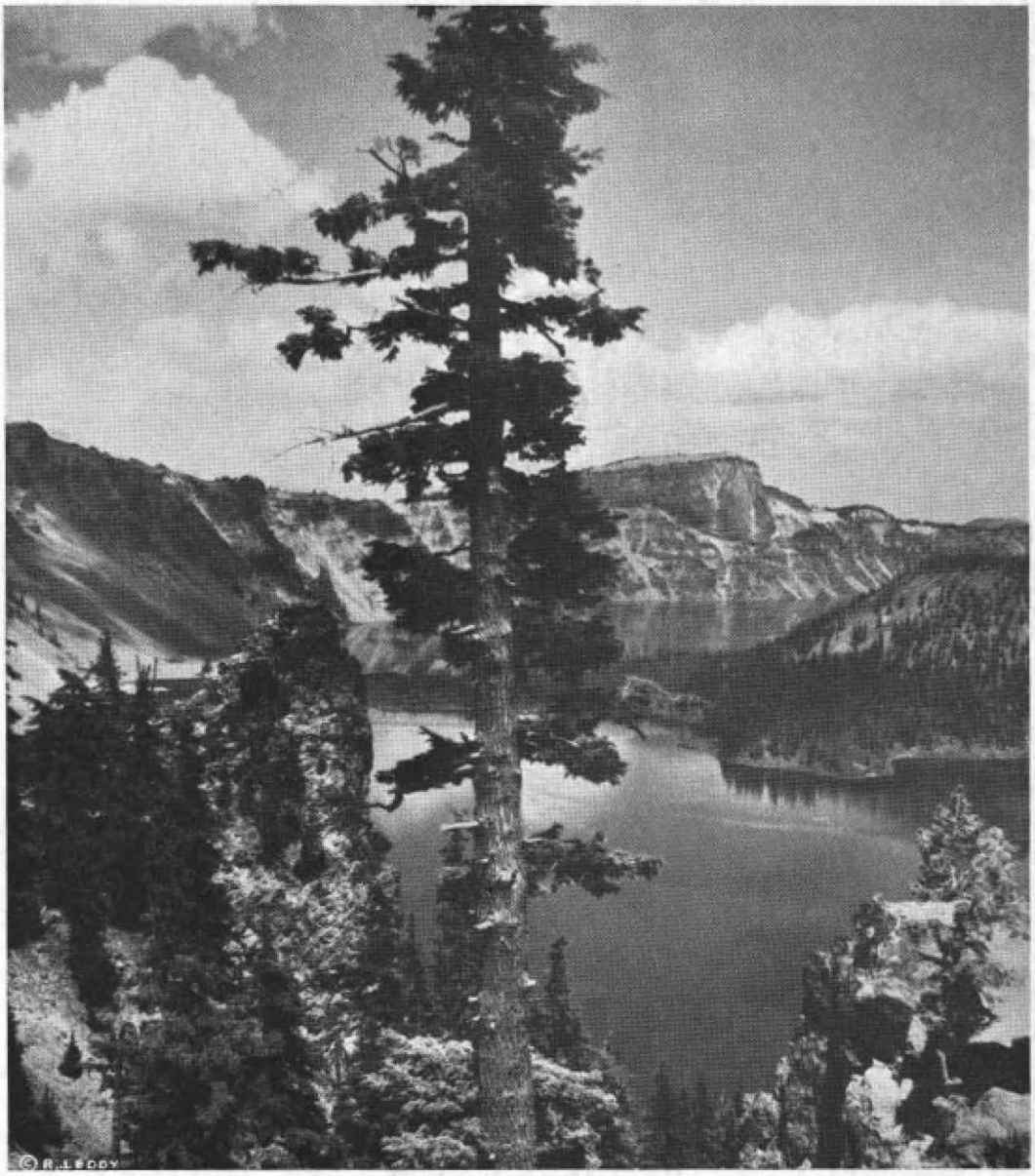
BIENNIAL REPORT OF THE FISH COMMISSION OF THE STATE OF OREGON, 1931



CRATER LAKE, STATE OF OREGON

BIENNIAL REPORT

OF THE

FISH COMMISSION

OF THE STATE OF OREGON

TO THE

GOVERNOR AND THE THIRTY-SIXTH LEGISLATIVE ASSEMBLY

1931

FISH COMMISSION OF THE STATE OF OREGON

Hon. C. A. LEINENWEBER, *Chairman*, Astoria
Hon. JOHN C. VEATCH, Portland
Hon. R. S. FARRELL, Portland
M. T. HOY, *Secretary and Master Fish Warden*

LETTER OF TRANSMITTAL

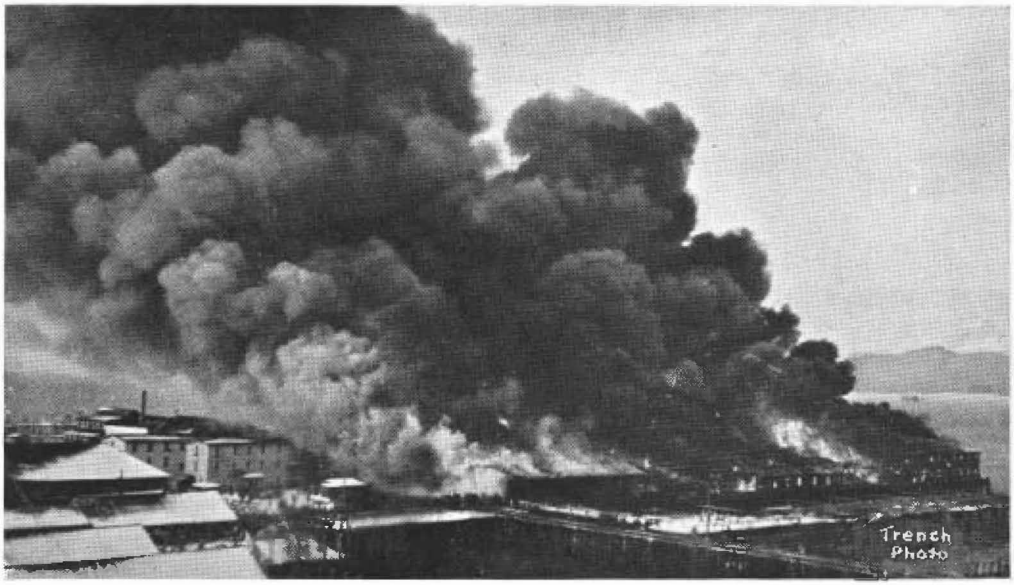
PORTLAND, OREGON, December 15, 1930.

TO HIS EXCELLENCY, THE GOVERNOR, AND THE MEMBERS
OF THE THIRTY-SIXTH LEGISLATIVE ASSEMBLY.

Gentlemen:

Herewith is transmitted the biennial report of the Fish Commission of the State of Oregon covering the period from December 1, 1928, to November 30, 1930.

FISH COMMISSION OF OREGON,
C. A. LEINENWEBER, *Chairman.*



THE BURNING OF THE PLANT OF THE SANBORN-CUTTING CO.,
ASTORIA, OREGON, IN 1930

This large cannery was among the first established on the Columbia River, and during the years it operated was instrumental in distributing salmon bearing Oregon labels in many countries of the world.

LETTER OF TRANSMITTAL

PORTLAND, OREGON, December 15, 1930.

To the
Honorable C. A. LEINENWEBER,
Honorable JOHN C. VEATCH,
Honorable R. S. FARRELL,

MEMBERS of the FISH COMMISSION of the STATE OF OREGON.

Gentlemen:

It is my pleasure to herewith submit to you the Financial Statement of the Master Fish Warden of the State of Oregon for the fiscal years of 1929 and 1930.

I have held the position of Master Fish Warden through the entire period covered by the attending Biennial Report. During that time I have been charged with the collection of all the revenues of the commission, but control only the expenditures for the patrol service and the office. All hatchery disbursements or other disbursements relating thereto have been made through the Director of the Department of Fish Culture.

During the two years just past, the financial conditions of the department, while somewhat improved over that of the 1927-28 biennium, have been such as to require a judicious and economical policy. Patrol service on the commercial streams of the state has not been noticeably increased. It has, however, been effective and a considerable revenue has resulted to the department through fines and from the sale of confiscated property in cases of conviction for commercial violations.

A new forty-five foot cabin patrol boat was constructed by the department early in 1930 for use on the lower Columbia river. This craft is well powered, contains every necessary equipment to make it practical and efficient, and should materially increase the effectiveness of patrol in that area. A used craft approximately thirty-five feet in length was purchased for temporary use on the middle and upper Columbia. While this craft gave good service during the past season, it will be necessary to replace it with a new boat before the end of the current biennium. Three patrol boats, which formerly were used in Columbia river patrol, but which had exceeded their period of usefulness, were disposed of at the best possible figure.

Conditions with respect to the observance of commercial laws in certain areas of the state should receive more attention during the approaching season. These areas, with the exception of one or two on the coast, are to be found inland, and it is obvious that the strict enforcement of statutes governing the activities of retailers, peddlers and other dealers will add materially to the revenues resulting through poundage fees, and at the same time greatly increase the amount of annual license fees. A closer patrol of the tributarial waters of our commercial streams in these inland areas would have an unbelievable effect in increasing the natural propagation. Therefore, I urgently recommend that additional patrol service be inaugurated in the areas and for the reasons above mentioned.

Respectfully submitted,

M. T. HOY,
Master Fish Warden.

Receipts, Hatchery Fund, District No. 1

	Dec. 1, 1928, to Nov. 30, 1929			Dec. 1, 1929, to Nov. 30, 1930		
	No.	Amount	Balance	No.	Amount	Deficit
Balance, December 1			$7,946.14	Deficit, December 1		$1,848.46
Gill-net Licenses	984	$7,380.00		922	$6,915.00	
Set-nets	233	873.75		181	678.75	
Traps	62	1,240.00		72	1,540.00	
Seines	44	2,104.50		43	2,130.60	
Trolls	31	77.50		42	105.00	
Boatpullers	495	495.00		387	387.00	
Retail Fish Dealers	538	2,690.00		579	2,895.00	
Wholesale Fish Dealers	51	102.00		63	126.00	
Salmon Canners	12	300.00		11	275.00	
Brokers	2	100.00		2	100.00	
Boat or Scows	98	196.00		82	164.00	
Bag-nets	104	104.00		394	394.00	
Crawfish	43	43.00		54	54.00	
Set Lines	50	50.00		61	61.00	
Transfers	34	34.00		35	35.00	
Crab	1	1.00		0	.00	
		$ 15,790.75			$15,860.35	
Poundage Fees, Salmon, Shad and Sturgeon		80,412.90			89,141.23	
Additional Fees on Clams and Crabs		36.65			.00	
Fines		2,372.05			2,213.90	
Sale of Confiscated Property		455.79			597.75	
Sundries		443.12			4,517.09	
		$99,511.26			$112,330.32	
Less 5 per cent deducted for Sinking Fund		4,975.55			5,616.51	
		$94,535.71			$106,713.81	
Money withdrawn from Sinking Fund and credited to H. F. No. 1		6,500.00	101,035.71		11,000.00	117,713.81
			$108,981.85			$115,865.35

Distribution of Salmon Propagation—Hatchery Fund, District No. 1

	Operation 1929	Construction 1929	Equipment 1929	Improvement 1929	Totals 1929
Bonneville Hatchery	$12,008.58	$1,993.65	$878.20	$285.55	$15,165.98
Klaskanine Hatchery	4,097.64	280.35	17.20	462.09	4,857.28
McKenzie Hatchery	5,011.77	719.85	112.98	.00	5,844.60
Willamette Hatchery	3,382.64	139.28	20.50	92.23	3,634.65
Wallowa Hatchery	5,286.65	3,916.34	343.79	238.12	9,784.90
Herman Creek Station	2,248.07	29.21	.00	.00	2,277.28
Santiam Hatchery	3,789.40	314.08	.00	44.35	4,147.83
South Santiam Hatchery	1,054.07	1,045.10	.00	.00	2,099.17
Willamette Egg Collecting Station	2,251.81	738.93	.00	.00	2,990.74
Clearwater, Idaho, Station	953.81	247.72	.00	.00	1,201.53
Salmon, Idaho, Station	129.79	.00	.00	.00	129.79
Breitenbush Station	1,438.71	619.98	35.95	.00	2,094.64
McKenzie Egg Collecting Station	3,024.65	679.82	50.00	.00	3,754.47
Lower McKenzie Feeding Station	.00	.00	.00	.00	.00
	$44,677.59	$10,724.31	$1,458.62	$1,122.34	$57,982.86

Distribution of Salmon Propagation—Hatchery Fund, District No. 1

	Operation 1930	Construction 1930	Equipment 1930	Improvement 1930	Totals 1930
Bonneville Hatchery	$12,539.35	$672.30	$57.88	$327.62	$13,597.15
Klaskanine Hatchery	4,068.15	71.67	9.20	167.87	4,316.89
McKenzie Hatchery	6,366.82	631.70	15.00	.00	7,013.52
Willamette Hatchery	3,243.25	.00	.00	110.64	3,353.89
Wallowa Hatchery	6,074.02	2,312.10	284.01	25.00	8,695.13
Herman Creek Station	2,579.17	147.35	.00	4.84	2,731.36
Santiam Hatchery	3,112.72	676.44	.00	161.86	3,951.02
South Santiam Hatchery	1,748.04	507.65	.00	.00	2,255.69
Willamette Egg Collecting Station	2,060.60	434.55	.00	11.00	2,506.15
Clearwater, Idaho, Station	.00	.00	.00	.00	.00
Salmon, Idaho, Station	61.05	.00	.00	.00	61.05
Breitenbush Station	1,849.28	509.04	21.38	.00	2,379.70
McKenzie Egg Collecting Station	88.97	23.24	.00	.00	112.21
Lower McKenzie Feeding Station	1,486.16	958.47	.00	.00	2,444.63
	$45,277.58	$6,944.51	$387.47	$808.83	$53,418.39

Disbursements, Hatchery Fund, District No. 1

	Dec. 1, 1928, to Nov. 30, 1929			Dec. 1, 1929, to Nov. 30, 1930		
Bonneville Hatchery	$15,165.98			$13,597.15		
Klaskanine Hatchery	4,857.28			4,316.89		
McKenzie Hatchery	5,844.60			7,013.52		
Willamette Hatchery	3,634.65			3,353.89		
Wallowa Hatchery	9,784.90			8,695.13		
Herman Creek Station	2,277.28			2,731.36		
Santiam Hatchery	4,147.83			3,951.02		
South Santiam Hatchery	2,099.17			2,255.69		
Willamette Egg Collecting Station	2,990.74			2,506.15		
Clearwater, Idaho, Station	1,201.53			.00		
Salmon, Idaho, Station	129.79			61.05		
Breitenbush Station	2,094.64			2,379.70		
McKenzie Egg Collecting Station	3,754.47			112.21		
Lower McKenzie Feeding Station	.00	$57,982.86*		2,444.63	$53,418.39*	
United States Government Cooperation		1,239.50			1,876.00	
Motor Vehicle a/c		2,025.89			1,871.42	
Investigations		893.65			3,003.55	
Distribution		463.16			284.35	
Refunds		89.46			234.88	
Fishways		39.33			50.21	
Master Fish Warden		2,056.00			1,925.40	
Director of Hatcheries		2,451.97			2,361.60	
Miscellaneous a/c						
Fish Food	4,403.63			6,686.98		
Industrial Insurance	945.63			927.14		
Films and Photographic Work	5.25			21.55		
Rewards	51.00			.00		
Biennial Reports	249.63			.00		
Premium on Bonds	55.50			55.50		
Reciprocal Fish Tax to Washington	16,474.35			13,046.27		
Reciprocal Fines to Game Commission	750.59			563.75		
Legal Expense: Case Peoples West-Coast Hydro-Electric Corporation	81.50			.00		
Ammunition	29.87			21.84		
Restoration Fund	103.52			109.55		
Confiscated Property	.00			36.00		
Interim Fish Committee	.00			421.57		
Fish Tags	.00			5.00		
Auto Insurance	.00			102.60		
Audit Secretary of State's Warrants	.00			15.06		
Boats	.00	23,150.47		8,285.03	30.297.84	
Patrol Service						
Salaries	9,550.04			12,253.88		
Employes' Expenses	737.30			1,614.58		
Meals and Lodging	.00			1,711.50		
Boat Rent	667.32			238.90		
Gasoline	659.48			905.39		
Oils and Supplies	489.77			890.82		
Repairs	894.79			265.74		
Expense	110.57			162.73		
Rent	202.00			252.45		
Equipment	62.75	13,374.02		239.33	18,535.32	
Commissioners a/c						
Salaries	130.00			85.00		
Expenses	134.05	264.05		170.45	255.45	
Office Expense						
Rent	902.00			1,008.00		
Salaries	4,319.35			4,183.72		
Supplies	148.72			150.55		
Postage Stamps	281.29			314.01		
Telephone and Telegraph	294.08			235.85		
Expense	192.67			136.67		
Auditor's Expenses	66.19			202.73		
Printed Supplies	454.47			437.70		
Equipment	141.18	6,799.95	$110,830.31	25.00	6,694.23	$120,808.64
Deficit, November 30			$1,848.46			$4,943.29
Outstanding Poundage Fees	$18,864.29			$17,279.76		

The above outstanding poundage fees accrued and were payable prior to November 30, 1930.

* Distribution of Salmon Propagation on opposite page.

Receipts, Hatchery Fund, District No. 2

	Dec. 1, 1928, to Nov. 30, 1929			Dec. 1, 1929, to Nov. 30, 1930		
	No.	Amount	Deficit	No.	Amount	Balance
Deficit, December 1			$590.35	Balance, December 1		$235.42
Gill-net Licenses	547	$4,102.50		479	$3,592.50	
Set-nets @ $3.75	1243	4,661.25		911	3,416.25	
Set-nets @ $23.75	64	1,520.00		35	831.25	
Seines	3	45.00		2	30.00	
Trolls	12	30.00		3	7.50	
Boatpullers	238	238.00		162	162.00	
Retail Fish Dealers	136	680.00		183	915.00	
Wholesale Fish Dealers	34	68.00		39	78.00	
Salmon Canners	3	75.00		1	25.00	
Shell Fish Canners	5	78.94		6	89.92	
Boat or Scows	36	72.00		26	52.00	
Bag-nets	11	11.00		7	7.00	
Clams	213	1,065.00		253	1,265.00	
Crabs	180	180.00		217	217.00	
Crawfish	1	1.00		0	.00	
Oysters	1	5.00		2	10.00	
Set Lines	0	.00		3	3.00	
Transfers	133	133.00		50	50.00	
		$12,965.69			$10,751.42	
Poundage Fees, Salmon, Shad and Sturgeon		38,692.30			29,644.31	
Additional Fees on Clams and Crabs		502.58			252.20	
Additional Fees on Oysters		.00			90.44	
Fines		1,343.60			1,053.75	
Sale of Confiscated Property		81.42			224.86	
Sundries		21.60			209.97	
		$53,607.19			$42,226.95	
Less 5 per cent deducted for Sinking Fund		2,680.36			2,111.34	
		$50,926.83			$40,115.61	
Money withdrawn from Sinking Fund and credited to H. F. No. 2		3,000.00	$53,926.83		7,000.00	$47,115.61
			$53,336.48			$47,351.03

Distribution of Salmon Propagation—Hatchery Fund, District No. 2

	Operation 1929	Construction 1929	Equipment 1929	Improvement 1929	Totals 1929
Nehalem Hatchery	$ 913.26	$ .00	$ .00	$ .00	$ 913.26
Trask River Hatchery	5,397.84	1,851.14	.00	55.83	7,304.81
Beaver Creek Hatchery	797.38	216.54	.00	.00	1,013.92
Yaquina River Hatchery	.00	.00	.00	.00	.00
Alsea River Hatchery	3,222.33	474.77	32.50	116.25	3,845.85
Siuslaw River Hatchery	2,095.31	614.36	143.27	.00	2,852.94
Umpqua River Hatchery	4,070.84	100.40	63.75	.00	4,234.99
Coos River Hatchery	4,157.38	2,259.33	138.17	85.00	6,639.88
Coquille River Hatchery	928.56	14.00	.00	.00	942.56
Rogue River Hatchery	928.37	.00	.00	.00	928.37
Scottsburg Station	147.46	30.14	.00	.00	177.60
	$22,658.73	$5,560.68	$377.69	$257.08	$28,854.18

Distribution of Salmon Propagation—Hatchery Fund, District No. 2

	Operation 1930	Construction 1930	Equipment 1930	Improvement 1930	Totals 1930
Nehalem Hatchery	$ 1,083.80	$ .00	$ .00	$ .00	$1,083.80
Trask River Hatchery	5,305.40	992.25	.00	116.12	6,413.77
Beaver Creek Hatchery	280.00	254.25	.00	.00	534.25
Yaquina River Hatchery	370.75	.00	.00	.00	370.75
Alsea River Hatchery	2,332.72	1,619.65	.00	73.49	4,025.86
Siuslaw River Hatchery	1,425.68	1,244.15	.00	17.62	2,687.45
Umpqua River Hatchery	4,006.12	353.12	.00	.00	4,369.24
Coos River Hatchery	3,188.78	536.45	20.21	155.50	3,900.94
Coquille River Hatchery	216.00	.00	.00	.00	216.00
Rogue River Hatchery	860.00	17.43	.00	.00	877.43
Scottsburg Station	100.00	.00	.00	.00	100.00
	$19,169.25	$5,017.30	$20.21	$362.73	$24,569.49

Disbursements, Hatchery Fund, District No. 2

	Dec. 1, 1928, to Nov. 30, 1929			Dec. 1, 1929, to Nov. 30, 1930		
Nehalem Hatchery	$ 913.26			$1,083.80		
Trask River Hatchery	7,304.81			6,413.77		
Beaver Creek Hatchery	1,013.92			534.25		
Yaquina River Hatchery	.00			370.75		
Alsea River Hatchery	3,845.85			4,025.86		
Siuslaw River Hatchery	2,852.94			2,687.45		
Umpqua River Hatchery	4,234.99			4,359.24		
Coos River Hatchery	6,639.88			3,900.94		
Coquille River Hatchery	942.56			216.00		
Rogue River Hatchery	928.37			877.43		
Scottsburg Station	177.60	$28,854.18*		100.00	$24,569.49	
U. S. Government Cooperation		644.25			22.75	
Investigations		1,689.05			307.90	
Motor Vehicle a/c		2,189.89			1,405.29	
Distribution		303.49			77.14	
Refunds		16.62			18.04	
Master Fish Warden		1,913.20			2,011.20	
Director of Hatcheries		2,295.90			2,304.05	
Miscellaneous a/c						
Reciprocal fines to Game Commission	1,410.73			713.47		
Fish Food a/c	1,212.82			698.72		
Industrial Insurance	491.91			440.61		
Biennial Reports	249.62			.00		
Premium on Bonds	55.50			55.50		
Films and photographic work	.50			2.01		
Damages to Sam Webb	650.00			.00		
Closing Streams	116.90			.00		
Restoration Fund	35.82			39.18		
Legal Expense	.00			292.97		
Audit Secretary of State's Warrants	.00			9.52		
Auto Insurance	.00			39.15		
Boats	.00			4,000.00		
Interim Fish Committee	.00			182.10		
Confiscated Property	.00	4,223.80		12.00	6,485.23	
Patrol Service						
Salaries	2,895.24			4,778.13		
Employes' Expenses	835.82			367.89		
Meals and Lodgings	.00			493.45		
Boat Rent	64.75			40.00		
Gasoline	37.55			53.73		
Oils and Supplies	122.62			22.61		
Repairs	117.10			38.95		
Expense	9.35			24.35		
Rent	25.00			.00		
Equipment	65.00	4,172.43		.00	5,819.11	
Commissioners a/c						
Salaries	185.00			145.00		
Expenses	134.95	319.95		80.80	225.80	
Office Expense						
Rent	924.00			1,008.00		
Salaries	4,325.00			4,152.50		
Supplies	71.55			15.61		
Postage Stamps	237.75			192.02		
Telephone and Telegraph	240.94			312.56		
Expense	140.14			39.12		
Auditor's Expenses	97.73			247.78		
Printed Supplies	391.10			480.95		
Equipment	50.09	6,478.30	$53,101.06	25.00	6,473.54	$49,719.54
Balance, November 30			$ 235.42	Deficit Nov. 30		$ 2,368.51
Outstanding Poundage Fees		$12,202.92			$17,209.55	

The above outstanding poundage fees accrued and were payable prior to November 30, 1930.

* Distribution of Salmon Propagation on opposite page.

Financial Statement, Year Ending November 30, 1929
Seal and Sealion Fund—District No. 1

RECEIPTS

Balance, November 30, 1928				$ 14.51
984 Gill-Net certificates	@	$ 2.50	$2,460.00	
113 Set-Net certificates	@	2.50	282.50	
31 Troll certificates	@	2.50	77.50	
62 Trap certificates	@	10.00	620.00	
42 Seine certificates	@	20.00	840.00	
12 Salmon Canner certificates	@	50.00	600.00	$4,880.00
Less five per cent deducted for Sinking Fund, according to Section 21, Chapter 295, Laws 1923				243.99 $4,636.01
				$4,650.52

DISBURSEMENTS

BOUNTIES

		Number Seals	Number Sealions	Amount	
Anderson, Albert	Clatskanie	1		$ 10.00	
Bailey, A. L.	Altoona, Washington	3		30.00	
Bjornsgard, Wesley M.	Astoria	4		40.00	
Chamberlain, W. A.	Astoria	2		20.00	
Demacon, L. J.	Oregon City	1		10.00	
Elliott, J. H.	Astoria	3		30.00	
Erickson, Albert	Astoria	86		860.00	
Erickson, Edward C.	Knappa	8		80.00	
Erickson, Emil	Astoria	3		30.00	
Erickson, Oscar	Astoria	3		30.00	
Fisher, Kenneth	Brookfield, Washington	1		10.00	
Fox, J. C.	Astoria	12		120.00	
Grasser, George	Astoria	1		10.00	
Halvorsen, T.	Astoria	1		10.00	
Henriksen, Elias	Clatskanie	1		10.00	
Jensen, Ole	Astoria	30		300.00	
Kincaid, Ralph	Corbett	6		60.00	
Knudsen, Cornelius	Astoria	1		10.00	
Kropsu, Elmer	Astoria	11		110.00	
Larson, Otto	Astoria	5		50.00	
Lewis, Frank Alvin	Astoria	12		120.00	
Lindstrom, Arthur	Astoria	12		120.00	
Long, G. E.	Oregon City	----	209	1,567.50	
Mills, J. H.	Astoria	8		80.00	
Oppel, John A.	Knappa	9		90.00	
Peterson, Archie	Astoria	1		10.00	
Puustinen, Onni	Svensen	2		20.00	
Puustinen, Toivo	Svensen	59		590.00	
Roth, E. B.	Astoria	1		10.00	
Smith, David T.	Knappa	5		50.00	
Story, George	Oregon City	1		10.00	
Whitten, Ernest	Altoona, Washington	5		50.00	
		298	209	$4,547.50	
Printing				17.58	$4,565.08
Balance on hand November 30, 1929					$ 85.44

SUMMARY

209 Sealions (1927 claim)	@ $ 7.50 bounty	$1,567.50	
298 Seals	@ 10.00 bounty	2,980.00	
		$4,547.50	

Financial Statement, Year Ending November 30, 1929
Seal and Sealion Fund—District No. 2

RECEIPTS

Balance, November 30, 1928					$ 14.51
547 Gill-Net certificates	@	$ 2.50	$1,367.50		
466 Set-Net certificates	@	2.50	1,165.00		
12 Troll certificates	@	2.50	30.00		
3 Seine certificates	@	20.00	60.00		
3 Salmon Canner certificates	@	50.00	150.00	$2,772.50	
Less five per cent deducted for Sinking Fund, according to Section 21, Chapter 295, Laws 1923				138.60	$2,633.90
					$2,648.41

DISBURSEMENTS

BOUNTIES

		Number Seals	Number Sealions	Amount	
Anderson, Victor	Wedderburn	7		$ 70.00	
Archie, William	Bay City	7		70.00	
Brazil, David	Florence	1		10.00	
Burns, George	Reedsport	1		10.00	
Clendening, N.	Empire	65	1	650.50	
Dashiell, Thos. J.	Brookings	4		40.00	
Eickworth, Lorance W.	Empire	3		30.00	
Gilmore, D. B.	Harbor	1		10.00	
Hayes, S. M.	Gold Beach	1		10.00	
Hillar, Paul	Empire	1		10.00	
Humbert, Roy	Eastside	3		30.00	
Ingram, A. C.	Gold Beach	1		10.00	
Johns, Jacob	Gardiner	1		10.00	
Johnson, Edwin	Eugene	1		10.00	
Landi, L.	Wedderburn	1		10.00	
McKenzie, R. G.	Port Orford	1		10.00	
Nelson, A. F.	Tillamook	1		10.00	
Olsen, Henry J.	Netarts	3	4	32.00	
Reekman, E. H.	Harbor	2		20.00	
Richardson, Earl L.	Manzanita Beach	1		10.00	
Soper, Ed.	Gold Beach	1		10.00	
Van Pelt, Harry H.	Harbor	23		230.00	
Whitney, Harry H.	North Bend	2		20.00	
Wilson, Hedrick	Gold Beach	1		10.00	
Wolfe, O.C.	Waldport	1		10.00	
Yerian, R. B.	Winant	1		10.00	
		135	5	$1,352.50	
Salary				75.00	
Gas and Ammunition				6.32	
Printed Supplies				47.03	
Refund				2.50	$1,483.35
Balance on hand November 30, 1929					$1,165.06

SUMMARY

135 Seal bounties, @ $10.00		$1,350.00
5 Sealion bounties, @ $ .50		2.50
		$1,352.50

Financial Statement, Year Ending November 30, 1930
Seal and Sealion Fund—District No. 1

RECEIPTS

Balance, November 30, 1929					$ 85.44
922 Gill-Net certificates	@	$ 2.50	$2,305.00		
85 Set-Net certificates	@	2.50	212.50		
42 Troll certificates	@	2.50	105.00		
72 Trap certificates	@	10.00	720.00		
42 Seine certificates	@	20.00	840.00		
11 Salmon Canner certificates	@	50.00	550.00	$4,732.50	
Less five per cent deducted for Sinking Fund, according to Section 21, Chapter 295, Laws 1923				236.64	4,495.86
					$4,581.30

DISBURSEMENTS

BOUNTIES

		Number Seals	Amount	
Anderson, Albert	Clatskanie	1	$ 10.00	
Andrews, Perry	Warrenton	1	10.00	
Anundi, Wm.	Clatskanie	1	10.00	
Archer, Robt. D.	Portland	1	10.00	
Berglund, B.	Cathlamet	1	10.00	
Bjornsgaard, E. C.	Astoria	2	20.00	
Boubel, W. F.	Portland	19	190.00	
Brooks, F. B.	Altoona	5	50.00	
Campbell, Raymond J.	Astoria	2	20.00	
Chamberlain, Clifford	Astoria	1	10.00	
Dicklich, Pete	Oregon City	1	10.00	
Ellis, W.	Astoria	1	10.00	
Erickson, Albert	Astoria	99	990.00	
Erickson, E. C.	Knappa	2	20.00	
Fischer, M. J.	Brookfield	23	230.00	
Gates, Chas.	Oregon City	3	30.00	
Goska, Joe F.	Knappa	2	20.00	
Halvorsen, T.	Astoria	4	40.00	
Johanson, Sven	Astoria	1	10.00	
Johnson, Carl G.	Knappa	1	10.00	
Knudsen, Cornelius	Astoria	2	20.00	
Kropsu, Elmer	Astoria	24	240.00	
Larson, Otto	Astoria	1	10.00	
Lindstrom, Arthur	Astoria	15	150.00	
Miles, Ben F.	Astoria	3	30.00	
Miles, C. R.	Astoria	9	90.00	
Miles, J. H.	Astoria	6	60.00	
Nizich, Joe	Portland	1	10.00	
Oppel, John	Knappa	18	180.00	
Penttila, Armas	Brownsmead	2	20.00	
Penttila, Ilo	Brownsmead	4	40.00	
Pettersen, Raymond	Astoria	4	40.00	
Pesonen, Paul	Astoria	1	10.00	
Pulliam, Earl	Corbett	7	70.00	
Puustinen, Onni	Svensen	3	30.00	
Puustinen, Toivo	Svensen	63	630.00	
Puustinen, Wm.	Svensen	11	110.00	
Reinikka, Jack	Astoria	1	10.00	
Rickert, W. J.	Crow	2	20.00	
Riddle, W. H.	Seaside	20	200.00	
Sarajarvi, Alex	Astoria	1	10.00	
Sering, L.	Portland	2	20.00	
Smith, David T.	Knappa	10	100.00	
Whitten, Ernest	Willamette	3	30.00	
Winegar, A. D.	Cushman	16	160.00	$4,000.00
		400		
Balance on hand November 30, 1930				$ 581.30

SUMMARY

400 Seals @ $10.00 bounty $4,000.00

Financial Statement, Year Ending November 30, 1930
Seal and Sealion Fund—District No. 2

RECEIPTS

Balance November 30, 1929				$1,165.06
479 Gill-Net certificates	@	$2.50	$1,197.50	
332 Set-Net certificates	@	2.50	830.00	
3 Troll certificates	@	2.50	7.50	
2 Seine certificates	@	20.00	40.00	
1 Canner certificate	@	50.00	50.00	
				$2,125.00
Less five per cent deducted for Sinking Fund, according to Section 21, Chapter 295, Laws 1923				106.25
				$2,018.75
				$3,183.81

DISBURSEMENTS

BOUNTIES

		Number Seals	Number Sealions	Amount
Anderson, George	Cutler City	1		$ 10.00
Anderson, Joe	Gold Beach	1		10.00
Archie, William	Bay City	6		60.00
Barto, B. F.	Otis	1		10.00
Barton, P. J.	Bay City	3		30.00
Benson, Charles	Florence	2		20.00
Bohnhoff, Harry	Winchester Bay	1		10.00
Boubel, Wm. F.	Portland	25		250.00
Bray, John B.	Sixes	5		50.00
Brown, Michael	Westlake	16		160.00
Calkins, E. G.	Otis	4		40.00
Clark, Geo.	Otis	1		10.00
Collins, Robert	Portland	1		10.00
Conrad, S. D.	Reedsport	6		60.00
Cook, John	Tillamook	1		10.00
Curtis, Jack	Depot Bay	1		10.00
Eastman, C. A.	Reedsport	1		10.00
Eickworth, Lorance W.	Empire	18		180.00
Fidler, H. W.	Taft	1		10.00
Fidler, J. J.	Astoria	1		10.00
Gay, E. L.	North Bend	5		50.00
Gentry, Loyd	Otis	1		10.00
Hall, W. J.	Taft	1		10.00
Hansen, N. C.	Wedderburn	1		10.00
Harkins, C. B.	Empire	1		10.00
Hillar, W. M.	Empire	2		20.00
Hinckley, G. R.	Brookings	1		10.00
Hogue, Chas. C.	Gold Beach	1		10.00
Hoskins, C. H.	Tillamook	1		10.00
Makinster, Alvin	Tillamook	1		10.00
Miller, Dillon W.	Ophir	18	1	180.50
McKinley, H. R.	Tillamook	1		10.00
Olsen, Henry J.	Netarts	15		150.00
Rice, F. E.	Portland	1		10.00
Riefenberg, S. I.	Bay City	1		10.00
Roberts, B. O.	Reedsport	3		30.00
Robosky, M.	Bay City	1		10.00
Rochelle, E. B.	Florence	1		10.00
Smith, Frank W.	Brookings	1		10.00
Swanson, Chas. H.	Lakeside	1		10.00
Vanderpool, Alfred	Garibaldi	1		10.00
Van Pelt, Harry	Harbor	7		70.00
Walker, Sydney A.	Pistol River	1		10.00
Wilson, Charles G.	Gold Beach	1		10.00
Winegar, A. D.	Cushman	151		1,510.00
Wyman, Albert	North Bend	2		20.00
		317	1	$3,170.50
Printing				5.34
				$3,175.84
Balance on hand, November 30, 1930				$ 7.97

SUMMARY

317 Seal bounties	@ $10.00		$3,170.00
1 Sealion bounty	@ .50		.50
			$3,170.50

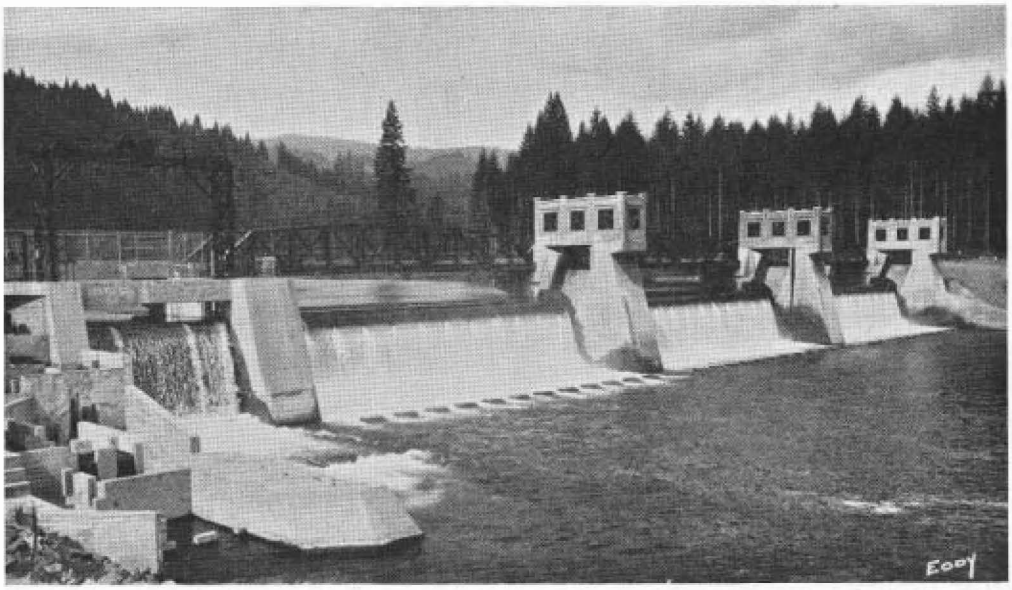
Unpaid Seal and Sealion Bounties in District No. 2
Year Ending November 30, 1930

		Seals	Sealions	
Brown, Michael	Westlake	34		$ 340.00
Carns, Archie	Reedsport	128	2	1,281.00
Clendening, N.	Empire	41		410.00
Johnson, Milo S.	Florence	1		10.00
Smith, William	Florence	1		10.00
Winegar, A. D.	Cushman	159		1,590.00
		364	2	$3,641.00

Hundreds of scalps from seals taken or killed by expert hunters are presented to the department annually for a bounty. At present the payment of a $10 bounty per scalp is mandatory upon the department. This amount is exorbitant and results yearly in the total depletion of the seal and sealion fund. Past experience undeniably demonstrates the fact that the satisfactory protection of both the salmon and the fishing gear in our rivers and bays may be accomplished by the employment of local hunters at opportune times during the open commercial fishing season.

SINKING FUND ACCOUNTS

	Balance on hand November 30, 1929	Balance on hand November 30, 1930
Hatchery Fund, District No. 1	$9,007.44	$3,890.32
Hatchery Fund, District No. 2	5,316.06	1,652.35
Seal and Sealion	869.50	



CITY OF EUGENE HYDRO-ELECTRIC POWER DAM, MCKENZIE RIVER

Hydro-electric Dam on McKenzie River

The only hydro-electric dam of any great importance completed in the state of Oregon during the past two years is the one constructed by the city of Eugene. This unit, which is located about twenty-eight miles from Eugene on the McKenzie river, was built by the city water board. A twenty-foot dam impounds water which passes through a canal, the intake of which is 200 feet wide, for use at the electric plant situated approximately three miles downstream.

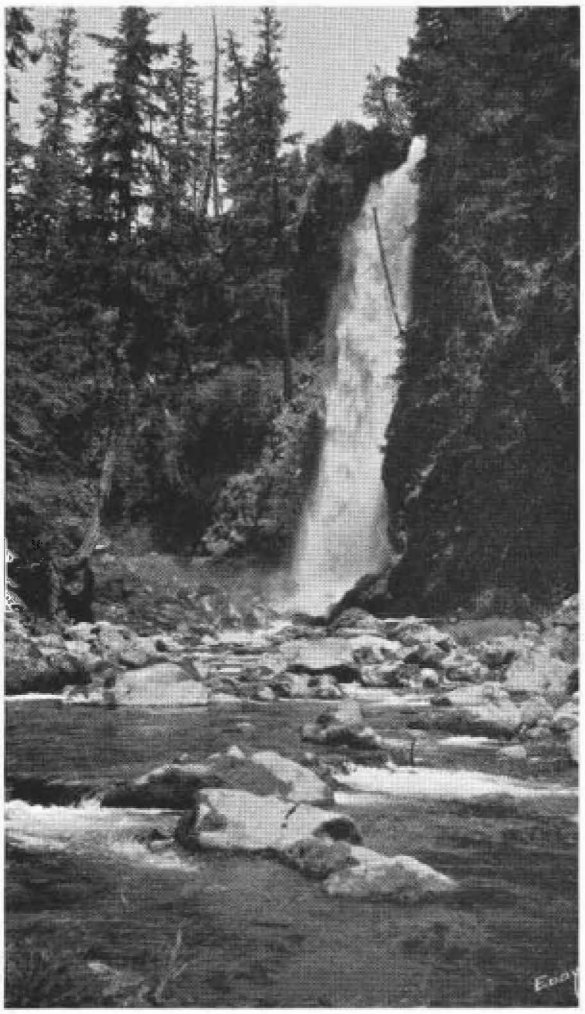
Due to the importance of the McKenzie river in the Columbia river salmon propagation system, every effort was made to minimize the damage which might be done by this obstruction to the salmon run. It was necessary to construct an adequate passageway over the obstruction for the ascending salmon. The canal also had to be screened to prevent the descending seaward migrants from passing into the power turbines. The fisways, consisting of pools approximately ten feet square, each with a surface area of 100 square feet, were designed as integral units of the structure. The rise or ascent of the fishways was of a degree that afforded an easy swimming grade approximately one foot rise in ten.

The type of screen utilized for the canal was somewhat of an innovation from any of the usual screens used under similar conditions. An oscillating chain screen, which is believed to be the first of its kind used in a diversion of major importance, was installed. The chains, composing the main part of the screen, were suspended from a steel bar in pairs at intervals of one foot and extended to the bottom of the canal. An electric motor was used to impart an eccentric motion to the screen by actuating a steel cable from which the entire unit was suspended. A guard frame of latticed steel construction was put in on the upstream side to protect the screen and prevent any sort of debris from entering the canal.

To test the effectiveness of the fishways during the first season's operation, the Fish Commission permitted upwards of three thousand adult salmon to pass through the impounding racks at Hendricks bridge. Employes of the Eugene water board and agents of the Commission made daily observations of the fishways, and the ascending salmon were able to make the passage over the dam in a satisfactory and unhampered manner. While similar observa-

tions of the operation of the movable chain screen did not indicate that all migrants were prevented from entering the canal, the proportion of the total which was successfully diverted makes one feel confident that, after a few minor changes, the efficiency will equal expectations.

During the construction of this dam, and throughout the period prior to beginning construction, when fishway plans were being submitted for approval of the Fish Commission, the officials of the city of Eugene water board and their engineers cooperated to the fullest extent.



MILL CREEK FALLS
Upper Rogue River near Prospect, Oregon

They were perfectly willing at any time to modify or change their tentative plans for the entire structure to meet with any suggestions or requirements of the Fish Commission which would give additional protection to the salmon and other fishes of the McKenzie river, or which would tend to make the passageway over the obstruction more efficient.

The Fish Commission, in making every effort to protect and provide a safe passage for salmon and other fishes, both up and down over this obstruction, was merely following out an adopted policy pertaining to hydro-electric or irrigation development. Any application to the State Engineer for a permit covering hydro-electric or irrigation projects on any of the streams in the state of Oregon, frequented by salmon and other food fish, is protested by the department until plans are submitted and approved which provide for adequate passageway over such obstructions. For example, among other protests the Fish Commission recently filed an objection with the State Engineer to the diversion, for irrigation purposes, of the waters of Mill creek, which is pictured on this page. This falls will be recognized by many as a familiar scenic falls on the Crater Lake Highway below Prospect.

Pack of Canned Salmon on the Columbia River From the Inception of the Industry to 1927

Year	Number of Canneries	Chinook		Blueback		Silverside		Dog or Chum		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	335,704	1,946,087	57,345	290,069	.....	.....	.....	.....	42,825	171,300	435,774	2,407,456
1891	22	353,907	2,038,566	15,482	284,242	.....	.....	.....	.....	29,564	118,156	398,953	2,440,964
1892	24	344,267	1,996,388	66,547	372,909	4,176	$20,880	.....	.....	72,348	288,892	487,338	2,679,069
1893	24	288,773	1,559,374	30,459	152,295	29,107	116,428	2,311	$6,933	65,226	260,904	415,876	2,095,934
1894	24	351,106	1,896,976	43,814	224,430	42,758	171,032	.....	.....	52,422	209,688	490,100	2,501,126
1895	24	444,909	2,428,658	18,015	86,523	99,601	329,683	22,493	62,591	49,678	203,542	634,696	5,110,997
1896	24	370,943	1,804,511	16,983	81,518	44,108	141,145	.....	.....	49,663	198,652	481,697	2,261,826
1897	22	432,753	1,804,221	12,972	51,888	60,850	197,762	.....	.....	46,146	165,440	552,721	2,219,311
1898	23	329,566	1,490,394	66,670	300,015	65,431	222,465	.....	.....	26,277	60,352	487,933	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	1,777,975
1900	16	262,392	1,821,258	13,162	92,184	44,925	202,163	17,696	63,706	20,597	102,985	358,772	2,282,296
1901	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	390,183	1,942,660
1902	14	270,380	1,428,743	17,037	86,465	10,532	44,732	10,401	41,604	8,593	42,965	317,143	1,644,509
1903	16	301,762	1,610,614	8,383	42,867	12,181	49,869	10,000	37,500	7,251	36,255	339,577	1,777,105
1904	20	320,378	1,944,690	12,911	78,048	31,254	118,357	20,693	52,691	9,868	48,892	395,104	2,242,678
1905	19	327,106	1,962,636	7,768	46,608	26,826	114,011	25,751	65,206	9,822	49,110	397,273	2,237,571
1906	19	311,334	1,868,007	7,816	54,712	41,446	124,338	27,802	69,505	6,500	32,500	394,898	2,149,062
1907	19	258,433	.....	5,504	.....	31,757	.....	22,556	.....	5,921	.....	324,171	1,763,490
1908	14	210,096	.....	8,581	.....	31,432	.....	16,884	.....	10,726	.....	255,341	1,380,708
1909	15	162,131	1,203,546	*27,908	214,561	42,178	185,070	24,542	57,115	17,283	99,796	†274,087	1,760,088
1910	15	244,285	1,882,137	6,234	34,287	68,922	363,688	66,538	232,883	5,436	31,302	391,415	2,544,198
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	3,052,164
1912	15	220,517	1,988,526	8,210	85,384	31,842	177,248	15,699	46,590	6,958	22,108	285,666	2,319,856
1913	15	192,116	1,664,670	11,152	93,677	40,969	175,412	13,303	29,486	8,939	49,142	266,479	2,012,387
1914	17	289,464	2,573,502	35,311	376,924	69,769	380,666	49,285	205,541	10,792	59,356	454,621	3,595,989
1915	19	406,486	3,694,361	5,459	56,707	33,336	173,234	86,530	251,632	26,723	129,358	558,534	4,305,292
1916	20	395,166	3,572,203	3,790	27,288	52,084	335,114	77,766	307,483	18,999	118,987	547,805	4,361,075
1917	20	403,637	5,023,529	7,968	111,552	64,299	700,680	53,659	386,596	23,783	292,538	555,218	6,530,939
1918	20	400,952	5,222,983	37,833	605,528	98,145	1,072,843	29,846	215,669	24,605	350,071	591,381	7,466,924
1919	21	392,125	5,455,550	7,268	145,360	90,728	1,142,767	75,493	541,989	14,414	205,254	580,028	7,490,920
1920	22	420,467	5,661,580	2,617	62,808	27,024	257,806	18,792	99,564	12,645	116,859	481,545	6,198,617
1921	20	267,582	3,761,321	6,045	120,900	34,381	233,372	4,821	19,791	10,142	68,266	323,241	4,203,649
1922	23	237,230	3,724,393	30,743	614,860	90,437	633,935	8,844	47,130	24,920	186,675	392,174	5,206,993
1923	23	289,586	4,967,657	38,309	766,180	101,554	673,954	25,508	135,168	25,968	187,965	480,925	6,730,924
1924	22	293,716	4,508,236	7,366	129,840	112,308	992,865	57,748	303,356	29,734	285,107	500,872	6,219,404
1925	21	350,809	5,423,129	5,650	106,220	113,554	1,488,855	55,812	272,398	14,637	177,866	540,452	7,468,468
1926	21	295,302	4,744,113	21,736	434,720	97,142	1,027,597	32,853	181,216	32,690	356,418	479,723	6,744,064
1927	22	332,479	5,559,202	6,699	147,378	83,422	957,202	67,916	425,240	29,700	311,070	520,216	7,400,091
1928	24	251,404	4,355,218	4,814	100,131	49,136	478,355	124,953	747,619	16,339	222,139	446,646	5,903,462
1929	21	242,938	4,234,214	10,072	181,296	90,684	917,561	54,619	314,928	23,804	257,025	422,117	5,905,024
1930	20	281,346	4,092,810	9,823	194,460	110,430	1,156,042	11,371	43,324	16,535	171,541	429,505	5,658,177
												26,360,667	$203,588,350

* Of these, 2,846 cases, valued at $23,203, were packed with Sockeyes brought from Puget Sound.
† 55 cases of Humpbacks, valued at $132, were also packed with Humpbacks brought from Puget Sound.
(We are able to show the above table including the 1930 figures through the courtesy of the Pacific Fisherman.)

BIENNIAL REPORT

OF THE

Department of Fish Culture

OF THE STATE OF OREGON

TO THE

GOVERNOR AND THE THIRTY-SIXTH LEGISLATIVE ASSEMBLY

1931

FISH COMMISSION *of the* STATE OF OREGON

Hon. C. A. LEINENWEBER, *Chairman,* Astoria
Hon. JOHN C. VEATCH, Portland
Hon. R. S. FARRELL, Portland

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

UMPQUA RIVER HATCHERY BUILDING AND DWELLING, ROCK CREEK, DOUGLAS COUNTY

LETTER OF TRANSMITTAL

PORTLAND, OREGON, December 15, 1930.

To the
Honorable C. A. LEINENWEBER,
Honorable JOHN C. VEATCH,
Honorable R. S. FARRELL,
MEMBERS of the FISH COMMISSION of the STATE OF OREGON:

Gentlemen:

Elsewhere in this report is a very comprehensive history of the fish cultural work in this state, and it is only necessary to say here that the policies and plans adopted in 1927 and 1928 were continued throughout this past biennium with even better results, at costs somewhat reduced from those given in detail in the 1927 and 1928 report.

During the past two years much has been accomplished in the form of expansion by increasing pond systems at the Bonneville, North Santiam, South Santiam, McKenzie, Trask, Siuslaw and Coos Stations. A new feeding station on Cogswell Creek near Leaburg was established, and is being operated in order to care for the surplus stock in the McKenzie River Basin. New hatching houses were built at the Coos River and Siuslaw Stations. A very nice dwelling for the man in charge of the Wallowa Station was also completed this year. Many minor repairs and improvements, in an endeavor to increase efficiency, improve living conditions for employees, and add to the general attractiveness of the various stations, have been made throughout the field.

The establishment of fish cultural stations on the North Fork of the John Day and on the Deschutes River near Oak Springs would add greatly to the Commission's output of fingerlings. The geographical position of the proposed stations is such as to make them of inestimable value, as spring run salmon are known to frequent both rivers. I would respectfully recommend the immediate development of these projects, as well as the establishment of a central hatchery on the Roosevelt Highway near the Coos-Curry line for the purpose of stocking all streams south of the Coquille River.

I would further urge the construction and operation of two cold storage plants in addition to the one now at Bonneville. Stations located to serve adjacent hatcheries and feediing stations should be selected. Providing and preserving approximately 400 tons of food for fry and fingerlings, which is the amount required annually, has become a problem.

I would recommend the purchase of a tank truck of large capacity, which is obviously necessary to take care of the present needs, for a more general distribution of fingerlings in tributarial waters at the time of liberation.

Respectfully submitted,

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

District No. 1

Showing the number of eggs collected at the hatcheries operated by the State of Oregon in the Columbia River Basin during the year 1929:

Hatchery	Spring Chinook	Fall Chinook	Silver Salmon	Steelheads	Landlocked Blueback	Sockeyes	Chums	Totals
Bonneville	.....	2,191,100	.....	.....	.....	.....	.....	2,191,100
Klaskanine	.....	.....	242,470	.....	.....	.....	.....	242,470
Herman Creek	.....	49,900	.....	.....	.....	.....	.....	49,900
Santiam	9,731,000	.....	.....	.....	.....	.....	.....	9,731,000
South Santiam	256,700	.....	.....	13,000	.....	.....	.....	269,700
Willamette	8,774,000	.....	.....	.....	.....	.....	.....	8,774,000
Wallowa	175,000	.....	40,000	.....	1,954,820	.....	.....	2,169,820
McKenzie	19,350,000	.....	.....	.....	.....	.....	.....	19,350,000
Co-operative Stations—U. S. Bureau	.....	.....	.....	.....	250,226	4,953,200	800,000	6,003,426
	38,286,700	2,241,000	282,470	13,000	2,205,046	4,953,200	800,000	48,781,416

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 1929:

Hatchery	Spring Chinook	Fall Chinook	Silver Salmon	Steelheads	Totals
Trask River	5,280,000	.....	770,000	1,642,000	7,692,000
Nestucca	4,725,000	.....	2,460,000	1,870,000	9,055,000
Alsea	.....	.....	1,153,000	2,630,000	3,783,000
Siuslaw	350,000	.....	970,500	1,265,000	2,586,000
Umpqua	4,155,036	.....	.....	.....	4,155,036
South Coos	.....	1,262,000	3,293,000	647,500	5,202,500
	14,510,036	1,262,000	8,646,500	8,055,000	32,473,536

District No. 1

Showing the number of fingerling liberated into the Columbia River and its tributaries during the year 1929 by the State of Oregon:

Hatchery	Spring Chinook	Fall Chinook	Silver Salmon	Steelheads	Landlocked Blueback	Sockeyes	Chums	Totals	Where Liberated
Bonneville	6,796,660	4,647,620			*	*		11,444,280	Tanner Cr., Eagle Cr.-Columbia R. Trib.
Klaskanine		3,017,000	*800,000				792,700	4,609,700	Klaskanine River-Youngs Bay Trib.
Herman Creek		1,739,550				*1,858,145		3,597,695	Herman Creek-Columbia R. Trib.
Santiam	5,953,800							5,953,800	Santiam River-Willamette R. Trib.
South Santiam				411,056				411,056	South Santiam-Santiam R. Trib.
Willamette	10,263,500							10,263,500	Salmon Cr.-Willamette R. Trib.
Wallowa	4,680,000				*146,000			4,826,000	Wallowa River-Snake R. Trib.
	5,987,000							5,987,000	
McKenzie	11,054,304							11,054,304	McKenzie R.-Willamette R. Trib.
Molalla	235,000							235,000	Molalla River-Willamette R. Trib.
	44,970,264	9,404,170	800,000	411,056	146,000	1,858,145	792,700	58,382,335	
Fingerling on hand November 30, 1929								3,974,576	
Total fingerling liberated and on hand								62,356,911	

* 243,686 landlocked blueback fingerling on hand.
223,190 sockeye fingerling on hand.
999,000 silver salmon fingerling on hand.
2,309,200 sockeye fingerling on hand.
199,500 landlocked blueback fingerling on hand.

District No. 2

Showing the number of fingerling liberated into the waters of the Coast streams south of the Columbia River, by the State of Oregon, during the year 1929:

Hatchery	Spring Chinook	Fall Chinook	Silver Salmon	Steelheads	Totals	Where Liberated
Nehalem	986,040		293,620		1,279,660	Nehalem River
Trask	3,951,880	19,300	2,487,600	1,900,450	8,359,230	Salmon Creek, Trask and Nestucca Rivers
Alsea	978,182		1,679,835	2,603,849	5,261,866	Alsea River
Siuslaw	1,041,900		663,400	1,111,300	2,816,600	Siuslaw River
Umpqua	4,033,300				4,033,300	Umpqua River and Rock Creek
South Coos		2,390,474	2,597,520	612,350	5,600,344	South Coos River
Coquille		298,100	987,625		1,285,725	Coquille River
Rogue River	1,905,340	987,220			2,892,560	Rogue, Chetco, Elk, Winchuck River
Scottsburg			981,755		981,755	Umpqua
	12,896,642	3,695,094	9,691,355	6,227,949	32,511,040	

District No. 1

Showing the number of eggs collected at the hatcheries operated by the State of Oregon in the Columbia River Basin during the year 1930:

Hatchery	Spring Chinook	Fall Chinook	Silver Salmon	Steelheads	Landlocked Blueback	Sockeyes	Chums	Totals
Bonneville	25,000	8,556,000	.....	.....	.....	40,340	.....	8,621,340
Klaskanine	.....	.....	66,960	.....	.....	.....	.....	66,960
Herman Creek	54,440	26,860	.....	.....	.....	100,460	.....	181,760
Santiam	8,511,000	.....	.....	2,860,500	.....	.....	.....	11,371,500
South Santiam	584,854	.....	.....	2,490,843	.....	.....	.....	3,075,697
Willamette	7,341,500	.....	.....	.....	.....	.....	.....	7,341,500
Wallowa	1,013,110	.....	.....	.....	3,255,600	.....	.....	4,268,710
McKenzie	21,129,000	.....	.....	.....	.....	.....	.....	21,129,000
Co-operative Stations—U. S. Bureau	.....	2,000,000	.....	.....	.....	1,682,000	30,000	3,712,000
	38,658,904	10,582,860	66,960	5,351,343	3,255,600	1,822,800	30,000	59,768,467

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 1930:

Hatchery	Spring Chinook	Fall Chinook	Silver Salmon	Steelheads	Totals
Trask River	3,825,000	.....	1,257,000	951,000	6,033,000
Nestucca	3,065,000	340,000	2,770,000	510,000	6,685,000
Alsea	.....	.....	2,051,000	321,000	2,372,000
Siuslaw	72,500	.....	848,000	54,000	974,500
Umpqua	5,709,620	.....	.....	.....	5,709,620
South Coos	172,000	372,000	994,000	739,000	2,277,000
Co-operative Stations—U. S. Bureau	500,000	1,060,020	.....	.....	1,560,020
	13,344,120	1,772,020	7,920,000	2,575,000	25,611,140

District No. 1

Showing the number of fingerling liberated into the Columbia River and its tributaries during the year 1930 by the State of Oregon:

Hatchery	Spring Chinook	Fall Chinook	Silver Salmon	Steelheads	Landlocked Blueback	Sockeyes	Chums	Totals	Where Liberated
Bonneville	4,130,740	2,192,670	.....	.....	243,276	*222,778	29,688	6,819,152	Tanner Cr., Scappoose Cr.—Columbia R. Trib.
Klaskanine	952,400	.....	*998,000	.....	.....	.....	.....	1,950,400	Klaskanine River—Youngs Bay Trib.
Herman Creek	.....	.....	.....	.....	.....	*2,306,585	.....	2,306,585	Herman Creek—Columbia River Trib.
Santiam	4,587,000	.....	.....	1,683,546	.....	.....	.....	6,270,546	North Santiam River—Willamette River Trib.
South Santiam	1,248,076	.....	.....	1,110,716	.....	.....	.....	2,358,792	South Santiam River—Santiam River Trib.
Willamette	8,545,200	.....	.....	.....	.....	.....	.....	8,545,200	Salmon Creek—Willamette River Trib.
Wallowa	2,944,000	.....	33,200	.....	*500,000	.....	.....	3,477,200	Wallowa River—Snake River Trib.
					199,200	.....	.....	199,200	
McKenzie	6,040,473	.....	.....	.....	.....	.....	.....	6,040,473	McKenzie River—Willamette River Trib.
Lower McKenzie Sta.	3,960,950	.....	.....	.....	.....	.....	.....	3,960,950	McKenzie River—Willamette River Trib.
	32,408,839	2,192,670	1,031,200	2,794,262	942,476	2,529,363	29,688	41,928,498	
Fingerling on hand November 30, 1930								7,183,587	
Total fingerling liberated and on hand								49,112,085	

*1,957,600 sockeye fingerling on hand.
2,039,847 silver salmon fingerling on hand.
2,593,340 sockeye fingerling on hand.
592,800 landlocked blueback fingerling on hand.

District No. 2

Showing the number of fingerling liberated into the waters of the Coast streams south of the Columbia River, by the State of Oregon, during the year 1930:

Hatchery	Spring Chinook	Fall Chinook	Silver Salmon	Steelheads	Totals	Where Liberated
Nehalem	700,000	.....	492,590	.....	1,192,590	Nehalem River
Trask	5,364,268	.....	2,083,800	888,910	8,336,978	Trask R., Nestucca R., Drift Cr., Siletz Cr., Schooner Cr., Nehalem R.
Alsea	497,922	.....	974,920	314,330	1,787,172	Alsea River
Siuslaw	339,725	.....	548,800	53,480	942,005	Siuslaw River
Umpqua	4,061,090	.....	.....	.....	4,061,090	Rock Creek, Umpqua River Trib.
South Coos	.....	1,206,857	774,500	665,400	2,646,757	South Coos River
Rogue	924,000	.....	.....	.....	924,000	Rogue River
	11,887,005	1,206,857	4,874,610	1,922,120	19,890,592	

District No. 1

Summary

Showing the total number of eggs collected in Districts Nos. 1 and 2, during the years 1929 and 1930:

District—Year	Spring Chinook	Fall Chinook	Silver Salmon	Steelheads	Landlocked Bluebacks	Sockeyes	Chums	Totals
District No. 1—1929	38,286,700	2,241,000	282,470	13,000	2,205,046	4,953,200	800,000	48,781,416
District No. 2—1929	14,510,036	1,262,000	8,646,500	8,055,000	.....	.....	.....	32,473,536
Totals	52,796,736	3,503,000	8,928,970	8,068,000	2,205,046	4,953,200	800,000	81,254,952
District No. 1—1930	38,658,904	10,582,860	66,960	5,351,343	3,255,600	1,822,800	30,000	59,768,467
District No. 2—1930	13,344,120	1,772,020	7,920,000	2,575,000	.....	.....	.....	25,611,140
Totals	52,003,024	12,354,880	7,986,960	7,926,343	3,255,600	1,822,800	30,000	85,379,607
Recapitulation—								
Total Egg Take—1929	52,796,736	3,503,000	8,928,970	8,068,000	2,205,046	4,953,200	800,000	81,254,952
Total Egg Take—1930	52,003,024	12,354,880	7,986,960	7,926,343	3,255,600	1,822,800	30,000	85,379,607
Grand Totals	104,799,760	15,857,880	16,915,930	15,994,343	5,460,646	6,776,000	830,000	166,634,559

District No. 2

Summary

Showing the total liberations in Districts Nos. 1 and 2, during the years 1929 and 1930:

District—Year	Spring Chinook	Fall Chinook	Silver Salmon	Steelheads	Landlocked Bluebacks	Sockeye	Chums	Totals
District No. 1—1929	44,970,264	9,404,170	800,000	411,056	146,000	1,858,145	792,700	58,382,335
District No. 2—1929	12,896,642	5,695,094	9,691,355	6,227,949	.....	.....	.....	32,511,040
Totals	57,866,906	13,099,264	10,491,355	6,639,005	146,000	1,858,145	792,700	90,893,375
District No. 1—1930	32,408,839	2,192,670	1,031,200	2,794,262	942,476	2,529,363	29,688	41,928,498
District No. 2—1930	11,887,005	1,206,857	4,874,610	1,922,120	.....	.....	.....	19,890,592
Totals	44,295,844	3,399,527	5,905,810	4,716,382	942,476	2,529,363	29,688	61,819,090
Recapitulation—								
Total Liberation—1929	57,866,906	13,099,264	10,491,355	6,639,005	146,000	1,858,145	792,700	90,893,375
Total Liberation—1930	44,295,844	3,399,527	5,905,810	4,716,382	942,476	2,529,363	29,688	61,819,090
Grand Totals	102,162,750	16,498,791	16,397,165	11,355,387	1,088,476	4,387,508	822,388	152,712,465

Table

Showing the number of eggs collected at the hatcheries operated by the Fish Commission of Oregon, U. S. Bureau of Fisheries and the Fisheries Board of Washington, in the Columbia River Basin, during the year 1929:

Stations	Spring Chinook	Fall Chinook	Silver Salmon	Steelheads	Landlocked Blueback	Chums	Totals
Oregon Stations:							
Bonneville	.....	2,191,100	.....	.....	.....	.....	2,191,100
Klaskanine	.....	.....	242,470	.....	.....	.....	242,470
Herman Creek	.....	49,900	.....	.....	.....	.....	49,900
Santiam	9,731,000	.....	.....	.....	.....	.....	9,731,000
South Santiam	256,700	.....	.....	13,000	.....	.....	269,700
Willamette	8,774,000	.....	.....	.....	.....	.....	8,774,000
Wallowa	175,000	.....	40,000	.....	1,954,820	.....	2,169,820
McKenzie	19,350,000	.....	.....	.....	.....	.....	19,350,000
Totals	38,286,700	2,241,000	282,470	13,000	1,954,820	.....	42,777,990
U. S. Bureau Stations:							
Clackamas Station	570,000	.....	.....	.....	.....	.....	570,000
Snake River Station	351,000	.....	.....	.....	.....	.....	351,000
Little White Salmon	.....	9,830,000	.....	.....	.....	505,000	10,335,000
Big White Salmon	.....	5,845,000	.....	.....	.....	.....	5,845,000
Totals	921,000	15,675,000	.....	.....	.....	505,000	17,101,000
***Washington Stations:**							
Cowlitz River	2,062,000	.....	.....	.....	.....	.....	2,062,000
Kalama	.....	13,210,000	.....	.....	.....	.....	13,210,000
Wind River	.....	1,208,500	.....	.....	.....	.....	1,208,500
Totals	2,062,000	14,418,500	.....	.....	.....	.....	16,480,500
Recapitulation:							
Oregon Stations	38,286,700	2,241,000	282,470	13,000	1,954,820	.....	42,777,990
U. S. Bureau	921,000	15,675,000	.....	.....	.....	505,000	17,101,000
Washington Stations	2,062,000	14,418,500	.....	.....	.....	.....	16,480,500
Grand Totals	41,269,700	32,334,500	282,470	13,000	1,954,820	505,000	76,359,490

* Copied from Bulletin No. 14, issued by the Fisheries Board of Washington.

Table

Showing the number of eggs collected at the hatcheries operated by the Fish Commission of Oregon, U. S. Bureau of Fisheries and the Fisheries Board of Washington, in the Columbia River Basin, during the year 1930:

Stations	Spring Chinook	Fall Chinook	Silver Salmon	Steelheads	Landlocked Blueback	Sockeyes	Chums	Totals
Oregon Stations:								
Bonneville	25,000	8,556,000				40,340		8,621,340
Klaskanine			66,960					66,960
Herman Creek	54,440	26,860				100,460		181,760
Santiam	8,511,000			2,860,500				11,371,500
South Santiam	584,854			2,490,843				3,075,697
Willamette	7,341,500							7,341,500
Wallowa	1,013,110				3,255,600			4,268,710
McKenzie	21,129,000							21,129,000
Totals	38,658,904	8,582,860	66,960	5,351,343	3,255,600	140,800		56,056,467
U. S. Bureau Stations:								
Clackamas Station	2,025,000							2,025,000
Snake River Station	3,042,000							3,042,000
Little White Salmon		24,808,000					375,000	25,183,000
Big White Salmon		13,137,000						13,137,000
Totals	5,067,000	37,945,000					375,000	43,387,000
***Washington Stations:**								
Chinook		689,500						689,500
Cowlitz River	5,023,400							5,023,400
Kalama		11,340,000						11,340,000
Lewis River	328,500		121,500				64,000	514,000
Wind River		3,663,000						3,663,000
Totals	5,351,900	15,692,500	121,500				64,000	21,229,900
Recapitulation:								
Oregon Stations	38,658,904	8,582,860	66,960	5,351,343	3,255,600	140,800		56,056,467
U. S. Bureau	5,067,000	37,945,000					375,000	43,387,000
Washington Stations	5,351,900	15,692,500	121,500				64,000	21,229,900
Grand Totals	49,077,804	62,220,360	188,460	5,351,343	3,255,600	140,800	439,000	120,673,367

* Copied from Bulletin No. 21, issued by the Fisheries Board of Washington.

District No. 1

Showing the collections and distribution of eggs made in 1928, and the liberation of resulting fingerlings during 1929, at the hatcheries operated by the State of Oregon, in the Columbia River Basin:

Species	Collections	Eggs Received from Other Stations	Eggs Transferred	Liberations Number	Liberations Stream Stocked	Size Inches	Age Mos.	Stock On Hand
Spring Chinook Salmon:								
Bonneville	.....	4,948,020—McKenzie 1,982,904—Santiam	.....	6,796,660	—Tanner Creek	2½–4¾	11	.....
Santiam	7,572,904	1,139,423—South Santiam	1,982,904—Bonneville	1,045,000	—South Santiam			
				4,908,800	—Santiam River	1⅝–3	10	.....
South Santiam	1,171,837	.....	1,139,423—North Santiam	.....		.....	.....	.....
Willamette	10,740,000	.....	75,000 fing.—Game Com.	10,263,500	—Salmon Creek	3	10	.....
Wallowa	185,000	5,002,272—McKenzie		1,000	—Grande Ronde			
				4,679,000	—Wallowa River	3½–4	12	.....
McKenzie	27,748,246	.....	4,948,020—Bonneville	*5,987,000	—Wallowa River	5	16	.....
			5,002,272—Wallowa					
			5,520,384—U. S. Bureau	11,054,304	—McKenzie River	2-3	10	.....
Molalla	285,000	.....	.....	235,000	—Molalla River	3	9	.....
Totals	47,702,987	13,072,619	18,668,003	44,970,264		.....	.....	.....
Fall Chinook Salmon:								
Bonneville	3,693,330	6,146,780—U. S. Bureau	1,000,100—Rogue River					
		95,200—Herman Creek	2,059,200—Klaskanine					
			1,750,000 fry—Herman Cr.	4,647,620	—Tanner Cr., Eagle Cr.	3–4½	8–11	.....
Klaskanine	.....	2,059,200—Bonneville						
		1,016,000—U. S. Bureau	.....	3,017,000	—Klaskanine Riv.	3–5	8–10	.....
Herman Creek	95,550	1,750,000 fry—Bonneville	95,200—Bonneville	1,739,550	—Herman Creek	4	9	.....
Totals	3,788,800	11,067,180	4,904,500	9,404,170		.....	.....	.....
Silver Salmon:								
Bonneville	.....	50,400—Trask River	49,620—U. S. Bureau	.....		.....	.....	.....
Klaskanine	282,100	1,050,000—Trask River						
		784,000—Alsea River	.....	800,000	—Klaskanine River	5–7	11–12	999,000
Totals	282,100	1,828,400	49,620	800,000		.....	.....	999,000
Steelhead Salmon:								
Bonneville	.....	50,800—Trask River	50,800—U. S. Bureau	.....		.....	.....	.....
South Santiam	13,000	454,747—Rogue River	.....	411,056	—South Santiam	2–4	6	.....
Totals	13,000	505,547	50,800	411,056		.....	.....	.....
Landlocked Blueback:								
Bonneville	.....	250,226—U. S. Bureau	.....	.....		.....	.....	243,686
Wallowa	504,820	.....	.....	146,000	—Wallowa River	2	10	199,500
Totals	504,820	250,226	.....	146,000		.....	.....	443,186
Sockeye Salmon:								
Bonneville	.....	2,608,830—U. S. Bureau	2,323,000 fry—Herman Cr.	.....		.....	.....	223,190
Herman Creek	.....	2,323,000 fry—Bonneville	.....	†1,858,145	—Herman Creek	5	16	2,309,200
Totals	.....	4,931,830	2,323,000	1,858,145		.....	.....	2,532,390
Chums:								
Klaskanine	.....	800,000—U. S. Bureau	.....	792,700	—Klaskanine River	3	4	.....
Totals	.....	800,000	.....	792,700		.....	.....	.....
Recapitulation:								
Spring Chinook	47,702,987	13,072,619	18,668,003	44,970,264		.....	.....	.....
Fall Chinook	3,788,800	11,067,180	4,904,500	9,404,170		.....	.....	.....
Silver Salmon	282,100	1,828,400	49,620	800,000		.....	.....	999,000
Steelhead Salmon	13,000	505,547	50,800	411,056		.....	.....	.....
Landlocked Blueback	504,820	250,226	.....	146,000		.....	.....	443,186
Sockeye Salmon	.....	4,931,830	2,323,000	1,858,145		.....	.....	2,532,390
Chums	.....	800,000	.....	792,700		.....	.....	.....
Grand totals	52,291,707	32,455,802	25,995,923	58,382,335				3,974,576

* This item represents yearling spring chinook salmon from the 1927 egg take, that were held over through 1928 and liberated in March, 1929.
† This item represents yearling sockeye salmon from the 1927 egg take, that were held over through 1928 and liberated in April, 1929.

District No. 2

Showing the collections and distribution of eggs made in 1928, and the liberation of resulting fingerlings during 1929, at the hatcheries operated by the State of Oregon on the Coast streams south of the Columbia River

Species	Collections	Eggs Received from Other Stations	Eggs Transferred	Liberations Number	Liberations Stream Stocked	Size Inches	Age Mos.	Stock On Hand
Spring Chinook Salmon:								
Nehalem	.....	1,000,000—Trask	.....	986,040	—Nehalem River	2½	6	.....
Trask River	2,480,000	4,865,000—Nestucca	1,000,000—Rogue River	2,416,880	—Trask River	3½	9–11	.....
			250,920—Alsea	1,535,000	—Nestucca River	3½	10	.....
			828,000—Siuslaw					
			1,000,000—Nehalem					
Nestucca	4,865,000	.....	4,865,000—Trask River	.....		.....	.....	.....
Alsea River	756,000	250,920—Trask	.....	978,182	—Alsea River	4–5	10	.....
Siuslaw	230,000	828,000—Trask	.....	1,041,900	—Siuslaw River	3½	9	.....
Umpqua	4,128,820	.....	.....	4,033,300	—Umpqua R. and Rock Cr.	3–4	9–10	.....
Rogue River	.....	1,000,000—Trask	.....	1,805,340	—Rogue River	3¼	7	.....
		966,800—U. S. Bureau		100,000	—Chetco River	3¼	7	.....
Totals	12,459,820	8,910,720	7,943,920	12,896,642		.....	.....	.....
Fall Chinook Salmon:								
Trask River	20,000	.....	.....	19,300	—Trask River	2½	7	.....
South Coos	1,784,500	1,000,000—U. S. Bureau	300,132—Coquille	2,390,474	—South Coos R.	3⅜	8	.....
Coquille	.....	300,132—South Coos	.....	298,100	—Coquille River	3	8	.....
Rogue River	.....	1,000,000—Bonneville	.....	857,220	—Rogue River	2½–3	7–8	.....
				35,000	—Chetco River	2½–3	7–8	.....
				10,000	—Winchuck River	2½–3	7–8	.....
				85,000	—Elk River	2½–3	7–8	.....
Totals	1,804,500	2,300,132	300,132	3,695,094		.....	.....	.....
Silver Salmon:								
Nehalem	.....	300,000—Trask	.....	293,620	—Nehalem River	2½	6	.....
Trask River	371,000	3,835,000—Nestucca	300,000—Nehalem	2,087,100	—Trask River	2–3	7–8	.....
			1,030,000—Klaskanine	300,000	—Nestucca River	3	8	.....
			50,400—Bonneville	100,500	—Salmon River	3¼	9	.....
			200,000—Game Com.					
Nestucca	3,835,000	.....	3,835,000—Trask	.....		.....	.....	.....
Alsea River	2,594,000	.....	748,000—Klaskanine	1,679,835	—Alsea River	3–4⅝	9–10	.....
Siuslaw	679,500	.....	.....	663,400	—Siuslaw River	4	8	.....
South Coos	5,334,000	.....	1,000,025—Coquille	2,597,520	—South Coos River	2⅞	6	.....
			1,000,155—Scottsburg					
Coquille	.....	1,000,025—South Coos	.....	987,625	—Coquille River	2½	5	.....
Scottsburg	.....	1,000,155—South Coos	.....	981,755	—Umpqua River	3	6	.....
Totals	12,813,500	6,135,180	8,163,580	9,691,355		.....	.....	.....
Steelhead Salmon:								
Trask River	1,642,000	1,870,000—Nestucca	50,800—Bonneville	1,850,450	—Trask River	1¼–1¾	5	.....
			1,348,400—Game Com.	50,000	—Salmon River	1¾	5	.....
Nestucca	1,870,000	.....	1,870,000—Trask	.....		.....	.....	.....
Alsea River	2,630,000	.....	.....	2,603,849	—Alsea River	2½–3	7	.....
Siuslaw	1,265,500	.....	.....	1,111,300	—Siuslaw River	2⅜	6	.....
South Coos	647,500	.....	.....	612,350	—South Coos R.	2⅜	7	.....
Totals	8,055,000	1,870,000	3,269,200	6,227,949		.....	.....	.....
Recapitulation:								
Spring Chinook	12,459,820	8,910,720	7,943,920	12,896,642		.....	.....	.....
Fall Chinook	1,804,500	2,300,132	300,132	3,695,094		.....	.....	.....
Silver Salmon	12,813,500	6,135,180	8,163,580	9,691,355		.....	.....	.....
Steelhead Salmon	8,055,000	1,870,000	3,269,200	6,227,949		.....	.....	.....
Grand totals	35,132,820	19,216,032	19,676,832	32,511,040		.....	.....	.....

District No. 1

Showing the collections and distribution of eggs made in 1929, and the liberation of resulting fingerlings during 1930, at the hatcheries operated by the State of Oregon, in the Columbia River Basin:

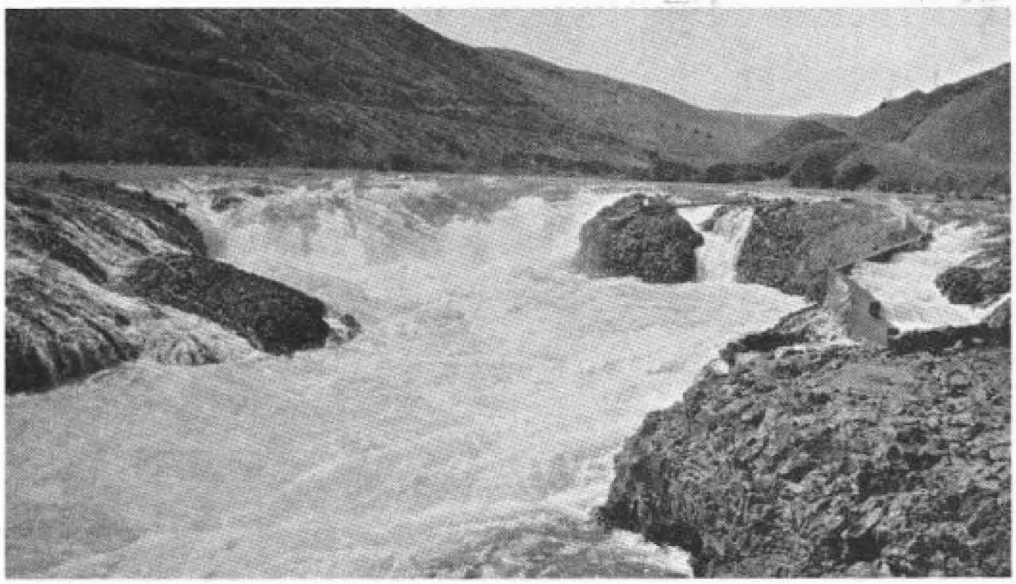
Species	Collections	Eggs Received from Other Stations	Eggs Transferred	Liberations Number — Stream Stocked	Size Inches	Age Mos.	Stock On Hand
Spring Chinook Salmon:							
Bonneville	.....	3,252,852—Santiam	.....	60,000—Scappoose Cr.	2	7	.....
	.....	920,692—Trask River	.....	4,070,740—Tanner Cr.	3–5	11	.....
Klaskanine	.....	1,000,000—Trask River	.....	952,400—Klaskanine R.	4	9	.....
Santiam	9,731,000	.....	3,252,852—Bonneville	4,587,000—N. Santiam R.	2–4	8–10	.....
			1,050,000—S. Santiam				
South Santiam	256,700	1,050,000—Santiam	.....	1,248,076—S. Santiam R.	1¾–3½	8–10	.....
Willamette	8,774,000	.....	.....	4,545,200—Salmon Creek	3	9	.....
				4,000,000—Willamette R.	3	9	.....
Wallowa	175,000	3,000,060—McKenzie	.....	2,944,000—Wallowa R.	4	12	.....
McKenzie	19,350,000	.....	3,000,060—Wallowa				
			4,000,000—Lower McKenzie				
			500,500—Game Com.				
Lower McKenzie			4,900,350—U. S. Bureau	6,040,473—McKenzie R.	3	9	.....
Station	.....	4,000,000—McKenzie	.....	3,960,950—McKenzie R.	3	9	.....
Totals	38,286,700	13,223,604	16,703,762	32,408,839	.....	.....	.....
Fall Chinook Salmon:							
Bonneville	2,191,100	48,960—Herman Creek	.....	2,192,670—Tanner Cr.	3½	10	.....
Herman Creek	49,900	.....	48,960—Bonneville	.....	.....	.....	.....
Totals	2,241,000	48,960	48,960	2,192,670	.....	.....	.....
Silver Salmon:							
Klaskanine	242,470	2,000,000—Trask River	.....	998,000*—Klaskanine R.	6–8	14	2,039,847
Wallowa	40,000	.....	.....	33,200—Wallowa R.	4	12	.....
Totals	282,470	2,000,000	.....	1,031,200	.....	.....	2,039,847
Steelhead Salmon:							
Santiam	2,860,500	.....	946,394—Game Com. (To be liberated into S. Santiam from Roaring River)	1,683,546—N. Santiam R.	2¾	6	.....
South Santiam	2,490,843	.....	1,346,526—Game Com. (To be liberated into S. Santiam from Roaring River)	1,110,716—S. Santiam	1¾–3½	6–7	.....
Totals	5,351,343	.....	2,292,920	2,794,262	.....	.....	.....
Landlocked Blueback:							
Bonneville	.....	.....	.....	243,276†—Tanner Cr.	5	16	.....
Wallowa	1,200,000	.....	.....	500,000—Wallowa R.	3	11	592,800
				199,200‡—Wallowa R.	4½	16	.....
Totals	1,200,000	.....	.....	942,476	.....	.....	592,800
Sockeye Salmon:							
Bonneville	.....	4,953,200—U. S. Bureau	2,615,000 fry—Herman Cr.	222,778¶—Tanner Cr.	6	16	1,957,600
Herman Creek	.....	2,615,000 fry—Bonneville	.....	2,306,585§—Herman Cr.	5½	16	2,593,340
Totals	.....	7,568,200	2,615,000	2,529,363	.....	.....	4,550,940
Chums:							
Bonneville	.....	30,000 fing.—U. S. Bureau	.....	29,688—Tanner Cr.	4	7	.....
Totals	.....	30,000	.....	29,688	.....	.....	.....
Recapitulation:							
Spring Chinook	38,286,700	13,223,604	16,703,762	32,408,839	.....	.....	.....
Fall Chinook	2,241,000	48,960	48,960	2,192,670	.....	.....	.....
Silver Salmon	282,470	2,000,000	.....	1,031,200	.....	.....	2,039,847
Steelhead Salmon	5,351,343	.....	2,292,920	2,794,262	.....	.....	.....
Landlocked Blueback	1,200,000	.....	.....	942,476	.....	.....	592,800
Sockeye Salmon	.....	7,568,200	2,615,000	2,529,363	.....	.....	4,550,940
Chums	.....	30,000	.....	29,688	.....	.....	.....
Grand totals	47,361,513	22,870,764	22,660,642	41,928,458	.....	.....	7,183,587

* This item represents yearling silver salmon from the 1928 egg take, that were held over through 1929 and liberated in March, 1930.
† This item represents yearling landlocked blueback from the 1928 egg take, that were held over through 1929 and liberated in April, 1930.
‡ This item represents yearling landlocked blueback from the 1928 egg take, that were held over through 1929 and liberated in April, 1930.
¶ This item represents yearling sockeye salmon from the 1928 egg take, that were held over through 1929 and liberated in April, 1930.
§ This item represents yearling sockeye salmon from the 1928 egg take, that were held over through 1929 and liberated in April, 1930.

District No. 2

Showing the collections and distribution of eggs made in 1929, and the liberation of resulting fingerlings during 1930, at the hatcheries operated by the State of Oregon on the coast streams south of the Columbia River:

Species	Collections	Eggs Received from Other Stations	Eggs Transferred	Liberations Number — Stream Stocked	Size Inches	Age Mos.	Stock On Hand
Spring Chinook Salmon:							
Nehalem	.....	1,000,000—Trask River	.....	700,000—Nehalem River	3	8	.....
Trask River	5,280,000	4,725,000—Nestucca	920,692—Bonneville	4,364,268—Trask River	3½	9	.....
			1,000,000—Klaskanine	1,000,000—Nestucca River	3½	9	.....
			1,000,000—Nehalem				
			510,000—Alsea				
			1,000,140—Rogue River				
Nestucca	4,725,000	.....	4,725,000—Trask River	.....	.....	.....	.....
Alsea River	.....	510,000—Trask River	.....	497,922—Alsea River	4	10	.....
Siuslaw	350,000	.....	.....	339,725—Siuslaw River	3½	9	.....
Umpqua	4,155,036	.....	.....	4,061,090—Rock Creek	2½–4½	8–10	.....
Rogue River	.....	1,000,140—Trask River	.....	924,000—Rogue River	5½	7	.....
Totals	14,510,036	7,235,140	9,155,832	11,887,005	.....	.....	.....
Fall Chinook Salmon:							
South Coos	1,262,000	.....	.....	1,206,857—S. Coos River	4¾	10	.....
Totals	1,262,000	.....	.....	1,206,857	.....	.....	.....
Silver Salmon:							
Nehalem	.....	500,000—Trask River	.....	492,590—Nehalem River	2¾	7	.....
Trask River	1,847,000	3,185,000—Nestucca	2,000,000—Klaskanine	1,001,000—Nestucca River	3½	10	.....
			500,000—Nehalem	1,082,800—Drift, Schooner and Siletz Cr.	3½	10	.....
			300,000—U. S. Bureau				
Nestucca	3,185,000	.....	3,185,000—Trask	.....	.....	.....	.....
Alsea River	1,002,000	.....	.....	974,920—Alsea River	3	6	.....
Siuslaw	556,000	.....	.....	548,800—Siuslaw River	3	6	.....
South Coos	810,000	.....	.....	774,500—S. Coos River	3	6	.....
Totals	7,400,000	3,685,000	5,985,000	4,874,610	.....	.....	.....
Steelhead Salmon:							
Trask River	951,000	510,000—Nestucca	510,000—Game Com.	573,910—Trask River	2¾	6	.....
				300,000—Nehalem River	2¾	6	.....
				15,000—Siletz Creek	2¾	6	.....
Nestucca	510,000	.....	510,000—Trask River	.....	.....	.....	.....
Alsea River	321,000	.....	.....	314,330—Alsea River	3	7	.....
Siuslaw	54,000	.....	.....	53,480—Siuslaw River	2	5	.....
South Coos	739,000	.....	.....	665,400—S. Coos River	2½	6	.....
Totals	2,575,000	510,000	1,020,000	1,922,120	.....	.....	.....
Recapitulation:							
Spring Chinook	14,510,036	7,235,140	9,155,832	11,887,005	.....	.....	.....
Fall Chinook	1,262,000	.....	.....	1,206,857	.....	.....	.....
Silver Salmon	7,400,000	3,685,000	5,985,000	4,874,610	.....	.....	.....
Steelhead Salmon	2,575,000	510,000	1,020,000	1,922,120	.....	.....	.....
Grand totals	25,747,036	11,430,140	16,160,832	19,890,592	.....	.....	.....



SHERAR FALLS

A natural barrier across the Deschutes River, some distance below Maupin, Oregon. Note present fishway along west bank, which is to be enlarged and improved in the near future.

Hatcheries Operated by the Fish Commission of Oregon

Station	Stream	Post Office	In Charge
(Stations on streams tributary to the Columbia River)			
Bonneville Hatchery	Tanner Creek (trib. of Columbia R.)	Bonneville, Oregon	E. A. Howell
Klaskanine Hatchery	Klaskanine R. (trib. of Youngs Bay)	Astoria, Oregon, M. R. A.	L. W. Hickey
Herman Creek Station	Herman Creek (trib. of Columbia R.)	Cascade Locks, Oregon	George Nelson
Santiam River Hatchery	Santiam River (trib. of Willamette R.)	Stayton, Oregon	LeRoy Ledgerwood
S. Santiam R. Hatchery	S. Santiam R. (trib. of Santiam R.)	Foster, Oregon	C. R. Ellis
Willamette Hatchery	Willamette R. (trib. of Columbia R.)	Oakridge, Oregon	Chas. Hills
Wallowa River Hatchery	Wallowa River (trib. of Snake River)	Enterprise, Oregon	Irvine French
McKenzie River Hatchery	McKenzie River (trib. of Willamette R.)	Vida, Oregon	J. F. Minney
Lower McKenzie R. Station	McKenzie River (trib. of Willamette R.)	Leaburg, Oregon	Walter Carter
(Stations on coast streams south of the Columbia River)			
Nehalem Station	Nehalem R. (trib. of Nehalem Bay)	Nehalem, Oregon	L. W. Strass
Trask River Hatchery	Trask R. (trib. of Tillamook Bay)	Tillamook, Oregon	Chas. Buckbee
Alsea River Hatchery	Alsea R. (trib. of Alsea Bay)	Tidewater, Oregon	M. H. Bales
Siuslaw River Hatchery	Siuslaw River	Swisshome, Oregon	Jess J. Bales
Umpqua River Hatchery	Umpqua R. (trib. of Winchester Bay)	Hoaglin, Oregon	Lee McCarn
South Coos Hatchery	S. Coos River (trib. of Coos Bay)	Marshfield, Oregon	Frank W. Smith
Coquille Station	S. Coquille River (trib. of Coquille R.)	Powers, Oregon	(Under S. Coos Sta.)
Rogue River Station	Rogue River	Gold Beach, Oregon	(Closed for this season)
Yaquina Station	Simpson Creek (trib. of Yaquina Bay)	Chitwood, Oregon	O. W. Peterson

COOS RIVER HATCHERY DWELLING, IN MYRTLE GROVE SETTING

A Brief Report on Cooperative Experiments in Marking Young Chinook Salmon on the Columbia River

For many years the Fish Commission of Oregon has closely cooperated with the United States Bureau of Fisheries in its experiments in marking young Chinook Salmon on the Columbia River, in an endeavor to determine percentage of return, success of long and short periods of rearing, interpretation of scales, time of entering fresh water, age at maturity, and homing instinct. Recently the government released a pamphlet on this work which was conducted over a period of eleven years, from which the following excerpts are taken:

"These experiments were planned with several purposes in mind. First and foremost, they were designed for the very practical purpose of testing the relative efficiency of various procedures in artificial propagation. It is believed that this method of investigation, more than any other, promises information of vital importance in the upbuilding and improvement of current hatchery practices.

"PERCENTAGE OF RETURN: The reported returns from these experiments range from 1 out of 50,000 liberated to 1 out of each 300 liberated. These figures have very little significance, however, because they represent not the total returns, but an unknown and varying proportion of the total. As has been pointed out in the introduction, the authors and other employes of the Bureau of Fisheries who have assisted them with the collection of data have been unable to observe personally more than a small fraction of the fish taken from the Columbia during the time when these experiments were in progress.

"SUCCESS OF LONG AND SHORT PERIODS OF REARING: One of the most important problems confronting those interested in the artificial propagation of salmon is the determination of the length of time the fingerlings should be held at the hatchery in order to get the greatest return. Some hatchery men prefer to liberate their fingerlings very soon after the yolk sac is absorbed, whereas others are of the opinion that best results are obtained from much longer rearing. Two of the more recent marking experiments were designed to provide an answer to this question. Each of these involved five lots of marked fingerlings, which were liberated at varying ages. None of the fish in these experiments have reached maturity to date and have not been discussed in this report."

RECOVERIES FROM CHINOOK SALMON FINGERLINGS MARKED AT MCKENZIE RIVER HATCHERY DURING 1925 AND 1926.

Lot Number	Date of Liberation	Fins Removed	Recoveries			
			1928 (4th Year)	1929 (5th Year)	1930 (6th Year)	Totals
1	May 10, 1925	Adipose and right ventral	2	28	1	31
2	June 1, 1925	Adipose and both ventrals	1	35		36
3	July 1, 1925	Posterior half of dorsal and both ventrals	1	15		16
4	Sept. 15, 1925	Adipose and left ventral	3	39	4	46
5	Mar. 1, 1926	Posterior half of dorsal and left ventral	1	15	2	18
			8	132	7	147

NOTE—This is the table referred to. The above figures were taken from records in this office. The table can not be considered complete, as further reports are expected on the 1930 recoveries, and it is barely possible for specimens to show up in the seventh year.

"As fingerlings of the spring run normally spend the entire first year in fresh water, best returns would be expected from the longer period of rearing. This is especially true if the fingerlings are forced by unfavorable conditions to leave the river as soon as liberated. In the case of the Fall Chinooks, which normally leave the stream soon after the yolk sac is absorbed, the shorter period of rearing might be expected to be the most successful.

"INTERPRETATION OF SCALES: It is hardly necessary now to argue for the validity of the methods developed for determining the age and other features of the life history of salmon by means of a microscopic examination of their scales. These methods already have given abundant proof of their value, especially through the careful and extensive researches of Gilbert on the Sockeye Salmon. It is important to note, however, that the scales of these fish of known history corroborate fully the theory that the arrangement of the concentric rings (circuli) provides an accurate record of the previous history.

"TIME OF ENTERING FRESH WATER: Perhaps the most important contribution which these experiments have made to our knowledge of the biology of the salmon is that relating to the hereditary character of the factors that determine the time of year when the adults enter fresh water and begin their migration to the spawning grounds. The great practical value of determining beyond question whether this is strictly an hereditary character or not is associated with the fact that the early run of Chinooks (Spring Chinooks) is of much better quality and is, consequently, of much greater value to the fishery than the later run (Fall Chinooks). The spring fish are sought most earnestly, and the maintenance of the spring run has been the chief concern of those interested in practical conservation. This question has been asked frequently: Is it necessary to breed from fish of the spring run in order to produce spring fish, or is it possible, by proper handling of the progeny of the fall run, to produce fish that will return as adults to fresh water early in the spring.

"The evidence of these marking experiments shows beyond question the heritable quality of this character. It seems fairly clear that the fish belonging to any given tributary enter the main river from the ocean at a definite and characteristic time. This is an important point, as it gives additional evidence of the existence of local races in the tributary streams and shows that each race is present in the main river only a comparatively short time. Knowing, further, that each race is self-propagating, it becomes perfectly apparent that all parts of the salmon run in the Columbia River must be given adequate protection if the run as a whole is to be maintained. The protection of only one or two portions of the run will not be sufficient, inasmuch as certain races will be left entirely unprotected.

"AGE AT MATURITY: The relation between the reported returns and the actual returns has varied so greatly as to make only a general consideration of the age at maturity justifiable. For this purpose the experiments again may be divided into two classes—those involving Spring Chinooks from eggs taken on the Willamette River and its tributaries and those involving salmon from the Big White Salmon and the Little White Salmon Rivers, which enter fresh water during the latter part of the season.

"Mature Spring Chinooks that were in their third to sixth years have been recovered. In every case the greatest number matured in their fifth year. The 6-year-olds have always exceeded the 4-year-olds, and the 3-year-olds are represented by only two recoveries.

"The data relating to the Fall Chinook are very inadequate, but they indicate that the fourth and fifth years are the prevailing ages at maturity. On the whole, the fish of this class mature one year younger than the Spring Chinooks. A few males mature in their second year, and a significant number of both males and females return in their third. No 6-year-olds have been recovered as yet. From the standpoint of growth, however, there is very little difference in the time of maturing; that is, the two classes mature after approximately equal intervals of rapid growth. The rate of growth in fresh water is so low, in comparison to that in the ocean, that a year of fresh-water growth is insignificant in comparison to two or more years of ocean growth. The size attained, therefore, is proportional to the length of time spent in the ocean. The Fall Chinooks normally enter the ocean early in their first year, whereas the Spring Chinooks remain in the streams for an entire year before going to the ocean. In addition, the former remain in the ocean for three or four months of the rapid-growing season of the year in which they mature, whereas the Spring Chinooks start their spawning migration so early in the year that they make little or no growth during the last season. As a result of the earlier seaward migration and later spawning migration the fall fish spend approximately one full growing season more in the ocean than do the Spring Chinooks one year older. The relation between ocean residence and time of maturing is therefore about the same for the two classes.

"HOMING INSTINCT: The so-called 'parent-stream' theory or 'home-stream' theory is now substantiated by such a wealth of evidence that it seems nearly superfluous to state that none of the salmon marked on the Columbia have been recovered in any other river system.

"The records of marked Columbia River Chinooks taken off the coast of British Columbia and southeastern Alaska show something of the wide oceanic migrations of these fish and are in agreement with the results of the tagging experiments. The tagging experiments in British Columbia in 1925 (Williamson, 1927) showed conclusively that a large percentage of the Spring (Chinook) Salmon caught by troll in these northern waters originated in the Columbia River. In view of this wide range in the ocean, the fact that no marked fish were reported in any other stream than the Columbia indicates clearly the force and discrimination of the homing instinct as it effects the return to the home stream.

"It is evident, furthermore, that under normal circumstances salmon predominantly return to spawn in the tributary in which they spent the early part of their lives, although they have been shown not to do so in some instances. It is important to note, in this connection, that the transplanted fish have shown no tendency to return to the stream from which the eggs were taken. The homing instinct is not a purely hereditary matter, therefore, but is determined largely by the early environment."

These experiments serve to substantiate the plans and policies of the Department of Fish Culture adopted in 1924. It is indeed gratifying to be assured that the methods used in this department in the artificial propagation of Pacific Salmons have been scientifically checked and found to be correct.

Analysis of Fishery Catch Statistics

In order that the owners of a fishery or any other natural resource may derive the greatest benefit from that resource, it must be utilized to the fullest possible extent. A policy of unwarranted restriction or miserly hoarding does not give the maximum benefit to the owners, since they then are deprived of their legitimate profits. Nor does a program of wasteful extravagance produce the greatest possible good from a fishery. Indeed of the two courses the latter is the more unwise and harmful, since the resource may be reduced to such an extent that it is either obliterated or brought to a level so low that it can no longer produce profitable returns.

Therefore, the persons administering a fishery are confronted with the problem of getting the greatest possible returns from the resource, without harming the supply or breeding stock. There appears to be no method by which is is possible to determine how large a catch a fishery can produce without injury to itself, until depletion becomes apparent at least to a small extent. It would seem then that the only course remaining is to proceed to utilize cautiously the fishery, endeavoring to keep on the safe side so that depletion will not occur. Then if it is evident that the resource is being injured by over-production, either the supply must be increased artificially or the total take reduced.

Evidently then in conjunction with this method of trial and error, it is necessary to have some means of judging the point at which a state of injurious over-production is reached, in order that some remedy or regulation may be applied before the breeding stock of the fishery is depleted seriously. Probably the most common method in the past of judging the condition of a fishery has been to accept the opinions of people working or interested in the resource as evidence in the case. These opinions are usually of doubtful value, since depletion must proceed to an advanced stage before it becomes apparent to the casual observer, and it is then often too late to save the fishery. Also people deriving their sport or living from a fishery are apt to be prejudiced and their opinions biased or founded on a few observations of outstanding instances.

Figures showing the annual total catch of a species of fish are also often used as a basis for judging the relative abundance of a fish. When such data are used without careful analysis and other supplementary information, as is often the case, they are usually without value and often misleading.

This is necessarily so, because the abundance of a fish is only one of many factors which ordinarily cause fluctuations in the total take of that species. The total catch may remain constant or even increase while the species of fish is being depleted. Such a situation can be readily brought about by the effort expended on the fishery, number of men and boats, being increased, new and more productive fishing grounds being opened up, or a more effective type of gear coming into use. An increase in fishing effort may be caused by higher prices, failure of another fishery making it necessary for fishermen to change over to the one in question, or a greater demand offering opportunities for more men and boats.

Likewise a drop in total catch might occur when the supply of the species is holding its own or increasing. This may be caused by a decrease in fishing effort, legislation preventing use of effective gear or good fishing areas or fixing closed seasons, which diminish the available fishing time. Unfavorable weather or strikes of fishermen also may pull down the total catch for a brief time.

Therefore, since the total amount of any species taken in a calendar year is dependent on several factors other than the relative abundance of the species, namely: fishing effort, legislation, shifts in fishing grounds, weather, changes in another fishery, labor and economic conditions, some method of treating the catch figures, which will eliminate as nearly as possible factors other than abundance must be resorted to in order to secure any dependable index of abundance from the catch data. By expressing catch returns in some definite unit which is subject as little as possible to influence by factors other than abundance, such a desired result may be accomplished.

The catch return per a constant amount of fishing effort, gear and time, is such a unit. In other words the catch resulting from a constant amount of fishing gear and effort used for a constant period of time should be indicative of the relative abundance of a species of fish, or at least the availability of the species to the fishermen, providing the data used are representative samples of the catch results from the entire fishery. It is reasonable to assume that as a species of fish becomes less abundant, the same amount of gear employed in the same manner and for the same length of time will catch a lesser quantity of the fish as the supply decreases, or more fish as the supply increases.

However, all disturbing factors are not removed by using a constant unit of effort and time, since unfavorable weather or hydrographic conditions may diminish the catch artificially, new and more productive grounds may be opened up and cause a false rise in average catch, or good fishing territory may be closed by legislation and cause a drop in the average take per unit of effort and time. Also, there may be natural fluctuations in abundance caused by the appearance and gradual disappearance of dominant age groups, or migrations of the species to regions inaccessible or unknown to the fishermen.

Therefore, a curve showing catch returns per unit of effort and time should be correlated with all possible biological, economic and hydrographic data in order that it might be correctly interpreted as an index of abundance or availability of the species to the fishermen.