00
Clam	1,880.00	1,605.00
Crab	1,410.00	1,140.00
Crawfish	135.00	115.00
Oyster	25.00	.....
Setline	116.00	106.00
Delivery	837.50	6,670.00
Total License Receipts	\$ 31,255.46	\$ 36,947.04
Other Income:		
Poundage Fees	\$ 93,463.81	\$ 98,582.10
Privilege Tax—Pilchards	8,508.94	11,466.96
Interest	910.81	2,494.72
Additional Fees on Crabs	2,632.32	2,941.55
Additional Fees on Clams	537.68	703.87
Additional Fees on Oysters	143.48	11.35
Fines	1,573.99	1,478.54
Sale of Confiscated Property	332.71	425.86
Fish and Crab Tags	3,091.94	1,778.91
Oyster Leases	286.95	22.69
Sale of Stranded Fish	23.78	65.08
Sale of Scrap Iron .....	.....	2.00
Total Other Income	\$111,506.41	\$119,973.63
Total Revenue	\$142,761.87	\$156,920.67
Sundry—Tithe Exempt:		
Sale of Patrol Boat Engine	\$	\$ 428.00
Recovery of Court Costs	29.20	.....
Sale of Equipment	1.00	1.00
Contribution for Oyster Research .....	.....	500.00
Gasoline Tax Refunded	150.85	33.60
Received from Game Commission for Joint Fishway Construction .....	.....	133.62
Total Sundry Receipts	\$ 181.05	\$ 1,096.22
Total Receipts	\$142,942.92	\$158,016.89

HATCHERY FUND

STATEMENT OF RECEIPTS AND DISBURSEMENTS—Continued

For Biennial Period Ended June 30, 1940

DISBURSEMENTS

Accounts	Fiscal Year Ended June 30, 1939		Fiscal Year Ended June 30, 1940	
Tithe on Revenue to General Fund.....	\$ 11,282.86		\$ 11,707.62	
Less: Credit on June 30, 1938.....	278.58	\$ 11,004.28	.....	\$ 11,707.62
Oregon State Police		\$ 16,539.51		\$ 16,586.51
Salmon Propagation:				
General Expenses	\$ 5,715.00		\$ 5,852.68	
Operating Expenses	60,350.70		56,920.40	
Maintenance Expenses	1,095.64		2,456.72	
Capital Outlays	12,068.97	\$ 79,230.31	6,857.87	\$ 72,087.67
Investigations—Hatchery Sites:				
Salaries	\$ 29.33		.....	
Traveling Expenses:				
Mileage	22.48		.....	
Meals and Lodging.....	13.10	\$ 64.91	.....	
Director Department of Fish Culture:				
Salary	\$ 4,200.00		\$ 4,200.00	
Traveling Expenses:				
Fares .....	.....		7.00	
Meals and Lodging	218.90		207.70	
Telephone and Telegraph	8.25		16.30	
Automobile Expenses:				
Gasoline, Oil and Grease.....	536.20		500.76	
Tires and Tubes	59.48		77.34	
Repairs and Renewals	95.25		94.73	
Insurance	17.09		13.98	
All Other	100.85		86.85	
Surety Bond Premium	37.50		37.50	
State Compensation Insurance	79.25	\$ 5,352.77	58.54	\$ 5,300.70
Office and Miscellaneous—				
Department of Fish Culture:				
Salary	\$ 1,680.00		\$ 1,680.00	
Rent	300.00		300.00	
Stamps and Postage	81.00		99.93	
Telephone and Telegraph	76.30		92.89	
Stationery and Printing.....	52.11		135.02	
Office Supplies	26.39		24.59	
Biennial Report	298.06		.....	
Audit	99.00		.....	
State Compensation Insurance	33.80		24.52	
Office Furniture and Equipment:				
Repairs and Maintenance.....	14.25		6.50	
Capital Outlays	6.00	\$ 2,657.91	11.20	\$ 2,374.65

HATCHERY FUND

STATEMENT OF RECEIPTS AND DISBURSEMENTS—Continued

For Biennial Period Ended June 30, 1940

Accounts	Fiscal Year Ended June 30, 1939		Fiscal Year Ended June 30, 1940	
Pilchard and Tuna Research:				
Salaries	\$ 2,100.00		\$ 1,699.50	
Traveling Expenses:				
Mileage and Fares	28.49		88.16	
Meals and Lodging	335.95		326.50	
Stamps and Postage	3.00		1.50	
Freight and Express	2.00		.95	
Rent on Equipment	46.65		.....	
State Compensation Insurance	41.45		25.32	
Sundry Expenses	16.02		47.69	
Equipment:				
Repairs and Maintenance	55.80		1.00	
Capital Outlays	198.01	\$ 2,827.37	.....	\$ 2,190.62
Yaquina Bay Oyster Research:				
Contribution for Salaries .....	.....		\$ 700.00	
Salary of Inspector .....	.....		1,014.19	
Traveling Expenses:				
Mileage and Fares .....	.....		134.68	
Meals and Lodging .....	.....		8.65	
Telephone and Telegraph .....	.....		.75	
State Compensation Insurance .....	.....		13.57	\$ 1,871.84
Experimental Fisheries Products Research:				
Contributions .....	.....		\$ 3,337.50	
Capital Outlays:				
Refrigeration Equipment .....	.....		1,342.70	\$ 4,680.20
General Research:				
Salaries	\$ 1,521.88		\$ 2,241.00	
Traveling Expenses:				
Mileage and Fares	200.60		323.94	
Meals and Lodging	436.00		483.90	
Stamps and Postage	15.00		19.92	
Stationery and Printing	5.65		.....	
Office Supplies, Tel. and Telegraph	7.41		6.07	
Freight, Express and Cartage .....	.....		5.04	
Rent on Equipment .....	.....		30.50	
Material and Supplies	36.17		197.09	
Bulletins and Reports	42.50		279.15	
State Compensation Insurance	30.03		33.02	
Capital Outlays:				
Books and Equipment	40.00	\$ 2,335.24	245.25	\$ 3,864.88

HATCHERY FUND

STATEMENT OF RECEIPTS AND DISBURSEMENTS—Continued

For Biennial Period Ended June 30, 1940

Accounts	Fiscal Year Ended June 30, 1939	Fiscal Year Ended June 30, 1940
Pilchard and Tuna Inspection Service:		
Salaries	\$ 2,514.28	\$ 2,536.00
Traveling Expenses:		
Mileage and Fares	166.48	158.08
Meals and Lodging	564.55	319.40
Automobile Expenses:		
Gasoline, Oil and Grease	269.48	200.61
Tires and Tubes		35.68
Repairs and Renewals	27.81	29.94
Insurance	17.09	13.98
All Other	33.15	7.75
Stamps and Postage	12.00	15.00
Freight, Express and Cartage	2.00	2.11
Telephone and Telegraph	47.83	41.77
Rent and Electricity	50.12	
Materials and Supplies	5.25	
Notarial Commission, Bond and Seal		16.50
State Compensation Insurance	50.74	38.14
Capital Outlay—Auto Trade-in	367.49	
	\$ 4,128.27	\$ 3,414.96
General Patrol Service:		
Salaries	\$ 9,189.00	\$ 9,085.39
Traveling Expenses:		
Mileage and Fares	146.85	158.33
Meals and Lodging	386.25	438.15
Automobile Expenses:		
Gasoline, Oil and Grease	426.91	330.76
Tires and Tubes	42.16	23.13
Repairs and Renewals	118.16	106.41
Insurance	17.09	13.98
All Other	85.40	81.03
Boats:		
Rent and Moorage	289.28	378.29
Gasoline, Oil and Grease	377.45	129.06
Tools, Repairs and Maintenance	508.45	423.01
Flamo	11.48	13.55
Food Supplies for Crew	179.12	221.31
Capital Outlays:		
Diesel Engine—"Boat Oregon"	4,598.46	
All Other	55.12	
Other Expenses:		
Stamps and Postage	12.00	12.00
Telephone and Telegraph	2.00	
Maps	7.50	
State Compensation Insurance	184.49	127.87
Notarial Commissions and Bonds		21.00
Boots for Inspector		14.16
	\$ 16,637.17	\$ 11,577.43
Fishways:		
Salaries	\$ 32.20	\$ 224.80
Tools, Materials and Supplies	7.44	115.68
Films, Printing and Developing	16.91	6.85
Cooperative—Game Commission	170.39	48.28
State Compensation Insurance	.88	6.40
	\$ 227.82	\$ 402.01

HATCHERY FUND

STATEMENT OF RECEIPTS AND DISBURSEMENTS—Continued

For Biennial Period Ended June 30, 1940

Accounts	Fiscal Year Ended June 30, 1939	Fiscal Year Ended June 30, 1940
Master Fish Warden:		
Salary	\$ 4,025.00	\$ 4,120.96
Traveling Expenses:		
Mileage and Fares	286.68	450.24
Meals and Lodging	93.35	137.35
Telephone and Telegraph	10.80	1.30
Surety Bond Premium	45.00	45.00
State Compensation Insurance	75.95	57.40
	\$ 4,536.78	\$ 4,812.25
Commissioners:		
Per Diem	\$ 450.00	\$ 420.00
Traveling Expenses:		
Mileage and Fares	233.80	196.51
Meals and Lodging	96.50	90.40
	\$ 780.30	\$ 706.91
Office and Miscellaneous—		
Department of Administration:		
Salaries	\$ 7,383.89	\$ 7,352.14
Traveling Expenses:		
Mileage and Fares	126.28	175.80
Meals and Lodging	35.80	46.15
Stationery and Printing	586.94	948.19
Office Supplies	327.35	333.10
Office and Equipment Rent	2,323.41	2,258.08
Stamps and Postage	577.79	634.24
Telephone and Telegraph	365.87	315.65
Freight, Express and Cartage	6.05	5.39
Newspapers and Magazines	40.10	36.10
Towel Service	21.00	21.00
Commercial Fisheries Codes .....	.....	517.73
Biennial, Legal and Other Reports	367.90	221.01
Surety Bond Premium	30.00	30.00
Maps, Films, Prints, Developing	4.76	46.96
Tools and Light Globes	5.83	5.08
Restoration Fund	14.24	18.24
Audit	296.90	.....
Publishing Notices	185.08	.....
Fish and Crab Tags	614.80	252.55
State Compensation Insurance	148.33	106.61
Notarial Commission Fees	6.00	.....
Closing Area Signs	19.86	.....
Confiscated Property Expense	2.00	.....
Office Furniture and Equipment:		
Repairs and Maintenance	38.65	70.56
Capital Outlays	200.12	233.85
	\$ 13,728.95	\$ 13,628.43
Total Disbursements	\$160,060.59	\$155,206.68
Balance	(\$ 17,117.67)	\$ 2,810.21
Balance at Beginning of Period	21,717.12	4,599.45
Balance at End of Period	\$ 4,599.45	\$ 7,409.66

HATCHERY FUND**COMPARATIVE SCHEDULE OF LICENSES ISSUED**

For Fiscal Years Ended on June 30th

Licenses	Rate	1935	1936	1937	1938	1939	1940
Gillnet	\$ 7.50	1349	1192	1139	1132	1124	1108
Setnet	3.75	983	1119	1107	1038	1052	1186
Trap	25.00	73	41	37	33	32	41
Seine	Various	47	61	45	45	40	41
Troll	2.50	36	32	52	68	56	45
Boatpuller	2.50	485	430	485	378	359	318
Retail Fish Dealer & Peddler.....	5.00	1041	1119	1159	1173	1210	1187
Wholesale Fish Dealer	25.00	111	124	123	152	139	140
Buyer	2.00	99	....	....	....	....	....
Broker	50.00	2	3	3	4	3	4
Salmon Canner	25.00	9	9	9	7	6	9
Shellfish Canner	Various	6	8	8	17	10	7
Reduction Plant	25.00	3	15	6	6	8	10
Boat and Scow	2.00	133	123	108	18	....	....
Bagnet	5.00	159	128	164	122	127	62
Clam	5.00	231	234	182	329	376	321
Crab	5.00	244	306	325	343	282	228
Crawfish	5.00	40	30	29	27	27	23
Oyster	5.00	5	2	2	2	5	....
Setline	1.00	105	84	103	152	116	106
Delivery	Various	....	....	....	....	135	802
Total Licenses		5161	5060	5086	5046	5107	5638

HATCHERY FUND

SALMON PROPAGATION

For Fiscal Year Ended June 30, 1939

Station or Account	General Expenses	Operating Expenses	Maintenance Expenses*	Capital Outlays	Total
McKenzie	\$ 327.50	\$ 3,163.66	\$ 27.09	\$ 527.03	\$ 4,045.28
Lower McKenzie .....	.....	782.88	15.00	.....	797.88
McKenzie Egg Collecting	20.30	1,454.56	.....	11.00	1,485.86
Willamette	118.63	4,040.35	87.68	72.75	4,319.41
North Santiam	59.76	2,781.78	184.86	121.71	3,148.11
North Santiam Egg Collecting	77.77	1,102.48	9.98	36.43	1,226.66
Bonneville	680.46	8,348.25	302.83	2,800.17	12,131.71
Klaskanine	313.81	3,348.71	24.33	300.54	3,987.39
Trask	316.11	2,858.79	27.59	489.36	3,691.85
Coos	204.08	2,868.08	30.29	.....	3,102.45
Mill Creek	125.22	585.14	34.64	16.02	761.02
Umpqua	51.94	3,390.69	11.13	.....	3,453.76
South Santiam	15.50	2,336.76	25.44	41.21	2,418.91
Rogue	90.69	1,169.35	6.39	951.77	2,218.20
Ox Bow	8.53	2,966.02	28.45	12.57	3,015.57
Alsea	98.91	1,665.56	.....	30.81	1,795.28
Ten Mile	137.04	883.51	.....	21.70	1,042.25
Coquille	91.01	581.00	106.56	.....	778.57
Nehalem	172.75	1,908.33	3.65	261.53	2,346.26
Yaquina	181.27	1,271.58	23.89	811.11	2,287.85
Deschutes	15.00	.....	.....	.....	15.00
Siletz	76.85	1,578.67	8.09	506.64	2,170.25
Tahkenitch	108.60	561.45	.....	.....	670.05
North Lake	249.08	1,057.10	.....	102.27	1,408.45
Sandy	13.30	1,171.32	36.85	1,436.67	2,658.14
Siuslaw	49.28	949.48	6.40	3,517.68	4,522.84
Tillamook	325.12	1,298.92	94.50	.....	1,718.54
Shad Propagation-St. Helens	291.03	405.52	.....	.....	696.55
Undistributed:					
U. S. Government Cooperative....	.....	830.20	.....	.....	830.20
Fish Food Cost .....	.....	4,990.56	.....	.....	4,990.56
Restoration Fund	258.68	.....	.....	.....	258.68
State Compensation Insurance....	1,236.78	.....	.....	.....	1,236.78
TOTALS	\$ 5,715.00	\$60,350.70	\$ 1,095.64	\$12,068.97	\$79,230.31

* Not including salary items.

HATCHERY FUND

SALMON PROPAGATION

For Fiscal Year Ended June 30, 1940

Station or Account	General Expenses	Operating Expenses	Maintenance Expenses*	Capital Outlays	Total
McKenzie	\$ 351.95	\$ 3,071.06	\$ 51.44	\$ 458.25	\$ 3,932.70
Lower McKenzie .....	.....	416.00	4.20	.....	420.20
McKenzie Egg Collecting .....	.....	1,391.27	.....	.....	1,391.27
Willamette	187.14	4,002.25	129.80	9.67	4,328.86
North Santiam	57.38	2,220.76	1,305.04	47.50	3,630.68
North Santiam Egg Collecting	34.50	1,252.28	.....	9.00	1,295.78
Bonneville	509.12	7,401.73	97.78	1,301.28	9,309.91
Klaskanine	171.24	3,121.42	171.95	75.40	3,540.01
Trask	360.98	3,097.13	102.06	250.64	3,810.81
Coos	198.02	2,918.42	5.30	39.92	3,161.66
Mill Creek	235.46	515.95	.....	.....	751.41
Umpqua	177.34	3,760.53	250.15	.....	4,188.02
South Santiam	49.99	2,141.03	6.42	125.18	2,322.62
Rogue	74.26	1,712.05	8.00	9.96	1,804.27
Ox Bow .....	.....	1,585.93	39.88	12.13	1,637.94
Alsea	164.01	1,983.00	213.69	99.04	2,459.74
Ten Mile	195.32	706.61	15.65	.....	917.58
Coquille	104.28	439.47	.....	135.28	679.03
Nehalem	138.66	1,636.42	40.63	.....	1,815.71
Yaquina	227.09	1,144.64	.....	741.48	2,113.21
Deschutes	330.20	603.50	.....	728.12	1,661.82
Siletz	126.83	1,544.32	12.23	581.74	2,265.12
Tahkenitch	201.58	572.83	.....	774.41	774.41
North Lake	232.02	624.08	.....	.....	856.10
Sandy	121.00	2,063.46	.....	840.13	3,024.59
Siuslaw	35.65	839.43	2.50	703.04	1,580.62
Calapooya	28.00	.....	.....	620.00	648.00
Tillasqua	346.04	1,669.70	.....	57.61	2,073.35
Shad Propagation-St. Helens	99.08	302.34	.....	.....	401.42
Shad Propagation-Daniels Creek	28.13	63.35	.....	12.50	103.98
Shad Propagation-Mapleton	42.58	28.67	.....	.....	71.25
Undistributed:					
Fish Food Cost .....	.....	4,090.77	.....	.....	4,090.77
Restoration Fund	236.40	.....	.....	.....	236.40
State Compensation Insurance	788.43	.....	.....	.....	788.43
TOTALS	\$ 5,852.68	\$56,920.40	\$ 2,456.72	\$ 6,857.87	\$72,087.67

* Not including salary items.

HATCHERY FUND

COMPARATIVE STATEMENT OF LICENSES ISSUED

For License Years Ended on March 31st

Licenses	Rate	1935	1936	1937	1938	1939	1940
Alsea Bay and River							
Gillnet	\$ 7.50	44	44	45	41	41	48
Setnet	3.75	138	145	168	181	159	162
Boat Puller	2.50	17	15	24	8	10	3
Retail Fish Dealer and Peddler..	5.00	13	10	19	48	39	40
Buyer	2.00	7	...	...	...	...	...
Wholesale Fish Dealer	25.00	3	3	5	5	4	3
Shellfish Canner	Various	1	2	1	1	1	2
Salmon Canner	25.00	...	...	1	...	...	...
Clam	5.00	12	5	17	14	18	20
Crab	5.00	64	48	30	31	46	31
Setline	1.00	6	2	2	2	8	...
Total Alsea Bay and River..		305	274	312	331	326	309
Brookings Harbor							
Wholesale Fish Dealer.....	\$25.00	...	...	...	...	1	1
Retail Fish Dealer	5.00	...	...	...	...	1	1
Total Brookings Harbor		...	...	...	...	2	2
Chetco River							
Gillnet	\$ 7.50	18	...	...	...	...	...
Setnet	3.75	10	...	...	...	...	...
Boat Puller	2.50	2	...	...	...	...	...
Buyer	2.00	1	...	...	...	...	...
Total Chetco River		31	...	...	...	...	...
Clatsop Beaches							
Retail Fish Dealer and Peddler..	\$ 5.00	9	10	12	13	4	2
Wholesale Fish Dealer	25.00	3	2	2	4	...	...
Shellfish Canner	Various	3	4	3	3	6	3
Clam	5.00	93	161	135	107	202	243
Total Clatsop Beaches.....		108	177	152	127	212	248
Columbia River and Tributaries							
Gillnet	\$ 7.50	792	818	757	709	713	680
Setnet	3.75	141	143	134	151	155	176
Trap	25.00	39	68	38	32	32	38
Seine	Various	35	50	47	46	32	37
Troll	2.50	39	29	39	64	56	42
Boat Puller	2.50	309	359	348	386	307	290
Retail Fish Dealer and Peddler..	5.00	765	837	834	805	803	849
Wholesale Fish Dealer	25.00	63	74	65	68	64	74
Broker	50.00	2	2	4	2	3	3
Buyer	2.00	61	48	...	...	...	...
Shellfish Canner	10.00	...	...	1	1	...	...
Salmon Canner	25.00	9	6	6	6	6	6
Reduction Plant	25.00	...	4	4	3	5	8
Boat and Scow	2.00	79	63	62	71	...	...
Bagnet	5.00	133	114	150	161	145	61
Clam	5.00	...	1	1	...	...	...
Crab	5.00	10	10	16	21	12	12
Crawfish	5.00	37	36	32	24	31	24
Setline	1.00	65	63	62	74	92	91
Total Columbia River		2579	2725	2600	2624	2456	2391

HATCHERY FUND **COMPARATIVE STATEMENT OF LICENSES ISSUED—Continued**

For License Years Ended on March 31st

Licenses	Rate	1935	1936	1937	1938	1939	1940
Coos Bay and River							
Gillnet	\$ 7.50	19	24	28	25	32	27
Setnet	3.75	32	34	65	73	65	79
Seine	15.00	1	6	3	3	6	2
Boat Puller	2.50	1	6	3	10	9	1
Retail Fish Dealer and Peddler..	5.00	23	24	32	33	60	63
Wholesale Fish Dealer	25.00	4	8	9	12	12	11
Buyer	2.00	4	2	...	...	...	...
Reduction Plant	25.00	...	5	4	3	3	2
Boat and Scow	2.00	7	7	2	3	...	...
Shellfish Canner	10.00	...	...	...	1	3	3
Salmon Canner	25.00	...	...	1	...	...	1
Clam	5.00	14	26	29	28	34	27
Crab	5.00	52	53	75	110	114	82
Setline	1.00	1	1	...	...	5	...
Broker	50.00	...	...	...	...	1	...
Total Coos Bay and River...		158	196	251	301	344	298
Coquille River							
Gillnet	\$ 7.50	57	62	54	53	59	60
Setnet	3.75	58	69	56	53	77	83
Seine	15.00	...	1	1	...	...	...
Boat Puller	2.50	17	15	5	15	10	7
Retail Fish Dealer and Peddler..	5.00	8	10	37	33	11	19
Wholesale Fish Dealer	25.00	1	2	3	3	4	4
Buyer	2.00	4	1	...	...	...	...
Boat and Scow	2.00	1	1	1	3	...	...
Clam	5.00	3	3	1	4	3	2
Crab	5.00	5	7	13	9	5	4
Salmon Canner	25.00	...	...	...	...	...	1
Total Coquille River		154	171	171	173	169	180
Depoe Bay							
Retail Fish Dealer and Peddler..	\$ 5.00	2	2	5	3	18	27
Wholesale Fish Dealer	25.00	...	2	2	3	4	4
Buyer	2.00	1	...	...	...	...	...
Boat and Scow	2.00	1	...	...	...	...	...
Crab	5.00	1	...	1	1	...	...
Total Depoe Bay.....		5	4	8	7	22	31
Elk River							
Gillnet	\$ 7.50	3	...	...	...	...	...
Total Elk River		3	...	...	...	...	...
Euchre Creek							
Setnet	\$ 3.75	...	1	...	...	...	...
Total Euchre Creek		...	1	...	...	...	...
Floras Creek							
Setnet	\$ 3.75	8	28	28	26	12	...
Boat Puller	2.50	...	...	...	1	...	...
Total Floras Creek		8	28	28	27	12	...
Hunters Creek							
Setnet	\$ 3.75	1	...	...	...	1	...
Total Hunters Creek		1	...	...	...	1	...
Lincoln County Beaches							
Clam	\$ 5.00	...	...	...	...	10	7
Total Lincoln County Beaches		...	...	...	...	10	7

HATCHERY FUND
COMPARATIVE STATEMENT OF LICENSES ISSUED—Continued
For License Years Ended on March 31st

Licenses	Rate	1935	1936	1937	1938	1939	1940
Nehalem River							
Gillnet	\$ 7.50	68	59	72	68	68	75
Setnet	3.75	131	130	135	143	129	126
Boat Puller	2.50	8	10	11	9	7	9
Retail Fish Dealer and Peddler..	5.00	10	6	5	5	11	16
Wholesale Fish Dealer	25.00	2	2	2	5	6	7
Buyer	2.00	1	...	...	...	...	...
Boat and Scow	2.00	2	2	2	2	...	...
Clam	5.00	2	1	4	6	9	5
Crab	5.00	12	9	8	12	11	12
Total Nehalem River		236	219	239	250	241	250
Nestucca River							
Retail Fish Dealer and Peddler..	\$ 5.00	5	5	...	1	7	1
Shellfish Canner	10.00	...	...	1	1	1	...
Clam	5.00	7	6	7	6	6	7
Crab	5.00	1	1	3	3	3	3
Crawfish	5.00	...	...	1	...	...	...
Total Nestucca River		13	12	12	11	17	11
Netarts Bay							
Setnet	\$ 3.75	...	9	5	5	3	5
Retail Fish Dealer and Peddler..	5.00	5	7	7	6	9	11
Shellfish Canner	Various	...	...	1	1	1	...
Crab	5.00	14	14	12	15	19	19
Wholesale Fish Dealer	25.00	...	...	...	...	...	1
Total Netarts Bay		19	30	25	27	32	36
Pistol River							
Setnet	\$ 3.75	2	5	...	3	4	...
Retail Fish Peddler	5.00	...	...	...	...	1	...
Total Pistol River		2	5	...	3	5	...
Port Orford							
Retail Fish Dealer and Peddler..	\$ 5.00	3	2	5	7	3	3
Wholesale Fish Dealer	25.00	...	...	...	3	4	...
Crab	5.00	3	6	16	14	29	15
Shellfish Canner	Various	...	...	...	...	1	1
Total Port Orford		6	8	21	24	37	19
Rogue River							
Gillnet	\$ 7.50	51	26	...	...	...	...
Boat Puller	2.50	31	19	...	...	...	...
Retail Fish Dealer and Peddler..	5.00	23	28	2	19	19	...
Wholesale Fish Dealer	25.00	2	2	...	...	2	...
Salmon Canner	25.00	1	2	1	...	...	...
Total Rogue River		108	77	3	19	21	...
Salmon River							
Gillnet	\$ 7.50	1	...	...	...	...	1
Setnet	3.75	15	12	18	23	20	19
Boat Puller	2.50	1	1	...	...	...	3
Retail Fish Dealer and Peddler..	5.00	4	5	7	7	8	6
Wholesale Fish Dealer	25.00	1	1	2	1	2	1
Crab	5.00	...	...	1	4	1	...
Setline	1.00	...	...	...	1	...	...
Total Salmon River		22	19	28	36	31	30
Sand Lake							
Setnet	\$ 3.75	...	...	...	...	...	7
Retail Fish Peddler	5.00	...	...	...	...	...	1
Total Sand Lake		...	...	...	...	...	8

HATCHERY FUND

COMPARATIVE STATEMENT OF LICENSES ISSUED—Continued

For License Years Ended on March 31st

Licenses	Rate	1935	1936	1937	1938	1939	1940
Siletz River							
Gillnet	\$ 7.50	21	15	14	10	4	6
Setnet	3.75	147	114	107	97	85	97
Boat Puller	2.50	13	4	14	9	3	3
Retail Fish Dealer and Peddler..	5.00	9	8	13	10	25	19
Wholesale Fish Dealer	25.00	3	2	4	5	5	4
Boat and Scow	2.00	1	1	...	...	...	...
Clam	5.00	2	1	4	3	...	...
Setline	1.00	1	...	...	1	1	...
Buyer	2.00	3	...	...	...	...	...
Crab	5.00	...	...	...	...	1	...
Total Siletz River		200	145	156	135	124	129
Siuslaw River							
Gillnet	\$ 7.50	46	37	32	27	32	41
Setnet	3.75	81	85	92	104	89	47
Boat Puller	2.50	15	9	13	9	7	11
Retail Fish Dealer and Peddler..	5.00	7	9	26	32	28	28
Wholesale Fish Dealer	25.00	1	1	1	5	4	3
Buyer	2.00	10	2	...	...	...	...
Boat and Scow	2.00	2	2	...	...	...	...
Clam	5.00	7	4	5	5	6	6
Crab	5.00	13	10	15	12	6	3
Setline	1.00	6	3	1	8	2	...
Total Siuslaw River		188	162	185	202	174	139
Sixes River							
Gillnet	\$ 7.50	12	...	...	...	...	...
Boat Puller	2.50	4	...	...	...	...	...
Total Sixes River		16	...	...	...	...	...
Ten Mile Lake							
Crawfish	\$ 5.00	2	1	1	1	...	...
Total Ten Mile Lake		2	1	1	1	...	...
Tillamook Bay							
Gillnet	\$ 7.50	70	94	79	65	70	70
Setnet	3.75	157	211	197	166	156	172
Boat Puller	2.50	7	15	10	1	3	...
Retail Fish Dealer and Peddler..	5.00	15	22	32	30	41	38
Wholesale Fish Dealer	25.00	7	8	6	9	9	7
Buyer	2.00	3	...	...	...	...	...
Salmon Canner	25.00	1	...	2	1	...	1
Boat and Scow	2.00	2	3	2	3	...	...
Clam	5.00	6	8	10	13	20	19
Crab	5.00	32	41	47	35	41	33
Setline	1.00	...	1	1	1	2	...
Total Tillamook Bay		300	403	386	324	342	340
Umpqua River							
Gillnet	\$ 7.50	94	106	109	104	108	108
Setnet (Smith River)	3.75	14	31	48	58	55	74
Seine	15.00	1	1	2	...	...	1
Troll	2.50	3	2	2	2	...	1
Boat Puller	2.50	12	25	34	25	18	16
Retail Fish Dealer and Peddler..	5.00	18	16	49	46	44	34
Wholesale Fish Dealer	25.00	4	5	6	12	12	8
Buyer	2.00	6	4	...	...	...	...
Shellfish Canner	Various	1	2	1	1	1	1
Boat and Scow	2.00	17	5	7	12	...	...
Clam	5.00	5	8	10	13	5	8
Crab	5.00	33	24	26	17	24	10
Reduction Plant	25.00	...	...	1	1	1	...
Total Umpqua River		208	229	295	291	268	261

HATCHERY FUND

COMPARATIVE STATEMENT OF LICENSES ISSUED—Continued

For License Years Ended on March 31st

Licenses	Rate	1935	1936	1937	1938	1939	1940
Winchuck River							
Setnet	\$ 3.75	4	...	...	...	...	...
Total Winchuck River.....		4	...	...	...	...	...
Yachats River							
Retail Fish Dealer and Peddler..	\$ 5.00	2	1	...	...	...	...
Clam	5.00	2	...	...	...	...	...
Total Yachats River		4	1	...	...	...	...
Yaquina Bay and River							
Gillnet	\$ 7.50	13	11	19	20	23	21
Setnet	3.75	6	11	20	1	5	5
Seine	15.00	1	...	1	1	1	2
Boat Puller	2.50	5	2	7	8	10	6
Retail Fish Dealer and Peddler..	5.00	12	20	25	20	41	49
Wholesale Fish Dealer	25.00	3	3	6	5	11	11
Buyer	2.00	2	2	...	...	...	...
Boat and Scow	2.00	...	1	...	1	...	...
Clam	5.00	10	5	7	10	16	14
Crab	5.00	24	24	40	42	45	38
Oyster	5.00	1	4	2	2	4	3
Setline	1.00	20	24	27	27	31	22
Total Yaquina Bay and River		97	107	154	137	187	171
Miscellaneous							
Vehicle (State Highways)	\$ 2.00	32	33	28	14	...	...
Troll (Pacific Ocean)	2.50	...	...	6	3	...	...
Delivery	Various	...	...	...	...	...	655
Total Miscellaneous		32	33	34	17	...	655
Grand Totals		4809	5027	5061	5067	5033	5515
Recapitulation							
Gillnet	\$ 7.50	1309	1296	1209	1122	1150	1137
Setnet	3.75	945	1028	1073	1084	1015	1052
Trap	25.00	39	68	38	32	32	38
Seine	Various	38	58	54	50	39	42
Troll	2.50	42	31	47	69	56	43
Boat Puller	2.50	442	480	469	481	384	349
Retail Fish Dealer and Peddler..	5.00	933	1022	1110	1118	1173	1207
Wholesale Fish Dealer	25.00	97	115	113	140	144	139
Buyer	2.00	103	59	...	...	...	...
Broker	50.00	2	2	4	2	4	3
Salmon Canner	25.00	11	8	11	7	6	9
Shellfish Canner	Various	5	8	8	9	14	10
Reduction Plant	25.00	...	9	9	7	9	10
Boat and Scow	2.00	144	118	104	109	...	...
Bagnet	5.00	133	114	150	161	145	61
Clam	5.00	163	229	230	209	329	358
Crab	5.00	264	247	303	326	357	262
Crawfish	5.00	39	37	34	25	31	24
Oyster	5.00	1	4	2	2	4	3
Setline	1.00	99	94	93	114	141	113
Delivery	Various	...	...	...	...	...	655
Totals		4809	5027	5061	5067	5033	5515

SEAL FUND

STATEMENT OF RECEIPTS AND DISBURSEMENTS

For Biennial Period Ended June 30, 1940

RECEIPTS

From Sale of Seal Certificates:

Number	License	Rate	Amount	Total
1333	Gillnet	\$ 2.50	\$3,332.50	
145	Setnet	2.50	362.50	
100	Troll	2.50	250.00	
73	Trap	10.00	730.00	
74	Seine	20.00	1,480.00	
11	Canner	50.00	550.00	
Total Receipts				\$6,705.00
Less: Tithe of 10% on above receipts from April 1, 1939 to June 30, 1940				628.00
Balance receipts after payment of tithe				\$6,077.00

DISBURSEMENTS

For Bounties Paid on Seals Destroyed:

	Address	\$5.00	\$10.00	Amount
Adamappel, Coose	Clifton, Oregon	..	1	\$ 10.00
Anderson, Arthur J.	Skamokawa, Wash.	..	15	150.00
Anderson, Burtell	Skamokawa, Wash.	1	11	115.00
Anderson, Earle	Astoria, Oregon	1	..	5.00
Anderson, Gust	Astoria, Oregon	1	..	5.00
Antoniow, Argerios	Astoria, Oregon	1	..	5.00
Backman, Kenneth	Cathlamet, Wash.	4	..	20.00
Basse, Thomas	Astoria, Oregon	1	..	5.00
Bjornsgard, Wesley	Altoona, Wash.	1	..	5.00
Bryant, Ralph	Altoona, Wash.	..	1	10.00
Carlson, V. O.	Astoria, Oregon	..	1	10.00
Christensen, Arthur	Astoria, Oregon	1	..	5.00
Christensen, Niels	Astoria, Oregon	..	2	20.00
Christensen, Sam	Astoria, Oregon	..	2	20.00
Claeson, H.	Astoria, Oregon	..	1	10.00
Danielovich, Nick	Astoria, Oregon	..	1	10.00
Davis, Trooper	Chinook, Wash.	1	..	5.00
Eastland, Carl	Astoria, Oregon	..	2	20.00
Elliot, J. H.	Astoria, Oregon	..	1	10.00
Empi, Jack	Astoria, Oregon	..	1	10.00
Englund, Axel R.	Astoria, Oregon	..	2	20.00
Ennis, Arnold	Astoria, Oregon	..	3	30.00
Ennis, John	Astoria, Oregon	4	2	40.00
Erickson, Fred	Knappton, Wash.	..	1	10.00
Erickson, Nick	Clatskanie, Oregon	..	1	10.00
Goska, Joe	Knappa, Oregon	1	..	5.00
Grable, Ralph	Ilwaco, Wash.	3	4	55.00
Graham, W. A.	Ilwaco, Wash.	4	5	70.00
Gunderson, Arthur L.	Knappton, Wash.	..	1	10.00
Hagerup, H. A.	Knappton, Wash.	..	2	20.00
Haglund, Gottfrid	Knappa, Oregon	..	2	20.00
Haglund, Oscar	Astoria, Oregon	..	1	10.00
Hansen, David	Astoria, Oregon	..	1	10.00
Hansen, Herman A.	Chinook, Wash.	10	14	190.00
Hansen, Walter	Chinook, Wash.	..	7	70.00
Hellberg, Edward	Astoria, Oregon	..	1	10.00
Herlin, Robert	Astoria, Oregon	1	..	5.00
Howard, Earl F.	Ilwaco, Wash.	1	1	15.00
Hoyer, A. L.	Astoria, Oregon	1	..	5.00
Ivanoff, A.	Astoria, Oregon	2	..	10.00
Jackson, Alex	Astoria, Oregon	1	..	5.00
Jackson, Ed	Astoria, Oregon	..	1	10.00

SEAL FUND

STATEMENT OF RECEIPTS AND DISBURSEMENTS — Continued

For Biennial Period Ended June 30, 1940

Paid to	Address	\$5.00	\$10.00	Amount
Jensen, Henry	Chinook, Wash.	3	..	15.00
Jensen, Ole	Astoria, Oregon	2	..	10.00
Johnson, Alfred	Astoria, Oregon	1	1	15.00
Johnson, Carl	Knappa, Oregon	..	1	10.00
Johnson, John L.	Astoria, Oregon	..	1	10.00
Johnson, Robert	Frankfort, Wash.	1	..	5.00
Johnson, Robert E.	Astoria, Oregon	..	3	30.00
Jorgensen, Tom	Astoria, Oregon	1	..	5.00
Josephson, Cecil	Astoria, Oregon	1	..	5.00
Julin, Axel	Portland, Oregon	1	..	5.00
Jurmu, John	Astoria, Oregon	1	..	5.00
Kaarle, Ralph R.	Astoria, Oregon	..	1	10.00
Kandoll, Ernest	Rosburg, Wash.	..	1	10.00
Korpila, Wilho	Astoria, Oregon	1	..	5.00
Kruckman, George	Astoria, Oregon	7	8	115.00
Laine, J. E.	Rosburg, Wash.	..	2	20.00
Larson, A. L.	Astoria, Wash.	..	2	20.00
Larson, Edwin	Astoria, Oregon	1	..	5.00
Lebeck, E. H.	Ilwaco, Wash.	..	2	20.00
Lindstrom, Carl	Astoria, Oregon	..	2	20.00
Long, Eino	Astoria, Oregon	..	1	10.00
Maki, Emil	Ilwaco, Wash.	1	..	5.00
Marcincovich, Sam	Astoria, Oregon	..	1	10.00
Milde, Gus	Astoria, Oregon	1	..	5.00
Miles, Ben	Astoria, Oregon	..	3	30.00
Miles, C. R.	Astoria, Oregon	3	14	155.00
Moore, Walter	Astoria, Oregon	..	1	10.00
Mustola, Lee	Mayger, Oregon	1	..	5.00
North, Alfred	Astoria, Oregon	1	..	5.00
Olson, Harry	Woodson, Oregon	1	..	5.00
Parker, H. K.	Astoria, Oregon	..	1	10.00
Pearson, Eugene	Svenson, Oregon	2	..	10.00
Pederson, A. C.	Cathlamet, Wash.	..	1	10.00
Peterson, Arnold	Astoria, Oregon	1	..	5.00
Peterson, E. L.	Astoria, Oregon	..	1	10.00
Peterson, Einer L.	Astoria, Oregon	1	2	25.00
Peterson, John A.	Skamokawa, Wash.	3	2	35.00
Peterson, Martin	Skamokawa, Wash.	1	2	25.00
Petrich, Anton	Oregon City, Oregon	..	3	30.00
Pice, Henry	Astoria, Oregon	..	3	30.00
Pierson, C. A.	Astoria, Oregon	..	2	20.00
Pitkanen, William	Astoria, Oregon	1	..	5.00
Powell, Lawrence	Cathlamet, Wash.	..	1	10.00
Prepula, Robert	Astoria, Oregon	1	..	5.00
Pulliam, Charles	Portland, Oregon	..	3	30.00
Puustinen, Ouni	Svensen, Oregon	..	11	110.00
Puustinen, Toivo	Svensen, Oregon	2	266	2,670.00
Puustinen, W. Wm.	Svensen, Oregon	2	5	60.00
Raihala, Reno	Astoria, Oregon	..	1	10.00
Randa, Harlan	Clatskanie, Oregon	..	1	10.00
Rasmussen, Edward	Cathlamet, Wash.	..	1	10.00
Rea, Marion	Portland, Oregon	..	1	10.00
Reinikka, Henry	Astoria, Oregon	1	..	5.00
Rigas, Leon	Clifton, Oregon	..	1	10.00
Risto, John	Astoria, Oregon	..	1	10.00
Rose, P. C.	Astoria, Oregon	..	1	10.00
Ruljancich, Louis	Astoria, Oregon	..	1	10.00
Ryding, Charlie	Astoria, Oregon	..	2	20.00
Schwarzenbach, Henry	Skamokawa, Wash.	1	12	125.00
Simmons, Al	Ilwaco, Wash.	2	5	60.00
Sirnio, George	Clatskanie, Oregon	1	..	5.00

SEAL FUND

STATEMENT OF RECEIPTS AND DISBURSEMENTS—Continued

For Biennial Period Ended June 30, 1940

Paid to	Address	\$5.00	\$10.00	Amount
Siverson, Chris A.	Astoria, Oregon	4	6	80.00
Smith, Chesley	Astoria, Oregon	..	1	10.00
Smith, David	Astoria, Oregon	3	..	15.00
Smith, O. L.	Chinook, Wash.	..	45	450.00
Soderstrom, O. R.	Clatskanie, Oregon	..	1	10.00
Sorenson, Anton	Astoria, Oregon	1	..	5.00
Soter, Nick	Clifton, Oregon	..	4	40.00
Stanich, Anton	Astoria, Oregon	1	..	5.00
Strandholm, John	Astoria, Oregon	1	..	5.00
Tucker, Harold	Roseburg, Oregon	..	1	10.00
Vlastelicia, Max	Astoria, Oregon	..	1	10.00
Wahl, Herbert	Astoria, Oregon	..	6	60.00
Wahlbom, Karl	Astoria, Oregon	1	..	5.00
Webb, G. L.	Astoria, Oregon	..	2	20.00
Wiitala, John	Ilwaco, Wash.	2	..	10.00
Wirkkula, Frans Victor	Astoria, Oregon	1	..	5.00
Yadro, Larry	Astoria, Oregon	..	2	20.00
Zankich, Joe	Astoria, Oregon	..	1	10.00
Zankich, Martin N.	Astoria, Oregon	..	2	20.00
Total Seals Destroyed		<u>101</u>	<u>534</u>	
Total Disbursements for Biennium				<u>\$5,845.00</u>
Balance Receipts over Disbursements				\$ 232.00
Balance on Hand at Beginning of Biennium				7,890.28
Balance on Hand at End of Period				<u>\$8,122.28</u>

NOTE: The law creating the Seal Fund (applying only to the Columbia River) was enacted at the Special Legislative Assembly November, 1935: statutory amendment by the 1939 Legislature increased the bounty to \$10.00.

ARRESTS FOR VIOLATIONS OF COMMERCIAL FISHERIES CODE**For Fiscal Year Ended June 30, 1939**

Dealing in food or shellfish without a license.....	27
Failure to file fishermen's catch reports.....	10
Failure to file reports of fish purchased.....	2
Failure to post license number on monuments, boats, nets.....	6
Fishing during closed seasons or periods.....	10
Fishing in closed waters.....	19
Fishing without a license.....	49
Shooting, molesting, gaffing, or foul hooking of food fish.....	34
Possession of untagged salmon.....	1
Possession of undersize and over-limit of clams.....	19
Selling crabs with backs removed.....	1
Using clams for crab bait.....	8
Unlawful taking of oysters.....	2
Setting net more than one-third distance across stream.....	14
Possession of illegally caught salmon.....	3

Total arrests..... 205

ARRESTS AND DISPOSITION OF CASES**For Fiscal Year Ended June 30, 1939**

COUNTY	Number of Arrests	Number of Convictions	Number Pending, Dismissed or Not Guilty	Number Continued for Sentence	Amount of Fines Imposed	Amount of Fines Remitted or Suspended	Number Paroled or Suspended in Whole or Part
Baker	1	1	..	..	\$ 50.00	..	..
Clackamas	5	5	..	..	450.00	\$ 385.00	5
Clatsop	12	12	..	..	825.00	690.00	11
Columbia	14	13	1	..	1,100.00	735.00	13
Coos	45	44	1	..	4,250.00	3,500.00	43
Crook	1	1	..	..	25.00	15.00	1
Curry	6	6	..	..	600.00	250.00	6
Douglas	14	12	2	..	450.00	105.00	10
Josephine	2	2	..	..	200.00	94.00	1
Lane	5	4	1	..	325.00	245.00	3
Lincoln	49	35	14	..	2,364.50	1,285.00	21
Multnomah	13	11	..	2	685.00	430.00	6
Tillamook	35	32	3	..	2,965.00	1,865.00	24
Union	1	1	..	..	250.00	247.50	1
Wasco	1	1	..	..	100.00	100.00	1
Yamhill	1	1	..	..	100.00	90.00	1
Totals.....	205	181	22	2	\$14,739.50	\$10,036.50	147

ARRESTS FOR VIOLATIONS OF COMMERCIAL FISHERIES CODE**For Fiscal Year Ended June 30, 1940**

Dealing in food or shellfish without a license.....	29
Failure to file fishermen's catch reports.....	4
Failure to file reports of fish purchased.....	1
Failure to post license number on monuments, boats, nets.....	2
Fishing during closed seasons or periods.....	1
Fishing in closed waters.....	21
Fishing without a license.....	45
Shooting, molesting, gaffing, or foul hooking of foodfish.....	34
Possession of undersize sturgeon.....	7
Possession of over-limit of sturgeon.....	2
Possession of untagged salmon.....	1
Untied wet net in boat during closed season.....	1
Buying clams from unlicensed digger.....	1
Possession of undersize and over-limit of clams.....	21
Illegal possession and transportation of clams.....	4
Setting net more than one-third distance across stream.....	7
Possession of illegally caught salmon.....	6

Total arrests..... 187

ARRESTS AND DISPOSITION OF CASES**For Fiscal Year Ended June 30, 1940**

COUNTY	Number of Arrests	Number of Convictions	Number Pending, Dismissed or Not Guilty	Number Continued for Sentence	Amount of Fines Imposed	Amount of Fines Remitted or Suspended	Number Paroled or Suspended in Whole or Part
Baker.....	1	..	1	..	.....	.....	..
Clackamas.....	6	6	..	..	\$ 310.00	\$ 137.50	4
Clatsop.....	8	8	..	..	550.00	230.00	5
Columbia.....	12	12	..	..	1,100.00	655.00	10
Coos.....	24	22	2	..	1,975.00	1,625.00	19
Curry.....	16	12	4	..	1,025.00	460.00	7
Douglas.....	14	14	..	..	1,150.00	850.00	11
Jackson.....	4	3	1	..	150.00	.....	..
Josephine.....	5	4	..	1	400.00	.....	..
Klamath.....	1	1	..	..	10.00	10.00	1
Lane.....	6	5	1	..	125.00	120.00	5
Lincoln.....	32	28	4	..	1,930.00	1,565.00	26
Linn.....	2	2	..	..	200.00	190.00	2
Malheur.....	1	1	..	..	5.00	.....	..
Marion.....	13	12	1	..	500.00	255.00	6
Multnomah.....	6	5	..	1	450.00	380.00	5
Tillamook.....	34	33	1	..	2,170.00	1,238.60	18
Wasco.....	2	2	..	..	350.00	225.00	2
Totals.....	187	170	15	2	\$12,400.00	\$7,941.10	121

SCHEDULE OF COMPENSATION AND EXPENSE ALLOWANCE

For Biennial Period Ended June 30, 1940

Name	Location	Occupation	Rate	COMPENSATION		EXPENSE ALLOWANCE			
				From	To	Meals	Lodging	Fares	Mileage
Abraham, Guy E.	Siletz Station.	Laborer.	\$3.50 day	11-13-38	11-15-38				
Allen, Alfred.	South Santiam Sta.	Laborer.	3.00 "	5-12-39	5-18-39				
Anderson, Archie W.	Ox Bow and South Santiam Stations.	Foreman-Superintendent.	130.00-150.00 month						
Anderson, E. J. W.	Bonneville Station.	Superintendent.	150.00 "	7-1-38	6-30-40				52.00
Anderson, Julius.	Willamette Station.	Laborer.	3.00 day	7-1-38	6-30-40	80.40		16.65	32.04
Anderson, Lucena.	Ox Bow Station.	Laborer.	3.50 "	5-5-39	5-10-39		19.75		
Anderson, Norman E.	Bonneville Station.	Laborer.	3.00 "	6-2-39	6-13-39				
Andrews, Marion.	Oregon City Fishway.	Temporary Inspector.	3.00 "	2-27-40	5-18-40	201.00			
Axe, Wm. M.	Cocos Station.	Laborer.	4.00 "	4-3-40	6-9-40	272.00			
Baker, Sam.	South Santiam Sta.	Laborer.	3.00 "	12-8-39	1-17-40	54.00			
Bales, E. E.	Alsea Station.	Laborer.	3.00 "	5-12-39	5-18-39	18.00			
Bales, Jess J.	Suslaw Station.	Foreman.	130.00 month	12-1-39	1-12-40	68.00			
Balmer, J. G.	Alsea Station.	Foreman.	130.00 "	7-1-38	6-30-40	3,120.00			59.28
Beamer, Roy.	Willamette Station.	Laborer.	3.00 day	7-1-38	6-30-40	3,120.00			179.80
Bentley, Vernon T.	Rogue Station.	Laborer.	3.00 "	4-29-40	5-1-40	24.00			
Billings, C. A.	Oregon City Fishway.	Laborer.	3.00 "	8-1-39	6-22-40	268.50			
Blanchard, Ralph.	South Santiam Sta.	Laborer with team.	3.00 "	9-6-38	9-24-38	51.00			
Bliss, Percy.	Siletz Station.	Laborer.	3.00 "	10-24-39	10-26-39	15.00			
Blum, James.	North Santiam Stas.	Laborer.	3.00 "	3-8-40	6-8-40	240.00			
Boggs, R. L.	North Santiam Stas.	Laborer.	3.00 "	7-6-38	7-22-38	30.00			
Bolle, Fred.	St. Helens-Shad Battery Fish Culturist.	Laborer.	41 2/3c-3.00 hr.-day	4-26-39	11-27-39	18.00			
Bradley, Wallace.	McKenzie Station.	Foreman.	5.00 day	11-16-38	12-4-38	13.37			
Briggs, Harold.	North Santiam Stas.	Laborer.	3.00 "	5-10-39	5-16-39	42.00			15.36
Brock, Vernon E.	Portland, Oregon.	Biologist.	175.00 month	7-1-38	6-30-40	3,120.00		3.70	
Buckbee, Charles.	Yaquina Station.	Foreman.	3.00-3.50 day	9-18-39	5-7-40	138.00			
Burgess, Rob.	Yaquina Station.	Laborer.	3.00 "	4-12-40	6-29-40	84.00			
Bush, E. A.	South Santiam Sta.	Laborer.	3.00 "	7-1-38	6-30-40	3,587.50		3.25	89.64
Buss, Gerald.	St. Helens-Shad Battery	Laborer.	3.50 "	12-8-39	1-10-40	3,120.00			87.84
Camp, William.	Suslaw Station.	Laborer.	3.00 day	8-15-38	8-15-38	350.95	307.50		
Carasa, A. M.	Skasline Station.	Laborer.	3.00 hour	3-20-40	4-4-40	45			
Carle, G. G.	Takkenich Station.	Laborer.	3.00 day	5-14-40	5-20-40	29.25			
Carlson, Dale.	McKenzie Station.	Laborer.	3.50 "	8-25-38	8-21-38	16.50			
Carlson, Norman.	North Lake Sta.	Laborer.	3.50 "	9-1-40	2-2-40	6.00			
Carter, R. H.	McKenzie Station.	Superintendent.	3.00-4.00 "	7-25-38	6-30-40	1,044.00			
Chesboro, Marvin.	Suslaw Station.	Laborer.	3.00 hour	7-1-38	6-30-40	3,600.00			
Chesman, M. E.	Astoria, Oregon.	Commissioner.	5.00 diem	6-11-40	6-19-40	28.50			
Christensen, M. G.	Oregon City, Oregon.	Inspector.	140.00 month	7-12-38	6-12-40	241.50			
Cook, E. H.	Yaquina Station.	Laborer.	3.00 day	7-1-38	6-30-40	39.00	49.50	23.50	152.00
Cook, Henry.	Willamette Station.	Laborer with team.	3.00 "	12-10-39	12-18-39	3,360.00	199.50	.25	367.44
Couch, Melvin.	McKenzie Station.	Laborer.	3.00-6.00 "	7-18-38	5-1-40	177.75			
Croun, Robert F.	Wheeler, Oregon.	Commissioner.	5.00 diem	5-1-39	5-5-39	15.00			
Cross, Francis.	Cocos Station.	Laborer.	3.00 day	7-12-38	6-11-40	220.00	39.50		229.36
Cross, John.	Skasline Station.	Laborer Appr. Fish Culturist.	3.00-100.00 day-mo.	3-27-39	3-8-40	141.00			
Cummins, Loren F.	Skasline Station.	Laborer.	3.50 day	7-1-38	8-15-38	1,772.99			
Dalley, Douglas.	Smith River Fishway.	Laborer.	.65 hour	8-15-38	10-2-39	3.50			
Darnell, Marian.	Trask Station.	Apprentice Fish Culturist.	100.00 month	9-27-39	6-30-40	26.00			20.40
Dickie, Arlie.	North Santiam Stas.	Laborer.	3.00 day	7-1-38	4-30-39	16.50			
Dickie, George.	North Santiam Stas.	Laborer.	3.00 "	4-25-39	10-18-38	10.87			
Dickie, R. O.	North Santiam Stas.	Laborer.	3.00 "	4-25-39	4-30-39	16.50			
Dietz, Henry.	Trask Station.	Laborer.	3.00 "	9-27-39	10-2-39	9.00			
Domier, Elmer.	Willamette Station.	Laborer with horse.	4.50 "	7-2-39	10-14-39	93.00			
Donoho, Audie.	McKenzie Station.	Fish Culturist.	115.00 month	7-1-38	6-30-40	2,760.00			
Donoho, Wilson.	McKenzie Station.	Laborer.	3.00 day	9-23-39	9-28-39	18.00			

SCHEDULE OF COMPENSATION AND EXPENSE ALLOWANCE—Continued

For Biennial Period Ended June 30, 1940

Name	Location	Occupation	Rate	COMPENSATION		EXPENSE ALLOWANCE			
				From	To	Meals	Lodging	Fares	Mileage
Dow, Lorenzo	Seattle, Washington	Draftsman	5-16-38	6-9-38	11.95				
Dunlap, Ralph	McKenzie Station	Laborer	5-1-39	5-6-39	18.00				
Dunning, Raymond	Willamette Station	Watchman	3.00 day	7-1-38	6-29-40				
Eaves, J. O.	Shelkwa Station	Carpenter	3.00-90.00 day-mo.	8-1-38	9-23-38				
Eckles, Albert	North Lake Station	Laborer	4.50 day	7-27-38	8-18-38				
Edger, Ben	Coss Station	Painter	3.00 "	9-22-39	9-23-39				
Edward, Gene	Coss Station	Laborer	3.00 "	10-27-39	10-28-39				
Elfring, John H.	Clatskanie Station	Laborer	3.50 "	8-15-38	8-15-38				
Ellis, C. R.	South Santiam Sta.	Superintendent	150.00 month	7-1-38	11-20-39	2,500.00			
Elzweiler, H. E.	Yachina Station	Laborer	3.00 day	12-14-38	12-23-38	27.00			
Everson, W. E.	Waldport, Oregon	Inspector	120.00 month	10-18-39	6-30-40	1,014.19			
Eyck, Bob Ten	Sandy Station	Laborer	3.50 day	6-28-40	6-5-40	21.00	8.65		133.88
Farnham, W. C.	Umpqua Station	Laborer	3.00 day	9-11-39	10-20-39	64.50			
Farrow, Dick	North Santiam Sta.	Laborer	3.00 "	7-22-39	6-13-40	12.00			
Fawcett, Kenneth G.	Coss Station	Laborer	3.00 "	4-8-40	4-13-40	12.00			
Fearley, Ed	Astoria, Oregon	Temporary Inspector	3.00 "	7-21-39	9-10-39	156.03			
Fischer, M. J.	North Bend, Oregon	Temporary Inspector	135.00 month	8-15-38	10-15-38	274.28	116.00		10.00
Ford, T. E.	Winchester Dam								
Forster, Richard F.	Seattle, Washington	Powderman	.90 hour	9-15-39	9-24-39	10.80			
Frame, Max	Rogue Station	Biologist	5.00 day	12-2-38	6-9-39	237.50			
Freed, Mary	Portland, Oregon	Foreman	130.00 month	7-1-38	6-30-40	3,120.00			
Gibbons, Carl H.	North Santiam Sta.	Sec. Dept. of Fish Culture	140.00 "	7-1-38	6-30-40	3,360.00			
Giksey, Leonard	Rogue Station	Laborer	3.00 day	7-6-38	7-9-38	12.00			
Gilzew, Wallace	McKenzie Station	Laborer	3.50 "	7-1-38	8-31-38	185.50			
Girven, Robert	Aleka Station	Laborer	3.00-3.50 "	4-22-40	5-9-40	40.00			
Godwin, James C.	South Santiam Sta.	Laborer	3.00 "	6-10-40	6-22-40	36.00			
Goodman, Verne	Aleka Station	Laborer	3.00 "	5-11-39	5-12-39	6.00			
Greer, Harry	Ox Bow Station	Laborer	3.50 "	12-2-39	1-18-40	78.00			
Green, Orval	Sandy Station	Foreman	130.00 month	8-21-38	8-31-38	3,120.00			131.92
Gunn, Donald	Bonneville Station	Laborer	3.00 day	7-1-38	6-30-40	21.00			
Hankert, Alfred	Trask Station	Laborer	3.00 "	9-22-39	9-28-39	12.00			
Hans, O. Oscar	Rogue Station	Laborer	3.50 "	4-18-40	4-22-40	12.00			
Harr, Robert L.	Clatskanie Station	Laborer-Appr. Fish Culturist	100.00 month	8-17-38	8-17-38	3.50			
Harrison, Alice	Ox Bow Station	Laborer	3.50 day	1-10-39	6-30-40	1,580.65	52.50		21.40
Harrison, Louis	Ox Bow Station	Laborer	3.50 "	6-2-39	5-29-40	64.75			
Harrison, T. C.	Bonneville Station	Fish Culturist	115.00 month	7-1-38	6-30-40	2,760.00	114.05		48.44
Harrison, Thos. H.	Bonneville Station	Appr. Fish Culturist	100.00 "	7-1-38	6-30-40	2,400.00	9.30		
Harrison, Wilbur	Bonneville Station	Laborer	3.00 day	10-1-38	10-4-38	9.00			
Hawley, N. I.	Clatskanie Station	Clerk	3.00 "	7-1-38	8-31-38	118.50			
Henze, Otto D.	Clatskanie Station	Fish Culturist	115.00 month	7-1-38	8-15-39	1,550.65	10.45		8.96
Hester, Dale	Trask Station	Laborer	3.00 day	4-10-39	10-1-39	54.00			
Hickey, Joseph H.	Clatskanie Station	Laborer	3.00 "	5-13-40	6-23-40	55.50			
Hickey, L. W.	Clatskanie Station	Superintendent	150.00 month	7-1-38	6-30-40	3,600.00	18.90		108.12
Hills, Chas. J.	Willamette Station	Superintendent	150.00 "	7-1-38	6-30-40	3,600.00			
Hills, Vina	Willamette Station	Laborer	3.00 day	9-13-38	10-12-38	52.50			
Hoar, Norman R.	Nehalem Station	Laborer	3.00 "	1-7-39	3-11-39	174.00			
Hogan, Virginia	Nehalem Station	Laborer	3.00 "	1-13-39	1-20-39	32.50			
Horne, R. E.	Ox Bow Station	Comptroler	5.00 "	5-6-40	5-18-40	86.00			
Horsfall, Jack	Siletz Station	Laborer	3.00 "	12-2-38	12-3-38	3.75			
Housman, Bert	Winchester Dam								
Hoy, M. T.	Portland, Oregon	Laborer	4.00 "	9-14-39	9-30-39	36.00			
Hughes, Herbert	South Santiam Sta.	Master Fish Warden	350.00 month	7-1-38	6-30-40	8,145.96	105.10	2.00	734.92
Hughes, V. R.	Bonneville Station	Laborer	3.00 day	3-20-40	6-29-40	186.25			
Hulse, Charles	Trask Station	Laborer	3.00 "	4-16-40	5-10-40	16.50			
Jackson, Laurie E.	Clatskanie Station	Laborer	3.50 day	8-25-38	8-25-38	7.00			
Jackson, Tom	North Santiam Sta.	Laborer	3.00 "	10-13-38	10-18-38	13.50			
Jackson, Victor	Astoria, Oregon	Inspector & Boat Captain	153.00 month	7-1-38	6-30-40	3,672.00	8.60		106.08
Jackson, Harold N.	Astoria, Oregon	Temporary Asst. Biologist	4.00 day	7-25-39	9-15-39	212.00	2.00		23.76
Jenkins, Harold	Ox Bow Station	Laborer	3.00 "	9-29-38	10-5-38	19.50			

SCHEDULE OF COMPENSATION AND EXPENSE ALLOWANCE—Continued

For Biennial Period Ended June 30, 1940

Name	Location	Occupation	Rate	COMPENSATION		EXPENSE ALLOWANCE				
				From	To	Amount	Meals	Lodging	Fares	Mileage
Jewett, Stanley G., Jr.	Astoria, Oregon	Assistant Biologist	100.00 month	6- 7-39	6-30-40	780.00	198.40	185.50	.....	303.98
Johnson, J. A.	Bonneville & Ox Bow Stations	Fish Culturist-Foreman	115.00-130.00 "	7- 1-38	6-30-40	2,805.00	75.60	57.25	10.60	13.36
Johnson, Kenneth	Ten Mile Lake Sta.	Laborer	3.00 day	12- 1-38	12-12-39	54.00	.....	.....	.....	.....
Johnson, Oliver	North Santiam Stas.	Laborer	3.00 "	7-21-39	7-21-39	3.00	.....	.....	.....	.....
Jones, Calvin	North Santiam Stas.	Laborer	3.00 "	10-24-39	10-26-39	7.87	.....	.....	.....	.....
Joyner, E.	Oregon City, Oregon	Temporary Inspector	4.00 "	5-16-39	6- 1-39	68.00	.....	.....	.....	.....
Kelly, M. F.	North Bend, Oregon	Inspector	140.00 month	7- 1-38	6-30-40	3,860.00	327.10	96.00	.....	.....
Koch, Karl	Bonneville Station	Assistant Biologist	4.00 day	7- 1-38	9- 8-38	238.00	56.65	59.75	.90	.....
Koch, Robert	Sandy & Bonneville Stations	Laborer	3.00 "	8- 1-39	6-30-40	507.00	.....	.....	.....	.....
Kraft, George S.	South Santiam Sta.	Laborer with team	3.00-5.00 "	10-19-38	5-18-39	50.00	.....	.....	.....	.....
Landers, Arthur W.	North Santiam Stas.	Laborer	3.00 day	12- 5-39	6-29-40	390.00	.....	.....	.....	.....
Larson, R. W.	Sandy Station	Laborer	3.50 "	5-29-40	6- 1-40	10.50	.....	.....	.....	.....
La Vine, Melvin	North Santiam Stas.	Laborer	3.00 "	10-23-39	10-27-39	15.00	.....	.....	.....	.....
Ledgerwood, Edgar	North Santiam & Bonneville Stations	Foreman-Fish Culturist	130.00-115.00 month	7- 1-38	6-30-40	2,865.00	10.70	9.50	.....	47.40
Ledgerwood, Le Roy	North Santiam Stas.	Superintendent	150.00 "	7- 1-38	6-30-40	3,600.00	.85	2.00	1.60	95.40
Leinenweber, Henry	Astoria, Oregon	Inspector	140.00 "	7- 1-38	6-30-40	3,360.00	2.80	.....	.....	144.72
Lempeke, Rudolph	Klaskanine Station	Teamster	1.00 hour	8-15-39	8-15-39	5.00	.....	.....	.....	.....
Levell, Ernie	Bonneville Station	Laborer	3.00 day	9-21-38	10- 3-38	36.00	.....	.....	.....	.....
Lindholm, Harry	Portland, Oregon	Watchman	5.00 month	5- 1-38	5- 1-40	120.00	.....	.....	.....	.....
Long, Eugene	McKenzie Stations	Laborer	3.00 day	8- 1-39	8- 5-39	15.00	.....	.....	.....	.....
Loyd, A. J.	Nehalem Station	Laborer	3.00 "	5- 4-39	5-11-39	15.00	.....	.....	.....	.....
Lulay, Henry J.	No. Santiam Fishway	Laborer	.75 hour	6-12-40	6-18-40	25.50	.....	.....	.....	.....
McCall, Bill	North Santiam Stas.	Laborer	3.00 day	4-24-39	5- 1-39	24.00	.....	.....	.....	.....
McCarn, Lee	Umpqua Station	Superintendent	150.00 month	7- 1-38	6-30-40	3,600.00	.....	.....	.....	28.00
McCarn, M. B.	Umpqua Station	Laborer	3.00 day	10- 2-39	10-31-39	24.00	.....	.....	.....	.....
McCartney, C. W.	Winchester Dam Fishway	Laborer	4.00 "	9-14-39	9-28-39	32.00	.....	.....	.....	.....
McCartney, A. E.	Klaskanine Station	Electrician	1.20 hour	1-14-39	1-14-39	4.80	.....	.....	.....	.....
McCoy, Dan	St. Helens-Shad Battery	Laborer with boat	5.00-6.00 day	5-10-39	6-10-40	335.00	.....	.....	.....	.....
McCulloch, Clarence	Ten Mile Station	Laborer with team	3.00-6.00 "	7- 1-38	1- 8-39	136.50	.....	.....	.....	.....
McCulloch, M. L.	Ten Mile Station	Laborer	3.00 "	8- 3-38	8-25-38	24.00	.....	.....	.....	.....
McLeod, A. D.	Klaskanine Station	Laborer	.50 hour	9-18-39	9-19-39	5.00	.....	.....	.....	.....
McLeod, Jack	Deschutes Station	Laborer	3.50 day	6-18-40	6-28-40	17.50	.....	.....	.....	.....
Maki, Albert	North Lake Station	Laborer	3.00 "	12- 1-39	2- 9-40	90.00	.....	.....	.....	.....
Marks, Otis	North Santiam Stas.	Laborer	3.00 "	11-29-38	12-31-38	82.50	.....	.....	.....	.....
Milde, Gus M.	Astoria, Oregon	Mechanic	5.00 "	8-24-38	9- 9-38	85.00	.....	.....	.....	.....
Miller, Ben	Sandy Station	Laborer with team	6.00 "	10-16-39	5-28-40	15.00	.....	.....	.....	.....
Minney, Arthur	Willamette Station	Fish Culturist	115.00 month	7- 1-38	6-30-40	2,760.00	.....	.....	.....	.....
Mitchell, Hugh C.	Portland, Oregon	Director of Fish Culture	350.00 "	7- 1-38	6-30-40	8,400.00	273.10	153.50	11.00	7.20
Monson, Ben	Ten Mile Station	Laborer	3.00 day	1- 1-40	1-28-40	36.00	.....	.....	.....	.....
Monson, Bill	Ten Mile Station	Laborer	3.00 day	11- 1-38	11-30-38	51.00	.....	.....	.....	.....
Monson, Cliff	Ten Mile Station	Laborer	3.50 "	10-25-38	4-22-40	1,057.00	.....	.....	.....	.....
Monson, Joe	Ten Mile Station	Laborer	3.00 "	12- 8-39	2-25-40	46.50	.....	.....	.....	.....
Moore, Keith	North Santiam Stas.	Laborer	3.00 "	4-25-39	6-30-40	288.37	.....	.....	.....	.....
Morris, H. A.	McKenzie Stations	Laborer with team	6.00-7.00 "	7-25-38	10-15-38	59.00	.....	.....	.....	.....
Murray, Paul E.	Bonneville Station	Apprentice Fish Culturist	100.00 month	7- 1-38	6-15-39	1,150.00	.....	.....	.....	.....
Nelson, George	Ox Bow, Bonneville & Deschutes Stations	Fish Culturist-Foreman	115.00-130.00 month	7- 1-38	6-30-40	2,805.00	188.60	3.00	.....	52.56
Nelson, Mira	Ox Bow Station	Laborer	3.50 day	6- 2-39	5-29-40	61.25	.....	.....	.....	.....
Nesmith, Linn W.	Klaskanine Station	Laborer	3.00 "	8-14-39	11-28-39	288.00	.....	.....	.....	.....
Nicklaus, H.	Siletz Station	Foreman	3.00 "	12- 2-39	1-26-40	52.50	.....	.....	.....	.....
Nicklaus, Tom	Siletz Station	Temporary Research Asst.	130.00 month	7- 1-38	6-30-40	3,120.00	.....	.....	.....	51.56
Niska, Edwin L.	Astoria, Oregon	Laborer	100.00 "	6-16-40	6-30-40	50.00	.....	.....	.....	.....
Noble, F. C.	North Lake Station	Laborer	3.00 day	12- 2-38	12- 4-38	9.00	.....	.....	.....	.....
Odell, Wister	McKenzie Stations	Laborer	4.00 day	7-25-38	7-26-38	8.00	.....	.....	.....	.....
Oestreich, Roy	Portland, Oregon	Cashier & Chief Clerk	200.00 month	7- 1-38	6-30-40	4,800.00	.95	.....	.....	19.68
Oglesby, Leith J.	Clackamas Station	Laborer	100.00 "	1-10-39	3-31-39	270.97	.....	.....	.....	.....

SCHEDULE OF COMPENSATION AND EXPENSE ALLOWANCE—Continued

For Biennial Period Ended June 30, 1940

Name	Location	Occupation	Rate	COMPENSATION		EXPENSE ALLOWANCE			
				From	To	Meals	Lodging	Fares	Mileage
Olman, Eric.....	Bonneville Station.....	Laborer.....	3.00 day	9-17-38	10- 5-38	.....	.....	.....	.....
Oregon Agricultural Experiment Sta.....	Waldport, Oregon.....	Oyster Research.....	700.00 year	7- 1-39	6-30-40	.....	.....	.....	.....
Orr, John.....	Willamette Station.....	Laborer with team.....	6.00 day	4-26-40	4-26-40	.....	.....	.....	.....
Osburn, Wayne.....	Bonneville Station.....	Laborer.....	3.00 "	9- 8-38	9-13-38	.....	.....	.....	.....
Osterlund, Henry H.....	Klaskanine Station.....	Laborer.....	3.50 "	8-17-38	8-22-38	.....	.....	.....	.....
Pasley, David A.....	Smith Riv. Fishway.....	Laborer.....	4.00 day	9-27-39	10- 2-39	.....	.....	.....	.....
Peck, Crawford.....	North Santiam Stas.....	Laborer.....	3.00 "	4-12-40	4-16-40	.....	.....	.....	.....
Pepiot, Elmer.....	McKenzie Stations.....	Laborer.....	3.00 "	5- 6-39	5- 6-39	.....	.....	.....	.....
Peterson, M. T.....	Umpqua Station.....	Laborer.....	3.00 "	8-17-38	9-21-38	.....	.....	.....	.....
Pettiger, George.....	Rogue Station.....	Laborer.....	3.00 "	8-18-39	8-18-39	.....	.....	.....	.....
Pfaff, B. R.....	North Santiam Stas.....	Laborer.....	3.00 "	4-24-39	4-18-40	.....	.....	.....	.....
Phillips, Merle A.....	North Santiam Stas.....	Laborer.....	3.00 "	5- 1-39	6-30-40	.....	.....	.....	.....
Pickett, G. A.....	Bonneville Station.....	Laborer.....	3.00 "	7- 6-38	7- 9-38	.....	.....	.....	.....
Pieren, T. A.....	Bonneville Station.....	Laborer.....	3.00 "	2-22-40	3- 1-40	.....	.....	.....	.....
Pugh, Forest.....	North Santiam Stas.....	Laborer.....	3.00 "	7-21-39	7-24-39	.....	.....	.....	.....
Pugh, Gary.....	North Santiam Stas.....	Laborer.....	3.00 "	7-21-39	7-21-39	.....	.....	.....	.....
Reed, Warren.....	McKenzie Stations.....	Laborer.....	3.00-4.00 day	7-25-38	5-24-40	.....	.....	.....	.....
Reeder, J. M.....	Siletz Station.....	Laborer.....	3.00 "	12- 3-39	12-23-39	.....	.....	.....	.....
Rice, Larkin.....	Umpqua Station.....	Laborer.....	3.00 "	8-22-38	10-20-39	.....	.....	.....	.....
Rice, Robert H.....	Bonneville Station.....	Assistant Biologist.....	4.00 "	7- 1-38	9-14-38	.....	.....	.....	.....
Rich, Dr. Willis H.....	Portland, Oregon.....	Director of Research.....	200.00 month	7- 1-38	1-31-40	.....	.....	.....	.....
Ritter, Clifford M.....	Trask & Tillasqua Stas.....	Appr. Fish Cut st-Foreman.....	100.00-130.00 "	7- 1-38	6-30-40	.....	.....	.....	.....
Robinson, J. H.....	Sandy Station.....	Laborer.....	3.50 day	5-23-40	6- 5-40	.....	.....	.....	.....
Ryckman, Jack.....	McKenzie & Sandy Stations.....	Apprentice Fish Culturist.....	100.00 month	7- 1-38	6-30-40	.....	.....	.....	.....
Sales, Geo.....	Nehalem Station.....	Truck Driver.....	3.00 day	12-30-38	12-31-38	.....	.....	.....	.....
Scherer, Rosalie.....	Salem, Oregon.....	Special Stenographer.....	4.50 "	7-18-38	7-20-38	.....	.....	.....	.....
Sergeys, Leon F.....	Bogue & North Santiam Stations.....	Laborer.....	3.00 "	2-21-39	4-19-40	.....	.....	.....	.....
Shearer, George.....	Trask Station.....	Carpenter.....	6.50 "	9- 2-38	9-17-38	.....	.....	.....	.....
Sherwood, Lester.....	South Santiam Sta.....	Laborer.....	3.00 "	7- 7-38	7-16-38	.....	.....	.....	.....
Silvers, Thomas J.....	Bonneville Station.....	Laborer.....	3.00 "	9-23-38	10- 1-38	.....	.....	.....	.....
Simmons, L. W.....	Coos Station.....	Laborer.....	3.00 "	12- 9-39	12-19-39	.....	.....	.....	.....
Simons, A. B.....	South Santiam Sta.....	Laborer.....	3.00 "	7- 8-38	7-15-38	.....	.....	.....	.....
Stobom, Erlend.....	Astoria, Oregon.....	Temporary Inspector.....	5.00-125.00 day-mo.	3- 1-39	4-30-40	.....	.....	.....	.....
Sneds, John.....	Tillasqua Station.....	Powderman.....	5.40 day	1-10-39	1-10-39	.....	.....	.....	.....
Smiley, Wallace.....	Takkenitch Station.....	Laborer.....	3.00 "	11- 9-38	3- 4-40	.....	.....	.....	.....
Smith, Ed.....	Winchester Dam Fishway.....	Laborer.....	4.00 "	9-14-39	9-20-39	.....	.....	.....	.....
Smith, Frank W.....	Coos Station.....	Superintendent.....	150.00 month	7- 1-38	6-30-40	.....	.....	.....	.....
Smith, H. S.....	Portland, Oregon.....	Auditor.....	175.00 "	7- 1-38	6-30-40	.....	.....	.....	.....
Smith, Kenneth.....	Daniel's Ck. Shad Bat'y.....	Laborer.....	3.00 day	6-29-40	6-20-40	.....	.....	.....	.....
Smith, Wm. A.....	South Santiam Sta.....	Laborer.....	3.00 "	3-20-40	4- 4-40	.....	.....	.....	.....
Spatz, Melvin.....	Willamette Station.....	Laborer.....	3.00 "	4-26-40	5- 1-40	.....	.....	.....	.....
Spelstra, C. S.....	Nehalem Station.....	Laborer.....	3.00 "	11-12-39	4-22-40	.....	.....	.....	.....
Spredink, C. E.....	Umpqua Station.....	Laborer.....	3.00 "	10-13-38	10-19-38	.....	.....	.....	.....
Stahman, Ward.....	North Santiam Stas.....	Laborer.....	3.00 "	10-13-38	10-17-38	.....	.....	.....	.....
Staine, Sylva M.....	Portland, Oregon.....	Hollerith Operator.....	85.00-100.00 month	7- 1-38	6-30-40	.....	.....	.....	.....
Stanley, Gordon.....	Willamette Station.....	Laborer.....	3.00 day	5-22-39	9-26-39	.....	.....	.....	.....
Stockdale, Max.....	Yaquina Station.....	Laborer with horse.....	41 2/3 hr.	11-15-38	11-15-38	.....	.....	.....	.....
Stone, Pete.....	Sandy Station.....	Laborer.....	3.50 day	7- 1-38	1-31-39	.....	.....	.....	.....
Stone, W. W.....	Winchester Dam Fishway.....	Laborer.....	4.00 "	9-18-39	9-28-39	.....	.....	.....	.....
Strass, L. W.....	Nehalem Station.....	Foreman.....	130.00 month	7- 3-38	6-30-40	.....	.....	.....	.....
Straw, A. M.....	Klaskanine Station.....	Paperhanger.....	1.25 hour	10-23-39	10-31-39	.....	.....	.....	.....
Stumpf, Edward J.....	Portland, Oregon.....	Temporary Clerk.....	2.75 day	12- 6-38	6-16-40	.....	.....	.....	.....
Stutsman, Guy.....	North Lake Station.....	Laborer.....	3.00 "	12-28-38	1-31-39	.....	.....	.....	.....
Sundsten, Helmer.....	Bonerville, Sandy & Suslaw Stations.....	Carpenter.....	7.00 "	7-22-38	9-28-38	.....	.....	.....	.....

SCHEDULE OF COMPENSATION AND EXPENSE ALLOWANCE—Continued

For Biennial Period Ended June 30, 1940

Name	Location	Occupation	COMPENSATION			EXPENSE ALLOWANCE		
			Rate	From	To	Amount	Meals	Lodging
Suter, Louis	Trask Station	Laborer	3.00	11- 2-38	12- 8-39	162.00		
Taylor, Lloyd N.	McKenzie, Tahkenitch & Mill Creek Stas.	Apprentice Fish Culturist	100.00 month	7- 1-38	6-30-40	1,719.35	125.00	
Thomas, Frank L.	Coquille Station	Appr. Fish Cult'g-Caretaker	10.00-100.00 "	10- 1-38	6-29-40	994.91		
Thompson, A. R.	Coos & North Santiam Stations	Laborer	3.00 day	7- 1-38	12-17-39	381.00		
Thompson, Ed.	North Santiam Stas.	Laborer	3.00 "	10-26-39	10-27-39	3.00		
Thompson, Peter N.	Claskanine Stations	Laborer	3.50 "	8-17-38	8-25-38	10.50		
Tolles, Walter	Umpqua Station	Mason	5.00 "	8- 9-38	8-10-38	10.00		
Torgerson, T. C.	North Lake, Ten Mile & Tahkenitch Stas.	Laborer	3.00 "	10- 9-39	4-16-40	531.00	54.20	101.24
Tremblay, W. E.	Alsea Station	Carpenter	6.00 day	8-29-39	8-31-39	18.00		
Troutman, A. E.	Deschutes Station	Laborer	3.50 "	3-20-40	6-28-40	168.00		
Tullock, B. S.	Alsea Station	Laborer	3.00 "	5-27-40	6-29-40	69.00		
Udell, C. F.	South Santiam Sta.	Laborer	3.00 day	7-11-38	7-15-38	15.00		
Umburn, Frank	McKenzie Stations	Carpenter	6.00 "	8-22-38	7-22-39	99.00		
Upmeyer, Orville	Willamette Station	Laborer with team	6.00 "	5-22-39	7- 7-39	18.00		
Veatch, John C.	Portland, Oregon	Commissioner	5.00 diem	7-12-38	6-28-40	400.00	6.95	25.45
Vierow, John	North Lake Station	Laborer	3.00 day	1- 1-39	1-15-39	6.00		
Vleck, C. E.	Umpqua Station	Fish Culturist	115.00 month	7- 1-38	6-30-40	2,760.00	1.50	
Vleck, Myron	Umpqua Station	Laborer	3.00 day	6-12-39	6-22-40	69.00		
Vost, Augustine	Trask Station	Laborer	3.00 "	11- 2-38	12- 2-38	10.50		
Walker, H. R.	Bonneville Station	Laborer	3.00 day	9-17-38	9-27-39	72.00		
Walker, Loyal G.	South Santiam Sta.	Laborer	3.00 "	3-20-40	3-23-40	12.00		
Walker, M. E.	Portland, Oregon	Inspector	170.00 month	7- 1-38	6-30-40	4,080.00	22.10	17.85
Walsh, J. V.	Bonneville Station	Landscaper	5.00 day	4- 7-39	4-29-39	100.00		
Warren, H. C.	Portland, Oregon	Inspector	170.00 month	7- 1-38	6-30-40	4,080.00	329.90	287.75
Welborn, Marion T.	Portland, Oregon	Stenographer and Secretary to Master Fish Warden	130.00 "	7- 1-38	6-30-40	3,120.00		
Wessela, Eugene	Mill Creek Station	Apprentice Fish Culturist	100.00 "	11- 8-38	4-30-39	576.67		
Whipple, Orville A.	South Santiam Sta.	Laborer	3.00 day	9- 1-38	10-29-38	165.00		
White, Ellis	Rogue Station	Laborer	3.00 "	10- 6-38	11-10-38	90.00		
Wilkins, Wm.	North Lake Station	Laborer with team	3.00-6.00 "	12- 3-38	3- 5-40	9.00		
Williams, Henry	Oregon City, Oregon	Temporary Inspector	4.00 "	4- 1-39	5-15-39	180.00		
Willis, John	Alsea Station	Laborer	3.00 "	2- 1-40	2- 4-40	12.00		
Willner, Carl	Seattle, Washington	Draftsman	.56 1/4 hour	4-20-38	4-25-38	20.25		
Wilson, Philip	South Santiam Sta.	Laborer	3.00 day	7- 2-38	7-18-38	39.00		
Wirth, W. L.	North Lake Station	Laborer	4.00 "	7-25-38	8-18-38	78.00		
Wirth, W. M.	Coos Station	Laborer	3.00 "	1- 1-39	1-28-39	9.00		
Wright, Joe	North Santiam Stas.	Laborer	3.00 "	10-13-38	4-13-40	18.00		
Yoss, Benoit	Tillamook Station	Laborer	3.00 "	11- 1-38	12-26-39	147.00		
Zimmerman, Ed.	McKenzie Stations	Laborer with team	6.00 day	5- 1-39	5- 6-40	114.00		
TOTALS						\$179,037.65	\$3,360.25	\$2,255.75
							\$138.62	\$4,157.58

PACK OF CANNED SALMON ON THE COLUMBIA RIVER FROM THE INCEPTION OF THE INDUSTRY TO 1939

Year	Number of Canneries	Chinook		Blueback		Silverside		Chum or Keta		Steelhead Trout		Total	
		Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value
1866												4,000	\$ 64,000
1867												18,000	288,000
1868												28,000	392,000
1869												100,000	1,350,000
1870												150,000	1,800,000
1871												200,000	2,100,000
1872												250,000	2,325,000
1873												250,000	2,250,000
1874												350,000	2,625,000
1875												375,000	2,250,000
1876												450,000	2,475,000
1877												380,000	2,052,000
1878	30											460,000	2,300,000
1879	30											480,000	2,640,000
1880	29											530,000	2,650,000
1881												550,000	2,475,000
1882												541,300	2,600,000
1883												629,400	3,147,000
1884												620,000	2,915,000
1885												553,800	2,500,000
1886												448,500	2,135,000
1887												356,000	2,124,000
1888	28											372,477	2,234,862
1889	21	266,697	\$1,600,182	17,797	\$101,051					25,391	\$108,587	309,885	1,809,820
1890	21	335,604	1,946,087	57,345	290,069					42,825	171,300	435,774	2,407,456
1891	22	353,907	2,038,566	15,482	284,242					29,564	118,156	398,953	2,440,964
1892	24	344,267	1,996,388	66,547	372,909	4,176	\$ 20,880			72,348	288,892	487,338	2,679,069
1893	24	288,773	1,559,374	30,459	152,295	29,107	116,428	2,311	\$ 6,933	65,226	260,904	415,876	2,095,934
1894	24	351,106	1,896,976	43,814	224,430	42,758	171,032			52,422	209,688	490,100	2,501,126
1895	24	444,909	2,428,658	18,015	86,523	99,601	329,683	22,493	62,591	49,678	203,542	634,696	3,110,997
1896	24	370,943	1,804,511	16,983	81,518	44,108	141,145			49,663	198,652	481,697	2,261,826
1897	22	432,753	1,804,221	12,972	51,888	60,850	197,762			46,146	165,440	552,721	2,219,311
1898	23	329,566	1,490,394	66,670	300,015	65,431	222,465			26,277	60,352	487,944	2,073,226
1899	17	255,824	1,458,175	23,969	134,723	29,608	112,055	11,379	33,836	11,994	39,186	332,774	1,777,975
1900	16	262,392	1,821,258	13,162	92,184	44,925	202,163	17,696	63,706	20,597	102,985	358,772	2,282,296
1901												390,183	1,942,660
1902	14	270,580	1,428,743	17,037	86,465	10,532	44,732	10,401	41,604	8,593	42,965	317,143	1,644,509
1903	16	301,762	1,610,614	8,383	42,867	12,181	49,869	10,000	37,500	7,251	36,255	339,577	1,777,105
1904	20	329,378	1,944,690	12,911	78,048	31,254	118,357	20,693	52,691	9,868	48,892	395,104	2,242,678
1905	19	327,106	1,962,636	7,768	46,608	26,826	114,011	25,751	65,206	9,822	49,110	397,723	2,237,571
1906	19	311,334	1,868,007	7,816	54,712	41,446	124,338	27,802	69,505	6,500	32,500	394,898	2,149,062
1907	19	258,433		5,504		31,757		22,556		5,921		324,171	1,763,490
1908	14	210,096		8,581		31,432		16,884		10,726		253,341	1,380,708
1909	15	162,131	1,203,546	27,908	214,561	42,178	185,070	24,542	57,115	17,283	99,796	274,087	1,760,088
1910	15	244,286	1,882,137	6,234	34,287	68,922	363,688	66,538	232,883	5,436	31,203	391,415	2,544,198
1911	15	406,862	2,204,185	5,988	47,904	79,416	549,478	58,471	203,198	8,594	47,399	543,331	3,052,164
1912	15	220,317	1,988,526	8,210	85,384	31,842	177,248	18,699	46,590	6,958	22,108	285,666	2,319,856
1913	15	192,116	1,664,670	11,152	93,677	40,969	175,412	13,303	29,486	8,939	49,142	266,479	2,012,387
1914	17	289,484	2,573,502	35,811	376,924	69,769	380,666	49,285	205,541	10,792	59,356	454,621	3,595,989
1915	19	406,486	3,694,361	5,459	56,707	33,336	173,234	86,530	251,632	26,723	129,358	558,534	4,305,292
1916	20	395,166	3,572,203	3,790	27,288	52,084	335,114	77,766	307,483	18,999	118,987	547,805	4,361,075
1917	20	403,637	5,023,529	7,968	111,552	64,299	700,680	53,659	386,596	23,783	292,538	555,218	6,530,939
1918	20	400,952	5,222,983	37,833	605,328	98,145	1,072,343	29,846	215,669	24,605	350,071	591,381	7,466,924
1919	21	392,125	5,455,550	7,268	145,360	90,728	1,142,767	75,493	541,989	14,414	205,254	580,028	7,490,920
1920	22	420,467	5,661,580	2,617	62,808	27,024	257,806	18,792	99,564	12,645	116,859	481,545	6,198,617
1921	20	287,582	3,761,321	6,045	120,900	34,381	233,372	4,821	19,791	10,142	68,266	323,241	4,203,649
1922	23	237,230	3,724,393	30,743	614,860	90,437	633,935	8,844	47,130	24,920	186,675	392,174	5,206,993
1923	23	280,586	4,967,657	38,309	766,180	101,554	673,954	25,508	135,168	25,968	187,965	480,925	6,730,924
1924	22	293,716	4,508,236	7,366	129,840	112,308	992,865	57,748	303,356	29,734	285,107	500,872	6,219,404
1925	21	350,809	5,423,129	5,650	106,220	113,554	1,488,855	55,812	272,398	14,637	177,866	540,452	7,468,468
1926	21	295,202	4,744,131	21,736	434,720	97,142	1,027,597	32,853	181,216	32,690	356,418	479,723	6,744,064
1927	22	339,446	5,559,202	6,887	147,378	74,879	585,816	68,449	425,240	30,148	311,070	519,809	7,028,705
1928	24	251,404	4,355,218	4,814	100,131	49,136	478,355	124,953	747,619	16,339	222,139	446,646	5,903,462
1929	21	242,938	4,234,214	10,072	181,296	90,684	917,561	54,619	314,928	23,804	257,025	422,117	5,905,024
1930	21	281,346	4,092,810	9,823	194,460	110,430	1,156,042	11,371	43,324	16,535	171,541	429,505	5,658,177
1931	20	294,793	3,754,929	4,125	66,000	39,268	247,878	3,518	11,764	11,980	110,429	353,699	4,191,000
1932	15	216,511	2,023,390	2,795	33,540	46,492	280,853	17,261	44,879	13,132	91,924	296,191	2,474,586
1933	14	251,157	2,179,303	6,921	96,894	36,430	263,190	24,398	107,351	17,805	142,440	336,711	3,329,178
1934	13	251,068	2,630,152	6,869	82,423	56,428	536,731	24,455	92,608	14,901	121,000	362,721	3,462,919
1935	10	205,870	2,479,450	1,302	17,619	95,184	725,863	15,495	59,499	14,888	122,846	322,739	3,405,282
1936	11	220,188	2,964,058	9,837	137,718	36,541	303,263	30,597	110,149	19,282	317,867	316,445	3,833,055
1937	11	291,343	4,256,819	7,526	126,436	69,801	725,996	30,592	138,309	17,568	189,734	416,830	5,437,294
1938	10	173,892	2,707,267	13,889	260,369	67,257	630,364	37,704	143,275	15,248	152,480	307,990	3,893,755
1939		207,595	3,336,209	5,301	102,359	69,082	730,549	15,201	75,416	25,293	421,608	322,472	4,696,578

29,396,058 \$237,920,611

(We are able to show the above table through the courtesy of the Pacific Fisherman.)

LETTER OF TRANSMITTAL

Portland, Oregon, July 1, 1940.

FISH COMMISSION OF THE STATE OF OREGON,
Portland, Oregon.

Gentlemen:

I transmit herewith the report of the Department of Research for the biennium ending June 30, 1940.

Respectfully,

WILLIS H. RICH,
Director of the Department of Research.

REPORT OF THE DEPARTMENT OF RESEARCH

For the Biennium Ending June 30, 1940

The last biennial report recorded the establishment of the Department of Research early in 1938. The past two years have seen the work of this department develop into a consistent program of biological research dealing primarily with the major fishery resources of the state. The program is necessarily a modest one as conditioned by the limited funds available, but it is believed to be sound and to bear directly upon the more important problems of fishery conservation that confront the Commission.

The present staff consists of Dr. Willis H. Rich who has continued to act as Director on a part time basis, Mr. Vernon Brock, Fishery Biologist, and Messrs. Stanley G. Jewett, Jr. and Edwin Niska, Research Assistants.

During the past year headquarters for the work of the department have been established at Astoria in the Food Industries Laboratory of the Agricultural Experiment Station of the State College of Oregon. The officials of the college have generously set aside space for the use of the department and have also made available much in the way of standard laboratory equipment and facilities. This arrangement is proving to be of great advantage since it provides, at the fishery center of the State, laboratory and office space suitable for much of the routine research and adequate storage for specimens and field equipment. In addition to the facilities provided by the Food Industries Laboratory, the department has purchased such laboratory and office equipment as has been necessary to meet the present requirements. The Astoria Laboratory although small and simply equipped is serving an exceedingly useful function.

The result of the studies of the department have been published in a series of "Contributions" the first number of which appeared early in 1939. In a foreword to this first Contribution, the Chairman of the Commission, Mr. John C. Veatch, made the following statement:

"In preparing a research program it has been important to consider facilities for publication of the results as a means of recording these in such form that they may be permanently available, not only to the members of this commission but to State administrators and legislators and to others who may be concerned with the conservation of the commercial fisheries of Oregon. There are certain advantages in publishing papers of this character in a regular series of bulletins but the expense of this has seemed likely to be prohibitive. Furthermore there are certain other advantages to be obtained by publishing such results in already established series and periodicals. The results are thus given a more general distribution than would be possible with a new series and specialized papers may appear in series devoted to the particular field in which they fall. Flexibility and at least most of the advantages of both systems can, we believe, be secured by a combination of the two methods of publishing the results of research.

"We have therefore established a series entitled 'Contributions from the Department of Research of the Fish Commission of Oregon'. The papers appearing in this series are to be serially numbered in the order in which they are accepted for publication—which will, in general, approximate the order of publication. Papers of general importance or of wider interest will, when possible, be published in established series and periodicals. Others, particularly those that are chiefly of local importance, will be published by the State Printing Department. It is thought that such a system of publication will provide a maximum of advantage at a minimum of cost to the Commission."

This system of recording the results of research has proved entirely satisfactory so far. The separates, as purchased from the publishers, have been sent to the State Printer who binds

them in printed covers of a style following that adopted by several other of the State administrative organizations. A list of the papers published or in press at the close of the biennium, follows:

1. Local populations and migration in relation to the conservation of Pacific salmon in the western states and Alaska. By Willis H. Rich. (Reprinted from "The Migration and Conservation of Salmon", Publication No. 8 of the American Association for the Advancement of Science. 1939.)
2. Symposium on "Dams and the Problem of Migratory Fishes", including the following papers:
 - a. Fishery problems raised by the development of water resources. By Willis H. Rich, Fish Commission of Oregon.
 - b. The passage of fish at Bonneville Dam. By Harlan B. Holmes, U. S. Bureau of Fisheries.
 - c. Fish problems connected with Grand Coulee Dam. By Wilbert M. Chapman, Washington Department of Fisheries.
 - d. Preliminary report on an investigation to determine possible methods of salvaging the Sacramento River salmon and steelhead trout at Shasta Dam. By Harry A. Hanson, U. S. Bureau of Reclamation.
 - e. A summary of the present status of dams versus migratory fishes on the Pacific coast with especial reference to problems in California. By Alan C. Taft, California Division of Fish and Game.

(Special number of the Stanford Ichthyological Bulletin, 1940. Published in co-operation with Fish Commission of Oregon.)
3. The present state of the Columbia River salmon resources. By Willis H. Rich. (Proceedings of the Sixth Pacific Science Congress. In press.)
4. Note on the young of the Sable Fish (*Anoplopoma fimbria*). By Vernon Brock. (Copeia. In press.)
5. Seasonal variations in weight of Columbia River Chinook salmon. By Willis H. Rich. (Reprinted from Copeia, 1940, No. 1.)

The program of the department has been developed around a number of major research projects, each of which deals with the problems involved in maintaining important fishery resources. These major projects are of a continuing nature and it is expected that each will be carried on for a number of years into the future. Some, indeed, should be carried on indefinitely as routine studies of the fisheries in order to follow the fluctuating condition of the resources and to determine the effects of changes in the intensity of exploitation and the results of conservation measures and artificial propagation. Because of their predominating importance the salmon fisheries of the Columbia River have been studied with particular care but attention has also been focused upon the two exclusively marine fisheries that are of growing importance to the state—those for pilchards and albacore. In addition to these activities of major importance there have been others of minor importance which have also been carried on by the department.

The major projects have been—

1. **Detailed study of the annual statistics of the Columbia River salmon runs.** The year 1938 saw, for the first time, the collection of a series of data on the salmon runs of the Columbia River that made possible a study of various biological and economic phases of the salmon fishery that are of the greatest importance to the work of conserving the runs. These data consist of daily catch figures of each species in each of six zones that have been established for the purpose of segregating the catch records. The data for the States of Oregon and Washington are presented in similar form so that they may be combined and thus the data for the

river as a whole made available. In addition to these catch records, we have had daily counts of the salmon passing Bonneville Dam since the 7th of May, 1938. There were also estimates of the number of fish passing Bonneville Dam between the time the dam was first closed in January, 1938, and the time actual counting began in May. There are also records of salmon counts made at the Rock Island Dam in eastern Washington since the season of 1933. All of these data have been combined and a comprehensive and detailed study of the runs for 1938 has been made and is nearly ready for publication. Some of these data have already appeared in a report issued in mimeograph form by the U. S. Bureau of Reclamation. This report was prepared by a Board of Consultants appointed by the Bureau of Reclamation to consider plans for the preservation of the salmon runs affected by the Grand Coulee Dam. The director of this department served as a member of that Board. Various interesting and important facts were developed in the course of this study, but perhaps the most important one relates to the intensity of the fishery. The study shows that the spring run of Chinook salmon is so intensively fished that only about 20 or 25% of the fish entering the river escape to the spawning grounds where they are available to reproduce the runs in future years. The fall run is not so intensively fished but it is probable that the spawning escapement of these fish is only about 33% of the run. A similar study is under way dealing with the salmon runs of 1939 and the data are already being collected for a similar study of the 1940 runs. It is planned to continue this work indefinitely providing an analysis of each year's run. These studies will provide fundamental information needed to show the trend of abundance of these important runs, the effect of changes in the intensive fishing and of conservation measures. The work has been done chiefly by Dr. Rich, assisted by Mr. Jewett.

2. Effect of the Bonneville Dam on the young salmon during their down-stream migration.

A series of experiments designed to test the mortality of young salmon caused by the Bonneville Dam was started in 1938 and was mentioned in the preceding biennial report. This important series of experiments has been continued by Dr. Rich and Mr. Jewett and approximately one hundred thousand young salmon were marked in both 1939 and 1940. This will be repeated again in 1941. The experiments have consisted in marking approximately equal numbers of young Chinook salmon at the Oxbow Station, using two distinct marks. The fish bearing one mark are then planted a short distance above the dam and those with the other mark immediately below the dam. When they return as adults an effort is made to collect marked fish from the commercial catch and also at the spawning stations where these fish may be expected to appear. Any increase in mortality caused by the dam will, other things equal, be shown in a smaller percentage of returns from the fish planted above the dam. Comparatively few marked mature fish have appeared in the two years that have elapsed since the experiments have started but such evidence as is at present available does not show any unfavorable effect of the dam.

3. Steelhead.

Mr. Jewett has undertaken a comprehensive study of the life-history of the steelhead in the Columbia River and of the steelhead fishery. With the assistance of Mr. Niska, collections have been made of young fish in many of the tributary streams and scales and other biological data have been secured from over 8,000 adult steelhead taken in the commercial fishery. Studies of the food of the young fish during their early life before the seaward migration are being made as well as investigations of the rate of growth in fresh water and the age at the time of seaward migration. These are made in each tributary stream studied. Later studies, based on scale examinations, will include determination of the age at maturity and the frequency of spawning of races inhabiting different tributaries. Very little has previously been known of the biology of the Columbia River steelhead although the pack of this species is exceeded in value only by that of Chinooks and silver salmon.

4. Pilchards.

Mr. Brock has continued his investigations of the pilchard, or sardine, fishery assisted by Mr. Niska. The need for this study has been pressing for several reasons; the most important being the need to determine (1) the extent and origin of the local pilchard population (2) its ability to bear an intensive commercial fishery and (3) the effect of this fishery on other established fisheries that draw upon the same general population. The research program during the past two years has dealt particularly with three problems. The first of these involved a study of the abundance of the species off the coasts of Oregon, Washington

and British Columbia through the analysis of the catches made by individual boats of the fishing fleet. Such a study of abundance during the seasons of 1935 to 1938, inclusive, was made at Stanford University during the winter of 1939 in collaboration with Mr. O. E. Sette, in charge of the Pacific Pilchard Investigations of the U. S. Bureau of Fisheries.

The second line of investigation dealt with the migrations that this species may make in the ocean and involved a program of tagging pilchards at sea and recovering the tags in the reduction plants. The tags used for this purpose were of the internal type similar to those developed by the California Division of Fish and Game. These were inserted into the body cavity of the fish by means of an improved model of the tagging "gun" first used by the Biological Board of Canada. Tag recovery has been accomplished by means of electrical magnets installed in the fish meal lines of the reduction plants. Tagging was done at sea from various boats of the commercial fishing fleet and the degree of success attained may be largely credited to the fine cooperation received from the captains and crews of these boats. During the season of 1939, Vince Cardinalli, owner and captain of the "Cavalieri" helped us greatly. During 1940, similar assistance was rendered by Spiro Babich, owner and captain of the "Western Queen".

The third phase of the program of pilchard investigation has dealt with the size of fish taken in the commercial catch. Data for this purpose has consisted of length measurements of the fish in samples of uniform size taken throughout the season. The main outlines of this program had been laid down at the start of the investigation of this fishery in 1936. It has been at all times conducted in cooperation with various other governmental organizations engaged in research of this fishery, on the Pacific Coast, especially the U. S. Bureau of Fisheries (now U. S. Fish and Wildlife Service), the Division of Fish and Game of the State of California, the Department of Fisheries of the State of Washington and the Biological Board of Canada. The primary purpose of this phase of the pilchard study has been to discover the relationships of the stocks of fish upon which the fishery draws in the different fishing districts and to determine the success of spawning in successive years as bearing upon future abundance.

5. **Albacore.** The albacore, or tuna, fishery off the coast of Oregon has developed entirely within the past three or four years. Research was started as soon as catches of commercial size were made and has been directed particularly toward determining the age and size composition of the schools on which the local fishery draws. Attention is also being paid to the migrations that these species may make and to those hydrographic changes that may influence these migrations. It is hoped that these investigations will, in time, determine the extent of and the origin of the population of albacore upon which the fishery draws. These studies will also provide information bearing upon the consistency with which these fish may be expected to appear off the coast of Oregon in future years. During the season of 1939, the investigation of the albacore fishery was expanded because of the heavy investments made in this fishery by fish packers and fishermen in buildings, canning equipment, boats and fishing gear. The program of research will provide information bearing on the permanence and magnitude of the supply and will thus bear upon the economic soundness of further expansion of the industry.

During 1939, length measurements of about 3500 fish were made and these, on being analyzed, showed that the fish were grouped about two modal lengths; one group centered around an average length of about 25.0 inches and the other around an average length of about 29.3 inches.

During 1939 a program of albacore tagging was carried out on an experimental scale, using a new type of hook tag of our own devising. This tag was composed of a specially selected hook with a bright red celluloid tag threaded onto the shank. The tag had a serial number printed on one side and the letters O. F. C. on the other. This hook tag was fastened to a standard albacore lure by a loop of fairly fine copper wire, the wire just strong enough to sink the hook firmly into the jaw of the fish after which any increase in strain causes the copper wire to break and release the fish. The tag was, of course, attached to any fish that happened to strike the lure. The advantages of this method lie chiefly in the fact that no actual capturing or handling of the fish is necessary. This makes more rapid tagging possible and undoubtedly serves to reduce the mortality attendant upon tagging by the usual method which involves

taking the fish onto the deck of the fishing boat. This method has several apparent disadvantages and objections, however, among those being the impossibility of measuring the tagged fish, the lack of assurance that the tags were firmly placed in the right position and the fact that other species may inadvertently be tagged since only in a very few cases are the fish actually seen. About 100 of these tags were released throughout the season of 1939 off the Oregon coast principally within 50 or 100 miles of the mouth of the Columbia River. This portion of our program was rendered possible by the cooperation of Mr. W. L. Thompson and Mr. Floyd Wright of the Columbia River Packers Association who permitted experimental tagging on the M. V. "Unga".

6. **Fishes of Oregon.** Fundamental to any study of the biology of the fishes of a region it is important to have in convenient form all available knowledge of the fish fauna. To this end the department has started the preparation of a complete account of the fishes of the state which is to include descriptions of every species known to inhabit the waters of the state or of the coastal areas of the ocean and keys for their identification. The biology and life histories of the fishes, so far as known, will also be included and, for the species of commercial value, data on the history of the fisheries. The work on the marine fishes is being done by Mr. Brock and on the fresh water species by Mr. Jewett. This project will require a number of years for completion but a good beginning has been made. Over five thousand specimens have been collected and a considerable number of data are available on the distribution, food habits, migrations, etc., of some of the species.

In addition to the major lines of research listed above the department has, during the biennium, made some few studies of more limited scope. Of these the following deserve mention:

1. At the request of Governor Charles A. Sprague a preliminary investigation was made of the condition of the native oyster beds in Yaquina Bay. The results indicated that these beds were far below their potential productivity and a comprehensive study was recommended. Such a study was later undertaken by Professor R. E. Dimick, Head, Department of Fish and Game Management, State College of Oregon.

2. The Department of Research has cooperated with the Department of Fish Culture in preparing an exhibit of the commercial fishes of Oregon that has been placed in the main hatchery building at the Bonneville station. A unique feature of this exhibit is a series of colored drawings showing the development of the eggs of Chinook salmon from fertilization to hatching.

3. During the past year the director served on a Board of Consultants appointed by the U. S. Bureau of Reclamation to consider proposals for the preservation of the salmon affected by the Shasta Dam in northern California. In the course of this study it became important to determine, if possible, the origin of the Chinook salmon taken at sea along the coast of California. A statistical study showed that the annual catch of these fish since 1916 has been highly correlated with the catch of Chinook salmon in the Columbia River. From this it may be inferred that Columbia River fish constitute a dominant element in the troll catch of salmon off the coast of California. This is the first evidence that has been brought forward to show that Columbia River salmon are taken in large numbers south of the mouth of the river, and the fact must be borne in mind in considering the intensity of fishing to which these resources are subjected.

WILLIS H. RICH,

Director of the Department of Research.

FISH COMMISSION

OF THE
STATE OF OREGON



DEPARTMENT
OF
FISH CULTURE



HUGH C. MITCHELL,
Director

LETTER OF TRANSMITTAL

Portland, Oregon, July 1, 1940.

FISH COMMISSION OF THE STATE OF OREGON,
Portland, Oregon.

Gentlemen:

In accordance with the provision of law, I herewith submit the report of the Department of Fish Culture for the biennium ending June 30, 1940.

Respectfully,

HUGH C. MITCHELL,
Director of the Department of Fish Culture.

REPORT OF THE DEPARTMENT OF FISH CULTURE

For the Biennium Ending June 30, 1940

The activities of the Department of Fish Culture have, as always, been directed toward the production and liberation of the maximum number of young fish of favorable size and condition that can be provided by the available facilities. The expansion of our facilities has continued and new stations are now being constructed on the Deschutes and Calapooya rivers and should be completed next year. For lack of sufficient funds it has been necessary to depend on the regular staff for this new construction. Only a small amount of temporary help has been employed for this purpose. It has been necessary to practice the most rigid economy in order to maintain the activities of the department and under these circumstances desirable expansion in the field has meant additional work for the entire staff. In the central office, this additional work and responsibility has been carried on without additional overhead cost due especially to the efficient clerical staff.

In addition to the new construction effected, badly needed repairs and improvements have been made at established stations. At the North Santiam River station the hatching house has been provided with a concrete foundation, the roof has been reshingled, the ponds rebuilt and the water supply system rearranged so as to provide greater efficiency and safety in operation. This has been done with the help of the Federal Work Projects Administration. The station on the Deschutes River near Maupin has been equipped with hatching tanks in lieu of the standard troughs used at most stations. The Maupin station is provided with an abundant supply of spring water which is particularly suitable to the application of the improved hatching method provided by these hatching tanks.

Our operations during the biennium have been without serious incident and the results have been entirely satisfactory. All salmon and steelhead stations have been filled nearly to capacity with both eggs and fish. In addition, shad batteries were set up and operated on the Columbia, Umpqua, Siuslaw and Coos rivers with varied degrees of success. In a number of instances shad eggs were secured from spawning fish taken in the commercial fisheries and the resulting fry were liberated into the parent streams close to the point at which the eggs were taken. It is felt that such salvage work as this is especially valuable wherever it can be applied. Efforts have been continued to improve the quality as well as the quantity of our output chiefly through expansion of the pond systems which make it possible to hold the young fish until they attain a larger size and therefore have a better chance for survival after planting.

In the last biennial report mention was made of the apparent success of the fish ladders at Bonneville Dam in getting the adult fish up over the dam. The experience of the past biennium has confirmed this impression; there is no doubt but that the gravity fishways are entirely adequate for the passage of salmon and other anadromous fishes over the dam. The fish locks have been further tested but without conspicuous success; it is exceedingly doubtful that they will ever be used for routine operations. Thus the stand taken for the construction of this type of fish ladders by the Director, who served as representative of the Fish Commission of the State of Oregon on the committee appointed to consider the matter, has been amply justified.

Next in importance to the problem of providing adequate passage for the adult fish over the Bonneville Dam has been the question as to the effect of the dam on the downstream migrants. If there should be a serious mortality of young fish in going down past the dam, the results of getting the adult safely up over the dam might well be seriously affected. In order to test this, experiments have been conducted during the past three years by marking young Chinook salmon at the Ox Bow station before liberation. This work has been carried on in co-operation with the Department of Research and a more complete account will be found in the report of that department. It will suffice here to state that the results are not yet sufficient to warrant final conclusions but, so far as the present indications show, there is no reason to

think that there has been any marked increase in mortality of the downstream migrants as a result of the dam. Additional safety for the young fish has been provided through the construction of a by-pass that permits the fingerlings to pass the dam on the Oregon side without having to go either over or through the dam. This by-pass runs through the grounds of the Bonneville station and flows into Tanner Creek below the hatchery.

The plan for a series of dams on the tributaries of the Willamette River provides another serious threat to the maintenance of a very important part of the Columbia River salmon resources. Careful consideration must be given to the problems raised by this project if serious loss to the state is to be prevented. At the present time actual work has been started on only three of the several proposed dams, those on the Row, Coast Fork and Long Tom rivers. There are no salmon runs in any of these three streams so that the dams, now building, will in no manner affect the industry. The preparedness program of the nation has now taken first place and it seems probable that the construction of the proposed major dams on the McKenzie, Willamette, North Santiam and South Santiam rivers will be indefinitely postponed. This delay will give a much to be desired opportunity for a more adequate consideration of the project as a whole and, in particular, of the possible means for preserving the salmon runs in the event that the plea is eventually carried through in its entirety. It is important that the danger threatening the salmon from this source be kept in mind and that the present postponement of construction shall not be taken as a basis for complacent dismissal of the problem. The plan will undoubtedly be taken up again as soon as the present national emergency is past, and the interval should be used to full advantage in a study of the value of the Willamette Valley Project, its probable effect on the salmon resources and the means that may be provided to prevent such depletion as might result therefrom.

HUGH C. MITCHELL,
Director of the Department of Fish Culture.

Showing the number of eggs collected at stations operated by the Fish Commission of the State of Oregon during the period July 1, 1938, to June 30, 1939:

Fisheries Station	Chinook	Silver Salmon	Steelhead	Shad	Chum	Totals
McKenzie	15,436,000	.....	.....	.....	.....	15,436,000
Willamette	9,130,000	.....	.....	.....	.....	9,130,000
Santiam	2,006,000	.....	1,403,000	.....	.....	3,409,000
Bonneville	15,960,000	.....	.....	.....	.....	15,960,000
Clatskanie	531,700	986,002	221,460	.....	.....	1,739,762
Trask	2,460,000	3,110,000	100,000	.....	.....	5,670,000
Coos	97,000	1,332,000	2,488,000	.....	.....	3,917,000
Umpqua	2,830,925	.....	.....	.....	.....	2,830,925
South Santiam	1,450,000	.....	.....	.....	.....	1,450,000
Rogue	270,000	.....	365,000	.....	.....	635,000
Ox Bow Springs	1,550,000	.....	.....	.....	4,000	1,554,000
Ten Mile .....	.....	3,065,000	20,000	.....	.....	3,025,000
Nehalem	160,000	203,700	96,000	.....	139,000	598,700
Yaquina	92,000	2,325,500	110,000	.....	.....	2,527,500
Siletz .....	.....	1,667,700	134,420	.....	.....	1,802,120
Tahkenitch .....	.....	845,000	.....	.....	.....	845,000
North Lake .....	.....	1,472,000	.....	.....	.....	1,472,000
Sandy	10,904	533,324	827,634	.....	.....	1,421,862
Tillamook .....	.....	550,500	.....	.....	.....	550,500
Shad Battery—St. Helens .....	.....	.....	.....	7,591,480	.....	7,591,480
Cooperative Stations .....	.....	1,382,000	.....	.....	.....	1,382,000
	51,984,529	17,463,326	5,765,514	7,591,480	143,000	82,947,849

Showing the number of fingerlings and fry liberated into the waters of the State of Oregon by the Fish Commission during the period July 1, 1938, to June 30, 1939:

Fisheries Station	Chinook	Silver Salmon	Steelhead	Shad	Blueback	Chum	Totals	Where Liberated
McKenzie	11,411,000	.....	.....	.....	.....	.....	11,411,000	Gate and Cogswell Creeks, McKenzie R. Trib.
Willamette	7,544,000	.....	.....	.....	.....	.....	7,544,000	Salmon Creek - Willamette R. Trib.
Santiam	1,853,400	.....	1,344,050	.....	.....	.....	3,197,450	Breitenbush, N. Santiam Rivers — Willamette R. Trib., Elk, Dunlap, Fay and Unnamed Lakes.
Bonneville	9,867,000	.....	.....	.....	68,500 } 57,650 }	.....	9,933,150	Tanner Cr., Hood R. — Columbia R. Trib.
Shad Battery— St. Helens	.....	.....	.....	7,591,480	.....	.....	7,591,480	Willamette Slough — Columbia R. Trib.
Klaskanine	2,493,962	960,696	213,450	.....	.....	.....	3,668,108	Klaskanine R. — Youngs Bay Trib.
Trask	2,227,000	3,008,000	76,300	.....	.....	.....	5,311,300	Gold Cr., Trask River.
Coos	94,840	1,278,410	1,750,960	.....	.....	.....	3,124,210	South Coos River.
Mill Creek	.....	830,070	.....	.....	.....	.....	830,070	Umpqua River.
Umpqua	2,809,125	.....	.....	.....	.....	.....	2,809,125	Rock Cr. — Umpqua R. Trib.
South Santiam	1,373,980	.....	.....	.....	.....	.....	1,373,980	South Santiam River.
Rogue	266,000	.....	361,000	.....	.....	.....	627,000	Rogue River and Trib.
Ox Bow	*3,504,000	.....	.....	.....	.....	3,710	3,507,710	Herman and Eagle Creeks, Columbia River.
Alsea	746,140	828,960	.....	.....	.....	.....	1,575,100	Fall Cr., Alsea R. and Trib.
Ten Mile	.....	900,925	17,000	.....	.....	.....	917,925	Templeton Cr., Ten Mile L. Trib.
Coquille	.....	789,425	.....	.....	.....	.....	789,425	Coquille River.
Nehalem	2,088,000	937,900	248,950	.....	.....	134,100	3,408,950	Foley Cr., N. Fork Nehalem R., S. Fork Nehalem R., — Nehalem R. Trib.
Yaquina	335,675	2,260,750	107,000	.....	.....	.....	2,703,425	Simpson Cr. — Yaquina R. Trib.
Deschutes	397,000	.....	.....	.....	.....	.....	397,000	Deschutes River, Columbia R. Trib.
Siletz	.....	1,578,700	122,620	.....	.....	.....	1,701,320	Rock and Steer Creeks — Siletz R. Trib.
Tahkenitch	.....	625,250	.....	.....	.....	.....	625,250	Five Mile Cr. — Tahkenitch L. Trib.
North Lake	.....	756,490	.....	.....	.....	.....	756,490	Big Creek — North Lake Trib.
Sandy	502,209	532,872	670,034	.....	.....	.....	1,705,115	Sandy R. — Columbia R. Trib.
Siuslaw	.....	996,950	.....	.....	.....	.....	996,950	Knowles Cr. — Siuslaw R. Trib.
Tillamook	.....	540,770	.....	.....	.....	.....	540,770	Tillamook R., Columbia R. Trib.
Total	47,513,331	16,826,168	4,911,364	7,591,480	126,150	137,810	77,106,903	

*Note: 100,000 of these Chinook salmon were marked. 50,000 marked with the left ventral and adipose were liberated into Columbia River directly below the Bonneville Dam; remaining 50,000 were marked with the right ventral and adipose, and liberated into the Columbia River approximately five miles above the Bonneville Dam on the Oregon side, June 14, 1939.

Showing the number of eggs collected at stations operated by the Fish Commission of the State of Oregon during the period
July 1, 1939, to June 30, 1940:

Fisheries Station	Chinook	Silver Salmon	Steelhead	Blueback	Chum	Shad	Totals
McKenzie	12,546,000	.....	.....	.....	.....	.....	12,546,000
Willamette	6,010,000	.....	.....	.....	.....	.....	6,010,000
Santiam	3,551,000	.....	2,230,000	.....	.....	.....	5,781,000
Ronneville	2,300,000	118,000	.....	.....	61,000	.....	2,479,000
Klaskanine	590,676	2,045,900	50,200	.....	303,700	.....	2,990,476
Trask	6,225,000	1,880,000	.....	.....	110,000	.....	8,215,000
Coos	1,944,000	3,065,000	2,655,000	.....	.....	.....	7,664,000
Umpqua	9,273,310	.....	.....	.....	.....	.....	9,273,310
South Santiam	931,000	.....	3,335,000	.....	.....	.....	4,266,000
Rogue	473,000	.....	45,000	.....	.....	.....	518,000
Ox Bow Springs	2,395,000	.....	.....	.....	.....	.....	2,427,000
Alsea	42,000	32,000	.....	.....	.....	.....	2,769,000
Ten Mile .....	.....	2,727,000	.....	.....	.....	.....	4,080,000
Nehalem	12,000	335,000	14,000	.....	955,000	.....	1,316,000
Yaquina	149,900	4,046,900	.....	.....	.....	.....	4,196,800
Siletz .....	.....	4,017,000	203,300	.....	.....	.....	4,220,300
Tahkenitch .....	.....	2,360,000	.....	.....	.....	.....	2,360,000
North Lake .....	.....	1,873,000	.....	.....	.....	.....	1,873,000
Sandy	1,614,451	485,900	858,500	.....	.....	.....	2,958,851
Tillamook .....	.....	1,727,280	72,000	.....	72,000	.....	1,871,280
Cooperative Stations .....	.....	1,800,000	.....	1,020,544	.....	.....	2,820,544
Shad Battery—St. Helens .....	.....	.....	.....	.....	.....	5,154,150	5,154,150
Shad Battery—Daniels Creek .....	.....	.....	.....	.....	.....	4,200,000	4,200,000
Shad Battery—Mapleton .....	.....	.....	.....	.....	.....	2,910,000	2,910,000
Shad Battery—Brandy Bar .....	.....	.....	.....	.....	.....	500,000	500,000
Grand Totals.....	48,057,337	30,592,980	9,463,000	1,020,544	1,501,700	12,764,150	103,399,711

Showing the number of fingerlings and fry liberated into the waters of the State of Oregon by the Fish Commission during the period July 1, 1939, to June 30, 1940:

Fisheries Station	Chinook	Silver Salmon	Steelhead	Shad	Chum	Totals	Where Liberated
McKenzie	7,885,000	.....	.....	.....	.....	7,885,000	Gate and Cogswell Creeks, McKenzie R. Trib.
Willamette	5,535,000	.....	.....	.....	.....	5,535,000	Salmon Creek—Willamette R. Trib.
Santiam	3,371,400	.....	2,091,400	.....	.....	5,462,800	Breitenbush, No. Santiam Rivers—Willamette R. Trib., Elk and Dunlap Lakes.
Bonneville	3,180,000	1,100,000	.....	.....	54,400	4,334,400	Tanner Cr. and Columbia River.
Klaskanine	560,414	732,500	49,422	.....	300,169	1,642,505	Klaskanine R.—Youngs Bay Trib.
Trask	5,277,000	1,770,000	.....	.....	100,000	7,147,000	Gold Cr., Trask and Salmon Rivers.
Coos	1,884,200	2,921,460	1,852,760	.....	.....	6,658,420	South Coos River.
Mill Creek .....	.....	1,241,300	.....	.....	.....	1,241,300	Umpqua River.
Umpqua	9,027,110	.....	.....	.....	.....	9,027,110	Rock Cr.—Umpqua R. Trib.
South Santiam	904,988	.....	2,670,000	.....	.....	3,574,988	South Santiam River.
Rogue	465,000	.....	43,800	.....	.....	508,800	Rogue River and Trib.
Ox Bow	1,887,500*	29,250	.....	.....	.....	1,916,750	Herman and Eagle Creeks, Columbia R.
Alsea	39,650	2,529,635	.....	.....	.....	2,569,285	Fall and Eckman Creeks, Alsea R.
Ten Mile .....	.....	1,749,000	56,300	.....	.....	1,805,300	Templeton Cr.—Ten Mile L. Trib.
Coquille .....	.....	1,485,300	132,625	.....	.....	1,617,925	Coquille River.
Nehalem	504,000	1,544,000	212,400	.....	880,000	3,140,400	Foley and Coal Creeks, N. Fork Nehalem R., S. Fork Nehalem R.—Nehalem R. Trib.
Yaquina	147,000	1,938,100	.....	.....	.....	2,085,100	Simpson Creek and Yaquina River.
Deschutes	1,090,220	.....	.....	.....	.....	1,090,220	Deschutes River, Columbia R. Trib.
Siletz .....	.....	2,067,500	194,150	.....	.....	2,261,650	Rock and Steer Creeks—Siletz R. Trib.
Tahkenitch .....	.....	1,062,000	.....	.....	.....	1,062,000	Harry and Five Mile Cr.—Tahkenitch L. Trib.
North Lake .....	.....	1,327,550	.....	.....	.....	1,327,550	Big Creek—North Lake Trib.
Sandy	1,451,000	452,800	751,380	.....	.....	2,655,180	Sandy River—Columbia R. Trib.
Siuslaw .....	.....	1,913,800	.....	.....	.....	1,913,800	Deadwood, Green, Thompson, Sweet and Knowles Cr.—Siuslaw R. Trib.
Tillamook .....	.....	1,718,600	70,500	.....	70,900	1,860,000	Tillamook River, Columbia R. Trib.
Shad Battery— St. Helens .....	.....	.....	.....	5,154,150	.....	5,154,150	Willamette Slough—Columbia R. Trib.
Shad Battery— Daniels Creek .....	.....	.....	.....	4,200,000	.....	4,200,000	Daniels Creek—So. Coos R. Trib.
Shad Battery— Mapleton .....	.....	.....	.....	2,910,000	.....	2,910,000	Siuslaw River.
Shad Battery— Brandy Bar .....	.....	.....	.....	500,000	.....	500,000	Umpqua River.
Grand Totals ..	43,209,482	25,582,795	8,124,737	12,764,150	1,405,469	91,086,633	

*Note: 100,000 of these Chinook salmon were marked. 50,000 marked with the left ventral and adipose were liberated into Columbia River directly below the Bonneville Dam; remaining 50,000 were marked with the right ventral and adipose, and liberated into the Columbia River approximately five miles above the Bonneville Dam on the Oregon Side, June, 1940.

SUMMARY

Showing the total number of eggs collected during the fiscal years 1939 and 1940:

	Chinook	Silver Salmon	Steelhead	Blueback	Chum	Shad	Totals
Total Egg Take—1939.....	51,984,529	17,463,326	5,765,514	.....	143,000	7,591,480	82,947,849
Total Egg Take—1940.....	48,057,337	30,592,980	9,463,000	1,020,544	1,501,700	12,764,150	103,399,711
Grand Totals.....	100,041,866	48,056,306	15,228,514	1,020,544	1,644,700	20,355,630	186,347,560

Showing the total liberations during the fiscal years 1939 and 1940:

	Chinook	Silver Salmon	Steelhead	Blueback	Chum	Shad	Totals
Total Liberation—1939.....	47,513,331	16,826,168	4,911,364	126,150	137,810	7,591,480	77,106,303
Total Liberation—1940.....	43,209,482	25,582,795	8,124,737	.....	1,405,469	12,764,150	91,086,633
Grand Totals.....	90,722,813	42,408,963	13,036,101	126,150	1,543,279	20,355,630	168,192,936

Showing egg transfers made during the fiscal year 1939:

Chinook Salmon	Steelhead
1,000,000 U. S. Bureau (Clackamas)	502,440 Game Commission (Bandon)

Showing egg transfers made during the fiscal year 1940:

Silver Salmon	Steelhead
*250,000 State of Montana.	100,080 Game Commission (Bandon)

(*In exchange for 1,020,544 Blueback eggs.)

STOCK ON HAND AS OF JUNE 30, 1940

Fisheries Station:	Chinook Salmon	Silver Salmon	Blueback	Steelhead	Totals
Bonneville	1,870,000	611,950	965,800	778,600	4,226,350
Klaskanine . . . . .	.....	2,775,758	.....	.....	2,775,758
Ox Bow Springs ..	399,500	.....	.....	.....	399,500
	2,269,500	3,387,708	965,800	778,600	7,401,608

Note: No stock on hand as of June 30, 1939.

FISHERIES STATIONS OPERATED BY THE FISH COMMISSION OF OREGON

Station	Stream	County	Post Office	In Charge
No. 1	McKenzie River	Lane	Leaburg, Oregon	Walter Carter
No. 2	Willamette River	Lane	Oakridge, Oregon	Chas. J. Hills
No. 3	Santiam River	Marion	Stayton, Oregon	LeRoy Ledgerwood
No. 4	Columbia River	Multnomah	Bonneville, Oregon	E. J. W. Anderson
No. 5	Klaskanine River	Clatsop	Astoria, Oregon	L. W. Hickey
No. 6	Trask River	Tillamook	Tillamook, Oregon	Henry Bolle
No. 7	Coos River	Coos	Marshfield, Oregon	Frank W. Smith
No. 8	Mill Creek	Douglas	Scottsburg, Oregon	Howard Ruben
No. 9	Umpqua River	Douglas	Idleld Park, Oregon	Lee McCarn
No. 10	So. Santiam River	Linn	Foster, Oregon	A. W. Anderson
No. 11	Rogue River	Curry	Ilaha, Oregon	Keith Moore
No. 12	Ox Bow Springs	Hood River	Cascade Locks, Oregon	J. A. Johnson
No. 13	Alsea River	Lincoln	Tidewater, Oregon	M. H. Bales
No. 14	Ten Mile Lake	Coos	Hauser, Oregon	Clifford B. Monson
No. 15	Coquille River	Coos	Powers, Oregon	F. L. Thomas
No. 16	Nehalem River	Tillamook	Mohler, Oregon	L. W. Strass
No. 17	Yaquina River	Lincoln	Toledo, Oregon	Chas. Buckbee
No. 18	Deschutes River	Wasco	Maupin, Oregon	A. B. Smith
No. 19	Siletz River	Lincoln	Nashville, Oregon	Tom Nicklaus
No. 20	Tahkenitch Lake	Douglas	Gardiner, Oregon	Frank W. Smith
No. 21	North Lake	Coos	Lakeside, Oregon	Norman Carlson
No. 22	Sandy River	Clackamas	Sandy, Oregon	Orval Greer
No. 23	Siuslaw River	Lane	Mapleton, Oregon	Jess J. Bales
No. 24	Calapooya Creek	Douglas	Nonpareil, Oregon	Vernon T. Bentley
No. 25	Tillasqua River	Clatsop	Astoria, Oregon	Clifford M. Ritter

Shad Batteries	Stream	County
St. Helens	Columbia River	Columbia
Daniels Creek	Coos River	Coos
Brandy Bar	Umpqua River	Douglas
Mapleton	Siuslaw River	Lane