

*History  
Locations &  
descriptions*

BOX 226  
BAY CITY, OREGON

*Oregon Fish Comm.  
Bay City, Oregon*

BIENNIAL REPORT  
OF THE  
**FISH COMMISSION**  
OF THE  
**STATE OF OREGON**  
FOR  
**1935 and 1936**



BIENNIAL REPORT  
OF THE  
**FISH COMMISSION**  
OF THE STATE OF OREGON  
TO THE  
GOVERNOR AND THE THIRTY-NINTH  
LEGISLATIVE ASSEMBLY  
1937



FISH COMMISSION OF THE STATE OF OREGON  
Hon. John C. Veatch, Chairman, Portland  
Hon. R. S. Farrell, Portland  
Hon. C. C. Going, Marshfield  
M. T. Hoy, Secretary and Master Fish Warden

**LETTER OF TRANSMITTAL**

Portland, Oregon, July 1, 1936.

TO HIS EXCELLENCY, the GOVERNOR, and the MEMBERS  
of the THIRTY-NINTH LEGISLATIVE ASSEMBLY.

Gentlemen:

Herewith is transmitted the biennial report of the Fish Commission of the State of Oregon covering the period from July 1, 1934, to June 30, 1936.

FISH COMMISSION of the STATE OF OREGON,

John C. Veatch, Chairman.

**LETTER OF TRANSMITTAL**

Portland, Oregon, July 1, 1936.

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

Gentlemen :

In accordance with the provision of statute, I herewith submit for your consideration the financial statement of the Master Fish Warden for the biennium covering the period July 1, 1934 to June 30, 1936. This financial statement includes all receipts and disbursements of the Fish Commission during the above period.

In addition, you will find a joint report covering the regular operations or special activities of my department, as well as those of the Department of Fish Culture.

Respectfully submitted,

M. T. HOY,

Master Fish Warden.

## HATCHERY FUND—RECEIPTS

	July 1, 1934 to June 30, 1935			July 1, 1935 to June 30, 1936		
	No.	Amount	Deficit	No.	Amount	Deficit
Deficit .....			\$ 12,427.36	.....		\$ 10,063.04
Gillnet licenses .....	1349	\$ 10,117.50		1192	\$ 8,940.00	
Setnet licenses .....	983	3,686.25		1119	4,196.25	
Traps .....	73	1,825.00		41	1,025.00	
Seines .....	47	1,959.30		61	2,520.18	
Trolls .....	36	90.00		32	80.00	
Boatpullers .....	485	1,212.50		430	1,075.00	
Retail fish dealers and peddlers	1041	5,205.00		1119	5,595.00	
Buyers .....	99	198.00		.....		
Wholesale .....	111	2,775.00		124	3,100.00	
Salmon Canners .....	9	225.00		9	225.00	
Shellfish Canners .....	6	77.91		8	109.24	
Reduction Plant .....	3	75.00		15	375.00	
Brokers .....	2	100.00		3	150.00	
Boat or Scows .....	133	266.00		123	246.00	
Bagnets .....	159	795.00		128	640.00	
Clams .....	231	1,155.00		234	1,170.00	
Crabs .....	244	1,220.00		306	1,530.00	
Crawfish .....	40	200.00		30	150.00	
Oysters .....	5	25.00		2	10.00	
Setline .....	105	105.00		84	84.00	
	5161	\$ 31,312.46		5060	\$ 31,220.67	
Poundage fees .....		78,761.34			106,521.69	
Privilege Tax, Pilchards .....					13,116.06	
Interest, Past-Due Accounts .....					1,757.55	
Additional fees on crabs .....		789.16			1,292.63	
Additional fees on clams .....		224.75			498.55	
Additional fees on oysters .....		143.75			77.58	
Fines .....		1,268.92			1,525.50	
Sale of confiscated property .....		392.32			735.85	
Fish, crab and oyster tags .....		1,886.27			2,129.12	
Sale of land (and for damages) .....		5,015.00			57,020.00	
Sundry .....		767.14			1,675.65	
		\$120,561.11			\$217,570.85	
Less 3% tithe for General Fund .....		2,846.68	\$1,797.78			
Less 10% tithe for General Fund .....			9,855.43		11,653.21	
		\$117,714.43			\$205,917.64	
Transferred funds from State Police .....		196.53	\$117,910.96			\$205,917.64
			\$105,483.60			\$195,854.60

## HATCHERY FUND—DISBURSEMENTS

	July 1, 1934 to		July 1, 1935 to	
	June 30, 1935		June 30, 1936	
Commissioners:				
Salaries .....	\$ 339.00		\$ 305.00	
Expenses .....	156.20	\$ 495.20	127.75	\$ 432.75
Master Fish Warden:				
Salary .....	\$ 2,952.00		\$ 3,006.00	
Expenses .....	97.55	3,049.55	115.60	3,121.60
Office Expense:				
Salaries .....	\$ 6,555.00		\$ 6,918.90	
Fares .....	191.75		202.66	
Meals and Lodgings .....	49.05		52.05	
General Office Supplies .....	133.23		171.63	
Telephone and Telegraph .....	538.69		440.96	
Postage .....	775.39		745.15	
Stationery and Printing .....	1,204.50		699.30	
Rent .....	1,481.28		1,483.28	
Freight, Cartage and Express .....	3.56		5.71	
Repairs .....	31.15		43.40	
Reports and Fish Codes .....	227.00		332.25	
Photostat Prints and Maps .....	27.81		7.20	
Notary Commissions and Seal .....	6.00		22.50	
Permits for refund on Gas Tax .....			1.00	
Towel Supply and Laundry .....	15.00		19.75	
Newspapers and Periodicals .....	18.20		30.70	
Furniture and Equipment .....	96.95	11,354.56	107.41	11,283.85
Patrol Service:				
Salaries .....	\$ 6,869.50		\$ 9,388.89	
Fares .....	75.95		318.83	
Gas and Oil .....	747.56		450.87	
Meals and Lodgings .....	504.40		1,648.65	
Telephone and Telegraph .....	1.45		3.80	
Postage .....			3.36	
Freight, Cartage and Express .....	1.00		1.00	
Rent .....	232.25		286.83	
Tools and Supplies .....	319.02		213.58	
Repairs and Supplies .....	815.02	9,566.15	472.24	12,788.05
State Police .....		13,924.01		16,099.99
Salary Tithe .....				6,030.64
Fishways .....		2,058.88		393.34
Investigations .....		1,512.26		5.00
Pilchard Fishery Research .....				928.93
Refunds .....		464.84		322.32
Motor Vehicles .....		2,557.17		3,679.77
Miscellaneous:				
Surety Bonds .....	\$ 82.50		\$ 82.50	
Insurance .....	177.60		184.08	
Workmen's Compensation Payments .....	2,887.71		2,556.13	
Restoration Fund .....	285.76		205.01	
Legal Expense .....			23.90	
Confiscated Property .....	60.00		61.50	
Opening and Closing Streams .....	24.40		35.07	
Ammunition .....	27.16		13.76	
Fish, Crab and Oyster Tags .....	286.87		483.80	
Surveys .....	25.00			
Films and Photos .....	19.87		7.04	
Audit .....		3,876.87	262.24	3,915.03

## HATCHERY FUND—DISBURSEMENTS—Continued

Distribution .....		786.72		765.31
Fish Food:				
Labor .....	\$ 164.57		\$ 360.28	
Fares .....	43.38		20.99	
Gas, Oil and Grease.....	274.83		111.60	
Meals and Lodgings .....	100.00		39.70	
Boxes, Ammonia and Supplies.....	472.20		889.08	
Freight, Cartage and Express.....	229.81		584.92	
Storage and Freezing .....	2,279.95		3,457.06	
Electricity .....	126.04		128.25	
Fish Food .....	367.32		830.11	
Repairs Engine .....			5.10	
Cold Storage Construction, McKenzie....	600.00	4,658.10	75.00	6,502.09
Director of Hatcheries:				
Salary .....	\$ 3,360.00		\$ 3,427.60	
Expenses .....	140.85	3,500.85	187.66	3,615.26
Salmon Propagation:				
General Expenses .....	\$ 2,694.36		\$ 3,158.05	
Operation .....	30,128.37		33,357.85	
Maintenance .....	12,183.16		10,284.16	
Capital Outlay .....	12,735.59	57,741.48	53,890.47	100,690.53
		\$115,546.64		\$170,574.46
Deficit, June 30, 1935.....		\$ 10,063.04		
Balance, June 30, 1936.....				\$ 25,280.14
Accounts receivable, now due on account of poundage fees .....		\$ 45,093.73		\$ 32,167.77

**SALMON PROPAGATION**

July 1, 1934 to June 30, 1935

Station	General Expense	Operation	Maintenance	Capital Outlay	Total
McKenzie	\$ 213.61	\$ 2,935.37	\$ 975.15	\$ .00	\$ 4,124.13
Lower McKenzie	125.00	2.74	.00	35.13	162.87
McKenzie Egg Collecting	28.98	1,925.98	61.78	.00	2,016.74
Willamette	183.21	1,733.60	785.75	930.73	3,633.29
Willamette Egg Collecting	120.00	974.98	.00	.00	1,094.98
North Santiam	108.04	1,677.11	745.97	.00	2,531.12
Breitenbush Egg Collecting	6.60	1,021.10	345.77	.00	1,373.47
Bonneville	320.00	4,715.76	2,645.12	9,393.47	17,074.35
Klaskanine	221.07	1,738.03	1,423.37	31.96	3,414.43
Trask	206.60	2,026.60	1,363.76	921.72	4,518.68
Coos	288.10	1,924.23	459.09	168.89	2,840.31
Wallowa	228.55	2,460.34	963.72	.00	3,652.61
Umpqua	100.10	2,382.01	421.66	238.15	3,141.92
South Santiam	129.68	1,530.80	293.38	.00	1,953.86
Nestucca	10.00	.00	.00	.00	10.00
Herman Creek	5.50	789.48	261.17	.00	1,056.15
Alesea	41.73	454.55	607.92	102.90	1,207.10
Ten Mile	115.79	631.92	247.10	126.97	1,121.78
Coquille	50.00	117.61	135.94	.00	303.55
Nehalem	108.20	667.39	307.67	785.67	1,868.93
Rogue	24.60	417.77	138.84	.00	581.21
U. S. Govt. Cooperation	.00	1.00	.00	.00	1.00
Salmon, Idaho	59.00	.00	.00	.00	59.00
	\$ 2,694.36	\$30,128.37	\$12,183.16	\$12,735.59	\$57,741.48

**SALMON PROPAGATION**

July 1, 1935 to June 30, 1936

Station	General Expense	Operation	Maintenance	Capital Outlay	Total
McKenzie	\$ 228.68	\$ 3,220.13	\$ 175.34	\$ 857.75	\$ 4,481.90
Lower McKenzie	213.50	560.23	.00	5,005.33	5,779.06
McKenzie Egg Collecting	6.25	1,640.00	.00	60.92	1,707.17
Willamette	257.59	1,880.83	1,825.57	1,054.00	5,017.99
Willamette Egg Collecting	220.00	944.92	30.74	.00	1,195.66
North Santiam	143.18	1,676.35	931.95	424.20	3,175.68
Breitenbush Egg Collecting	3.55	967.48	137.81	525.00	1,633.84
Bonneville	395.89	6,308.67	1,628.76	37,804.72	46,138.04
Klaskanine	199.99	1,790.94	1,165.79	3,162.60	6,319.32
Trask	273.62	1,632.31	841.76	2,440.58	5,188.27
Coos	283.06	2,590.11	670.04	578.88	4,122.09
Wallowa	126.73	2,096.35	621.77	.00	2,844.85
Umpqua	101.90	2,759.98	574.62	283.84	3,720.34
South Santiam	113.21	1,887.67	63.84	.00	2,064.72
Herman Creek	12.07	1,067.51	137.94	.00	1,217.52
Alesea	.00	441.84	806.59	.00	1,248.43
Ten Mile	186.21	606.14	144.30	95.88	1,032.53
Coquille	67.91	198.98	105.01	.00	371.90
Nehalem	115.75	739.48	330.08	1,596.77	2,782.08
Rogue	157.23	347.93	92.25	.00	597.41
Salmon, Idaho	51.73	.00	.00	.00	51.73
	\$ 3,158.05	\$33,357.85	\$10,284.16	\$53,890.47	\$100,690.53



## FINANCIAL STATEMENT—PERIOD DECEMBER 1, 1935 TO JUNE 30, 1936

## SEAL FUND—RECEIPTS

737 Gillnet Certificates .....	@	\$ 2.50	\$1,842.50
53 Setnet Certificates .....	@	2.50	132.50
33 Trap Certificates .....	@	10.00	330.00
38 Seine Certificates .....	@	20.00	760.00
1 Troll Certificate .....	@	2.50	2.50
6 Canner Certificates .....	@	50.00	300.00
			\$3,367.50

## DISBURSEMENTS—BOUNTIES

		No. Seals	Amount
Anundi, Wm. ....	Clatskanie	1	\$ 5.00
Bell, John H. ....	Svensen	22	110.00
Coffey, Tillman T. ....	Svensen	1	5.00
Day, V. P. ....	Warrenton	1	5.00
Empo, Oney .....	Brownsmead	1	5.00
Erickson, Jacob A. ....	Clatskanie	1	5.00
Fisher, Kenneth .....	Astoria	1	5.00
Halsan, Lloyd .....	Astoria	1	5.00
Johnson, Robert E. ....	Astoria	1	5.00
Johnson, Tom .....	Astoria	1	5.00
Makela, John .....	Clatskanie	1	5.00
Martens, Bertel .....	Astoria	1	5.00
Peterson, E. L. ....	Astoria	1	5.00
Puustinen, Toivo .....	Svensen	15	75.00
Puustinen, W. Wm. ....	Svensen	10	50.00
Ringbom, Hugo .....	Astoria	1	5.00
Smith, David .....	Astoria	2	10.00
Storvik, E. A. ....	Astoria	1	5.00
		63	\$315.00
Printed supplies .....			47.22
Refund .....			2.50
			364.72
Balance on hand June 30, 1936 .....			\$3,002.78

NOTE: Law creating the Seal Fund (applying only to the Columbia River) was enacted at the Special Session Legislative Assembly, November, 1935.

TABLE

Showing number of the different kinds of gear, canneries, cold storage plants and dealers operated on the various streams during 1935 and 1936 (license year ending March 31st), together with the moneys accruing from the issuance of said licenses.

	License Year Ending March 31, 1935		License Year Ending March 31, 1936	
	No.	Amount	No.	Amount
<b>Alsea Bay and River</b>				
Gillnets @ \$7.50 .....	44	\$ 330.00	44	\$ 330.00
Setnets @ \$3.75 .....	138	517.50	145	543.75
Boatpullers @ \$2.50 .....	17	42.50	15	37.50
Peddle or Retail Fish Dealers @ \$5.00 .....	13	65.00	10	50.00
Buyers @ \$2.00 .....	7	14.00	..	.....
Wholesale or Cold Storage @ \$25.00 .....	3	75.00	3	75.00
Canners, Shellfish .....	1	13.50	2	25.47
Clams @ \$5.00 .....	12	60.00	5	25.00
Crabs @ \$5.00 .....	64	320.00	48	240.00
Setlines @ \$1.00 .....	6	6.00	2	2.00
	305	\$1,443.50	274	\$1,328.72
<b>Chetco River</b>				
Gillnets @ \$7.50 .....	18	\$ 135.00		
Setnets @ \$3.75 .....	10	37.50		
Boatpullers @ \$2.50 .....	2	5.00		
Buyer @ \$2.00 .....	1	2.00		
	31	\$ 179.50		
<b>Clatsop Beach</b>				
Peddle or Retail Fish Dealers @ \$5.00 .....	9	\$ 45.00	10	\$ 50.00
Wholesale or Cold Storage @ \$25.00 .....	3	75.00	2	50.00
Canners, Shellfish .....	3	38.04	4	53.44
Clams @ \$5.00 .....	93	465.00	161	805.00
Crabs @ \$5.00 .....	5	25.00	..	.....
	113	\$ 648.04	177	\$ 958.44
<b>Columbia River</b>				
Gillnets @ \$7.50 .....	792	\$5,940.00	818	\$6,135.00
Setnets @ \$3.75 .....	141	528.75	143	536.25
Traps @ \$25.00 .....	39	975.00	68	1,700.00
Seines @ 3c ft. ....	35	1,580.58	50	2,218.38
Trolls @ \$2.50 .....	39	97.50	29	72.50
Boatpullers @ \$2.50 .....	309	772.50	359	897.50
Peddle or Retail Fish Dealers @ \$5.00 .....	155	775.00	174	870.00
Buyers @ \$2.00 .....	60	120.00	45	90.00
Wholesale or Cold Storage @ \$25.00 .....	27	675.00	34	850.00
Canners, Salmon @ \$25.00 .....	9	225.00	6	150.00
Reduction Plants @ \$25.00 .....	..	.....	4	100.00
Boats or Scows @ \$2.00 .....	79	158.00	63	126.00
Bagnets @ \$5.00 .....	133	665.00	114	570.00
Clams @ \$5.00 .....	..	.....	1	5.00
Crabs @ \$5.00 .....	5	25.00	10	50.00
Crawfish @ \$5.00 .....	37	185.00	36	180.00
Setlines @ \$1.00 .....	65	65.00	63	63.00
	1925	\$12,787.33	2017	\$14,613.63

	License Year Ending March 31, 1935		License Year Ending March 31, 1936	
	No.	Amount	No.	Amount
<b>Coos Bay and River</b>				
Gillnets @ \$7.50 .....	19	\$ 142.50	24	\$ 180.00
Setnets @ \$3.75 .....	32	120.00	34	127.50
Seines .....	1	15.00	6	90.00
Boatpullers @ \$2.50 .....	1	2.50	6	15.00
Peddle or Retail Fish Dealers @ \$5.00 .....	23	115.00	24	120.00
Buyers @ \$2.00 .....	4	8.00	2	4.00
Wholesale or Cold Storage @ \$25.00 .....	4	100.00	8	200.00
Reduction Plants @ \$25.00 .....	..	.....	5	125.00
Boats or Scows @ \$2.00 .....	7	14.00	7	14.00
Clams @ \$5.00 .....	14	70.00	26	130.00
Crabs @ \$5.00 .....	52	260.00	53	265.00
Setlines @ \$1.00 .....	1	1.00	1	1.00
	158	\$ 848.00	196	\$1,271.50
<b>Coquille River</b>				
Gillnets @ \$7.50 .....	57	\$ 427.50	62	\$ 465.00
Setnets @ \$3.75 .....	58	217.50	69	258.75
Seines .....	..	.....	1	15.00
Boatpullers @ \$2.50 .....	17	42.50	15	37.50
Peddle or Retail Fish Dealers @ \$5.00 .....	8	40.00	10	50.00
Buyers @ \$2.00 .....	4	8.00	1	2.00
Wholesale or Cold Storage @ \$25.00 .....	1	25.00	2	50.00
Boats or Scows @ \$2.00 .....	1	2.00	1	2.00
Clams @ \$5.00 .....	3	15.00	3	15.00
Crabs @ \$5.00 .....	5	25.00	7	35.00
	154	\$ 802.50	171	\$ 930.25
<b>Depoe Bay</b>				
Peddle or Retail Fish Dealers @ \$5.00 .....	2	\$ 10.00	2	\$ 10.00
Buyers @ \$2.00 .....	1	2.00	..	.....
Wholesale or Cold Storage @ \$25.00 .....	..	.....	2	50.00
Boat or Scow @ \$2.00 .....	1	2.00	..	.....
Crab @ \$5.00 .....	1	5.00	..	.....
	5	\$ 19.00	4	\$ 60.00
<b>Elk River</b>				
Gillnets @ \$7.50 .....	3	\$ 22.50	..	.....
<b>Euchre Creek</b>				
Setnets @ \$3.75 .....	..	.....	1	\$ 3.75
<b>Floras Creek</b>				
Setnets @ \$3.75 .....	8	\$ 30.00	28	\$ 105.00
<b>Hunters Creek</b>				
Setnets @ \$3.75 .....	1	\$ 3.75	..	.....
<b>Nehalem River</b>				
Gillnets @ \$7.50 .....	68	\$ 510.00	59	\$ 442.50
Setnets @ \$3.75 .....	131	491.25	130	487.50
Boatpullers @ \$2.50 .....	8	20.00	10	25.00
Peddle or Retail Fish Dealers @ \$5.00 .....	10	50.00	6	30.00
Buyers @ \$2.00 .....	1	2.00	..	.....
Wholesale or Cold Storage @ \$25.00 .....	2	50.00	2	50.00
Boats or Scows @ \$2.00 .....	2	4.00	2	4.00
Clams @ \$5.00 .....	2	10.00	1	5.00
Crabs @ \$5.00 .....	12	60.00	9	45.00
	236	\$1,197.25	219	\$1,089.00

	License Year Ending March 31, 1935		License Year Ending March 31, 1936	
	No.	Amount	No.	Amount
<b>Nestucca River</b>				
Peddle or Retail Fish Dealers @ \$5.00	5	\$ 25.00	5	\$ 25.00
Clams @ \$5.00	7	35.00	6	30.00
Crabs @ \$5.00	1	5.00	1	5.00
	<b>13</b>	<b>\$ 65.00</b>	<b>12</b>	<b>\$ 60.00</b>
<b>Netarts Bay</b>				
Setnets @ \$3.75	..	\$ .....	9	\$ 33.75
Peddle or Retail Fish Dealers @ \$5.00	5	25.00	7	35.00
Crabs @ \$5.00	14	70.00	14	70.00
	<b>19</b>	<b>\$ 95.00</b>	<b>30</b>	<b>\$ 138.75</b>
<b>Pistol River</b>				
Setnets @ \$3.75	2	\$ 7.50	5	\$ 18.75
<b>Port Orford</b>				
Peddle or Retail Fish Dealers @ \$5.00	3	\$ 15.00	2	\$ 10.00
Crabs @ \$5.00	3	15.00	6	30.00
	<b>6</b>	<b>\$ 30.00</b>	<b>8</b>	<b>\$ 40.00</b>
<b>Rogue River</b>				
Gillnets @ \$7.50	51	\$ 382.50	26	\$ 195.00
Boatpullers @ \$2.50	31	77.50	19	47.50
Peddle or Retail Fish Dealers @ \$5.00	23	115.00	28	140.00
Wholesale or Cold Storage @ \$25.00	2	50.00	2	50.00
Canners, Salmon	1	25.00	2	50.00
	<b>108</b>	<b>\$ 650.00</b>	<b>77</b>	<b>\$ 482.50</b>
<b>Salmon River</b>				
Gillnet @ \$7.50	1	\$ 7.50	..	\$ .....
Setnets @ \$3.75	15	56.25	12	45.00
Boatpullers @ \$2.50	1	2.50	1	2.50
Peddle or Retail Fish Dealers @ \$5.00	4	20.00	5	25.00
Wholesale or Cold Storage @ \$25.00	1	25.00	1	25.00
	<b>22</b>	<b>\$ 111.25</b>	<b>19</b>	<b>\$ 97.50</b>
<b>Siletz River</b>				
Gillnets @ \$7.50	21	\$ 157.50	15	\$ 112.50
Setnets @ \$3.75	147	551.25	114	427.50
Boatpullers @ \$2.50	13	32.50	4	10.00
Peddle or Retail Fish Dealers @ \$5.00	9	45.00	8	40.00
Buyers @ \$2.00	3	6.00	..	.....
Wholesale or Cold Storage @ \$25.00	3	75.00	2	50.00
Boat or Scow @ \$2.00	1	2.00	1	2.00
Clams @ \$5.00	2	10.00	1	5.00
Setline @ \$1.00	1	1.00	..	.....
	<b>200</b>	<b>\$ 880.25</b>	<b>145</b>	<b>\$ 647.00</b>
<b>Siuslaw River</b>				
Gillnets @ \$7.50	46	\$ 345.00	37	\$ 277.50
Setnets @ \$3.75	81	303.75	85	318.75
Boatpullers @ \$2.50	15	37.50	9	22.50
Peddle or Retail Fish Dealers @ \$5.00	7	35.00	9	45.00
Buyers @ \$2.00	10	20.00	2	4.00
Wholesale or Cold Storage @ \$25.00	1	25.00	1	25.00
Boats or Scows @ \$2.00	2	4.00	2	4.00
Clams @ \$5.00	7	35.00	4	20.00
Crabs @ \$5.00	13	65.00	10	50.00
Setlines @ \$1.00	6	6.00	3	3.00
	<b>188</b>	<b>\$ 876.25</b>	<b>162</b>	<b>\$ 769.75</b>

	License Year Ending March 31, 1935		License Year Ending March 31, 1936	
	No.	Amount	No.	Amount
<b>Sixes River</b>				
Gillnets @ \$7.50 .....	12	\$ 90.00	..	.....
Boatpullers @ \$2.50 .....	4	10.00	..	.....
	16	\$ 100.00		
<b>Ten Mile Lake</b>				
Crawfish @ \$5.00 .....	2	\$ 10.00	1	\$ 5.00
<b>Tillamook Bay</b>				
Gillnets @ \$7.50 .....	70	\$ 525.00	94	\$ 705.00
Setnets @ \$3.75 .....	157	588.75	211	791.25
Boatpullers @ \$2.50 .....	7	17.50	15	37.50
Peddle or Retail Fish Dealers @ \$5.00.....	15	75.00	22	110.00
Buyers @ \$2.00 .....	3	6.00	..	.....
Wholesale or Cold Storage @ \$25.00.....	7	175.00	8	200.00
Canner, Salmon @ \$25.00.....	1	25.00	..	.....
Boats or Scows @ \$2.00.....	2	4.00	3	6.00
Clams @ \$5.00 .....	6	30.00	8	40.00
Crabs @ \$5.00 .....	32	160.00	41	205.00
Setlines @ \$1.00 .....	..	.....	1	1.00
	300	\$1,606.25	403	\$2,095.75
<b>Umpqua River</b>				
Gillnets @ \$7.50 .....	94	\$ 705.00	106	\$ 795.00
Setnets @ \$3.75 (Smith River).....	14	52.50	31	116.25
Seine .....	1	15.00	1	15.00
Trolls @ \$2.50 .....	3	7.50	2	5.00
Boatpullers @ \$2.50 .....	12	30.00	25	62.50
Peddle or Retail Fish Dealers @ \$5.00.....	18	90.00	16	80.00
Buyers @ \$2.00 .....	6	12.00	4	8.00
Wholesale or Cold Storage @ \$25.00.....	4	100.00	5	125.00
Canners, Shellfish .....	1	10.00	2	23.00
Boats or Scows @ \$2.00.....	17	34.00	5	10.00
Clams @ \$5.00 .....	5	25.00	8	40.00
Crabs @ \$5.00 .....	33	165.00	24	120.00
	208	\$1,246.00	229	\$1,399.75
<b>Willamette River</b>				
Peddle or Retail Fish Dealers @ \$5.00.....	192	\$ 960.00	215	\$1,075.00
Retail Fish Dealers (Portland) @ \$5.00.....	418	2,090.00	448	2,240.00
Buyers @ \$2.00 .....	1	2.00	3	6.00
Wholesale Dealers (other than Portland) @ \$25.00..	8	200.00	9	225.00
Wholesale or Cold Storage (Portland) @ \$25.00.....	28	700.00	31	775.00
Brokers @ \$50.00 (Portland).....	2	100.00	2	100.00
	649	\$4,052.00	708	\$4,421.00
<b>Winchuck River</b>				
Setnets @ \$3.75 .....	4	\$ 15.00	..	.....
<b>Yachats River</b>				
Retail Fish Dealers @ \$5.00.....	2	\$ 10.00	1	\$ 5.00
Clams @ \$5.00 .....	2	10.00	..	.....
	4	\$ 20.00	1	\$ 5.00

	License Year Ending March 31, 1935		License Year Ending March 31, 1936	
	No.	Amount	No.	Amount
<b>Yaquina Bay and River</b>				
Gillnets @ \$7.50	13	\$ 97.50	11	\$ 82.50
Setnets @ \$3.75	6	22.50	11	41.25
Seine	1	15.00	..	.....
Boatpullers @ \$2.50	5	12.50	2	5.00
Peddle or Retail Fish Dealers @ \$5.00	12	60.00	20	100.00
Buyers @ \$2.00	2	4.00	2	4.00
Wholesale or Cold Storage @ \$25.00	3	75.00	3	75.00
Boat or Scow @ \$2.00	..	.....	1	2.00
Clams @ \$5.00	10	50.00	5	25.00
Crabs @ \$5.00	24	120.00	24	120.00
Oysters @ \$5.00	1	5.00	4	20.00
Setlines @ \$1.00	20	20.00	24	24.00
	97	\$ 481.50	107	\$ 498.75
<b>Miscellaneous</b>				
Vehicle licenses @ \$2.00 (State Highways)	32	\$ 64.00	33	\$ 66.00
<b>Recapitulation</b>				
	No.	Amount	No.	Amount
Gillnets @ \$7.50	1309	\$9,817.50	1296	\$9,720.00
Setnets @ \$3.75	945	3,543.75	1028	3,855.00
Traps @ \$25.00	39	975.00	68	1,700.00
Seines @ 3c ft.	38	1,625.58	58	2,338.38
Trolls @ \$2.50	42	105.00	31	77.50
Boatpullers @ \$2.50	442	1,105.00	480	1,200.00
Peddle or Retail Fish Dealers @\$5.00	933	4,665.00	1022	5,110.00
Buyers @ \$2.00	103	206.00	59	118.00
Wholesale or Cold Storage @ \$25.00	97	2,425.00	115	2,875.00
Canners, Salmon @ \$25.00	11	275.00	8	200.00
Canners, Shellfish	5	61.54	8	101.91
Reduction Plants @ \$25.00	..	.....	9	225.00
Brokers @ \$50.00	2	100.00	2	100.00
Boats or Scows @ \$2.00	144	288.00	118	236.00
Bagnets @ \$5.00	133	665.00	114	570.00
Clams @ \$5.00	163	815.00	229	1,145.00
Crabs @ \$5.00	264	1,320.00	247	1,235.00
Crawfish @ \$5.00	39	195.00	37	185.00
Oysters @ \$5.00	1	5.00	4	20.00
Setlines @ \$1.00	99	99.00	94	94.00
	4809	\$28,291.37	5027	\$31,105.79

## ARRESTS FOR VIOLATION OF COMMERCIAL FISHING LAWS

July 1, 1934 to June 30, 1935

Canning food and shellfish without license.....	2
Dealing in food or shellfish without license.....	38
Failure to file reports of fish handled.....	3
Failure to keep proper records, transportation of food fish.....	6
Falsifying fish reports.....	2
Fishing closed season.....	10
Fishing closed waters.....	22
Fishing without license.....	56
Gaffing, snagging or foul-hooking food fish.....	29
No license numbers posted on boats or nets.....	6
Over bag limit of salmon.....	2
Over limit of clams—no license.....	39
Possession of illegal fish.....	24
Possession of wet net in boat during closed season.....	2
Possession of undersized clams.....	1
Possession of undersized sturgeon.....	3
Sale of clams during closed season.....	1
Setting net more than one-third across stream.....	6
Transporting and illegal possession of untagged salmon.....	1
Transporting razor clams and crabs unlawfully.....	2
Unlawful sale of salmon.....	1
Using explosives to kill salmon.....	3
Using razor clams for bait.....	3

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## ARRESTS AND DISPOSITION OF CASES

July 1, 1934 to June 30, 1935

County	Number of Arrests	Number of Convictions	Number Dismissed or NOT GUILTY	Amount of Fine Imposed	Amount of Fine Remitted or Suspended	Number pardoned, Paroled or Suspended	Number Imprisoned	Number Continued for Sentence
Clackamas.....	16	10	4	\$ 418.80	\$ 130.00	3	1	2
Clatsop.....	23	20	2	1,050.00	710.00	14	8	1
Columbia.....	11	9	1	530.00	90.00	4	4	1
Coos.....	55	49	4	4,900.00	4,140.00	48	12	2
Deschutes.....	2	2	..	50.00	40.00	2	..	..
Douglas.....	15	14	1	1,225.00	450.00	7	6	..
Hood River.....	2	2	..	100.00	75.00	2	..	..
Jackson.....	7	5	2	200.00	..	2	3	..
Josephine.....	2	2	..	50.00	25.00	2	..	..
Lane.....	17	15	1	500.00	410.00	13	1	1
Lincoln.....	21	13	6	330.00	265.00	8	..	2
Linn.....	4	4	..	100.00	75.00	3	..	..
Marion.....	2	2	..	200.00	200.00	2	..	..
Multnomah.....	21	21	..	1,368.00	1,055.00	9	2	..
Polk.....	1	..	1	..	..	..	..	..
Tillamook.....	54	48	5	2,125.00	1,660.00	48	..	1
Union.....	2	2	..	55.00	25.00	1	..	..
Wallowa.....	2	2	..	100.00	80.00	2	..	..
Wasco.....	1	1	..	50.00	50.00	1	..	..
Washington.....	3	3	..	150.00	109.70	3	..	..
Yamhill.....	1	1	..	12.50	12.50	1	..	..
	262	225	27	\$13,514.30	\$9,602.20	175	37	10

**ARRESTS FOR VIOLATION OF COMMERCIAL FISHING LAWS**

July 1, 1935 to June 30, 1936

Allowing oil to escape into waters of Umpqua River.....	2
Dealing in food or shellfish without license.....	21
Failure to file reports of fish handled.....	22
Failure to keep proper record of food and shellfish.....	3
Falsifying fish reports.....	3
Fishing closed season.....	6
Fishing closed waters.....	30
Fishing without license.....	53
Gaffing, snagging, shooting or molesting food fish.....	69
Illegal possession of untagged salmon.....	1
No license numbers posted on boats or nets.....	4
Operating fish trap in McKenzie River.....	2
Over limit of clams--no license.....	5
Possession of undersized clams and crabs.....	11
Possession of undersized sturgeon.....	2
Setting net more than one-third across stream.....	5
Transporting food fish without license.....	2
Waste of food fish.....	1
	<hr/>
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**ARRESTS AND DISPOSITION OF CASES**

July 1, 1935 to June 30, 1936

County	Number of Arrests	Number of Convictions	Number pending, Dismissed or NOT GUILTY	Amount of Fine Imposed	Amount of Fine Remitted or Suspended	Number pardoned, Paroled or Suspended	Number Imprisoned	Number Continued for Sentence
Benton .....	2	2	..	\$ 20.00	\$ .....	..	..	..
Clackamas .....	14	12	2	610.00	480.00	11	..	..
Clatsop .....	16	15	1	1,360.00	950.00	12	2	..
Columbia .....	9	7	2	325.00	150.00	2	2	..
Coos .....	32	31	1	1,845.00	1,637.00	25	4	..
Curry .....	3	3	..	300.00	225.00	3	..	..
Douglas .....	11	10	1	445.00	300.00	7	..	..
Hood River .....	1	1	..	50.00	25.00	1	..	..
Jackson .....	3	3	..	..	..	3	3	..
Josephine .....	18	13	5	1,100.00	720.00	9	2	..
Lane .....	13	13	..	1,075.00	930.00	12	3	..
Lincoln .....	21	18	3	765.00	465.00	12	2	..
Linn .....	2	2	..	50.00	25.00	1	1	..
Marion .....	1	1	..	50.00	50.00	1	..	..
Multnomah .....	17	16	..	4,000.00	3,710.00	16	..	1
Tillamook .....	68	49	15	4,935.00	3,385.00	42	8	4
Union .....	3	3	..	150.00	70.00	2	..	..
Wasco .....	6	6	..	335.00	215.00	3	1	..
Yamhill .....	2	2	..	31.00	25.00	1	..	..
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	242	207	30	\$17,446.00	\$13,362.00	163	28	5



**LIST OF EMPLOYEES OF THE FISH COMMISSION**  
**Salary and Expenses During Biennium July 1, 1934 to June 30, 1936**

Name	Location	Position	Rate of Pay	Total	Meals	Lodgings	Fares	Mileage	Period
Alphauhalp, Verner	Trask Station	Temp. Laborer	4.00 day	\$ 104.00	\$				7/ 2/34- 8/ 8/34
Allen, Floyd W.	Portland	Engineer	25.00	187.50			3.00		7/ 6/34- 7/23/34
Anderson, Archie W.	Bonneville Station	Fish Culturist	100.00 mo.	2,400.00	20.80	23.75	7.00		7/ 1/34- 6/30/36
Anderson, E. J. W.	Bonneville Station	In Charge	125-130.00 "	3,055.00	13.40	10.25	41.85		7/ 1/34- 6/30/36
Baker, Ernest	Santiam Station	Temp. Laborer	3.00 day	81.00					10/12/34-10/13/34
Baker, Willis	10-Mile Station	Temp. Laborer	3.00 "	2,219.35	11.75	9.50	7.00		12/ 8/35- 1/ 7/36
Bales, Jess J.	Willamette Station	Fish Culturist	100.00 mo.	2,400.00					7/ 1/34- 6/30/36
Bates, M. H.	Alesea Station	Fish Culturist	100.00 mo.	2,400.00					7/ 1/34- 6/30/36
Bell, Carl	Santiam Station	Temp. Laborer	3.00 day	15.75					5/ 1/36- 5/ 6/36
Bell, Clarence	Santiam Station	Temp. Laborer	3.00 "	15.75					3/10/36- 3/11/36
Bentley, Wm.	Portland	Painter	1.00 hr.	8.00					9/11/34- 9/29/34
Beuch, L. W.	Carliplace	Temp. Laborer	.50 "	79.50					12/26/34
Beem, M. D.	Alesea Station	Temp. Laborer	3.00 day	200.00					7/ 1/34- 7/31/34
Bed, Milo C.	Portland	Engineer	200.00 mo.	2,400.00					9/ 1/34- 11/ 7/35
Biddle, John	McKenzie Station	Temp. Laborer	3.00 day	462.00					1/ 4/36- 1/ 5/36
Bittle, Louis	McKenzie Station	Temp. Laborer	3.00 "	4.50					10/ 6/34-10/20/34
Blanchard, Ralph	So. Santiam Station	Temp. Laborer	3.00 "	25.50					10/ 5/34- 5/11/36
Blum, James	Santiam Station	Temp. Laborer	3.00 "	37.50					7/22/35- 6/30/36
Boble, Henry	Trask Station	In Charge	85.00-130.00 mo.	1,117.42			11.68		4/13/35- 5/18/36
Bowers, Pray	Wallowa Station	Temp. Laborer	3.00 day	84.00					5/ 2/35- 5/15/35
Brady, Dan	Santiam Station	Temp. Laborer	3.00 "	25.50					5/ 4/36- 5/23/36
Briggs, E. O.	Willamette Station	Temp. Laborer	3.00 "	236.90	5.40	6.00	5.30		5/21/36- 6/30/36
Brock, Vernon E.	Portland	Extra Stenographer	174.80 mo.	2,097.60					7/ 6/34- 7/23/34
Brunner, Oscar	Klaskanine Station	Temp. Laborer	3.00 "	3.00					7/ 1/34- 4/ 3/36
Buckbee, Chas.	Trask Station	In Charge	125.00-130.00 mo.	2,678.00			33.88		6/26/35- 7/30/35
Buckbee, Wm. E.	Trask Station	Temp. Laborer	3.00 day	12.00					10/29/35- 1/23/35
Bizzard, Walter	South Coos Station	Temp. Laborer	3.00 "	34.50					7/ 2/34- 7/14/34
Carter, Cleo	McKenzie Station	Temp. Laborer	3.00 "	33.00					7/ 1/34- 6/30/36
Carver, Walter	McKenzie Station	In Charge	125.00-130.00 mo.	3,095.00	1.80	1.00			5/14/36- 6/26/36
Cedarberg, Axel	McKenzie Station	Carpenter	8.00 day	165.50					8/16/35- 6/30/36
Christensen, M. G.	Oregon City	Inspector	3.00 day	1,230.85	241.95	194.00	143.10		1/ 8/36- 6/30/36
Chue, Milo	Bonneville Station	Temp. Laborer	3.00 "	81.00					6/ 5/35- 7/ 8/35
Clark, Raymond	Willamette Station	Temp. Laborer	3.00 "	1,915.08					4/20/35- 3/10/36
Clausen & Clausen	Bonneville Station	Architects	3.00 "	10.50					1/18/35- 1/21/35
Clymer, V. W.	So. Santiam Station	Temp. Laborer	3.00 "	45.00					12/12/35- 1/29/36
Cross, Francis	South Coos Station	Temp. Laborer	3.00 "	483.00					11/ 1/35- 6/30/36
Cross, John	Bonneville Station	Temp. Laborer	3.00 "	4.31					8/ 9/35- 8/10/35
Curr, John	Bonneville Station	Temp. Laborer	3.00 "	15.00					7/11/35- 7/16/35
Dickie, Arlie	McKenzie Station	Fish Culturist	115.00-115.96 mo.	2,768.64					7/ 1/34- 6/30/36
Donolio, Audie	McKenzie Station	Temp. Laborer	3.00 day	12.00					10/16/35- 5/29/36
Dunoyer, Bernard	Santiam Station	Temp. Laborer	2.50-3.00 "	47.50					10/18/35- 10/19/36
Durfar, Fred	Willamette Station	Temp. Laborer	3.00 "	6.00					6/27/36- 6/28/36
Dowdy, R. E.	Santiam Station	Temp. Laborer	3.00 "	6.00					5/ 3/35- 5/ 8/35
Dowdy, Francis	McKenzie Station	Temp. Laborer	3.00 "	16.50					11/ 1/36- 11/ 2/35
Eaton, Eddie	Willamette Station	Temp. Laborer	5.00 "	10.00					8/ 9/36- 6/30/36
Eberhart, Wm.	Trask Station	Temp. Laborer	5.00 hr.	3.50					3/ 9/36- 6/30/36
Edwards, C. F.	Oregon City	Temp. Laborer	3.00 day	145.50					3/ 9/36- 6/30/36
Elliff, Del	Bonneville Station	Temp. Laborer	3.00 "	238.50					7/ 1/34- 6/30/36
Elliff, G. F.	Bonneville Station	Fish Culturist	115.00-115.96 mo.	2,788.64					7/ 1/34- 6/30/36
Ellis, C. R.	So. Santiam Station	Fish Culturist	4.00-6.00 day	412.64					3/ 2/36- 6/28/36
Ellis, George L.	Trask Station	Carpenter & Painter	4.00 "	352.00					8/26/35
Erington, Francis	McKenzie Station	Temp. Laborer	3.00 "	3.00					8/14/35- 8/16/35
Erlicht, Curtis	Willamette Station	Temp. Laborer	3.00 "	15.00					7/ 1/34- 10/23/35
Etztkon, Peter	Clatskanie	Temp. Laborer	85.00 mo.	133.63					7/ 1/34- 10/23/35
Etztkon, Hubert	Trask Station	Apprentice Fish Culturist	5.00 day	85.00					12/11/34
Farrell, R. S.	Portland	Fish Commissioner	5.00 day	7.85					5/15/36- 6/30/36
Fisher, Albert	Willamette Station	Temp. Laborer	3.00 "	70.50					11/ 1/34- 11/ 2/34
Fisher, Oscar	Wallowa Station	Temp. Laborer	3.50 "	7.00					

**LIST OF EMPLOYEES OF THE FISH COMMISSION—Continued**  
**Salary and Expenses During Biennium July 1, 1934 to June 30, 1936**

Name	Location	Position	Rate of Pay	Total	Meals	Lodgings	Fares	Mileage	Period
Forster, Louis	Se. Santiam Station	Apprentice Fish Culturist	\$5.00 mo.	172.74	.....	.....	.....	.....	8/ 5/34-10/12/34
Fontain, J. W.	McKenzie Station	Temp. Laborer	3.00 day	24.00	.....	.....	.....	.....	5/ 8/35- 5/15/35
Frane, Max	Santiam Station	Fish Culturist	85.00-90.00 mo.	2,095.00	.....	.....	.....	.....	7/ 1/34- 6/30/36
Frane, Roy	Santiam Station	Temp. Laborer	3.00 day	90.00	.....	.....	.....	.....	2/26/35- 5/28/35
Freed, Mary	Portland	Sec. to Director of Hatcheries	115.98-120.00 mo.	2,831.52	.....	.....	.....	.....	7/ 1/34- 6/30/36
French, Irvine	Wallowa Station	In Charge	125.00-130.00 mo.	3,055.00	.....	.....	.....	.....	7/ 1/34- 6/30/36
Fulton, Vera G.	Portland	Stenographer	115.93 "	1,091.68	.....	.....	.....	.....	7/18/35- 6/30/36
Gallegher, J. H.	Portland	Engineer	200.00 "	800.00	.....	24.00	.....	.....	9/ 1/34-12/31/34
Gallagher, John	McKenzie Station	Temp. Laborer	3-8.75 day	246.00	.....	.....	.....	.....	7/ 2/35- 9/30/34
Gallion, John O.	Trask Station	Temp. Laborer	3-8.75 "	219.00	.....	.....	.....	.....	2/ 4/35- 5/17/35
Garnier, Tom	Oregon City	Temp. Laborer	5-50 hr.	75.00	.....	.....	.....	.....	9/11/34- 9/21/34
Gell, Clellis	Portland	Temp. Laborer	3.00 day	15.00	.....	.....	.....	.....	10/ 4/34-10/ 9/34
Gibson, D. E.	Santiam Station	Temp. Laborer	3.00 "	14.25	.....	.....	.....	.....	8/ 7/35- 8/ 9/35
Givens, Otto	Alsea Station	Temp. Laborer	3.00 "	9.00	.....	.....	.....	.....	5/20/35- 5/22/36
Godard, Hugh	Willamette Station	Temp. Laborer	3-5.00 "	24.00	.....	.....	.....	.....	7/28/34- 5/25/36
Godard, S. J.	McKenzie Station	Temp. Laborer	3.00 "	138.00	.....	.....	.....	.....	10/10/34- 5/19/36
Goff, Wm. H.	McKenzie Station	Temp. Laborer	6.00 "	589.50	.....	.....	.....	.....	7/ 1/35- 6/27/36
Gray, Stanley	Willamette Station	Temp. Laborer	3.00 "	21.00	.....	.....	.....	.....	10/15/34-10/14/35
Greer, Austin	Willamette Station	Temp. Laborer	3.00 "	270.00	.....	.....	.....	.....	7/11/34- 7/23/35
Greer, Orval	Trask Station	Apprentice Fish Culturist	85.00-90.00 mo.	1,171.61	.....	.....	.....	.....	10/15/34- 6/30/36
Gribling, John E.	Wallowa Station	Temp. Laborer	85.00-90.00 "	1,395.00	.....	.....	.....	.....	2/ 1/35- 6/30/36
Hadleman, David M.	Bonneville Station	Temp. Laborer	3.00 "	48.00	.....	.....	.....	.....	6/15/36- 6/30/36
Hamberton, Leland	Wallowa Station	Temp. Laborer	3.00 "	7.50	.....	.....	.....	.....	5/ 9/35- 5/11/35
Hanenkrat, Ed	Trask Station	Temp. Laborer	6.00 "	69.00	.....	.....	.....	.....	6/ 8/35-11/15/35
Hanper, James	Trask Station	Temp. Laborer	3.00 "	52.12	.....	.....	.....	.....	8/ 1/34- 8/21/34
Harris, D. R.	Santiam Station	Temp. Laborer	3.00 "	7.50	.....	.....	.....	.....	5/26/36- 5/28/36
Harris, L. M.	Santiam Station	Temp. Laborer	3.00 "	7.50	.....	.....	.....	.....	5/26/36- 5/28/36
Harrison, Addison	Bonneville Station	Temp. Laborer	3.00 "	315.00	.....	.....	.....	.....	7/29/35- 6/30/36
Harrison, Gibson	Bonneville Station	Temp. Laborer	3.00 "	267.00	.....	.....	.....	.....	3/ 9/35- 6/30/36
Harrison, T. C.	Bonneville & So. Coos	Apprentice Fish Culturist	85.00-100.00 mo.	1,965.00	.....	.....	.....	.....	9/ 1/34- 6/30/36
Harrison, Thos. H.	Bonneville Station	Apprentice Fish Culturist	85.00-90.00 "	2,095.00	.....	.....	.....	.....	7/ 1/34- 6/30/36
Harrison, Wilbert	Herman Crk. Station	Temp. Laborer	3.00 day	7.50	.....	.....	.....	.....	1/ 8/36- 1/10/36
Hayes, W. A.	Santiam Station	Temp. Laborer	3.00 "	31.50	.....	.....	.....	.....	5/ 1/35- 5/11/35
Hayes, Willis	Santiam Station	Temp. Laborer	3.00 "	163.50	.....	.....	.....	.....	8/20/34-10/15/34
Heinze, Otto D.	Klaskanine Station	Fish Culturist	100.00 mo.	2,400.00	.....	.....	.....	.....	7/ 1/34- 6/30/36
Heitroy, N. S.	Bonneville Station	Carpenter	6.00 day	21.00	.....	.....	.....	.....	6/15/36- 6/18/36
Hickey, L. W.	Klaskanine Station	In Charge	135.00-130.00 mo.	3,055.00	.....	.....	.....	.....	7/ 1/34- 6/30/36
Hill, Wester	Klaskanine Station	Temp. Laborer	3.00 day	30.00	.....	.....	.....	.....	3/ 1/36- 4/30/36
Hills, Chas.	Willamette Station	In Charge	135.00-130.00 mo.	3,055.00	.....	.....	.....	.....	7/ 1/34- 6/30/36
Hills, Vina	Willamette Station	Temp. Laborer	3.00 day	36.00	.....	.....	.....	.....	10/ 1/35-10/16/35
Hise, Harry	Willamette Station	Temp. Laborer & Bulldozer	2.75 hr.	15.00	.....	.....	.....	.....	6/12/35- 6/14/35
Hoeff, Wm.	Umpqua Station	Temp. Laborer	3.00 day	19.22	.....	.....	.....	.....	6/ 1/36- 6/ 8/36
Holt, George	Klaskanine Station	Plasterer's Helper	5.60-7.00 "	19.80	.....	.....	.....	.....	6/ 1/36- 6/ 8/36
Holt, T. G.	Klaskanine Station	Plasterer	5.60 "	19.80	.....	.....	.....	.....	6/ 1/36- 6/ 8/36
Howard, Otis E.	Willamette	Temp. Carpenter	3.00 hr.	5.40	.....	.....	.....	.....	9/20/34
Hoy, M. T.	Portland	Master Fish Warden	246.00-257.40 mo.	5,958.00	.....	83.00	.....	.....	7/ 1/34- 6/30/36
Hueston, Leo	Willamette Station	Temp. Laborer	3.00 day	15.00	.....	.....	.....	.....	5/ 3/35- 5/ 7/35
Huntley, F. J.	Rogue Station	Temp. Laborer	3.00 "	9.00	.....	.....	.....	.....	1/12/35- 1/14/36
Hyland, Hubert	Willamette Station	Temp. Laborer	3.00 "	15.00	.....	.....	.....	.....	5/ 1/36- 5/ 5/36
Inel, Agnes B.	Portland	Sec. to Master Fish Warden	111.25-115.96 mo.	1,847.40	.....	.....	.....	.....	7/ 1/34-11/15/35
Jackoi, Victor	Astoria	Boat Capt. & Inspector	135.00-135.10 "	1,958.40	.....	.....	.....	.....	4/16/35- 6/30/36
Jarvis, A.	Klaskanine Station	Temp. Laborer	3.00 day	9.00	.....	.....	.....	.....	3/ 1/36- 3/ 8/36
Johnson, Wm.	Klaskanine Station	Building Laborer	5.50 "	12.03	.....	.....	.....	.....	6/25/36- 6/26/36
Johnson, J. A.	Bonneville Station	Fish Culturist	97.90-100.00 mo.	2,372.70	.....	180.75	.....	.....	7/ 1/34- 6/30/36
Johnson, Joe	Bonneville Station	Temp. Laborer	3.00 day	228.00	.....	.....	.....	.....	4/ 1/34- 9/21/34
Johnson, Rex	Portland	Temp. Laborer	3.00 "	93.00	.....	.....	.....	.....	3/15/33- 3/19/33
Jordan, Herman	Portland	Engineer	4.00 "	20.00	.....	.....	.....	.....	7/10/35- 7/17/35
Jungwirth, Clarence	Santiam Station	Temp. Laborer	3.00 "	21.00	.....	.....	.....	.....	.....

**LIST OF EMPLOYEES OF THE FISH COMMISSION—Continued**  
**Salary and Expenses During Biennium July 1, 1934 to June 30, 1936**

Name	Location	Position	Rate of Pay	Total	Meals	Lodgings	Fares	Mileage	Period
Jungwirth, Peter	Santiam Station	Temp. Laborer	3.00 day	33.00					5/1/35-5/11/35
Keddy, Chas.	Klaskanine Station	Building Laborer	5.50	5.50					5/15/35-5/15/35
Kelly, M. F.	Marshfield	Inspector	124.88-125.00 mo.	1,498.92	344.25	369.00	70.44		7/1/35-6/30/36
Kelsay, F. E.	Willamette Station	Temp. Laborer	3.00 day	24.00					5/3/35-5/6/36
Kinsay, Robt. C.	Willamette Station	Temp. Laborer	3.00 "	266.10					8/13/35-2/22/36
Kinsay, Arch.	Santiam Station	Temp. Laborer	3.00 "	69.00					11/1/34-11/25/34
King, John O.	So. Santiam Station	Temp. Laborer	3.00 "	39.00					4/9/35-6/24/36
Koch, Karl	So. Santiam Station	Fish Culturist	75.00-90.00 mo.	1,015.00					5/1/34-6/30/36
Koski, Adolf	Klaskanine Station	Building Laborer	5.50 day	66.67					5/22/35-6/26/36
Karchnick, Jos. J.	Santiam Station	Temp. Laborer	3.00 "	9.00					10/12/34-10/13/34
Larn, Herbert C.	Willow Station	Temp. Laborer	3.00 "	9.00					6/18/36-6/20/36
Larson, Carl	Klaskanine Station	Temp. Laborer	3.00 "	1.50					3/1/35-10/23/35
Lauteks, Laboratories	Seattle	Testing Water	5.60 "	5.00					7/1/34-6/30/36
Ledgerwood, Edgar	Santiam & Rogue Stn.	Fish Culturist & Supt.	85.00-115.00 mo.	1,973.61	70.00	70.00			7/1/34-6/30/36
Ledgerwood, LeRoy	Santiam Station	In Charge	125.00-130.00 "	3,055.00				6.48	6/12/34-5/19/36
Leibenweber, C. A.	Astoria	Fish Commissioner	5.00 day	284.00	78.20	71.00	124.30		7/1/34-6/30/36
Leibenweber, Henry	Astoria	Engineer & Inspector	124.88 mo.	2,451.92				48.00	7/1/34-6/30/36
Lempke, Gust.	Klaskanine Station	Driver & Truck	8.00 day	8.00					10/5/35
Levington, Francis	Willow Station	Temp. Laborer	3.00 "	78.00					8/27/35-11/8/35
Lind, John	Bonneville Station	Temp. Laborer	3.00 "	66.00					7/29/35-8/31/35
Mack, Charles	Gladstone Station	Temp. Laborer	3.50 "	3.50					9/6/34
Mackey, J.	Klaskanine Station	Temp. Laborer	5.50 "	13.41					6/18/36-6/26/36
Madden, Charlie	Bonneville Station	Temp. Laborer	3.00 "	2.63					8/9/35-8/10/35
Magill, Otto	10-Mile & So. Coos	Fish Culturist & Supt.	100.00-115.00 mo.	2,030.00	60.50				7/1/34-2/28/36
Malberry, I. T.	Umpqua Station	Temp. Laborer	3.00 day	57.00					4/10/36-5/16/36
May, C. F.	Willamette Station	Temp. Laborer	3.00 "	455.25					7/1/34-5/25/36
May, Dennis	Willamette Station	Temp. Laborer	3.00 "	30.00					4/12/35-5/8/35
Meek, Coleman	10-Mile Lake Station	Temp. Laborer	2.50 "	10.00					12/1/34-12/17/34
Millar, Carl F.	McKenzie Station	Mechanic & Painter	3.50-5.00 "	15.50					1/14/35-5/18/36
Minich, Fred H.	Portland	Carpenter	.50-3.00 hour	76.90					5/11/34-5/9/36
Minney, Arthur	Willamette Station	Temp. Laborer	3.00 day	631.50	1.80	1.00			7/1/34-8/30/36
Mitchell, Hugh C.	Portland	Director of Hatcheries	280.00-287.00 mo.	6,787.60	226.00	92.00	10.51		11/15/34-1/14/36
Monson, Ben	10-Mile Station	Temp. Laborer	2.50-3.00 day	198.50					1/24/35-2/19/36
Monson, Bill	10-Mile Station	Temp. Laborer	2.50-3.00 "	20.25					12/5/34-2/29/36
Monson, Clifford B.	10-Mile Station	Temp. Laborer	2.50-3.00 "	190.00					12/30/35-1/2/36
Monson, Junior	10-Mile Station	Temp. Laborer	3.00 "	12.00					12/1/34-2/28/36
Monson, Preston	10-Mile Station	Temp. Laborer	2.50-3.00 "	73.25					2/24/36-2/27/36
Monson, Tom	10-Mile Station	Temp. Laborer	3.00 "	9.00					5/28/35-10/4/35
Muirden, Edith	McKenzie Station	Temp. Laborer	3.00 "	19.50					5/1/35-5/11/35
Murray, W. L.	So. Santiam Station	Temp. Laborer	3.00 "	18.00					4/15/35-4/30/36
Myers, F. P.	Reedsport	Inspector	1.20 hour	4.80					7/1/34-6/30/36
McCabe, Harry H.	Umpqua Station	In Charge	2.25 day	68.75					1/3/36-1/4/36
McCann, Lee	Umpqua Station	Temp. Laborer	125.00-130.00 mo.	3,055.00	5.65		43.40		6/22/36-8/26/36
McCarney, C. W.	Umpqua Station	Temp. Laborer	3.00 day	6.00					10/16/34-10/18/34
McClure, Roy	Klaskanine Station	Electrician	8.00 "	38.50					8/27/35-9/21/34
McClure, Clarence	So. Santiam Station	Temp. Laborer	3.00 "	9.00					5/18/36-5/23/36
McGinnis, Elmer A.	10-Mile Station	Temp. Laborer	2.50 "	12.50					9/10/34-10/20/34
McKenzie, Harold	Willamette Station	Temp. Laborer	3.00 day	18.00					7/1/34-6/30/36
McLean, W. C.	Umpqua Station	Temp. Laborer	3.00 "	54.00					9/9/34-9/12/34
Neal, A.	Klaskanine Station	Building Laborer	5.50 "	5.50					7/1/34-6/30/36
Nelson, George	Berman Crk. Station	Fish Culturist	85.00-100.00 mo.	2,195.00					9/11/35-1/11/36
Nicholas, J.	Oregon City	Temp. Laborer	3.50 day	35.00					8/1/35-5/22/36
Nicholson, W. R.	Willow Station	Temp. Laborer	3.00 "	9.00					5/20/36-5/22/36
Nicklaus, Tom	Frask & McKenzie	Fish Culturist	100.00 mo.	1,626.39					7/17/34-7/31/34
Nordland, E.	Klaskanine Station	Temp. Laborer	3.00 day	20.25					
Odell, Wister	McKenzie Station	Temp. Laborer	3.00 "	162.00					
Oifarrell, Henry	Willamette Station	Temp. Laborer	3.00 "	3.00					
Olson, Hazel	Klaskanine Station	Temp. Laborer	3.00 "	30.00					

LIST OF EMPLOYEES OF THE FISH COMMISSION—Continued  
 Salary and Expenses During Biennium July 1, 1934 to June 30, 1936

Name	Location	Position	Rate of Pay	Total	Meals	Lodgings	Fares	Mileage	Period
O'Malley, Henry	Seattle, Wash.	Fishway Consultant	225.00 mo.	314.19	.....	.....	.....	.....	1/8/35-5/24/35
Osborne, Wayne	Bonneville Station	Temp. Laborer	3.00 day	444.00	.....	.....	.....	.....	1/9/36-6/30/36
Osgood, Geo.	Clatskanie Station	Temp. Laborer	3.00 "	29.05	.....	.....	.....	.....	1/11/36-5/23/36
Owen, Leslie	Rogue River Station	Temp. Laborer	3.00 "	15.00	.....	.....	.....	.....	11/19/34-2/5/35
Pavaya, C. A.	Clatskanie Station	Temp. Laborer	3.00 "	13.13	.....	.....	.....	.....	9/11/35-11/13/35
Peay, G. E.	Williamette Station	Temp. Laborer	3.00 "	45.00	.....	.....	.....	.....	8/14/34-8/31/34
Parkton, Gordon	Williamette Station	Temp. Laborer	3.00 "	10.50	.....	.....	.....	.....	10/14/34-7/23/35
Parkton, Sid	Williamette Station	Temp. Laborer	3.00 "	6.00	.....	.....	.....	.....	10/14/34-10/15/34
Pejori, Fred	Williamette Station	Temp. Laborer	3.00 "	33.00	.....	.....	.....	.....	5/3/35-5/27/35
Pepiot, Elden	McKenzie Station	Temp. Laborer	3.00 "	26.00	.....	.....	.....	.....	12/21/34-8/5/35
Pepiot, Elmer	McKenzie Station	Temp. Laborer	3.00 "	18.00	.....	.....	.....	.....	5/11/36-5/22/36
Perkins, Harold E.	Williamette Station	Temp. Laborer	3.00 "	12.00	.....	.....	.....	.....	5/19/36-5/22/36
Peterson, O. W.	McKenzie Station	Fish Culturist	115.00-116.96 mo.	1,409.71	.....	.....	.....	.....	7/1/34-6/30/36
Peterson, Oscar	Clatskanie Station	Carpenter	3.00 day	56.00	.....	.....	.....	.....	5/14/36-5/28/36
Pfund, B. E.	Santiam Station	Temp. Laborer	3.00 "	288.00	.....	.....	.....	.....	8/22/34-5/28/36
Phillips, Keith	Santiam Station	Temp. Laborer	3.00 "	30.00	.....	.....	.....	.....	3/26/36-4/11/36
Pictell, John	Clatskanie Station	Building Laborer	5.50 "	6.87	.....	.....	.....	.....	6/25/36-6/26/36
Puckett, Gene	Umpqua Station	Temp. Laborer	3.00 "	135.00	.....	.....	.....	.....	4/8/36-6/30/36
Purvis, Robt.	Oregon City	Temp. Laborer	.50 hour	15.00	.....	.....	.....	.....	9/15/34-9/21/34
Rakel, August	Oregon City	Inspector	3.50 day	297.50	.....	.....	.....	.....	6/3/35-6/16/36
Reid, Maurice	Umpqua Station	Temp. Laborer	3.00 "	104.25	.....	2.00	.....	.....	5/18/36-6/30/36
Rice, L. M.	Bonneville Station	Temp. Laborer	3.00 "	21.00	.....	.....	.....	.....	6/24/36-6/30/36
Riehl, Robert	Trask Station	Temp. Laborer	3.00 "	83.25	.....	.....	.....	.....	9/6/34-10/22/35
Ritzler, Clifford M.	Umpqua Station	Fish Culturist	90.00 mo.	213.00	.....	.....	.....	.....	5/18/36-6/30/36
Rohatt, Chas.	Clatskanie Station	Plumber	8.00 day	30.00	.....	.....	.....	.....	4/20/36-6/30/36
Russell, Jack	So. Coos Station	Carpenter	3.00 "	168.00	.....	.....	.....	.....	6/25/36-6/30/36
Rye, Kenneth	McKenzie Station	Temp. Laborer	3.00 "	6.00	.....	.....	.....	.....	5/20/36-5/22/36
Schafer, Chester	So. Coos Station	Temp. Laborer	2.50 "	1,578.00	.....	.....	.....	.....	5/13/36-6/26/36
Scheffer, Harold	So. Coos Station	Temp. Laborer	3.00 "	85.00	.....	.....	.....	.....	12/17/35-12/17/35
Schroeder, Chas. E.	Eatonton	Plumber	1.00 hour	36.00	.....	.....	.....	.....	7/1/34-6/30/36
Schulze, A. M.	Trask Station	Temp. Laborer	3.00 day	28.00	.....	.....	.....	.....	11/12/36-12/17/35
Seifert, Wm.	Santiam Station	Temp. Laborer	3.00 "	216.00	.....	.....	.....	.....	6/5/36-6/9/36
Shultz, A. G.	Trask Station	Temp. Laborer	3.00 "	43.50	.....	.....	.....	.....	4/4/36-4/9/36
Simons, A. B.	So. Santiam Station	Temp. Laborer	3.00 "	24.00	.....	.....	.....	.....	10/25/34-10/31/34
Simonsen, J. N.	Clatskanie Station	Building Laborer	5.50 "	88.50	.....	.....	.....	.....	7/8/36-4/25/36
Simonsen, J. A.	Rogue Station	Temp. Laborer	3.00 "	13.41	.....	.....	.....	.....	6/18/36-6/26/36
Skags, Guy E.	Wallowa Station	Temp. Laborer	3.00 "	12.00	.....	.....	.....	.....	2/8/36-2/25/36
Slater, Lee D.	So. Santiam Station	Temp. Laborer	3.00 "	190.72	.....	.....	.....	.....	5/1/35-12/4/35
Slatte, John	Clatskanie Station	Building Laborer	5.50 "	58.78	.....	.....	.....	.....	5/22/36-6/26/36
Smith, Charley	Williamette Station	Temp. Laborer	3.00 "	36.00	.....	.....	.....	.....	3/20/35-5/4/35
Smith, Chas. F.	So. Coos Station	Temp. Laborer	2.50 "	90.00	.....	.....	.....	.....	12/1/34-1/5/34
Smith, Frank W.	So. Coos Station	Temp. Laborer	3.00 day	3,055.00	.....	17.75	.....	.....	7/1/34-6/30/36
Smith, Henry	Clatskanie Station	In Charge	125.00-130.00 mo.	18.38	.....	.....	.....	.....	9/11/35-11/13/36
Smith, H. E.	Portland	Auditor	150.00 "	3,645.30	.....	36.00	.....	.....	7/1/34-6/30/36
Smith, W. A.	Astoria	Boat Capt. & Inspector	3.00 day	1,500.00	.....	7.00	.....	.....	7/1/34-6/30/36
Spatz, E. J.	Williamette Station	Temp. Laborer	3.00 "	6.20	.....	.....	.....	.....	5.25
Spradling, C.	Umpqua Station	Temp. Laborer	3.00 "	47.25	.....	.....	.....	.....	10/7/35-10/14/35
Steel, H. A.	Wallowa Station	Apprentice Fish Culturist	85.00 mo.	765.00	.....	.....	.....	.....	9/6/34-10/22/35
Steele, Percy	Williamette Station	Temp. Laborer	3.00 day	438.00	.....	.....	.....	.....	7/1/34-6/30/36
Steenon, Thos. M.	Williamette Station	Temp. Laborer	3.50 hour	9.00	.....	.....	.....	.....	7/2/34-6/30/36
Steintrap, A. C.	Williamette Station	Temp. Laborer & Truck	3.00 "	7.50	.....	.....	.....	.....	9/14/34-9/21/34
Stevens, I. E.	Santiam Station	Temp. Laborer	3.00 "	21.00	.....	.....	.....	.....	7/10/35-7/17/35
Stevens, Weldon	Bonneville Station	Apprentice Fish Culturist	85.00-90.00 mo.	2,095.00	.....	3.00	.....	.....	7/1/34-6/30/36
Strass, J. L.	Umpqua Station	Temp. Laborer	3.00 day	21.00	.....	.....	.....	.....	9/9/35-10/21/35
Strass, L. W.	Foley Crk. Station	Temp. Laborer	3.00 "	108.00	.....	.....	.....	.....	7/2/34-8/11/34
	Nehalem Station	Fish Culturist	100.00 mo.	2,400.00	.....	2.50	.....	.....	18.80

LIST OF EMPLOYEES OF THE FISH COMMISSION—Continued

Salary and Expenses During Biennium July 1, 1934 to June 30, 1936

Name	Location	Position	Rate of Pay	Total	Meals	Lodgings	Fares	Mileage	Period
Suter, Paul	Trask Station	Temp. Laborer	3.00 day	27.00	.....	.....	.....	.....	11/9/35-11/20/35
Swanson, R.	Klaskanine Station	Carpenter	8.00 "	157.50	.....	.....	.....	.....	5/15/35-6/26/36
Swensen, Ben	Klaskanine Station	Temp. Laborer	3.00 "	32.25	.....	.....	.....	.....	9/17/35-6/20/36
Templeton, Jay	Wallowa Station	Temp. Laborer	3.00 "	12.00	.....	.....	.....	.....	6/12/35-6/15/35
Terrill, H. C.	Portland	Carpenter	.90 hour	10.80	.....	.....	.....	.....	9/20/34-9/21/34
Thomas, F. L.	Coquille Station	Caretaker & Fish Culturist	10.00-75.00 mo.	546.20	.....	.....	.....	6.00	7/1/34-4/18/36
Thomas, Warren G.	The Dalles	Foreman, Fishway Work	6.00 day	282.00	.....	.....	.....	.....	12/5/34-1/26/35
Tilman, Henry	Trask Station	Temp. Laborer	4.00 "	184.00	.....	.....	.....	.....	7/18/34-9/22/34
Udell, Clifford	Santiam Station	Temp. Laborer	3.00 "	42.00	.....	.....	.....	.....	5/8/35-5/18/35
Lamburn, Frank	Willamette Station	Temp. Laborer	3.00 "	15.00	.....	.....	.....	.....	7/1/34-7/12/34
Vance, Gordon	McKenzie Station	Temp. Laborer	3.00 "	162.00	.....	.....	.....	.....	9/1/34-10/25/34
Vance, I. A.	McKenzie Station	Temp. Laborer	3.50 "	358.75	.....	.....	.....	.....	3/3/35-6/9/36
Veitch, John C.	Portland	Fish Commissioner	5.00 "	360.00	1.25	.....	.....	.....	7/17/34-6/9/36
Vieck, C. E.	Cumpqua Station	Fish Culturist	85.00-100.00 mo.	2,105.00	.....	.....	.....	.....	7/1/34-6/30/36
Walker, M. E.	Portland	Inspector	150.00-150.11	3,631.05	29.40	23.75	12.60	100.50	7/1/34-6/30/36
Walker, Will.	Willamette Station	Temp. Laborer	3.00-4.00 day	102.00	.....	.....	.....	.....	8/14/34-1/24/36
Warner, Chas. W.	Santiam Station	Temp. Laborer	3.00 "	15.75	.....	.....	.....	.....	10/4/34-10/10/34
Warren, H. C.	Portland	Inspector	3.00 day	30.00	.....	.....	.....	.....	7/17/34-7/31/34
Watson, C. J.	Klaskanine Station	Temp. Laborer	3.00 "	3,186.00	502.75	534.75	.....	.....	5/26/36-5/28/36
Weaver, A. W.	So. Santiam Station	Temp. Laborer	7.50	7.50	.....	.....	.....	.....	7/1/34-7/31/34
Whipple, Arthur H.	So. Santiam Station	Temp. Laborer	3.00 "	39.00	.....	.....	.....	.....	5/6/35-7/17/35
Whipple, Harrison	So. Santiam Station	Temp. Laborer	3.00 "	41.00	.....	.....	.....	.....	7/10/35-10/24/35
White, Louise	Santiam Station	Temp. Laborer	3.00 "	12.00	.....	.....	.....	.....	9/23/34-9/30/34
Wilford, L. J.	Santiam Station	Temp. Laborer	3.00 "	6.00	.....	.....	.....	.....	10/18/35-10/19/35
Williams, Earl	Willamette Station	Apprentice Fish Culturist	85.00 mo.	1,140.64	.....	.....	.....	.....	7/1/34-8/13/35
Williams, Lillie	Willamette Station	Temp. Laborer	3.00 day	99.00	.....	.....	.....	.....	10/1/34-11/16/34
Wilson, Lyle	So. Santiam Station	Temp. Laborer	3.00 "	33.00	.....	.....	.....	.....	5/1/36-5/13/36
Wilson, M. B.	Portland	Bookkeeper & Chief Clerk	165.00-174.80 mo.	4,058.00	.....	.....	.....	.....	4/8/36-4/24/36
Wilson, Philip	So. Santiam Station	Temp. Laborer	3.00 day	33.00	.....	.....	.....	.....	7/1/34-6/20/36
Winn, Marion	Klaskanine Station	Building Laborer	5.00 "	64.97	.....	.....	.....	.....	4/8/36-4/24/36
Wolfe, E. R.	Santiam Station	Temp. Laborer	3.00 "	5.25	.....	.....	.....	.....	5/25/36-6/26/36
Wood, A.	Willamette Station	Temp. Laborer	4.50 "	126.00	.....	.....	.....	.....	10/8/34-10/9/34
Woods, Maurice	Willamette Station	Temp. Laborer	3.00 "	1.50	.....	.....	.....	.....	7/9/34-8/10/34
Zielinski, T. C.	Trask Station	Temp. Laborer	3.00 "	9.75	.....	.....	.....	.....	4/14/36-4/17/36

GRAND TOTALS..... \$137,648.84 \$2,106.25 \$1,665.00 \$326.20 \$1,122.15

**PACK OF CANNED SALMON ON THE COLUMBIA RIVER FROM THE INCEPTION  
OF THE INDUSTRY TO 1935**

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	290,969	..	..	..	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
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
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	487,933	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
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
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
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
1904	..	20	320,378	1,944,690	12,911	78,048	31,254	118,357	20,693	52,691	9,868	48,892	395,104
1905	..	19	327,106	1,962,636	7,768	46,608	26,826	114,011	25,751	65,206	9,822	49,110	397,273
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
1907	..	19	258,433	..	5,504	..	31,757	..	22,556	..	5,921	..	324,171
1908	..	14	210,096	..	8,581	..	31,432	..	16,884	..	10,726	..	253,341
1909	..	15	162,181	1,203,546	27,908	214,561	42,178	185,070	24,542	57,115	17,283	99,796	274,087
1910	..	15	244,285	1,882,137	6,234	34,287	68,922	363,688	66,538	232,883	5,436	31,203	391,415
1911	..	15	405,862	2,204,185	5,988	47,904	79,416	549,478	53,471	203,198	8,594	47,399	543,331
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
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
1914	..	17	289,464	2,573,502	35,311	376,924	69,769	380,666	49,285	205,541	10,792	59,356	454,621
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
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
1917	..	20	403,687	5,023,529	7,968	111,552	64,299	700,650	53,659	386,596	23,783	292,538	555,218
1918	..	20	400,952	5,222,933	37,833	605,328	98,145	1,072,843	29,846	215,669	24,605	350,071	591,381
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
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
1921	..	20	267,582	3,761,321	6,045	120,900	34,381	233,372	4,821	19,791	10,142	68,266	323,241
1922	..	23	297,230	3,724,393	30,743	614,860	90,437	633,935	8,844	47,130	24,920	186,675	392,174
1923	..	23	289,586	4,967,657	38,309	766,180	101,554	673,954	25,508	135,168	25,968	187,965	480,925
1924	..	22	293,716	4,508,236	7,866	129,840	112,308	992,865	57,748	303,356	29,734	285,107	500,872
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
1926	..	21	295,302	4,744,113	21,736	434,720	97,142	1,027,597	32,853	181,216	32,690	356,418	479,723
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
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
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
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
1931	..	20	294,798	3,754,929	4,125	66,000	39,268	247,878	3,518	11,764	11,990	110,429	353,699
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
1933	..	14	251,157	2,719,303	6,921	96,894	36,430	263,190	24,398	107,351	17,805	142,440	336,711
1934	..	13	251,068	2,630,152	6,869	82,428	65,428	536,731	24,455	92,608	14,901	121,000	362,721
1935	..	10	205,870	2,479,450	1,302	17,619	95,184	725,868	15,495	59,499	14,888	122,846	322,739

28,032,321 \$220,069,929

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



To the  
Honorable John C. Veatch, Chairman,  
Honorable R. S. Farrell,  
Honorable C. C. Going,  
MEMBERS of the FISH COMMISSION of the STATE OF OREGON.

Gentlemen:

Continuing the policy adopted for the preceding biennium of combining the report covering the operation of the department under the supervision of the Master Fish Warden and that under the supervision of the Director of the Department of Fish Culture, we again submit a joint report of the various activities of the two departments covering the period July 1, 1934 to June 30, 1936.

Various statistical reports, financial statements, records of arrest, list of commission employees, egg takes and liberations, together with financial statements covering the operation of fisheries stations for each of the two fiscal years will be found elsewhere in this report for your information.

Aside from the usual work carried on by the Fish Commission, including general administration of the laws governing commercial fishing, the licensing and inspection of the several types of commercial fishing gear, fish dealers and salmon canners, artificial propagation and the efficient operation of the many fishery, egg taking and feeding stations throughout the field, it has been again necessary that an unusual amount of time and attention be devoted to Bonneville fishway matters, to the protection and safeguarding of the various runs of salmon at that point during the construction period, and to certain other matters of general importance to the industry as a whole, which were in our opinion brought to the front by economic or other conditions experienced during the depression—the results of which were reflected in the financial stability of this department.

For example, the financial condition of the department during preceding bienniums falling within the depression was such that in the major part, the necessary work of maintenance and proper upkeep of hatcheries, egg taking stations and other facilities, had to be somewhat neglected. With the improvement of general conditions, the beginning of the current biennium found more funds available for maintenance work than during any similar period since 1930. As a result, it was planned to do certain maintenance work at virtually all of our fisheries stations, and in some instances new construction was included.

The inclusion in one biennium of work which in normal times would have been distributed over two or more like periods, obviously added considerable to administrative and supervisory duties. Along with new construction in the rehabilitation of the Bonneville station, this program for bringing up to date all maintenance work at other stations was formulated, and has been in all instances carried to practical completion. Fisheries stations and other general facilities of the department have now approached a desirable status of repair, assuring adequate and efficient operation; and it is believed that a minimum amount of maintenance work each year at these several stations will assure their able and successful operation for many years to come.

As previously stated, in most instances the maintenance work has been completed, there yet remaining in isolated cases the finishing of minor details necessary to render the facility ready for practical operation. Two stations—Alsea and South Santiam—at which no maintenance work was actually done during the current biennium, will be taken care of immediately. Plans for this work have been prepared in detail, and fortunately, the necessary funds are now available, and the work can go forward without interruption.

In all instances during this maintenance period, the work has not only included the putting of the stations in the best of repair and the bringing of their every facility to an up-to-date

status, but has carried throughout the additional objectives of providing greater pond capacity for each station where possible, and for the expansion of facilities in any manner which might assist in bringing the status of our stations to a higher plane, even though it is now felt that the efficiency of Oregon's hatchery system is without peer.

In enumerating or outlining for your information the work of maintenance, improvement or expansion which was completed during the current biennium at the fisheries stations of the commission, permit us to offer a brief resumé, taking up each of the several stations in their numerical order.

### Fisheries Stations

#### Station No. 1—**McKenzie**:

This station which was formerly located, together with feeding ponds, at Gate creek, near Vida, Oregon, approximately four miles above the Leaburg dam, was moved to a new location at Cogswell creek. The new site is approximately three miles below the Leaburg dam. This move was deemed advisable and necessary, not only in view of the fact that the new site would obviate the necessity of transporting fish for liberation by truck to a point below the Leaburg dam, but also, in view of the fact that the buildings at the Gate creek site consisted only of a food house and a hatchery, both of which were in an exceedingly poor state of repair. This necessitated the building of a complete station at the new site at Cogswell creek, which now consists of a new hatchery building, a new cottage for the man in charge and a utility building containing a garage and carpenter shop. In addition, fourteen new ponds were made available in a natural channel on the site by the construction of fifteen wooden dams and screens between ponds, thereby providing for a holding capacity of five million fingerlings. The new station included a complete water supply for the hatchery and ponds, as well as a domestic supply for the cottage. The hatchery supply necessitated the installation of 960 feet of 10 inch pipeline, together with a filtering system for the hatchery supply. The new hatchery as constructed is capable of handling eleven million eggs. In addition, an outside battery consisting of forty-two troughs affords ample facility for seven and one-half million eggs.

In moving the McKenzie station to the new site it is not intended that the ponds at Gate creek be abandoned. These feeding ponds will be put in order at the earliest opportunity, and new cement headgates, screens and waste water gates below the pond system will be provided, after which the Gate creek ponds may be expected to take care of a capacity load of five million fingerlings annually. In seasons of heavy egg yield at the Hendricks Bridge rack site supplying this station, use of the Game Commission's hatchery near the Leaburg dam offers an opportunity of caring for an additional five million eggs.

#### Station No. 2—**Willamette**:

This station is located approximately one mile from the town of Oakridge and is situated in the upper reaches of the Willamette river, some fifty miles from Eugene, Oregon.

As is the case in other instances, this station, which has been operated for many years by the department, did not include a hatchery building—an outside battery of troughs being utilized since the site was located and the pond system constructed, in hatching all eggs obtained from the egg collecting station at Reserve, approximately eighteen miles downstream.

Maintenance work at this station during the past two years included the construction of a hatchery building complete. Other general repairs were made on the buildings and grounds, and the beauty of the site was enhanced by the construction of 950 feet of fencing, which enclosed three sides of the property. This fence, of wooden construction, was painted white. New floors were laid on the porches of the superintendent's cottage, and an addition was built onto the helper's cottage for a bathroom, in which fixtures were installed. Buildings on the grounds were stained or painted, and new bridges were constructed over ponds, water supply canals and creeks on the station property where crossed by roadways or walkways. In addition to the hatchery building, a new gas house, a food house and a utility building containing



a garage and a combination shop and storeroom were constructed in appropriate locations to fit in with the general plan of the station.

The pond capacity at this station was increased by the construction of a pond 20 feet wide and 300 feet long, which would readily take care of one million fingerlings and which was connected with the regular water supply. An adequate water supply was assured for the new hatchery building by the installation of 750 feet of 8 inch pipeline.

As part of the new hatchery, a sufficient number of troughs were installed to handle ten million eggs. The facilities of the nearby Game Commission hatchery are also available to this station, and if required, are capable of caring for three million eggs.

#### Station No. 3—**North Santiam**:

This fisheries station is located approximately seven miles from the town of Stayton and twenty-six miles from Salem, on the North Santiam river.

The major portion of maintenance and new construction work at this station consisted of improving and increasing the water supply system for both the ponds and the hatchery. In carrying on this phase of the work, the water supply canal was thoroughly cleaned, widened and deepened to desirable grade for a distance of one and one-eighth miles. A ditch 3 feet wide, 2 feet deep and 180 feet long, changing the water supply course and connecting with the canal, was dug. From this point, the supply was taken to the ponds by the construction of a new flume 22 inches by 24 inches, for a distance of 400 feet. The hatchery supply from Stout creek was connected with a new circular settling tank constructed from materials, part of which were obtained as salvage from the reconstruction of Bonneville. The flume for its entire length was covered by a board walk top to keep out leaves and other debris and to offer an easy means of access to new ponds, and for the frequent inspection of the ditch and canal above.

The facilities inside the hatchery itself were improved by the construction of a new head-trough 180 feet long, other dimensions of which were 14 inches by 14 inches. Forty-eight new troughs were installed in one-half of the hatchery, replacing those which were no longer serviceable. It is planned to renew the troughs in the other half of the hatchery building in a manner which will not interrupt service, as they give out.

Appearance of the station buildings was improved by a general painting and cleaning, and a small garage was constructed for housing the station's truck.

The egg capacity of this hatchery is much larger than the station holding capacity. In this instance, as is the case with other stations operated by the Commission, an unusually large hatchery capacity was provided when the station was built some twenty years ago, it being planned in early days that one station would serve several streams. However, the present-day policy of the department of operating stations on practically every commercial stream of importance, renders excessive hatchery capacities unnecessary.

The holding capacity at this station was increased approximately thirty per cent, pond facilities being provided for handling two million additional fingerlings by the construction of four new ponds with adequate water supply, each 96 feet wide and 10 feet long.

#### Station No. 4—**Bonneville**:

This station, as you know, has during the past three years been in the process of reconstruction, expansion and rearrangement, made necessary by the construction of the Bonneville Hydro-electric Project and the relocation of the Union Pacific Railroad adjacent thereto.

In the 1933-34 biennial report plans for the rehabilitation of this station were given in some detail. Continuing that report and in addition thereto, we are pleased to call attention to the fact that during the past two years the work already under construction, as well as new construction and the rearrangement of facilities provided for, has been carried virtually to a completion. The new dwelling and cottage have been built and in use approximately one year.

The new hatchery building, cold storage plant and utility building (feed room, garage and shop), all of distinct and pleasing architectural design, have been constructed on locations as planned, and are at this time in actual service. The cold storage and utility buildings were completed some fifteen months ago. The new hatchery building, which was put into practical operation early this fall by the installation of the one hundred and twenty new cedar hatchery troughs, properly connected to the new water supply—an important part of which is the new filtering system filtering all water used in the troughs and tanks, and built as an integral part of the hatchery building itself, gives every promise for more efficient and effective operation, added convenience and flexibility of its many facilities than originally planned or even anticipated. The main unit of the station was completed in ample time to receive and care for the supply of eggs taken this fall.

In addition to the work above mentioned, a new office building, including laboratory and storeroom for obsolete departmental records, was planned to occupy a suitable site near the main hatchery building, and will soon be in the final stages of construction.

The holding capacity of the station was increased by some three million fingerlings—six new ponds 3½ feet deep, 8 feet wide and 80 feet long being constructed on the site of the former hatchery building, and by approximately two million fingerlings by reclaiming and placing into operation two former ponds along the waste water canal immediately above its confluence with Tanner creek. These ponds at the present time are not connected with the water supply. However, this will be accomplished during the current year in sufficient time for spring use if required.

The general water supply of the station was renewed, 2250 feet of 18 inch continuous stave wood pipe operating under a 50-foot head being installed between the lower diversion dam on Tanner creek and the distributing pond. The distributing pond itself was rearranged and its general efficiency improved by the construction of new cement division walls, proper screen forms being provided. An auxiliary water supply for the station was assured by the drilling of a new well 54 feet deep and the installation of an adequate pump, to be operated either by gas or electricity, which will supply water for emergency use at the rate of 450 gallons per minute.

Accompanying these major items of construction, many minor items equally necessary in the general plan, were completed. Outlying areas of the grounds were cleared, and the necessary poles for the installation of a new electric service were cut and installed. Rock cribbing for the protection of water supply pipelines was built in the upper Tanner creek area, and a number of large rocks obstructing the channel were drilled, blasted and removed. The westerly lawns on the main grounds were filled and will be seeded and landscaped in the near future. Many small water supply pipelines, including the new domestic supply, were laid underground for the purpose of connecting ponds, hatchery, drains, and for use at other points in the new network. The trout ponds were thoroughly renovated. The old power house was razed, the site cleaned up and the accumulated debris disposed of. Buildings which were not replaced under the new plan were given general repair, re-roofed where needed and were painted in the suitable colors to fit in with the color scheme of the station. Attention was also given to the grounds and general buildings, adding to the appearance of the station as a whole.

#### Station No. 5—Klaskanine:

This station is located thirteen miles from Astoria, Oregon, on the Klaskanine river, a tributary of Youngs Bay.

During the latter part of the preceding biennium, certain maintenance work was done at this point through federal relief agencies. For that reason, maintenance or improvement work during the current biennium was of such nature as would enhance the general appearance or beauty of the station and grounds or improve its existing facilities.

An old building which contained a carpenter shop was razed and replaced by a new

utility building of sufficient size to accommodate a small shop, a food house and a garage for the station pick-up truck. A new porch and steps were added to the hatchery building, replacing those which had deteriorated to a point considered dangerous. A cement basement was constructed under the superintendent's dwelling, and a heating furnace was installed. The kitchen in the same dwelling was renovated, all built-ins renewed and the room redecorated.

New cement dams for screen forms were installed on all ponds on the south side of the river. Three new ponds each 7 feet wide and 175 feet long were also constructed in this area, increasing the holding capacity of the station by one and one-half million fingerlings.

A new diversion dam providing the water supply for the pond system was built, replacing the old one which was no longer serviceable or adequate. The new dam, which was of the three-step apron type, was 120 feet long, 5 feet high, and was safely and securely anchored to bedrock in the stream. In addition, such necessary abutments and cribs for the protection of the shoreline were provided.

#### Station No. 6—**Trask:**

This station, which is located on the Trask river about seven miles from the town of Tillamook, was built during the early nineties. It was found at the beginning of this biennium that all buildings of which the station consisted had served their period of usefulness, and for the sake of efficiency should be replaced.

The rebuilding of the station was begun in accordance with plans formulated for the new hatchery. This building, the dimensions of which were 60 feet by 35 feet, was completely constructed and placed in operation this year. The foundation was of cement, the floors and other materials used in the building being of wood. A new dwelling for the man in charge was constructed on the site of the old cottage, which was torn down and all unsightly materials burned or otherwise disposed of. A second cottage or dwelling was constructed for the station helper. One of the buildings already on the ground was used as a beginning for this structure. It was fully repaired and adapted to a cottage plan—all necessary additions being added thereto to make the cottage modern and comparable in design and style of structure to the new buildings erected.

In addition to the cottages and new hatchery building, a small utility building, to be used as a garage and shop was erected, and a food house adequate to supply the needs of the station was constructed. In the construction of the cottage and dwelling, a domestic water supply was provided, and modern plumbing fixtures installed, including up-to-date septic tanks located in the most logical place as indicated by the topography of the station grounds. All buildings constructed or rebuilt were properly painted and finished, giving the station a complete and uniform appearance. Much repair work was done to the station grounds, such as leveling, landscaping and general work, adding to the attractiveness of the station.

The pipeline furnishing the water supply for the hatchery was renewed, 1350 feet of 10 inch pipe being properly laid for this purpose. The new supply so provided will serve both the hatchery and lower ponds, which for some time have not operated as efficiently as might be desired on account of a shortage of water. This increase in the supply of water will now permit these ponds to be utilized to the fullest capacity, and will enable us to hold in that area one and one-half million more fingerlings.

Along that area of Gold creek adjacent to the feeding ponds, which are some distance from the hatchery, it was found necessary as a flood control measure to adequately protect the ponds from overflow waters, to construct a rock filled crib 8 feet wide and 4 feet high, for a distance of 108 feet. This work has been completed, and we feel sure that this precaution will offer a maximum of protection in the future by holding Gold creek in its channel during freshets.

The domestic water supply previously referred to, and which also provides fire protection for the station, was obtained by the installation of 1000 feet of 1 $\frac{1}{4}$  inch pipeline. The head or

fall from the source of this supply is sufficient to make it unusually valuable for the fire protection mentioned.

Maintenance work during this two-year period included the construction of approximately a quarter mile of roadway, a portion of which was built from the hatchery grounds to the ponds up Gold creek, permitting the use of a fish truck for liberation, as well as providing a means of ingress for hauling food or other supplies to the pond site. The length of this road was 630 feet. The remaining road work was utilized in building 600 feet of road from the hatchery to connect with the new county road on the south side of the river. With the completion of this new entranceway to the hatchery, it was found that the swinging bridge formerly used in crossing to the north side of the river might be abandoned. This bridge was torn down, the cables and other materials of value being salvaged for use elsewhere. The remainder of the materials which were of no value were disposed of.

Note: The same reasons given under Station No. 3 (North Santiam) for the reduction in the egg capacity of present hatchery apply also in the case of this station.

#### Station No. 7—Coos:

Coos River Fisheries Station is located on the South Coos river, twenty miles upstream from the town of Marshfield. *(See also Description)*

Prior to this biennium, a new hatchery had been built at this station, and maintenance work had not been neglected to the same degree as elsewhere. For that reason, maintenance at this station during the past two years has consisted mainly in renewing the water supply system, both to the ponds and to the hatchery. In carrying out this work, a new diversion dam was constructed in Salmon creek; a new water filter was provided, the size of the filtering box being 6 feet by 8 feet by 16 feet. To connect this filter with the diversion dam, 160 feet of 12 inch flume was built, and approximately 700 feet of 10 inch pipe, with suitable outlets or connections to the ponds, was laid from that point to the hatchery.

The roof of the hatchery building, which was originally constructed of paper, had to be replaced. In replacing this roof, a good grade of paper composition was utilized, and after being properly laid, the entire roof was treated to a generous coat of tar and sanded.

A new outside cellar was constructed in the hillside, near the back porch of the dwelling, and a complete installation of new bathroom fixtures was made, the bathroom being renovated and redecorated.

The general appearance of the station was maintained by orderly arrangement and piling of stored materials to be used in carrying on the work of this station—all unsightly material being disposed of.

Note: No attempt has been made toward increasing the holding capacity of this station; a limited water supply will not permit of any increase in holding pond capacities under existing conditions.

#### Station No. 8—Wallowa:

This eastern Oregon station is located near the town of Enterprise, on the Wallowa river, and has been operated for many years.

The department has not planned or carried on any work except the most minor repairs during this period. The station, however, has not been permitted to gravitate into a run-down or deteriorated condition. No new work or expansion has been planned, due to the fact that the geographical location of the station, in its relation to the many irrigation ditches in that vicinity, is not in our opinion conducive or favorable to a large and active program of salmon propagation. This station is more suitable and better adapted for the propagation of trout or other game fishes, which can be liberated by tank trucks in waters of the surrounding

country and tributaries of the river well below the danger of irrigation diversions. It is planned, therefore, for a limited use of this station for the propagation of salmon in the future, which limited use will be carried on under a cooperative plan with the Oregon State Game Commission, which is desirous of using its facilities for the propagation of trout to supply requirements in that portion of the eastern Oregon territory.

Note: In addition to the regular station facilities for holding salmon fingerlings, there are two lakes of large areas which are especially suited for trout culture, and which have not been used for salmon for some time.

#### Station No. 9—**Umpqua:**

At the Umpqua station, which is located near the confluence of Rock creek with the Umpqua river, some thirty-two miles from Roseburg, maintenance work has consisted of re-roofing all buildings on the grounds with composition paper, tarred and sanded; twenty-six new troughs were built and installed in the hatchery building; all troughs were painted, as were all buildings on the station. In the case of the store house and shop, it was necessary to add new rafters and new sheathing, making an entirely new roof. A new garage of sufficient size to shelter the station's truck was erected. An addition was made to the dwelling consisting of a bathroom, in which fixtures were installed complete. New pipelines carrying the water supply to the hatchery were provided. In this case two wooden pipelines each 6 inches in diameter and 300 feet long were necessary. New dams and screens were constructed in three ponds on this station. These dams were approximately 5 feet high and 40 feet wide.

In conformance with the request of the North Umpqua Rod and Gun Club, a Steelhead trap was installed at the impounding racks, some half mile below the station. This trap was located just inside and above the lower rack and was arranged to permit the passing of Steelheads in their upstream migration to the headwaters, and to at the same time obtain an accurate check on the number so passing.

No increase in pond holding capacity at this station is anticipated or planned in the immediate future, in view of the fact that limited space on our grounds will not permit of such an increase, it being considered neither necessary nor advisable so long as use of the holding ponds of the Game Commission at their Rock Creek Hatchery immediately adjacent is enjoyed.

#### Station No. 10—**South Santiam:**

This station is located on a river of the same name, at a point five miles from Foster, Oregon.

The holdings of the department at this particular station have to date consisted mainly of feeding ponds, water supply and rack sites. The man in charge at this station has lived in a rented trailer 12 feet by 32 feet for a number of years, no cottage ever having been provided for his use. The egg supply for this station has in the past been handled in an outside battery of troughs. It was both necessary and advisable in following our general plan of expanding and bringing all stations up to date, to provide a hatchery building and a cottage at this point. The construction plans are now being prepared for these structures, and materials will be delivered in the very near future. The work of construction will be immediately begun.

Due to the fact that this station is what we please to refer to as a double-run station, Chinook being handled in the spring and Steelheads in the fall, a hatchery capacity of only three million eggs will be required—the rotation or double run allowing for a total yearly capacity of six million eggs. Adequate pond capacity for three million fish with necessary water supply will be provided. This will include approximately 400 feet of 6 inch pipe for the hatchery supply.

The source of the water supply for this station is Coal creek, and the supply is somewhat limited. Therefore, no expansion or increase in holding capacity is being provided for at this time.

**Station No. 12—Herman Creek:**

This station is located on Herman creek, a tributary of the Columbia river, at a point two miles above Cascade Locks, and has been operated by the department for many years.

Under the Commission's program for artificial propagation of salmon, the Herman Creek Station has been classed as a feeding station only, and has been operated in conjunction with Bonneville. Like Bonneville, this station will be affected by the construction of the Bonneville dam. In fact, the major portion of the grounds, including ponds, will be covered by waters of the pool formed when the dam is closed. It, therefore, becomes not only desirable, but necessary, to move this station to a new site and rebuild it completely. This work should be completed and the new station ready for use prior to the time the present site is inundated.

In accordance with this general plan, the Commission has determined on a site in the upper reaches of Herman creek at what is known as Ox Bow Springs. The location chosen is on the plateau immediately above and south of the present site, and will permit of the use of the waters of Ox Bow Springs, which are the source of Little Herman creek and a part of the water supply for the present station.

The Commission has formulated the general plans for this station. As now outlined, they provide for a hatchery building which will offer sufficient capacity for handling five million eggs; a cottage for the man in charge of the station; and a small utility building containing a garage, a feed room and a shop. The natural creek channel passing through the grounds will be widened and deepened and as many ponds constructed therein as space will accommodate.

None of the work above referred to will be started until such time as the United States Government has acquired the site and the terms of settlement agreement between that body and the Fish Commission covering damage and property loss at the present site, have been formulated and approved. Negotiations to acquire the new site and in the matter of the settlement are under way. It is expected that the work above outlined will be carried through to a completion during the spring and summer of 1937.

**Station No. 13—Alsea:**

This station was constructed some twenty years ago and is located on the Alsea river approximately two miles above Tidewater post office.

As stated in the general resumé of maintenance work carried on during the biennium, this station received only minor attention. It is now planned to rebuild the station. The hatchery building is to be renewed, including a new floor, a new roof, new troughs, and is to be painted. The grounds are to be landscaped, seeded and enclosed by a suitable fence.

A new cottage is to be constructed for the man in charge and a small utility building erected for use as a garage, shop and storeroom. The water supply system to the ponds and hatchery building will be put in a first-class condition, and three new ponds will be constructed. This will increase the holding capacity of the station by one million fingerlings.?

Materials required for additions and improvements planned have been requisitioned and should soon be delivered at the site. The new construction, as well as the other work, will be begun immediately, and this station should be in excellent operating condition by the middle of the following biennium.

**Station No. 14—Ten Mile:**

This is an egg collecting station only, and was opened by the department two years ago for the purpose of obtaining a supply of Silver salmon eggs for coastal areas. The site on which impounding racks and an outside battery of troughs are located, is on Templeton creek, seventeen miles from North Bend.

The department does not expect, for the present at least, to create holding ponds at this site. It is to be operated solely as the source of the Silver salmon egg supply. An average of twelve million eggs has been obtained each year of the two years it has been operated.

#### Station No. 15—Coquille:

The Coquille station is located on the South Fork of the Coquille river, near Powers, Oregon. This is another of the department's feeding stations which has been in operation only during recent years. The facilities of the Commission here consist only of a small cabin or shed for the storage of food, and of the feeding ponds with necessary water supply.

No maintenance work at this station is planned, inasmuch as the present lease will expire October 1, 1937. It will be necessary to relocate this station, some point farther downstream being preferable.

#### Station No. 16—Nehalem:

This station, which was recently opened to serve the Nehalem river, is located on Foley creek, a tributary of that stream, at a site immediately below the Sales dam.

During this biennium the complete facilities of the station as it now stands have been provided. These include a hatchery building, a five-room cottage for the man in charge, a utility building, a water supply which was obtained by the construction of 600 feet of 12 inch by 12 inch flume, and twelve ponds, each 4 feet deep, 16 feet wide and 75 feet long, together with necessary dams and screens. The water supply for the hatchery was taken from Crystal creek, which necessitated the installation of a 10 inch pipeline 250 feet long, a small diversion dam also being required in obtaining this supply.

At Sales dam a holding pond for adult salmon was created by means of a controllable fishway constructed over the barrier, and as large a portion as possible of the station's egg supply will be obtained at this point.

#### Station No. 17—Rogue:

This feeding station of the Commission, which was located on Indian creek, near the mouth of the Rogue river, approximately one mile from the town of Gold Beach, was abandoned during the last year of this biennium.

In abandoning operations on this stream, we have done so with the understanding that the U. S. Bureau of Fisheries would continue salmon propagation on the Rogue river, which was closed to commercial fishing by legislative enactment, 1935 Special Session. This river was also closed by an order of the Fish Commission a short time prior to the effective date of the above mentioned enactment—the closure invoked by the department to be effective for a five-year period, during which studies of the biological and physical conditions of the stream, as well as of the salmon runs therein, were to be made.

In line with the studies proposed, the department carried on during the month of August a study of river water temperatures in that portion of the river between Trail and the Savage Rapids dam, near Grants Pass. The results of these water temperature studies disclosed some interesting data which obviously have considerable bearing on the migration of Chinook and Silver salmon, as well as on the migration of Steelheads to the upper reaches of this stream. For a complete record of these temperature studies, together with pertinent comment relative thereto, see report "Rogue River Investigation" by Edgar Ledgerwood, on file in this office.

The above completes a resumé of maintenance and construction work as carried on at our regular hatcheries, egg collecting and feeding stations during the biennium. There remains, however, for additional comment, a projected feeding station at Simpson creek on the Yaquina river, and a proposed feeding station on the Deschutes river, near Oak Springs.

The location of the feeding station on the Yaquina river was selected after a survey of the complete river, during which several tentative sites were investigated. Possible sites considered were: one on Grant creek; one on Thornton creek; one on Little Elk creek; four on Feagles creek; and two on Simpson creek. The site selected after careful consideration was site number one on Simpson creek. At the present time, two ponds have been completed, together with 650 feet of 12 inch by 12 inch flume for water supply. More ponds are to be constructed in the immediate future to provide a fingerling holding capacity of two and one-half millions.

The station will include a cabin for the operator, materials for which will be requisitioned, and construction will start during the succeeding biennium.

The proposed feeding station for the Deschutes river is to be operated in cooperation with the Oregon State Game Commission, and is to be located near that department's Oak Springs Hatchery. During the coming biennium there is to be constructed at this location two holding ponds of sufficient size to readily accommodate two million fingerlings, complete with an adequate water supply. A three-room cabin is to be erected as shelter for the operator. These facilities under an agreement are to be provided and furnished by the Oregon State Game Commission in consideration of and in exchange for the facilities being turned over to them by this department at Station No. 8 (Wallowa). In further cooperation in the operation of this feeding station, the use of the cold storage plant, food grinder and other facilities of the Game Commission's Oak Springs Hatchery is assured. This will relieve the department of considerable expense in getting the station in shape for use.

### General Departmental Activities

The regular and usual work of the departments in the operation of fisheries stations, including egg taking, fish liberations, administration of fishery regulations, issuance of licenses, collection of various revenues and general office and accounting work, has progressed in a satisfactory manner. Egg collections and liberations as a whole have been up to average, and in certain instances were perceptibly larger during the biennium than previously.

All phases of the work under these departments have not only been kept constant, but their cooperative work with the Oregon State Game Commission and the U. S. Bureau of Fisheries, as well as with all other state or governmental agencies, departments or commissions, has been increased, in a sincere and conscientious endeavor to carry on the work of the Fish Commission of the State of Oregon in an efficient and economical manner and to at the same time assure a maximum of benefits to all parties concerned.

The attention of the Commission is called to the need for carrying on biological research similar to that referred to earlier in this report on the Yaquina and Rogue rivers. Information obtained through the medium of such surveys is of immeasurable value in planning a program for additional artificial propagation on streams in the state of Oregon on which no work of that nature is now done. The department has in mind the inauguration of such a program which will collect in a form as to be readily used in the consideration of the Commission when planning future expansions in Oregon's hatchery system, and as a justification for creating adequate nursery areas on each of the several coastal streams of our state.

### Fishways

At Sherar falls on the Deschutes river, the fishway project which was begun during the last biennium as a SERA project in Wasco county, was completed this year. The relief labor was utilized during the early part of the period in doing the main construction work at Sherar falls as planned. The man-hours covered by that application, however, were exhausted before the latter was fully completed. The department this year completed the project, which consisted of the construction of the necessary concrete partitions or baffles between pools, and the construction of two concrete training walls near the upper end of the fishway, which had for their purpose not only the control and regulation of the water supply for the fishway, but the



protection of the fishway itself from flooding during periods of abnormal water. The completion of this fishway at Sherar falls will be beneficial to the salmon runs of the Deschutes river, and its construction has beyond a question of doubt, relieved a serious situation with which we have been previously confronted at this point.

In addition to the work done at Sherar falls, certain maintenance work on fishways has been carried on generally. The Forestry Department has greatly aided us by the use of compressors, drills and powder for construction work at Smith's River Falls on Smith's river, a tributary of the Umpqua, some twenty-five miles from Reedsport. Powder also was furnished to representatives of the department, working in cooperation with the Oregon State Game Commission, for shooting a passageway into Stella falls, on the Little Nestucca river. This work, which was completed in a satisfactory manner, shows every indication this first fall of having been highly successful. For example, salmon early in November had negotiated the falls and arrived in the upper reaches of the river above Dolph. This was accomplished, even though unusually low water conditions obtained in our coastal streams.

The department has prepared and furnished detailed plans to the California-Oregon Power Company for the construction of an additional fishway over the Winchester dam in the Umpqua river, near Roseburg, and for the necessary repairs to the present fishway. This work was done while the dam itself was being reconstructed, and will, it is believed, offer migrating salmon an easily accessible passageway over this barrier. Detailed plans were also formulated and submitted to the West Coast Power Company for an addition to the fishway in their dam at Lebanon, Oregon. This addition calls for the extension of the fishway for a distance of 12 feet upstream into the impounded water above the barrier, making, thereby, a fishway of three 12-foot pools, instead of two as formerly. Since the difference in elevation between the tailwaters and the impounded water above at this point is slightly less than eight feet, the addition of this extra pool will offer a much easier passageway than formerly. The distance or height between pools has been considerably lessened, and it is believed that future salmon migrations will experience no difficulty whatsoever in negotiating the new passageway provided.

Detailed plans were also designed and submitted to the Mill City Light and Power Company, at Mill City, Oregon, for the construction of a fishway over Mill City dam. We feel that the installation next spring of the fishway in accordance with these plans will relieve the situation at this barrier and that there will be no recurrence of the blocking or holding up of migrating Salmon and Steelheads at this point on their way to the hatchery and spawning areas above.

### **Bonneville Fishways**

While we feel that a great deal has been accomplished in the construction and improvement of fishways in general during the past two years, those which are to be utilized in connection with the Bonneville dam have required more time and attention than it has been possible to devote to the several others combined. The magnitude of this project, as well as the fact that it will have been under construction for a period of at least four years, has contributed materially to the problem. Coinciding with each migration of the several species of salmon and other food or game fishes arriving at this point, each successive stage of construction presented a different problem from a fishery viewpoint. Especially was this true when taking into consideration the fact that the run of each species coming in rotation for a year, repeated in the following year and again the year after, and that each corresponding stage of construction offered a more difficult passage than preceding ones. To guard against any unexpected contingency and to make available for the information and consideration of the department, every pertinent fact or significant data regarding migrations during this construction period, our representative of the department has been detailed to visit the area daily and to record his observations with respect to the ease or difficulty experienced by migratory fishes during these critical periods, as well as to indicate the numbers of various species which he observed negotiating temporary passageways provided or passing through the unobstructed bays between piers of the main spillway dam, together with such other comment as might indicate the variable water velocities and differentials between upper and lower levels.

The problems presented by the construction of the Bonneville Hydro-electric Project were discussed at some length in our report for the preceding biennium. A general resumé was given outlining the cooperative considerations given the problem by the U. S. Bureau of Fisheries and the respective fish and game commissions of the states of Oregon, Washington and Idaho. The creation and membership of the Interstate Fish Conservation Committee was made known, as were the decisions of that committee on the question of the types of fish passageways and the location of each to be installed at this barrier. It may be recalled that that report brought the matter up to the date of the publication of our biennium, which might be said to coincide with Colonel Robins' report to Washington, D. C., in which he recommended both conventional gravity type fishways and fish lifts or locks.

The general types of fishways to be installed at Bonneville having been determined early in the present biennium, the attention of the committee and of the fisheries departments turned first to the determination of the exact location for these devices, the matter of additional or auxiliary water supply, attraction, control, method of operation and numerous other points which had to be considered and passed upon before detailed construction drawings could be made. During such consideration of these pertinent points, a vast amount of experimental work was necessary. The reaction of fingerlings to variable pressures was given scientific attention by the College of Fisheries at the University of Washington, collaborating with the various state agencies and the representative of the U. S. Bureau of Fisheries.

The working model constructed by the U. S. Engineers at the Government Moorings, near Linnton, was being used almost daily for hydraulic experiments in testing methods of regulation and to work out construction problems encountered under various stages of the river, and was made available to the members of the committee and fisheries representatives.

As time went on, subsequent meetings of all parties concerned resulted in determining finally the exact location for the several devices. As determined and agreed upon by the U. S. Engineers and the fisheries departments, types and locations were as follows:

One conventional type gravity fishway on the north side of the main spillway dam, state of Washington.

One pair fish-locks on the north side of the main spillway dam, state of Washington.

One conventional type gravity fishway on the south side of the main spillway dam on Bradford Island.

One pair fish-locks on the south side of the main spillway dam on Bradford Island.

One conventional type gravity fishway on the north end of the power house section in Bradford Slough on Bradford Island.

One pair fish-locks on the south end of the power house section in Bradford Slough on the Oregon shore.

One conventional type gravity fishway or canal on the Oregon shore from upstream end navigation-locks to mouth of Tanner creek.

One passageway south end of power house section in Bradford Slough, connecting with and passing into navigation-locks near center.

Multiple fish pick-up or collecting system across entire lower face of power plant section, consisting of twenty-eight separate entrances, together with auxiliary water supply arranged to present a uniform velocity attraction at each of the twenty-eight separate entrances.

With the question of the type of fishway and their respective permanent locations settled and out of the way, the attention of all was given to the apparently never-ending detail of plans for construction. In progression, as each point was considered and passed, final plans crystallized and became an actuality. The question of screens, downstream by-passes, regula-

tion and control of water supply and velocities, control of fluctuating head and tail-waters, training walls and regulation of spillway gates on the main dam, trap type entrances and numerous other minor details were considered, approved and made a part of the general plans.

With the completion of construction plans and the letting of contracts covering certain units of the project, the interest of fisheries representatives took on a somewhat different angle. Their time and attention was now given more to observing the progress of the construction work, visiting the dam site at regular intervals and comparing and checking the details of any fishway device, as each was completed. Since that time, progress in construction has been rapid, and it is anticipated that approximately one year more will be necessary for the completion of the project. During the last stages of construction, it is quite necessary that the vigilance of the fishery representatives be continued in their earnest and conscientious endeavor to assure the safeguarding of the invaluable salmon runs of the Columbia river.

Even though this project will be completed in a few short months and all fishway facilities will be put into operation, it is not possible yet to prophesy or even guess as to the ultimate effectiveness of these various devices that have been provided, in what it is hoped may not prove a futile attempt to preserve and perpetuate the Columbia river salmon. The efficiency of the several fishways in passing fish over this barrier, or the effect of the barrier itself on the future of the industry, may not be definitely determined until such time as their actual operation brings forth the true answer.

The importance of the construction period in its relation to migrating fishes has already been stressed. We feel, however, that we should once more direct the attention not only of each of you as commissioners, but of every individual interested, directly or indirectly, to the gravity and importance of the situation which we will be called upon to face during the last year of the construction period. It is our honest belief that we have yet before us the most difficult period during construction and that the passing of the spring, summer and fall runs of 1937 will offer the most difficult task of any yet attempted. We firmly believe that it will be more difficult for salmon and other fishes to ascend this barrier during the period immediately before completion than it will after completion.

Supporting this contention, we submit that under construction schedules which will attain early next spring, the Bradford Slough, or power plant area, will be completely closed except for the passageway into the navigation-locks. The north section of the main spillway dam will have reached that point of construction at which the cofferdams are no longer needed, and they will have been removed. The structure between gate piers in that section will have been raised to the 24 foot elevation, and the piers themselves to a point well above anticipated freshet stages. According to working schedules, it is then proposed to raise the fill in the bays between the piers in the south section of the spillway dam three bays at a time. This will necessitate stop-logging between piers for raising the fill, and in accordance with proposed schedule, all seven bays in the south section will be completed before the spring freshet arrives. These conditions will result during the closure of the bays in a difference in head and tail-water elevations of approximately 11 feet. Upon the completion of the work of raising these fills to the final elevation of 24 feet, the arrival of the freshet waters will materially increase the difference in heads, thereby adding to the difficulty of providing adequate passageways for ascending fishes through or over the limited proportionate area available.

It is to be hoped that this problem will be solved in a satisfactory manner and that the 1937 cycles of the several species of salmon and other fishes may not be lost or unduly depleted thereby.

### **Relief Projects**

During the present biennium, as in the preceding one, the department has availed itself of relief labor in instances where the contemplated work would permit and where benefits were justified in our opinion. During this two-year period, relief labor for constructing and improvement of hatcheries or other departmental facilities was not utilized to so great an extent

as in the two years immediately preceding. We did, however, use relief labor in doing certain work included in our resumé of fisheries stations at the following points: McKenzie, North Santiam, Klaskanine, Trask, Coos and Nehalem.

### **Pilchard or Sardine Industry**

Oregon's new industry, the reduction of sardines or pilchard into oil or meal, came about during the current biennium, and the setting into operation of the new statutes which made this fishery possible, has required a great deal of attention. It is obvious, however, that this has been successfully accomplished, there being no particular difficulty experienced either in connection with the fishery fleet, plant operation or the relation of the corps of inspectors in the administration of the various provisions enacted for its regulation. Certain biological studies were begun in connection with this new industry during the last year of the biennium. A report of the biologist engaged in this work immediately follows:

The second season of pilchard or sardine fishing in Oregon has just passed. In comparison with the first, some hints are given as to the characteristics of the fishery that offer promise of recurrence each season and of the variations that may be expected.

#### **Length of Season.**

Fishing during the first season was attempted in June, and while same was reasonably successful to the fishermen, a low oil content made the fish undesirable for reduction purposes. During the season just passed, no fish were taken, with the exception of two deliveries, until July ninth. One boat scouted for fish earlier during May and June without success. Future operations probably will not begin until July first, and possibly not before July fifteenth. The end of the fishing season in Oregon is problematical. The testing period during the first year's fishing ended in September, but was reestablished during the month of November by a fleet of three boats, the latest delivery recorded being on the thirtieth day of that month. During the month of November fish caught off Coos Bay gave a very high oil yield, and as a result were much desired for reduction purposes. The possibility of holding a large fleet of boats for the Oregon fishery late in November is influenced by the beginning of the California season and the occasional rough weather off the coast of Oregon encountered during the winter months. The 1936 season ended prematurely in the month of August; boats making up Oregon's fleet having been previously chartered for the California fishery returned south with the opening date of the season in that area.

#### **Fishing Localities.**

During both years of this fishery, two fishing fleets fished in widely separated localities—one out of Astoria and one out of Coos Bay. Certain features and changes were observed throughout the season that were common to both fishing fleets. For example, both fleets fished to the north of their home port for the major part of the season, and the fishery during July extended farther north than during August.

#### **Coos Bay Fishery.**

The fleet operating out of Coos Bay took a large part of their fish (35.3% of monthly catch) during July from an area off the Umpqua river. A small amount was taken off the mouth of the Yaquina river, and about 2.3% of the monthly take from an area off Netarts Bay, while an area between the mouth of the Columbia river and Tillamook Head, some ten miles off shore, produced 7.9% of the monthly catch. These takes far to the north are not considered important, however, since 89.8% of all the fish taken in the month of July were caught in that area between Yaquina Head on the north and Port Orford on the south. The fish were taken from three to thirty miles off shore, the average distance being twelve to fifteen miles. Catch records recorded show isolated takes sixty miles off shore. These doubtless are an error on the part of the fishermen in locating their position, either deliberate or

otherwise. The Coos Bay fishery during the month of August was confined largely to that area between Yaquina Head and Port Orford, as during July. During this month, however, the area of greatest abundance had moved south a distance of fifteen miles, and was slightly to the north and off the entrance of Coos Bay. Forty per cent of the fish taken during August came from an area between the Cape Arago Lighthouse and the Umpqua River Lighthouse. Twenty-three per cent were taken from the water to the south of Arago Lighthouse and the remainder off and to the north of the Umpqua river, off the Siuslaw river and north to the Yaquina river. A small amount, less than 2%, came from an area just below the Columbia river. The relative position of the Astoria fishery off shore did not change from July to August.

### **Astoria Fishery.**

Sardines landed at Astoria during July were caught largely off the coast of Washington, except for one delivery. No fish were caught south of the entrance to Willapa Bay. That area just southwest of Destruction Island yielded approximately 25% of the July catch. Aside from this concentration of the fishery below Destruction Island, fishing was scattered up the coast north beyond our fisheries chart, which extends to latitude 48° north, or just above Cape Johnson. Fifty-three per cent of the catch for July came from the north of Cape Johnson. During the month of August a pronounced southerly shift in the fishing grounds was apparent, only 9% of the catch for that month coming from the north of Cape Johnson. The area southwest of Destruction Island, however, remained a rich fishing ground, yielding again about 25% of the monthly catch. Fishing was carried on along the Washington coast and the northern part of the Oregon coast to as far south as Netarts Bay, but was not greatly concentrated at any one point, and was approximately the same distance off shore as the Coos Bay fishery.

### **Fishing Methods.**

In California, the sardine fishery is carried on during the dark of the moon. Very little fishing is done during the light phases of the moon, or in daytime, the reason being that sardine schools are more easily detected at night during the dark of the moon on account of the phosphorescent glow that accompanies any activity of the school. The fishing method in Oregon has been largely similar to that followed in California, except for a greater proportion of daylight fishing. This was especially true of the fleet fishing out of Astoria. This follows the observed trend, since the British Columbia fishery is entirely a daylight one.

### **Length of Fish.**

Sardines delivered to the reduction plants in Coos Bay during July and August were sampled and their length measured to the base of the tail. A sample consisted of fifty-five fish from a single sardine boat. Attempts were made to obtain two samples daily, but this was not often possible under the limited fishery this season. Nevertheless, twelve hundred fish were measured between July eleventh and August seventeenth.

Sardines landed at Astoria were measured by the reduction plant inspector stationed at that point throughout August. Samples were irregular in size, and during the month only six hundred and forty-one fish were measured. This difference in number and the irregularity of sample sizes at Astoria does not contribute to the accuracy of comparison of sizes of fish landed in Astoria with those landed at Coos Bay. However, our data indicate that sardines landed at Astoria averaged approximately 8 mm. longer than sardines landed at Coos Bay. (Mean length of Astoria sardines 242.9 mm.; mean of Coos Bay Sardines 234.8 mm.)

The graphs of the length frequencies for Astoria and Coos Bay disclose three principal modes. The first mode is similar in both graphs, in that it is composed of young fish approximately 190 mm. in length. The middle and principal mode of the graph covering sardines landed at Coos Bay centers at about 230 mm., while that of the graph covering fish landed at

Astoria centers at 240 mm. The third, or final mode in both graphs is centered at 250 mm. It is probable that these modes represent different year classes. However, we will need a background of several seasons to lend authenticity to the interpretation of these graphs.

No significant change in the size of fish was observed during the period of sampling at Coos Bay. There was, however, a slight decrease in the size of Coos Bay fish from July to August, due possibly to an influx of small fish in the commercial catch, averaging six or seven inches in length. The average length of sardines included in the fish landed at Coos Bay was about eleven inches total length, while the average of those landed at Astoria was approximately a quarter inch longer, or eleven and one-quarter inches. There is a probability of significant changes in the length of the fish occurring later in the season. However, no length measurements were taken during the first season when fishing was carried on through November. There is likewise some indication of a population of small sardines in Oregon waters during the spring. Since no commercial sardine fishery is carried on during the spring months, the specimens observed were taken from catches made incidental to the capture of other fishes.

### **Oil Yield.**

Sardines taken and delivered thus far in the state of Oregon have been used almost entirely for reduction purposes. That fish here are most suitable for reduction is clearly indicated by the high oil yield obtained by plants during two years of operation in Oregon. The oil content of the Oregon sardines may be said to follow the same seasonal cycle observed in the California fishery; that is to say, the oil yield is lower during the early part of the season and increases rapidly as the season advances. The variation in the oil content of the Oregon sardine is from about twenty gallons for each ton of fish as a minimum, to sixty gallons from each ton of fish as a maximum. The average oil yield for all plants in Oregon for the 1935 season was forty gallons for each ton of fish. This average would have closely approached forty-eight gallons per ton, had it not been for the pre-season fishery in the month of June and the unusually low average oil production for one plant in November. The average oil yield for the 1936 season was slightly less than that for 1935, and is obviously accounted for by the premature ending of the fishing season on the last of August.

The 1937 season promises to be more consistent in both fishery and plant operation. It is felt, therefore, that catch data and average oil yield per ton will offer a truer picture and more accurately indicate the value of the resource than may be gained from a comparable analysis of these first two seasons, which may at best be considered a test fishery only.

### **Destruction of Industry Threatened**

In presenting to you a report on the activities and operation of our departments and in pointing out the various fishery problems for future consideration, we feel that we would be quite remiss in our responsibilities if we failed to mention a new and previously unencountered menace, not only to the fishery of Oregon, but to the salmon industry of the Pacific Coast area. The menace to which we refer is the threatened, general invasion of the Pacific Coast salmon resource by an alien nation, Japan.

The Japanese invasion of the North American fishery is already a fact. Their operations, however, have been localized in the Bristol Bay area of Alaska and have been devoted to the exploitation of pelagic fisheries in which we have claimed no exclusive interest. Now, however, it is the evident purpose of Japanese fishing companies to encroach not only on the salmon fisheries of Bristol Bay, but eventually to fish other salmon areas of the Pacific Coast as well. It is not necessary to point out that such a general invasion, if it materializes in definite form, will menace the very existence of our great fishing industry. Plans toward this threatened invasion are rapidly crystallizing, and the entering wedge will no doubt be driven in the Bristol Bay area through the establishment of floating salmon canneries off the coast of Alaska.

Indicative of the Japanese urge for expansion on a large scale in the fishery of the world is the recent gigantic merger in September of this year of affiliated Japanese fishing companies, which, together with its subsidiaries, is now considered the largest fishery organization in the world, not only in capitalization, but in the magnitude of its operations. The new company, which will make its head office in Tokyo, through its several branches, already conducts fishing operations on the Mexican coast, on the coast of South America and in the Argentine, in addition to their European activities.

The far-reaching results of such exploitation should be apparent to everyone, and the invasion of our fisheries by Japanese interests would endanger the national limitations set up by Canada and the United States for the regulation of their fishery, certain migrations of which extend beyond present territorial limits.

While we do not at this time suggest a definite remedy or means of combatting this threatened evil, we do contend that the matter warrants the serious attention of state and national authorities, and that regardless of the course pursued, a firm stand is immediately necessary. The problem should be made one of national scope, and for the preservation of the fishery resource, it should be considered in the coming sessions of the U. S. Congress and the Canadian Parliament.

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In conclusion, the nature of our work during this biennium in connection with fishways at Bonneville and elsewhere in the streams of our state, together with problems having to do with pollution of our waters, as well as those pertaining to natural and artificial barriers in general, have contributed much in our realization of the many vital problems now confronting or menacing the future of Oregon's fishing industry. It has crystallized and definitely fixed our belief that encroaching civilization will, unless adequate measures are taken and effective safeguards provided, ultimately result in the total depletion of our commercial fishery. It is realized that civilization is not fixed, but is unusually mobile. We are as a result rapidly approaching limits beyond which the task of maintaining and perpetuating our fisheries is one obviously hopeless and unavailing. It is equally obvious that the industry must carry on and that every effort to perpetuate and protect our menaced resources must be made. Artificial propagation should be doubled or even trebled, and all natural spawning areas in our streams and their many tributaries should be again put to work and protected from pollution and from other contributory menaces which may result from the development of our state resources by ever-expanding population.

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

M. T. HOY,  
Master Fish Warden.

Showing the number of Salmon and Steelhead eggs collected at stations operated by the Fish Commission of the State of Oregon during the period July 1, 1934, to June 30, 1935:

Fisheries Station	Spring		Fall		Silver		Blueback	Sockeyes	Totals
	Chinook	Chinook	Chinook	Salmon	Steelheads	Salmon			
McKenzie	18,531,000	.....	.....	.....	.....	.....	.....	.....	18,531,000
Willamette	8,162,000	.....	.....	.....	.....	.....	.....	.....	8,162,000
Santiam	13,206,000	.....	.....	1,051,000	.....	.....	.....	.....	14,257,000
Bonneville	665,150	791,000	.....	.....	.....	.....	.....	16,200	1,472,350
Klaskanine	.....	.....	.....	979,200	200,658	.....	.....	.....	1,179,858
Trask	3,744,300	.....	.....	1,003,000	.....	.....	.....	.....	4,747,300
Coos	.....	963,000	.....	.....	.....	.....	.....	.....	963,000
Wallowa	1,016,920	.....	.....	510,470	.....	.....	1,043,410	.....	2,570,800
Umpqua	8,036,225	.....	.....	.....	.....	.....	.....	.....	8,036,225
South Santiam	1,075,000	.....	.....	.....	441,600	.....	.....	.....	1,516,600
Ten Mile	.....	.....	.....	11,401,360	.....	.....	.....	.....	11,401,360
Nehalem	.....	.....	.....	633,500	65,000	.....	.....	.....	698,500
<b>Grand Totals</b>	<b>54,436,595</b>	<b>1,754,000</b>	<b>14,527,530</b>	<b>1,758,258</b>	<b>1,043,410</b>	<b>16,200</b>	<b>73,535,993</b>		



Showing the number of Salmon and Steelhead fingerlings liberated into the waters of the State of Oregon by the Fish Commission during the period July 1, 1934, to June 30, 1935:

Fisheries Station	Spring		Fall		Silver		Totals	Where Liberated
	Chinook	Chinook	Chinook	Salmon	Steelheads	Blueback		
McKenzie	7,237,000	.....	.....	.....	.....	.....	7,237,000	Gate Cr. and McKenzie R.
Willamette	6,416,750	.....	.....	.....	.....	.....	6,416,750	Salmon Cr.—Willamette R. Trib.
Santiam	6,632,000	.....	.....	.....	.....	.....	6,632,000	North Santiam R.—Will. R. Trib.
Santiam Egg Coll. Sta.	.....	.....	.....	.....	1,020,385	.....	1,020,385	Cliff, Beaver, Bowerman, Unnamed and Elk Lakes, and Breitenbush R.
Bonneville	5,884,030	.....	262,700	.....	.....	86,520	6,233,250	Deschutes, Hood, Sandy and Bull Run Rivers, Tanner and Eagle Creeks—Columbia R. Trib.
Klaskanine	3,877,903	.....	.....	.....	2,658,903	.....	6,712,233	Klaskanine R.—Youngs Bay Trib.
Trask	4,160,730	.....	.....	.....	2,752,860	.....	6,913,590	Gold Cr., Trask and Wilson Rivers.
Coos	1,413,860	.....	908,800	.....	1,479,600	.....	3,802,260	South Coos River.
Wallowa	2,102,000	.....	.....	.....	500,000	662,000	3,264,000	Wallowa River—Snake R. Trib.
Umpqua	4,532,035	.....	.....	.....	.....	.....	4,532,035	Rock Creek and Umpqua River.
South Santiam	1,024,015	.....	.....	.....	.....	.....	1,452,765	South Santiam River.
Herman Creek	1,348,600	.....	.....	.....	.....	.....	1,348,600	Herman Cr. and Columbia River.
Alesea	990,080	.....	.....	.....	1,982,703	.....	2,972,783	Siletz, Yaquina, Siuslaw, Yachats and Alesia Rivers.
Coquille	.....	.....	.....	.....	839,390	.....	839,390	Coquille River.
Nehalem	954,000	.....	.....	.....	1,039,800	62,850	2,056,650	Foley, Bobs, Coal and Rack Heap Creeks—Nehalem R. Trib., and Wilson River.
Rogue	1,139,000	.....	.....	.....	.....	.....	1,139,000	Rogue River.
<b>Grand Totals</b>	<b>47,712,003</b>	<b>1,171,500</b>	<b>11,253,256</b>	<b>1,687,412</b>	<b>748,520</b>	<b>62,572,691</b>		

Showing the number of Salmon and Steelhead eggs collected at stations operated by the Fish Commission of the State of Oregon during the period July 1, 1935, to June 30, 1936:

Fisheries Station	Fall		Silver		Totals
	Chinook	Salmon	Steelheads	Blueback	
McKenzie	25,117,000	.....	.....	.....	25,117,000
Willamette	7,453,000	.....	.....	.....	7,453,000
Santiam	2,127,000	.....	162,000	.....	2,289,000
Bonneville	12,100,000	.....	.....	540,000	12,640,000
Klaskanine	.....	784,000	.....	.....	784,000
Trask	2,901,000	2,044,000	.....	.....	4,945,000
Coos	.....	4,201,000	2,523,000	.....	7,799,000
Wallowa	505,000	515,000	.....	675,000	1,695,000
Umpqua	3,510,240	.....	.....	.....	3,510,240
South Santiam	2,006,000	.....	1,187,000	.....	3,193,000
Ten Mile	.....	12,770,200	.....	.....	12,770,200
Nehalem	.....	438,800	12,000	.....	450,800
Cooperative Stations—U. S. Bureau	5,000,000	.....	.....	.....	5,000,000
Grand Totals	60,719,240	20,753,000	3,884,000	675,000	87,646,240
				540,000	

Showing the number of Salmon and Steelhead fingerlings liberated into the waters of the State of Oregon by the Fish Commission during the period July 1, 1935, to June 30, 1936:

Fisheries Station	Spring		Fall		Silver		Steel-		Blue-		Sock-		Totals	Where Liberated
	Chinook	Chinook	Chinook	Chinook	Salmon	Salmon	heads	heads	back	back	eyes	eyes		
McKenzie	8,208,000	8,208,000											8,208,000	Gate and Cogswell Creeks, McKenzie R.
Williamette	6,881,750	6,881,750											6,881,750	Salmon Cr.—Williamette R. Trib.
Santiam	4,952,000	4,952,000											4,952,000	North Santiam R.—Will. R. Trib.
Santiam Egg Coll. Sta.							158,400						158,400	Hunts and Unnamed Lakes, No. Santiam R.
Bonneville	13,652,368				( 260,000	( 260,000					( 472,000		( 472,000	Hood, Sandy Rivers, Wind R. Wash. (for U.S. B.F.), Eagle, Tanner Creeks,—Columbia R. Trib., Clackamas R., Gales Cr.—Tualatin R. Trib.
					( 1,518,560	( 1,518,560					( 11,050		( 11,050	
Klaskanine	2,703,400	2,703,400			2,840,000	2,840,000							5,543,400	Klaskanine R.—Youngs Bay Trib.
Trask	2,823,710	2,823,710			1,984,100	1,984,100							4,807,810	Gold Creek and Trask River.
Coos			1,013,800		4,162,525	4,162,525	1,839,760						7,016,085	South Coos River.
Wallowa									1,005,000				1,005,000	Wallowa River—Snake R. Trib.
Umpqua	3,470,805	3,470,805			1,692,205	1,692,205							5,163,010	Rock, Susan, Steamboat Creeks, Little River, Umpqua R. Trib.
South Santiam	1,975,343	1,975,343					1,176,000						3,151,343	So. Santiam R. and Abiqua R.
Herman Creek	740,800	740,800			482,800	482,800							4,364,600	Herman Cr.—Col. R. Trib.
	3,141,000	3,141,000											2,419,380	Lake Creek, Siletz, Yaquina, Siuslaw, Alsea R. and Tribs.
Alsea	984,850	984,850			1,434,530	1,434,530							1,128,750	Coquille River.
Coquille					1,128,750	1,128,750							3,692,818	Soapstone, Rack Heap, Coal, Bobs, Foley Creeks, S. Fork Nehalem R., Nehalem R. Trib., Wilson, Kilehis, Miami, Salmon Rivers
Nehalem	1,271,068	1,271,068			2,410,000	2,410,000	11,750						678,000	Hunters, Euchre, Floras Creeks, Pistol, Rogue Rivers.
Rogue														
Grand Totals	51,483,094	51,483,094	1,013,800		17,913,470	17,913,470	3,185,910		1,005,000		483,050		75,084,324	

**SUMMARY**

Showing the total number of eggs collected during the fiscal years 1935 and 1936:

	Fall		Silver		Totals
	Chinook	Salmon	Steelheads	Blueback	
Total Egg Take—1935	1,754,000	14,527,530	1,758,258	1,043,410	73,535,993
Total Egg Take—1936	1,075,000	20,753,000	3,884,000	675,000	87,646,240
Grand Totals	2,829,000	35,280,530	5,642,258	1,718,410	161,182,233

Showing the total liberations during the fiscal years 1935 and 1936:

	Fall		Silver		Totals
	Chinook	Salmon	Steelheads	Blueback	
Total Liberation—1935	1,171,500	11,253,256	1,687,412	748,520	62,572,691
Total Liberation—1936	1,013,800	17,913,470	3,185,910	1,005,000	75,084,324
Grand Totals	2,185,300	29,166,726	4,873,322	1,753,520	137,657,015

**STOCK ON HAND AS OF JUNE 30, 1935**

Fisheries Station	Spring Chinook	Silver Salmon	Blueback	Sockeyes	Totals
Bonneville .....	.....	2,025,960	.....	14,670	2,040,630
Wallowa .....	.....	.....	1,009,000	.....	1,009,000
Herman Creek .....	750,000	.....	.....	.....	750,000
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	750,000	2,025,960	1,009,000	14,670	3,799,630

**STOCK ON HAND AS OF JUNE 30, 1936**

Fisheries Station	Spring Chinook	Silver Salmon	Blueback	Totals
Bonneville .....	.....	2,683,075	.....	2,683,075
Klaskanine .....	236,318	760,254	.....	996,572
Wallowa .....	1,180,100	512,900	672,300	2,365,300
	<hr/>	<hr/>	<hr/>	<hr/>
	1,416,418	3,956,229	672,300	6,044,947

Showing egg shipments received and transfers made during the fiscal year 1935:

**Eggs Received**

Silver Salmon      446,600 Game Commission (Necanicum)

**Eggs Transferred**

Spring Chinook	Silver Salmon
1,500,000 U. S. Bureau (Clackamas)	874,500 Game Commission (Bandon)
150,000 Helsingfors, Finland.	100,000 U. S. Bureau (Little White Salmon)
150,000 State of California.	

Showing egg transfers made during the fiscal year 1936:

**Eggs Transferred**

Spring Chinook	Steelheads
2,000,000 U. S. Bureau (Clackamas)	504,240 Game Commission (Bandon)
150,000 Helsingfors, Finland.	
150,000 State of California.	

**TABLE OF 1935 LIBERATIONS**

Species Liberated	Number Liberated	Size Inches	Age Months
Spring Chinook .....	47,712,003	1 ½—4	7—12
Fall Chinook .....	1,171,500	2 ½—2 ⅞	7—8
Silver Salmon .....	11,253,256	2 —4 ½	6—12
Steelheads .....	1,687,412	1 ⅜—2 ¼	3—5
Blueback .....	748,520	3 —4	13—14
Total Liberated.....	62,572,691		

**TABLE OF 1936 LIBERATIONS**

Species Liberated	Number Liberated	Size Inches	Age Months
Spring Chinook .....	51,483,094	2 —4	7—13
Fall Chinook .....	1,013,800	2 ¾	7
Silver Salmon .....	17,913,470	1 ¾—4	6—13
Steelheads .....	3,185,910	1 ¼—2 ½	3—4
Blueback .....	1,005,000	2 ½	12—13
Sockeyes .....	483,050	2 ¼—5	10—18
Total Liberated.....	75,084,324		

**FISHERIES STATIONS OPERATED BY THE FISH COMMISSION OF OREGON**

Station	Stream	Post Office	In Charge
McKenzie.....	McKenzie River (trib. of Willamette R.)....	Leaburg, Oregon.....	Walter Carter
Willamette.....	Willamette R. (trib. of Columbia R.).....	Oakridge, Oregon.....	Chas. J. Hills
Santiam.....	Santiam River (trib. of Willamette R.).....	Stayton, Oregon.....	LeRoy Ledgerwood
Bonneville.....	Tanner Creek (trib. of Columbia R.).....	Bonneville, Oregon.....	E. J. W. Anderson
Klaskanine.....	Klaskanine River (trib. of Youngs Bay)....	Astoria, Oregon, M.R.A....	L. W. Hickey
Trask.....	Trask River (trib. of Tillamook Bay).....	Tillamook, Oregon.....	Henry Bolle
Coos.....	So. Coos River (trib. of Coos Bay).....	Marshfield, Oregon.....	Frank W. Smith
Wallowa.....	Wallowa River (trib. of Snake R.).....	Enterprise, Oregon.....	Irvine French
Umpqua.....	Umpqua River (trib. of Winchester Bay)...	Idleyld Park, Oregon....	Lee McCarn
South Santiam....	So. Santiam River (trib. of Santiam R.)....	Foster, Oregon.....	C. R. Ellis
Herman Creek....	Herman Creek (trib. of Columbia R.).....	Cascade Locks, Oregon...	Geo. Nelson
Alsea.....	Alsea River (trib. of Alsea Bay).....	Tidewater, Oregon.....	M. H. Bales
Ten Mile.....	Ten Mile Lake.....	Lakeside, Oregon.....	Otto Magill
Coquille.....	So. Coquille River (trib. of Coquille R.)....	Powers, Oregon.....	F. L. Thomas
Nehalem.....	Nehalem River (trib. of Nehalem Bay).....	Mohler, Oregon.....	L. W. Strass
Rogue.....	Rogue River .....	Gold Beach, Oregon.....	Edgar Ledgerwood