Cocaral Rivers

REPORT

OF

ALBERT C. ROSS

Master Fish Warden of Oregon

AND

HUGH C. MITCHELL

Director of Hatcheries of Oregon

FOR

1923 and 1924



BIENNIAL REPORT

OF THE

FISH COMMISSION of the State of Oregon

TO THE

GOVERNOR AND THE THIRTY-THIRD LEGISLATIVE ASSEMBLY

1925



FISH COMMISSION OF THE STATE OF OREGON

HON F P KENDALL Chairman

CARL D. SHOEMAKER...

,	
Hon. Walter T. Eakin	oria
Hon. Thomas W. RossPort	land
Albert C. Ross	rden
HUGH C. MITCHELL. Director of Hatch	eries

General Manager

LETTER OF TRANSMITTAL

Portland, Oregon, December 31, 1924.

Fish Commission of the State of Oregon, Portland, Oregon.

Gentlemen:

In the financial statement of the Master Fish Warden for the fiscal years of 1923 and 1924, the figures of 1924 must of necessity show a collaboration of the transactions of the office between the time of Carl D. Shoemaker's services, which ended June 30, 1924, and that of Albert C. Ross, whose service covered the period from July 1, 1924, to November 30, 1924.

Respectfully submitted,

ALBERT C. ROSS, Master Fish Warden.

LETTER OF TRANSMITTAL

Portland, Oregon, December 31, 1924.

Fish Commission of the State of Oregon, Portland, Oregon.

Gentlemen:

I herewith submit to you the financial statement of the Master Fish Warden of the State of Oregon for the fiscal years of 1923 and 1924. I resigned as Master Fish Warden effective July 1, 1924, and, therefore, the figures are not segregated for this year, the last five months of the fiscal year being under the jurisdiction of Albert C. Ross, who succeeded me as Master Fish Warden upon my resignation from that position.

In April, 1923, Mr. R. E. Clanton was relieved of the duties of Director of Hatcheries, and the Fish Commission thereupon asked me to assume the duties and executive work connected with that department until such a time as a suitable successor could be selected. I, therefore, carried on the work not only as Master Fish Warden, but Director of Hatcheries as well, from April 1, 1923, to April 1, 1924. I call particular attention to the records of the Hatchery Department for the years 1923 and 1924.

Respectfully submitted,

CARL D. SHOEMAKER, Master Fish Warden, from December 1, 1922, to June 30, 1924.

HATCHERY FUND, DISTRICT NO. 1

Dec	. 1, 1922, to Nov.	30, 1923	Dec. 1, 1923, to Nov. 30, 1924		
No.	Amount	Balance	No.	Amount	Balance
December 1, Balance		\$ 9,784.56	Ba	ılance	\$ 39,816.74
Gill-net licenses1069	\$ 8,017.50		916	\$ 6,870.00	
Set-net licenses	585.00		223	836.25	
Traps or pound nets 46	820.00		66	1,260.00	
Stationary wheels 18	630.00		19	665.00	
Scow fish wheels 10	250.00		11	275.00	
Seines 41	1,939.20		49	2,208.60	
Trolls 160	400.00		108	270.00	
Boat pullers 522	522.00		593	593.00	
Retail fish dealers 430	2,150.00		425	2,125.00	
Wholesale fish dealers 42	100.00		73	146.00	
Salmon canners	350.00		12	300.00	
Shell fish canners 1	61.72		0	.00	
Brokers 4	200.00		2	100.00	
Boat or scow 95	190.00		132	264.00	
Bag-nets 20	20.00		23	23.00	
Crawfish 29	29.00		49	49.00	
Crab 1	1.00		1	1.00	
	\$ 16,265.42			\$ 15,985.85	
Transfers 107	107.00		60	60.00	
Poundage fees	94,734.47			152,390.51	
Fines	3,345.10			1,846.00	
Sale of confiscated property	2,266.62			1,253.45	
Sundries	4,120.55			2,006.59	
	\$120,839.16			\$173,542.40	
Less 5 per cent deducted for Sink-					
ing Fund (on 9 months' receipts)	5,733.83	\$115,105.33	(12 m	os.) 8,677.11	\$164,865.29
		\$124,889.89			\$204,682.03

HATCHERY FUND, DISTRICT NO. 1

DISBURSEMENTS

Bonneville Hatchery\$	18,050.42		\$ 21,596.30	
Klaskanine Hatchery	7,673.42		10,923.19	
McKenzie River Hatchery	7,023.70		885,96	
Willamette Hatchery	2,729.73		3,789.19	
Santiam Hatchery	2,724.39		2,322.04	
Herman Creek Station	2,658.37		4,565.53	
Lower Santiam Hatchery	4,857.83		5,754.53	
Oakridge Hatchery	6,059.41		4,149.09	
Wallowa Feeding Ponds	11,584.37		15,829.05	
Salmon, Idaho, Hatchery	53,19		53.74	
South Santiam Station	2,872.76		2,201.69	
Gate Creek Station	1,473.60		8,027.56	
Imnaha Eyeing Station	.00		810.93	1
U. S. Govt. co-operation work	2,814.62		5,340.87	7 - 11 -
Deschutes Hatchery	.00		912.57	
Troy Eyeing Station	.00		2,271.67	
Fishway a/c	1,041.91		412.77	
Refunds	59.47		43.75	
Fish Food a/c	3,742.62		.00	
Miscellaneous a/c—				
Reciprocal fish tax—Washington	.00		28,277.82	
Convention expense	.00		273.61	
Egg cases	.00		279.29	
Audit	.00.		1,106.25	
Closing streams	.00		77.04	
Investigations	90.10		2,232.00	
Attorney fees	.00		250.00	
Sandy River improvements	.00		924.26	
Director of Hatcheries	1,248.51		2,600.96	
Patrol service	3,096.94		34,773.63	
Commissioners	800.28		616,90	
Office expense	4,417.51	\$ 85,073.15	8,507.06	\$169,809.25
Balance		\$ 39,816.74	Balance	\$ 34,872.78

HATCHERY FUND, DISTRICT NO. 2

	Dec.	1, 1922, to Nov	. 30, 1923	De	c. 1, 1923, to No	v. 30, 1924
	No.	Amount	Balance	No.	Amount	Balance
December 1, Balance			\$ 26,934.86	Bala	nce	\$ 15,761.60
Gill-net licenses	428	\$ 3,210.00		600	\$ 4,500.00	
Set-net licenses	1082	4,057.50		1532	5,745.00	,
Seines	15	291.30		18	378.30	
Trolls	27	67.50		45	112.50	
Boat pullers	150	150.00		376	376.00	
Retail fish dealers	73	365.00		107	535.00	
Wholesale fish dealers	91	190.00		116	232.00	
Salmon canners	7	175.00		7	175.00	
Shell fish canners	5	62.41		5	79.04	
Boat or scow	16	31.00		21	42.00	
Bag-net	0	.00		2	2.00	
Clams	210	210.00		204	204.00	
Crabs	178	178.00		282	282.00	
Crawfish	1	1.00		2	2.00	
Oysters	0	.00		1	5.00	
		\$ 8,988.71			\$ 12,669.84	
Transfers	84	84.00		116	116,00	
Poundage fees, Salmon, etc		25,565.85			56,813.01	
Add'l fees, clams and crabs		138.30			360.74	
Fines		750.00			1,740.00	
Sale of confiscated property.		319.88			47.62	
Sundries		177.58			496.85	
		\$ 36,024.32			\$ 72,244.06	
Less 5 per cent deducted for	Sink-					
ing Fund (on 9 months' red			\$ 34,284.57	(12 mc	os.) 3,612.19	\$ 68,631.87
			\$ 61,219.43			\$ 84,393.47

HATCHERY FUND, DISTRICT NO. 2

DISBURSEMENTS

Nehalem Hatchery\$	9,110.16		\$ 6,268.07	
Gold Creek Hatchery	4,058.99		11,096.89	
Alsea Hatchery	6,678.46		6,555.18	
Siuslaw Hatchery	2,388.84		5,410.76	
Umpqua Hatchery	5,957.20		10,084.15	No.
South Coos Hatchery	5,423.30		6,292.84	
Coquille Hatchery	300.00		1,659.82	
Rogue River Hatchery	.00		1,159.55	
Nestucca Hatchery	.00		4,889.08	
Refunds	23.75		118.02	
Miscellaneous a/c—				
Satisfaction of judgment	311.00		.00	
Attorney fees	62.50		.00	
Audit	.00		1,381.33	
Egg cases	.00		164.46 .	
Investigations	76.59		957.14	
Convention expense	.00		282.49	
Closing streams	.00		8.70	
Fish food	3,749.51		.00	
Director of Hatcheries	1,248.51		2,734.61	
Fishways	4.11		447.39	
Patrol service	1,259.35		9,092.15	
Commissioners	800.28		617.86	
Office expense	4,005.28	\$ 45,457.83	7,806.94	\$ 77,027.43
Dalanas		£ 15 001 00	Dalassa	G M 5000 04
Balance	*******	- D 15,761.60	Balance	\$ 7,366.04

FINANCIAL STATEMENT, YEAR ENDING NOVEMBER 30, 1923

HATCHERY FUND

District No. 1

RECEIPTS

Balance November 30, 1922. Licenses issued. \$ 16,265.42 Transfer fees. 107.00 Additional fees. 94,734.47 Fines. 3,345.10 Sale of confiscated property 2,266.62 Sundries 4,120.55 \$120,839	
,	
Less 5 per cent deducted for sinking fund from March to November, inclusive, according to Section 21, Chapter 295, Laws 1923	.83 115,105.33 \$124,889.89
DISBURSEMENTS	φ102,00010=
Office expense\$ 4,417	
Commissioners	
Patrol service 3,096	
Director of Hatcheries 1,248	
Fish food a/c	
	.10
	.47
Fishway a/c	
U. S. Government co-operative work 2,814	.62
Salmon Propagation—	
Operation	.98
Construction 12,217	
Equipment 4,253	
Balance November 30, 1923	\$ 39,816.74

SALMON PROPAGATION

		110. 1		
Station	Operation	Construction	Equipment	Total
Bonneville	.\$15,520.57	\$ 563.85	\$ 1,966.00	\$18,050.42
Klaskanine	5,933,30	1,724.12	16,00	7,673.42
McKenzie	5,980.13	640.39	403.18	7,023.70
Willamette	2,671.40	48.00	10.33	2,729.73
Santiam	2,724.39	.00	.00	2,724.39
Herman Creek	2,511.62	146.75	.00	2,658.37
Lower Santiam	. 3,742.14	929.23	186.46	4,857.83
Oakridge	4,228.48	1,378.50	452.43	6,059.41
Wallowa feeding ponds	5,132.35	5,233.14	1,218.88	11,584.37
Salmon, Idaho	00	53.19	.00	53.19
South Santiam	. 2,791.60	81.16	.00	2,872.76
Gate Creek	54.00	1,419.60	.00	1,473.60
	\$51,289.98	\$12,217.93	\$ 4,253.28	\$67,761.19

FINANCIAL STATEMENT, YEAR ENDING NOVEMBER 30, 1923

HATCHERY FUND

District No. 2

RECEIPTS

Less 5 per cent deducted for sinking fund from	36,024.32	.\$	26,934.86
March to November, inclusive, according to Section 21, Chapter 295, Laws 1923	1 700 77	æ	04 004 MM
Section 21, Chapter 295, Laws 1925	1,739.75	P	34,284.57
	- 7	\$	61,219,43
DISBURSEMENTS		Ψ	01,010.10
Office expense\$	4,005.28		
Commissioners	800.28		
Patrol service	1,259.35		
Fishways	4.11		
Director of Hatcheries	1,248.51		
Investigations	76.59		
Fish food a/c	3,749.51		
Miscellaneous a/c—			
Satisfaction of judgment\$311.00			
Attorney fees 62.50	373.50		
Refunds	23.75		
Salman Dronagation			
Salmon Propagation—	01 404 00		
Operation	21,624.02		
Construction	10,986.61	de	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
Equipment	1,306.32	P	45,457.83
Balance on hand November 30, 1923		.\$	15,761.60

SALMON PROPAGATION

Station	Operation	Construction	Equipment	Total
Nehalem Hatches	ry\$ 1,330.80	\$ 7,448.70	\$ 330.66	\$ 9,110.16
Gold Creek Hato	hery 3,319.75	620.55	118.69	4,058.99
Alsea River Hat	chery. 5,379.08	866.89	432.49	6,678.46
Siuslaw River Ha		322.52	167.01	2,388.84
Umpqua River H		1,116.20	109.50	5,957.20
South Coos Hat		611.75	147.97	5,423.30
Coquille Hatcher	y 300.00	.00	.00	300.00
	\$21,624.02	\$10,986.61	\$ 1,306.32	\$33,916.95

FINANCIAL STATEMENT, YEAR ENDING NOVEMBER 30, 1924

HATCHERY FUND

District No. 1

RECEIPTS

Balance November 30, 1923 Licenses issued \$ 15,985.85 Transfer fees 60.00 Additional or poundage fees 152,390.51 Fines 1,846.00 Sale of confiscated property 1,253.45 Sundries 2,006.59 \$173,542.4	
Less 5 per cent deducted for sinking fund from December 1, 1923, to November 30, 1924, ac-	
cording to Section 21, Chapter 295, Laws 1923 8,677.1	11 \$164,865.29
DISBURSEMENTS	\$204,682.03
Office expense\$ 8,507.0	06
Commissioners	
Patrol service	33
Director of Hatcheries 2,600.9	96
Refunds 43.7	75
Fishways 412.7	7
Miscellaneous a/c	27
U. S. Government co-operative work 5,340.8	37
Salmon Propagation—	
Operation 64,134.8	21
Construction 17,433.5	
Equipment 2,524.7	
<u> </u>	Ψ100,000.20
Balance November 30, 1924	\$ 34,872.78

SALMON PROPAGATION

	Dist	rict No. 1		
Station	Operation	Construction	Equipment	Total
Bonneville	\$16,367.88	\$ 4,662.61	\$ 565.81	\$21,596.30
Klaskanine	7,675.95	1,565.10	1,682.14	10,923.19
McKenzie	874.91	11.05	.00	885.96
Willamette	2,943.37	833.82	12.00	3,789.19
Santiam	2,322.04	.00	.00	2,322.04
Herman Creek	3,542.76	971.24	51.53	4,565.53
Lower Santiam	5,119.62	599.82	35.09	5,754.53
Oakridge	3,269.11	846.61	33.37	4,149.09
Wallowa feeding ponds.	10,475.21	5,288.17	65.67	15,829.05
Salmon, Idaho	.00.	53.74	.00	53.74
South Santiam	2,201.69	.00	.00	2,201.69
Gate Creek	6,469.81	1,482.66	75.09	8,027.56
Imnaha	578.80	232.13	.00	810.93
Deschutes	908.57	.00	4.00	912.57
Troy	1,385.09	886.58	.00	2,271.67
	\$64,134.81	\$17,433.53	\$ 2,524.70	\$84,093.04

FINANCIAL STATEMENT, YEAR ENDING NOVEMBER 30, 1924

HATCHERY FUND

District No. 2

RECEIPTS

669.84 116.00 813.01 360.74 740.00 47.62		.\$	15,761.60
from 4, ac-	3.612.19	\$	68,631.87
_	0,018.10	_	
		\$	84,393.47
NTS			
	7,806.94 617.86 9,092.15 447.39 2,734.61 2,794.12 118.02		
	13,359.04	\$	77,027.43
	669.84 116.00 813.01 360.74 740.00 47.62 496.85 from 4, ac- 5 1923	669.84 116.00 813.01 360.74 740.00 47.62 496.85 \$ 72,244.06 from 4, ac- 5 1923 3,612.19 NTS \$ 7,806.94 617.86 9,092.15 447.39 2,734.61 2,794.12 118.02 \$ 37,785.01 13,359.04	116.00 813.01 360.74 740.00 47.62 496.85 \$ 72,244.06 from 4, ac- 5 1923 3,612.19 \$ NTS \$ 7,806.94 617.86 9,092.15 447.39 2,734.61 2,794.12 118.02 \$ 37,785.01 13,359.04

SALMON PROPAGATION

Station	Operation	Construction	Equipment	Total
Nehalem	\$ 2,402.88	\$ 3,740.96	\$ 124.23	\$ 6,268.07
Gold Creek	8,791.09	1,086.94	1,218.86	11,096.89
Alsea River	6,051.76	89.32	414.10	6,555.18
Siuslaw River	3,768.57	1,468.08	174.11	5,410.76
Umpqua River	7,942.32	1,920.56	221.27	10,084.15
South Coos	5,894.72	386.37	11.75	6,292.84
Coquille River		80.00	.00	1,659.82
Rogue River		1,145.00	.00	1,159.55
Nestucca River	1,339.30	3,441.81	107.97	4,889.08
	\$37,785.01	\$13,359.04	\$ 2,272.29	\$53,416.34

GENERAL FUND, SALARIES AND EXPENSES OF MASTER FISH WARDEN AND DEPUTY FISH WARDENS

January 1, 1923, to December 31, 1924

Appropriation for two years ending December 31, 1924\$36,000.00 Master Fish Warden, salary\$8,700.00
Master Fish Warden, traveling expense 2,071.14
Office Expense—
Postage \$ 102.99 Telephone and telegraph 971.32
Office supplies and expense 914.30
Rent 2,040.00 4,028.61
Patrol Service—
Expense and repairs \$2,366.31
Rent 498.50
Gasoline
Oils and supplies 914.06 \$5,323.50
Equipment
Deputy Fish Wardens, District No. 1, salary 8,616.55
Deputy Fish Wardens, District No. 1, expense 2,097.25
Deputy Fish Wardens, District No. 2, salary 2,812.12
Deputy Fish Wardens, District No. 2, expense 2,096.38 \$36,000.00
Balance in fund\$ 10.00

SEALION FUND

RECEIPTS

Period From April 1, 1921, to November 30, 1921

į	1406 gill-net Sealion certificates	
p.,	342 set-net Sealion certificates	
	208 troll Sealion certificates	
	44 trap Sealion certificates	
	57 seine Sealion certificates	
	15 canner Sealion certificates @ 50.00 750.00	\$7,220.00
	DISBURSEMENTS	
	Office expense\$ 175.00	
	Wm. M. Hunter (bounties) 6,645.00	
ļ	Chas, Baker (bounties) 42.60	
	John Wasson (bounties) 42.60	
	Jay Taylor (bounties) 42.60	
	Al Holden (bounties) 42.60	
	Mrs. Jack Davidson (bounties)	
i.	Jack Davidson (bounties) 95.60	\$7,122.50
	Balance on November 30, 1921	\$ 97.50

SEALION FUND

Period From December 1, 1921, to November 30, 1922

ij	Balance on hand November 30, 1921	\$ 97.50
	1466 gill-net Sealion certificates	
	436 set-net Sealion certificates	
	210 troll Sealion certificates	
	49 trap Sealion certificates	
	57 seine Sealion certificates	
	20 canner Sealion certificates	\$7,910.00
		\$8,007,50
	DISBURSEMENTS	φο,οοι.οο
	Office expense \$300.00	
	W. M. Hunter (bounties)	
	Chas. Baker (bounties) 42.60	
	John Wasson (bounties) 42.60	
	Jay Taylor (bounties) 42.60	
	Al Holden (bounties) 42.60	
	Mrs. Jack Davidson (bounties) 36.50	
	Jack Davidson (bounties) 95.60	
	Alex Somppi (bounties to various fishermen) 348.50	\$7,276.42
	Balance November 30, 1922	\$ 731.08

SEALION FUND

Period From December 1, 1922, to November 30, 1923

Balance on hand November 30, 1922		\$ 731.08
1497 gill-net Sealion certificates	3,742.50	
	1,210.00	
177 troll Sealion certificates	442.50	
46 trap Sealion certificates	460.00	
	1,080.00	
	,	
	840.00	PO 00 00
21 canner Sealion certificates	L,050.00	\$8,825.00
		\$9,556.08
DISBURSEMENTS		. /
Office expense\$	325.00	
Wm. M. Hunter (bounties)		
Hjalmer Hermansen (bounty)	3.48	
Axel Bjorklund (bounty)	3.48	
Henning Lindquist (bounty)	3.48	
Knute Lundin (bounty)	3.48	
Axel Berg (bounty)	3.48	
J. H. Miles (bounties)		
Howard Dunsmoor (bounties)	6.96	
	13.92	
Axel Josephsen (bounty)	3.48	6
Sari Rowa (bounty)	3.48	
Johan G. Kova (bounty)	3.48	
W. W. Nesbit (bounties)	6.96	
Walter Moore (bounties)	6.96	
H. Coles (bounties)	6.96	
Victor Savola (bounties)	6.96	
John Dahl (bounties)	10.44	
C. Christensen (bounty)	3.48	
Otto Erickson (bounty)	3.48	
S. L. Bartlett (bounties)	20.88	
George Theodeaus (bounties)	73.08	
Joe Lawson (bounties)	27.84	
Victor Carlson (bounty)	3.48	
Emil Korpela (bounty)	3.48	
John H. Bell (bounties)	87.00	
Oscar Erickson (bounties)	66.12	
Art Gunderson (bounties)	41.76	
August Manninen (bounty)	3.48	
Nick Kanttu (bounty)	3.48	
Refunds	10.00	\$8,380.69
_	_	
Balance November 30, 1923		\$1,175.39

SEALION FUND

Period From December 1, 1923, to November 30, 1924

Balance on hand November 30, 1923			.\$1,175.39
1516 gill-net Sealion certificates@	\$ 2.50	\$3,790.00	
704 set-net Sealion certificates@	2.50	1,760.00	
147 troll Sealion certificates@	2.50	367.50	
66 trap Sealion certificates@	10.00	660.00	
64 seine Sealion certificates@	20.00	1,280.00	
30 wheel Sealion certificates@	30.00	900.00	
19 canner Sealion certificates@	50.00	950.00	\$9,707.50
			\$10,882.89
DISBURSEMENTS	3		
Office expense		\$ 300.00	
Wm. M. Hunter (part payment on contract).		6,374.44	
Lou Tullock (salary)		125.00	
Lou Tullock (shells)		6.90	
Mark Siddall (shells)		31.86	
A. Mather (powder, caps and fuse)		57.02	
Refunds		30.00	\$6,925.22
Balance on hand November 30, 1924			\$3,957.67

LETTER OF TRANSMITTAL

Portland, Oregon, December 31, 1924.

To the Fish Commission of the State of Oregon, Gentlemen:

Soon after my appointment, which was effective March 14, 1924, I made a trip of inspection of all stations operated by the Fish Commission of Oregon.

It was gratifying to note that the fish were in splendid condition at all points, and I am very pleased to report that in all instances they continued to develop satisfactorily up until the date of liberation.

An examination of the buildings disclosed the fact that in many instances immediate repairs were essential in order to be in readiness for the coming spawn-taking season. The cost of these repairs at Bonneville, especially was quite extensive, as it was necessary to replace the hatching house floor and rearrange the water supply for the hatchery and many of the ponds. Considerable repairs were essential on the dams across Tanner Creek and at the intakes of the general water supply to insure a dependable and sufficient supply of water for fish cultural purposes. The emergency pump, which was indeed an inadequate affair, was overhauled and placed in as workable a condition as possible. It was also necessary to replace half the troughs in the hatchery. The station's feeding capacity was increased at least twenty per cent by the addition of six new cement ponds and various changes in the general working plan of the station.

At the Siuslaw Station it was necessary to replace the floor of the hatchery and all troughs in the building. The intake of the water supply at Klaskanine was rebuilt throughout, and a new food preparing house is at this time under construction. The flumes have been replaced at several of the stations, and the pond space has been increased at all the following named hatcheries, extensively at most of them—Alsea, Trask, Siuslaw, Nestucca, Nehalem, Wallowa, Gate Creek, Klaskanine and Santiam.

The flood-gate at the lower end of Lake No. 2 at Wallowa Station, which was destroyed two years ago as a result of either an incorrect water gauge or faulty construction, was replaced at considerable expense early in the year 1924.

Two new eyeing stations were established on the Imnaha and Grand Ronde Rivers, and a hatchery on the Nestucca River, near Beaver, during the year. At Catherine Creek, Deschutes River, Umpqua and Yaquina hatcheries, which are the property of the Game Commission, but not operated by them at this season of the year, the Fish Commission is

holding and feeding salmon in addition to capacity loads at all its own stations, in view of bringing about as wide a distribution of fish as possible.

This section of the Pacific Coast was visited by the most serious and longest cold snap recorded, during the month of December. During this time pipe lines fifteen inches below the ground, at Bonneville, were frozen. The creeks filled with ice and the temperature at Enterprise dropped to thirty-five degrees below zero. Regardless of the fact that the dreaded tapioca hail was in evidence, I am very pleased to report the Commission did not lose an egg or a fish as a result. Much credit is due the personnel of the field through its foresight and untiring effort in carrying through the enormous amount of stock on hand without loss.

I would recommend a further expansion of the work as funds become available, in order to meet the requirements of the industry. I would urge especially the establishment of more egg collecting stations and increasing the pond space throughout the field at least twenty-five per cent. After collecting data and thoroughly investigating the conditions on the Umpqua River, I find it will be essential to move the hatchery from Glide, at which point there is no water supply, to either a point on Rock Creek near the Game Commission's hatchery, or to the flat at the mouth of Steamboat Creek.

The season's collections were highly gratifying, as will be seen by referring to the table following.

Respectfully submitted,

HUGH C. MITCHELL,
Director of Hatcheries.

TABLE

DISTRICT NO. 1

Showing the number of eggs collected at the hatcheries operated by the State of Oregon tributary to the Columbia River during the year 1923:

	Spring	Fall	7 "		
Hatchery—	Chinook	Chinook	Sockeyes	Yanks	Totals
Bonneville		385,000			385,000
McKenzie12	2,085,028				12,085,028
Herman Creek		162,540	43,200		205,740
Willamette 7	7,260,000	********	*******		7,260,000
Santiam	5,837,587			*******	6,837,587
South Santiam	1,201,526				1,201,526
Wallowa	24,840			877,508	902,348
Cooperative Stations— Salmon, Idaho	1,824,030				4,824,030
Clackamas		*3,202,723			3,202,723
32	2,233,011	3,750,263	43,200	877,508	36,903,982

^{*500,000} of these eggs were shipped to Ketchikan, Alaska.

TABLE

DISTRICT NO. 2

Showing the number of eggs collected at the hatcheries operated by the State of Oregon on the Coast streams south of the Columbia River, during the year 1923:

Hatchery-	Spring Chinook	Fall Chinook	Silversides	Steelheads	Humpback	ks Totals
Nehalem		18,070		******	191,900	209,970
Gold Creek	2,394,600		3,679,000	*******	867,449	6,941,049
Alsea	3,199,113		6,295,604	4,506,200		14,000,917
Siuslaw					474,864	474,864
Umpqua	1,478,540		284,200			1,762,740
South Coos		6,840,500	3,606,000	******	402,515	10,849,015
	7,072,253	6,858,570	13,864,804	4,506,200	*1,936,728	34,238,555

^{*}These eggs were received from Alaska.

TABLE

DISTRICT NO. 1

Showing the number of fry liberated into the Columbia River and its tributaries during the year 1923 by the State of Oregon:

Hatchery—	Spring Chinook	Fall Chinook	Silversides	Sockeyes	Where Liberated
Bonneville	5,719,440		41,160		Tanner Creek
Klaskanine	1,506,119	1,046,914			Klaskanine
Herman Creek	1,706,520				Herman Creek
Oakridge	3,808,280	189,820			Salmon Creek
Santiam	1,490,203			*******	Stout Creek
Wallowa				951,991	Spring Creek
	14,230,562	1,236,734	41,160	951,991	

The above fry when liberated were from three to six inches in length.

TABLE

DISTRICT NO. 2

Showing the number of fry liberated into the waters of the Coast streams south of the Columbia River, by the State of Oregon, during the year 1923:

Hatchery—	Spring Chinook	Fall Chinook	Silver- sides	Steel- heads	Where Liberated
Nehalem	969,625			******	Nehalem River
Gold Creek	559,741		805,987		Trask River
Alsea	1,044,049	302,312	1,609,761	4,306,533	Alsea River
Siuslaw	1,000,000				Siuslaw River
Umpqua	994,848				Umpqua River
South Coos		3,013,810	2,869,610		So. Coos River
	4,568,263	3,316,122	5,285,358	4,306,533	

The above fry when liberated were from three to six inches in length.

TABLE

DISTRICT NO. 1

Showing the number of eggs collected at the hatcheries operated by the State of Oregon tributary to the Columbia River, during the year 1924:

	Spring	Fall			
Hatchery— C	Chinook	Chinook	Silversides	Sockeyes	Totals
Bonneville		3,929,000	32,000		3,961,000
McKenzie	,824,220		******	*******	13,824,220
Willamette 9,	,142,000				9,142,000
Santiam 8,	,694,672				8,694,672
South Santiam	,936,650		******		1,936,650
Klaskanine	354,400		48,000		402,400
Imnaha	313,460				313,460
Troy	525,000				525,000
Cooperative Stations—					
Clackamas		7,524,965		3,550,388	11,075,353
Kalama		2,500,000			2,500,000
34,	,790,402	13,953,965	80,000	3,550,388	52,374,755

TABLE

DISTRICT NO. 2

Showing the number of eggs collected at the hatcheries operated by the State of Oregon on the Coast streams south of the Columbia River, during the year 1924:

Hatchery—	Spring Chinook	Fall Chinook	Silversides	Steelheads	Totals
Nehalem		90,000			90,000
Gold Creek	960,850		1,630,000	1,569,000	4,159,850
Nestucca	4,446,880		*******		4,446,880
Alsea	2,605,220		7,132,000	2,789,894	12,527,114
Siuslaw	******	190,000			190,000
Umpqua	3,533,000				3,533,000
South Coos		3,268,500	3,956,500	1,014,500	8,239,500
	11,545,950	3,548,500	12,718,500	5,373,394	33,186,344

TABLE

DISTRICT NO. 1

Showing the number of fry liberated into the Columbia River and its tributaries during the year 1924 by the State of Oregon:

Hatchery—	Spring Chinook	Fall Chinook	Silver- sides	Steel- heads	Sockeyes	Where Liberated
Bonneville	7,592,980			159,500		Tanner Creek
McKenzie	4,133,541	******	*******	*******		Gate Creek
Klaskanine	1,653,054	441,946	929,989			Klaskanine Riv.
Herman Creek.	3,963,540				273,080	Herman Creek
Oakridge	8,180,515	******				Salmon Creek
Santiam	3,119,263					Stout Creek
Wallowa			1,019,900		5,054,230	Wallowa River
	28,642,893	441,946	1,949,889	159,500	5,327,310	

The above fry when liberated were from three to six inches in length.

TABLE

DISTRICT NO. 2

Showing the number of fry liberated into the waters of the Coast Streams south of the Columbia River, by the State of Oregon, during the year 1924:

Hatchery-	Spring Chinook	Fall Chinook	Silver- sides	Steel- heads	Hump- backs	Where Liberated
Nehalem		894,120			188,341	Salmonberry River
Gold Creek.	2,220,728	******	3,546,649	1,134,460	855,062	Trask River
Alsea	3,165,534		1,076,936	2,153,596		Alsea River
Siuslaw		761,819	1,591,424		423,607	Lake Creek
Umpqua	1,471,740	994,503	282,915			Umpqua River
South Coos.		5,913,050	1,237,950	858,100	370,985	South Coos River
Coquille		498,482	1,994,020			Coquille River
	6,858,002	9,061,974	9,729,894	4,146,156	1,837,995	

All the above fry when liberated, with the exception of Humpbacks and the Steelheads at Gold Creek, were from three to six inches in length.

TABLE

DISTRICT NO. 1

Showing egg takes at the various stations operated by the State of Oregon, in the Columbia River District, for the years 1918 to 1924, inclusive.

	1918	1919	1920	1921	1922	1923	1924
Bonneville							
Fall Chinook				895,000	491,400	385,000	
Silversides							32,000
Herman Creek							
Fall Chinook						162,540	
Sockeyes					303,800	43,200	
Wallowa							
Spring Chinook					100.000	24,840	
Yanks					103,000	877,508	
McKenzie							
Spring Chinook	. 13,712,330	5,896,076	9,014,000	7,064,905	5,692,164	12,085,028	13,824,220
Willamette							
Spring Chinook	.11,389,450	3,845,000	1,390,000	5,280,780	5,476,000	7,260,000	9,142,000
Santiam							
Spring Chinook	. 3,251,000	8,130,740	3,698,229	4,170,921	4,053,310	6,837,587	8,694,672
South Santiam							
Spring Chinook						1,201,526	1,936,650
Klaskanine							
Spring Chinook							354,400
Silversides							48,000
Imnaha							
Spring Chinook			*******				313,460
Troy							
Spring Chinook							525,000
	28,352,780	17,871,816	14,102,229	17,411,606	16,119,674	28,877,229	38,799,402

The above figures show actual egg takes at respective stations. Eggs received from outside stations under cooperative work are not included here.

SUMMARY SHOWING SEGREGATED VARIETIES

191	8 191	9 1920	1921	1922	1923	1924
Spring Chinook. 28,352						
Fall Chinook					,	, ,
Silversides Sockeyes				303,800	43,200	. ,
Yanks					. , -	

 $28,352,780\ 17,871,816\ 14,102,229\ 17,411,606\ 16,119,674\ 28,877,229\ 38,799,402$

TABLE-DISTRICT NO. 2

Showing Egg	takes at			operated b		of Orego	n, on the
Coast streams sou	ith of the	Columbia	River, for	the years 1	918 to 1924	, inclusive:	
Codor bri odino bo	1918	1919	1920	1921	1922	1923	1924
Nehalem							
Fall Chinook			25,000			18,070	90,000
		519,200	490,000				
			201,500				
Tillamook							
Fall Chinook		138,000	505,000				
Silversides	226,000						
Steelheads	760,000	1,252,000	1,438,000	959,000			
Gold Creek	•						
Spring Chinook.					65,000	2,394,600	960,850
Fall Chinook			340,000	525,000		******	
Silversides	748,200	745,000	1,378,000		825,000	3,679,000	1,630,000
Steelheads	195,000	229,000	195,000	126,000			1,569,000
Nestucca	,	,	,	,			
Spring Chinook.							4,446,880
Alsea							
Spring Chinook.					1,055,064	3,199,113	2,605,220
Fall Chinook	263,000	306,000	3,182,100	1,324,015	303,231		
Silversides	4,906,000	1,860,000	12,112,000	9,514,715	1,669,409	6,295,604	7,132,000
Steelheads		4,233,000	5,508,000	1,500,000	3,431,118	4,506,200	2,789,894
Siuslaw		, ,	, ,				
Fall Chinook							190,000
Silversides	165,000						
Steelheads	566,850		112,120				
Umpqua			,				
Spring Chinook.	6,020,460	4,142,620	4,027,570	2,598,855		1,478,540	3,533,000
						284,200	
South Coos						,	
Fall Chinook	3.787.000	1,081,500	2,221,500	2,366,500	3,200,000	6,840,500	3,268,500
	4,332,500		2,734,500	1,804,500	3,129,500	3,606,000	3,956,500
Steelheads							1,014,500
Coquille							
Silversides				1,450,000			
5	04 080 040	1 4 804 000	0.4.450.000	00 100 101	10 000 000	00 004 008	00 100 011

 $21,970,010\ 14,506,320\ 34,470,290\ 22,168,585\ 13,678,322\ 32,301,827,33,186,344$ The above figures show actual egg takes at respective stations. Eggs received from outside stations under cooperative work are not included here.

SUMMARY

SHOWING SEGREGATED VARIETIES

1918	1919	1920	1921	1922	1923	1924
Spring Chinook. 6,020,460	4,142,620	4,027,570	2,598,855	1,120,064	7,072,253	11,545,950
Fall Chinook 4,050,000						
Silversides 10,377,700						
Steelheads 1,521,850	5,714,000	7,454,620	2,585,000	3,431,118	4,506,200	5,373,394

21,970,010 14,506,320 34,470,290 22,168,585 13,678,322 32,301,827 33,186,344

RECAPITULATION OF EGGS COLLECTED AT STATIONS OPERATED EXCLUSIVELY BY STATE OF OREGON

Years From 1918 to 1924, Inclusive-Districts Nos. 1 and 2

1918 1919 1920 1921 1922 1923 1924
District No. 1..28,352,780 17,871,816 14,102,229 17,411,606 16,119,674 28,877,229 38,799,402
District No. 2..21,970,010 14,506,320 34,470,290 22,168,585 13,678,322 32,301,827 33,186,344

50,322,790 32,378,136 48,572,519 39,580,191 29,797,996 61,179,056 71,985,746

TABLE

Showing planting of fry in Columbia River District by Oregon Fish Commission:

1	1918	1919	1920	1921	1922	1923	1924
Variety							
Spring Chinook. 11,4	178,147	24,399,320	16,299,723	16,653,892	10,835,545	14,230,562	28,642,893
Fall Chinook 9,9	958,136		1,750,000	260,810	401,980	1,236,734	441,946
Steelheads 1,6	333,580	1,270,480	605,300	750,100	750,555		159,500
Silversides 4	474,039	1,284,734		4,230,885	4,206,940	41,160	1,949,889
Sockeye 2,7	731,823	3,199,800	600,000	4,063,970	467,000	951,991	5,327,310
26,2	275,725	30,154,334	19,255,023	25,959,657	16,662,020	16,460,447	36,521,538

TABLE

Showing planting of fry in the Coast streams south of the Columbia River by Oregon Fish Commission:

1 1011 001111111111111							
	1918	1919	1920	1921	1922	1923	1924
Variety	1020					2000	
Spring Chinook. 1	1,932,604	5,657,971	3,896,439	3,909,110	2,088,590	4,568,263	6,858,002
Fall Chinook 4	1,740,238	3,675,140	4,087,247	6,010,760	3,485,595	3,316,122	9,061,974
Steelheads		2,137,474	4,634,890	1,964,869	2,397,869	4,306,533	4,146,156
Silversides 4	1,082,168	7,856,035	2,775,785	12,983,836	6,419,855	5,285,358	9,729,894
Humpbacks							1,837,995
10	0,755,010	19,326,620	15,394,361	24,868,575	14,391,909	17,476,276	31,634,021

RECAPITULATION OF FRY LIBERATED INTO WATERS OF DISTRICT NO. 1 AND NO. 2

Years From 1918 to 1924, Inclusive

		1918	1919	1920	1921	1922	1923	1924
District	No.	126,275,725	30,154,334	19,255,023	25,959,657	16,662,020	16,460,447	36,521,538
District	No.	210,755,010	19,326,620	15,394,361	24,868,575	14,391,909	17,476,276	31,634,021
		37,030,735	49,480,954	34,649,384	50,828,232	31,053,929	33,936,723	68,155 559