

BIENNIAL REPORT OF THE FISH COMMISSION OF THE STATE OF OREGON

1953



SHERAR FALLS FISHWAY—DESCHUTES RIVER

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

1953



FISH COMMISSION OF THE STATE OF OREGON

Hon. John C. Veatch, Chairman, Portland

Hon. Robert L. Jones, Clifton

Hon. Don C. Ellis, Garibaldi

Arnie J. Suomela, State Fisheries Director

Letters of Transmittal

Portland, Oregon, July 1, 1952

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

Gentlemen:

Herewith is transmitted the biennial report of the Fish Commission of the State of Oregon for the period from July 1, 1950 to June 30, 1952.

FISH COMMISSION OF THE STATE OF OREGON

John C. Veatch, Chairman.

Portland, Oregon, July 1, 1952

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

Gentlemen:

In accordance with the provisions of statute, I herewith submit for your consideration the report of the operation of the department together with financial statement for the biennial period July 1, 1950 to June 30, 1952.

Respectfully submitted,

ARNIE J. SUOMELA,
State Fisheries Director.

Report of the State Fisheries Director

The intent of the Commission has consistently been to provide the State of Oregon with management of the fisheries resources which will assure a continued high yield from all of the fisheries. To achieve this, the problems involved are carefully examined and investigation is followed by appropriate action. Management for most species is accomplished chiefly through regulation; in the case of the salmon however, regulation is combined with stream improvement and maintenance as well as hatchery operation.

A large amount of effort has been directed toward hatchery construction and operation during the biennium. The construction has been chiefly with federal funds as a result of dam building programs in the Columbia River basin.

In recognition of the potential damage to the state's fisheries on the Willamette River because of construction of the Detroit Dam on the North Santiam River and the Meridian Dam on the Middle Willamette River, the federal government, through the Corps of Engineers, has provided salmon hatchery facilities on the North Santiam River, and is in the process of providing hatchery facilities on the Middle Willamette River. The North Santiam River hatchery is now being operated and it is anticipated the Middle Willamette station will be in operation late in 1952.

The stream improvement and hatchery construction phases of the Lower River Fisheries Rehabilitation Program were actively pursued during the biennium. This program was activated in June, 1948, when an agreement between the states of Oregon, Washington and Idaho and the federal government was consummated whereby the Department of the Interior through the Fish and Wildlife Service provided U. S. Army Engineer funds for the rehabilitation of the lower tributaries of the Columbia River. The program is intended to make restitution in part for the irreparable damage to the valuable Columbia River fisheries by past construction of multiple purpose dams on this famous salmon producing stream. The construction of permanent and insurmountable barriers in the upper river has resulted in the confinement of existing runs to a fraction of their former fresh water habitat. In order to maintain this natural resource it is, therefore, necessary to develop fully tributaries that can offer potential spawning and rearing areas.

During the past two years the Commission has expanded its engineering staff in order to accomplish work in connection with the Lower Columbia River Fisheries Rehabilitation Program. In addition, regular duties and construction as required under the state program have been carried on. Among the many projects undertaken the past biennium, the following are the most important of the Lower Columbia River Program projects.

The Sandy River Hatchery, located on Cedar Creek, was completed early in 1952 and is now in full operation.

The Big Creek Hatchery in Clatsop County is now in the second phase of expansion and should be in operation early in 1953.

The Ox Bow Hatchery, located one mile east of Cascade Locks, is being rehabilitated and will be ready for operation by January, 1953.

Plans and specifications for the Metolius Hatchery have been virtually completed and those for renovating the Klaskanine Hatchery are nearing completion. Construction of the latter project will begin before January, 1953.

In addition to the hatchery expansion program on the Columbia and Willamette Rivers, a contract was let for the construction of a new hatchery in the coastal area to be financed by state funds. This station, which is located on Fall Creek, a tributary of the Alsea River, will replace the hatchery formerly operated near Tidewater. The old station was abandoned because of a diminished water supply. The new station is ideally situated with ample water supply and with suitable water temperatures. Ten modern ponds capable of holding 500,000 14-months-old fish and a hatching house with a capacity of 10 million eggs will be completed during the fall of 1952. It is planned that in the future further facilities will be added to this station. This hatchery will be completed in time to receive silver salmon eggs in November, 1952.

Repairs and improvements have been made from time to time on most coast stations but several are still operating on a marginal basis. The relocation of at least one other coastal hatchery is now being considered in future planning.

Studies are underway which are designed to enable the hatchery system to produce an additional yield to the State's fisheries. Fingerling and yearling fish are marked at the time of release to determine the most efficient size, time and method of release. From later recoveries in the fisheries and hatchery returns it is possible to determine the relative merits of procedures tested. Marking of fish graded by size indicates that larger silver salmon yearlings gave approximately 75 per cent greater returns than did the smaller fish of the same age. Further, the fish which were larger at release weighed about a pound more at maturity. The search for new, cheaper sources of food suitable for rearing fish in hatcheries has led to the discovery that certain presently unused species of ocean fish, particularly hake and turbot, may be satisfactory for such purposes. Experiments in selective breeding of chinook salmon are underway at Bonneville hatchery to provide a hatchery race with redder flesh.

During the biennium the Commission operated 15 hatcheries, of which 10 are located in the Columbia River drainage and 5 on coastal stream systems. The numbers of fish liberated during the biennium are found herein in detail.

Federal funds for the rehabilitation of the lower Columbia River runs are being used to conduct surveys of the tributaries in order to determine where stream improvements can be made which will benefit salmon and steelhead populations as well as to locate feasible sites for new hatcheries. After the construction of ladders or removal of obstructions the streams are carefully watched to assess the improvement in subsequent runs. Fishways which have been completed under this program are at Bonnie Falls in the North Fork of Scappoose Creek and at the Clatskanie Falls in the Clatskanie River. A reinforced concrete fishway is under construction at Punch Bowl Falls in the West Fork of Hood River. In addition, stream clearance has been continued. Clear Creek, Deep Creek and the North Fork of Eagle Creek, tributaries to the Clackamas River have been cleared.

Outside of the Lower Columbia River area, stream improvement and maintenance has been conducted with State funds.

At Valsetz Falls, on the Siletz River, a concrete fishway has been completed and has successfully passed an early run of steelhead and cutthroat trout. This project was

constructed under the direction of the Fish Commission. The Fish Commission and State Game Commission shared equally in the cost of construction.

A new concrete fishway has been completed at Nehalem Falls, on the Nehalem River.

A by-pass channel blasted around LaVerne Park Falls in the north fork of the Coquille River permits easy passage for migrant anadromous fish.

The East Creek Falls on the Nestucca River system and the Scott Creek Falls on the Alsea River system have also been blasted to permit easier passage.

At Stoll Falls, located in the west fork of the Millicoma River, considerable blasting has been done to provide access for anadromous fishes to the upper portions of this stream.

The Smith River Falls fishway on the Umpqua system was damaged by heavy drift logs during high water. Repairs were made in the summer of 1952.

A new fishway has been constructed at the Powerdale Dam in Hood River by the Pacific Power & Light Company. The city of Silverton has installed a fishway at their new dam on Abiqua Creek. The owners of a sawmill dam on Bear Creek, tributary of Salmon River, have constructed a fishway at this barrier. Fishway designs for the above three privately owned dams were prepared by this Commission.

New culverts have been installed to permit free passage of migrant salmon where logging roads cross several tributaries of Big Creek in Clatsop County. These improvements were made by the owners at our suggestion.

A section of the abandoned Jordan Dam in Thomas Creek has been removed by blasting. The work was done with permission of the owner.

A mill dam in the west fork of Scott Creek, tributary of the Alsea River, has been removed by the owner.

Several serious jams have been removed from Lobster Creek, tributary to the Alsea River.

Six large log jams in the Wilson River system were removed and several others, caused by logging operations, were removed by the loggers found responsible.

In addition to the construction and stream clearance work, current problems involving private dams and natural barriers are constantly being brought to our attention and require considerable investigation. Data from these investigations are helpful in programming for future stream improvements.

The State Police assigned to fisheries work have done much to encourage various enterprises to remove debris deposited in streams in the course of operations.

The interstate and international nature of many of the fisheries problems of Oregon is becoming increasingly apparent. As a result, a large portion of the management research now undertaken by the Fish Commission is coordinated through the Pacific Marine Fisheries Commission and is an integral segment of coastwise programs with California and Washington.

The bulk of the work now being done on the Columbia River is of a cooperative nature. With Washington, studies of the smelt, sturgeon, shad, and salmon are underway. Outstanding among these is the salmon management program which is providing us with the facts regarding the effect of the fisheries upon the various distinct groups

of fish. Because each stream generally has several stocks of salmon, each with somewhat different habits, these must be treated individually if management is to be successful. No less important is the management with regard to the passage of fish at dams. Careful planning among the fisheries agencies of the region is required to assure reasonably safe facilities so that the resource will not lose its present high value, and the runs may even be enlarged in the areas where this is still possible.

Studies on the coastal rivers are concerned chiefly with watershed improvement, effect of river fisheries upon spawning escapements, and the relationship between numbers of spawners and resulting offspring. The greater part of the coastal watersheds has been examined with the result that many streams previously blocked are now open to migratory fish. Marking and tagging experiments have been conducted on the Coquille, Alsea, and Nehalem Rivers to find the portion of the runs taken by commercial gear. On the Alsea River in 1951 approximately 14 per cent of the silver salmon entering the river were caught by the commercial fishery. Studies on Tillamook Bay indicated survival from hatchery plantings compared closely to that of wild fish of the same age. A completed study of the fluctuations in numbers of chum salmon returning to Tillamook Bay showed that the abundance of this species is determined by stream levels during the first few months of the year. Low water during the time the young fish are in the gravel produced poor returns.

The troll salmon investigations operate as a portion of an interstate coastwise unit. The studies are directed toward determining how many fish are taken by the ocean troll fishery from the runs of each watershed, where these fish are taken, when they are taken, and at what size they are caught. Reasonable conservation cannot be practiced unless knowledge is available to permit protection of those runs requiring it. Preliminary results indicate that a substantial portion of the Oregon and Washington troll catch of chinook salmon have migrated from the Sacramento River in California. Similarly, the preponderance of troll returns from Columbia River chinooks has been to the north of the Columbia River, and not from the Oregon fishery.

The marine fisheries investigations have two purposes. One is to foster the utilization of species which are capable of yielding greater catches, such as the shrimp and probably the albacore. The second is to watch closely the progress of existing fisheries to insure that fishing does not proceed to the point of lowering the yields, particularly in the case of the sole and flounders. The basic research needed in a conservation program has advanced to the point that for the important species the area occupied by individual stocks and rate of growth is known. The yield from these individual stocks is being recorded. Without these statistics, declines on local fishing grounds would be masked by landings from more distant areas. Both the Pacific ocean perch and dover sole fisheries are being pursued with increasing intensity.

A part of the marine investigations pertains exclusively to shellfish. This group is responsible for management research on clams, crabs, and oysters. It is expected that the project report on crabs will be completed by January, 1953. The work deals with the life history of the species and the effect of the present fishery. The resource under present regulation appears to be safe from overfishing, the variations in catch being chiefly the result of natural conditions. There are, however, some questions of the most economic utilization of available stock yet to be solved. A survey of the existing public clam beds has been completed for each area, the species have been tabulated and the productivity and conditions of the stocks determined. An intensive study of the razor clam resource is underway to determine the best use that may be made of this resource and still preserve a healthy stock. Work is continuing on methods of algae control which has been a problem in oyster culture.

In the coming biennium it is anticipated that relatively more emphasis will be placed upon hatchery research and upon albacore tuna work. It is believed that with more complete knowledge it will be possible to receive even more return for the hatchery operations than is now the case. The albacore presents a problem of more efficient utilization. More complete knowledge of the species may either lead to a greater harvest or allow forecasts of the abundance so that the industry may make best use of its facilities.

During the biennium, certain projects have been brought to completion and the results applied to the management of the fisheries. In several cases, the results of earlier management have been apparent in larger yields. Outstanding among these is the notable increase in the abundance of Columbia River spring chinook salmon. The 1952 passage of these fish over Bonneville Dam totaled 200,453 fish, exclusive of jacks. This is the greatest number of spring chinook salmon to pass over the dam since the counts began in 1938. This species, whose numbers had been declining for decades, appears to be now regaining some of its former abundance. There are indications that a similar trend is taking place in the chinook salmon populations of the coastal streams. The 1952 run of blueback salmon past Bonneville Dam reached 184,635 fish by September 30, compared with 131,541 fish in the previous cycle. The run furnished both the most productive fishery and the best escapement of recent decades.

Similar counts show that over one-fourth million steelhead passed up the river. This far exceeds the average count of 127,673 fish for the years since 1938. The next highest count was 142,548 fish in 1946. All fish passage counts for Bonneville Dam have been furnished by the Corps of Engineers, U. S. Army.

Regulations leading to the better utilization of our marine fisheries have also been put into effect or proposed. Many of the problems involved in the management of the ocean fisheries are common to the entire Pacific Coast. Such problems are handled through the active participation of the three coastal states and the cooperation of Canada and Alaska in the Pacific Marine Fisheries Commission. Through the efforts of this commission the opening of the troll fishery for silver salmon on the West Coast has been delayed until June 15. This results in greater production by permitting the fish to reach a large size before capture. The Pacific Marine Fisheries Commission has recommended a further delay in the opening of the season until July 1.

During the past biennium the Fish Commission has carried out experiments with otter trawl nets to determine what size mesh will allow the small fish to escape unharmed. This required careful measurements of the lengths of various kinds taken by different mesh sizes. The three coastal states combined resources during 1952 to bring this study to a conclusion. As a result, recommendations have been made regarding the size of mesh that may be used in otter trawl nets.

Exploratory fishing operations carried out by the Fish Commission have led to the discovery of beds of shrimp in commercial proportions off our coast. As a result of these explorations, another profitable fishery may be added to the resources of the State.

Statement of Receipts and Disbursements

SEAL FUND ACCOUNT

Biennial Period Ending June 30, 1952

			<i>Fiscal Year Ending June 30, 1951</i>		<i>Fiscal Year Ending June 30, 1952</i>
Fund Balance at Beginning of Period			\$21,284.74		\$23,227.24
Receipts—Sale of Seal Certificates:					
	<i>Rate</i>	<i>Number Issued</i>		<i>Number Issued</i>	
Gillnet	\$ 2.50	597	\$ 1,492.50	573	\$ 1,432.50
Setnet	2.50	3	7.50		
Troll	2.50	58	145.00	34	85.00
Seine	20.00	4	80.00		
Canner	50.00	14	700.00	12	600.00
Total Receipts		<u>676</u>	<u>\$ 2,425.00</u>	<u>619</u>	<u>\$ 2,117.50</u>
Less 10% Tithing to State General Fund			\$ 242.50		\$ 211.75
			<u>\$ 2,182.50</u>		<u>\$ 1,905.75</u>
Total Beginning Balance and Net Receipts			23,467.24		25,132.99
Disbursements:					
Bounties Paid for Seals Destroyed		(24 @ \$10)	240.00	(25 @ \$10)	250.00
Balance at End of Period			<u>\$23,227.24</u>		<u>\$24,882.99</u>

Statement of Receipts and Disbursements
STATE GENERAL FUND ACCOUNTS
Biennial Period Ending June 30, 1952

RECEIPTS	<i>Fiscal Year Ending June 30, 1951</i>	<i>Fiscal Year Ending June 30, 1952</i>
Appropriations:		
Unexpended Balance, 1947-1949	\$ 7,229.58	
Reverted to State General Fund	7,225.28	\$ 4.30
Unexpended Balance, 1949-1951	\$590,312.73	
Emergency Appropriation, 1949-1951—Wage Increase	3,148.31	\$ 593,461.04
Emergency Appropriation, 1949-1951—Marion Forks Hatchery	33,133.31	\$ 41,359.94
Unexpended Balance, 1949-1951, Marion Forks Appropriation		13,177.95
Appropriation, 1951-1953		1,202,294.00
Emergency Appropriation, 1951-1953—Alsea Hatchery		63,200.00
Appropriation, 1951-1953—Pacific Marine Fisheries Commission		5,000.00
Total	\$ 626,598.65	\$1,325,031.89
Licenses:		
Fishing	\$ 65,219.50	\$ 72,864.50
Dealers and Processors	22,327.00	21,508.00
Total License Receipts	\$ 87,546.50	\$ 94,372.50
Other Income:		
Poundage Fees	\$ 152,258.76	\$ 139,825.16
Fish and Crab Tag Sales	712.45	275.18
Fines and Confiscated Property Sales	2,294.88	3,546.21
U. S. Army Engineers—Reimbursement, Marion Forks Operation	15,066.86	9,284.23
Surplus Equipment Sales		2,396.50
Miscellaneous	923.91	3,123.61
Total Other Income	\$ 171,256.86	\$ 158,450.89
Total Receipts	\$ 258,803.36	\$ 252,823.39
Total Appropriations and Receipts	\$ 885,402.01	\$1,577,855.28
Transferred to State General Fund	258,803.36	252,823.39
Available for Expenditure	\$ 626,598.65	\$1,325,031.89

Statement of Receipts and Disbursements
STATE GENERAL FUND ACCOUNTS
Biennial Period Ending June 30, 1952

DISBURSEMENTS

	<i>Fiscal Year Ending June 30, 1951</i>	<i>Fiscal Year Ending June 30, 1952</i>
Department of State Police	\$ 28,434.82	\$ 34,232.00
Pacific Marine Fisheries Commission		2,500.00
Division of Administration:		
Commissioners' Per Diem	1,030.00	910.00
Commissioners' Expenses	399.94	368.49
Salaries and Wages	54,377.47	62,150.32
General, Operating, Maintenance	26,029.15	32,812.65
Capital Outlays	45.34	1,783.30
Total	\$ 81,881.90	\$ 98,024.76
Division of Fish Culture:		
Salaries and Wages	\$ 126,486.11	\$ 125,264.86
General, Operating, Maintenance	82,989.39	108,093.03
Capital Outlays	44,786.33	14,949.19
Total	\$ 254,261.83	\$ 248,307.08
Division of Research:		
Salaries and Wages	\$ 107,759.76	\$ 116,720.41
General, Operating, Maintenance	39,176.08	49,466.66
Capital Outlays	13,797.75	15,300.29
Total	\$ 160,733.59	\$ 181,487.36
Division of Engineering:		
Salaries and Wages	\$ 24,253.88	\$ 24,597.08
General, Operating, Maintenance	20,209.12	17,595.73
Capital Outlays	2,285.62	6,491.13
Total	\$ 46,748.62	\$ 48,683.94
Total Disbursements	\$ 572,060.76	\$ 613,235.14
Balance at End of Period	\$ 54,537.89	\$ 711,796.75

Statement of Allotments and Disbursements

FEDERAL AID—LOWER COLUMBIA RIVER SALMON REHABILITATION PROGRAM
U. S. FISH AND WILDLIFE SERVICE

Fiscal Year Ending June 30, 1951

<i>Projects</i>	<i>Balance from Previous Year</i>	<i>Allotted</i>	<i>Disbursed</i>	<i>Balance</i>
Plans and Surveys	\$ 4,507.60	\$ 65,112.22	\$ 31,334.61	\$ 38,285.21
Hatchery Construction		316,200.00	147,359.20	168,840.80
Hatchery Operation and Maintenance				
Development of Hatchery Feeds	238.18	3,000.00	971.97	2,266.21
Fishways, Stream Improvement and Maintenance	14,155.56	71,038.00	17,046.15	68,147.41
Stream Gauging	510.73	4,500.00	4,614.73	396.00
Equipment Warehouse Rental and Maintenance	669.81	1,200.00	766.40	1,103.41
Total	\$ 20,081.88	\$461,050.22	\$202,093.06	\$279,039.04

Fiscal Year Ending June 30, 1952

Plans and Surveys	\$ 38,285.21	\$ 25,000.00	\$ 49,106.65	\$ 14,178.56
Hatchery Construction	168,840.80	468,900.00	229,855.72	407,885.08
Hatchery Operation and Maintenance		44,982.00	26,337.95	18,644.05
Development of Hatchery Feeds	2,266.21		2,218.81	47.40
Fishways, Stream Improvement and Maintenance	68,147.41	35,828.00	52,312.47	51,662.94
Stream Gauging	396.00	9,518.00	6,112.70	3,801.30
Equipment Warehouse Rental and Maintenance	1,103.41	600.00	890.47	812.94
Total	\$279,039.04	\$584,828.00	\$366,834.77	\$497,032.27

Statement of Receipts and Disbursements

**FEDERAL AID—WILLAMETTE RIVER BASIN SALMON PROGRAM
U. S. ARMY ENGINEERS**

North Santiam River—Marion Forks Hatchery

(Expenditures Advanced from the Revolving Fund—Chapter 176, Oregon Laws 1951)

Fiscal Year Ending June 30, 1951

Operating and Maintenance Expenditures		\$10,179.50
Reimbursed by U. S. Government, Army Engineers	\$	
Reimbursed from Fish Commission Funds		
 Total Reimbursed		<u>.....</u>
Unreimbursed Advances		\$10,179.50

Fiscal Year Ending June 30, 1952

Unreimbursed Advances	\$10,179.50	
Operating and Maintenance Expenditures	40,430.80	\$50,610.30
Reimbursed by U. S. Government, Army Engineers	\$32,810.05	
Reimbursed from Fish Commission Funds	7,050.08	
 Total Reimbursed		<u>39,860.13</u>
Receivable from U. S. Government	\$10,208.50	
Receivable from Fish Commission Funds	541.67	
 Unreimbursed Advances		\$10,750.17

ARRESTS FOR VIOLATION OF COMMERCIAL FISHERIES CODE

	<i>Fiscal Year Ending June 30, 1951</i>	<i>Fiscal Year Ending June 30, 1952</i>
Fishing and delivering fish without a license	25	22
Fishing prohibited methods	12	25
Fishing closed seasons and closed waters	34	32
Dealing in food or shellfish without a license	32	24
Possession of over-limit of clams	71	45
Unlawful possession of food or shellfish	22	22
Pollution of waters	30	32
Failure to file dealer reports .....	....	4
Molesting spawning salmon .....	....	6
Miscellaneous violations	2	12
Total Arrests	228	224
Number of convictions	207	216
Number pending, dismissed or not guilty	21	8
Amount of fines imposed	\$ 8,263.50	\$11,894.00
Amount of fines suspended or remitted	\$ 2,115.50	\$ 3,901.50

COMPARATIVE STATEMENT OF LICENSES ISSUED

Fiscal Years Ending on June 30th

Licenses	1952	1951	1950	1949	1948	1947
Gillnet	897	956	1009	1134	1064	1022
Setnet	300	338	544	610	714	992
Trap .....	.....	.....	26	31	49	53
Seine .....	.....	4	14	12	18	16
Troll	139	91	79	60	73	73
Boatpuller .....	.....	.....	.....	.....	1	280
Personal	2341	1663	2756	2744	2693	.....
Retail Fish Dealer and Peddler	1477	1629	1690	1600	1442	1295
Wholesale Fish Dealer	162	192	204	193	205	180
Broker	3	4	6	7	4	8
Buyer	72	82	81	94	100	.....
Salmon Canner	19	24	25	23	32	32
Shellfish Canner	14	18	14	13	13	12
Reduction Plant	2	4	4	7	6	7
Bagnet	(h)165	(g)148	(f)54	(e)152	(d)155	(c)53
Carp Permit	8	4	11	11	20	.....
Clam	819	772	996	732	601	708
Crab .....	.....	.....	.....	.....	.....	288
Crawfish .....	.....	.....	.....	.....	1	24
Crab-Shrimp-Crawfish	135	116	217	229	244	.....
Setline	36	19	18	66	81	366
Bait Net	3	5	7	18	10	.....
Delivery	924	848	947	1212	1091	1040
Supplemental to Delivery	4	3	6	6	10	4
Oyster Tongers	1	.....	.....	1	.....	.....
Wholesale Distributor	41	19	.....	.....	.....	.....
Retail Dealer Packaged Frozen Food Fish	803	87	.....	.....	.....	.....
Indian Gillnet	1	.....	.....	.....	.....	.....
Indian Bagnet	8	.....	.....	.....	.....	.....
Indian Personal	9	.....	.....	.....	.....	.....
Indian Wholesale Fish Dealer	1	.....	.....	.....	.....	.....
Indian Retail Fish Dealer	1	.....	.....	.....	.....	.....
Total Licenses	8385	7026	8708	8955	8627	6453

- (c) Includes 8 issued for Sandy River Smelt.
(d) Includes 109 issued for Sandy River Smelt.
(e) Includes 64 issued for Sandy River Smelt.
(f) Includes 16 issued for Sandy River Smelt.
(g) Includes 104 issued for Sandy River Smelt.
(h) Includes 60 issued for Sandy River Smelt.

COMPARATIVE STATEMENT OF LICENSES ISSUED

License Years Ending on March 31st

Licenses	1952	1951	1950	1949	1948	1947
Alsea Bay and River						
Gillnet	49	74	69	90	77	48
Setnet .....	.....	.....	.....	.....	.....	153
Boat Puller .....	.....	.....	.....	.....	2	3
Retail Fish Dealer and Peddler	36	37	45	35	33	37
Wholesale Fish Dealer	4	4	6	3	4	5
Clam	5	7	11	4	5	12
Crab .....	.....	.....	.....	.....	15	26
Crab-Shrimp-Crawfish	5	10	15	16	7	.....
Salmon Canner	1	1	1	1	.....	.....
Total Alsea Bay and River	100	133	147	149	143	284
Brookings Harbor						
Wholesale Fish Dealer .....	.....	.....	.....	1	1	.....
Retail Fish Dealer and Peddler .....	.....	.....	1	.....	.....	.....
Crab .....	.....	.....	.....	.....	.....	.....
Total Brookings Harbor .....	.....	.....	1	1	1	.....
Chetco Bay						
Retail Fish Dealer and Peddler	6	3	2	2	3	3
Wholesale Fish Dealer	1	1	.....	1	.....	.....
Crab .....	.....	.....	.....	.....	.....	.....
Total Chetco Bay	7	4	2	3	3	3
Clatsop Beaches						
Retail Fish Dealer and Peddler	1	1	.....	2	.....	.....
Shellfish Canner	4	5	2	2	.....	.....
Clam	180	652	602	480	589	716
Crab .....	.....	.....	.....	.....	2	3
Wholesale Fish Dealer	1	1	1	1	2	1
Buyer .....	.....	3	.....	1	1	.....
Crab-Shrimp-Crawfish	1	.....	.....	3	.....	.....
Total Clatsop Beaches	187	662	605	489	594	720
Columbia River and Tributaries						
Gillnet	585	613	629	632	582	566
Setnet .....	.....	108	152	248	251	240
Trap .....	.....	20	35	49	55	54
Seine .....	.....	13	13	15	21	18
Troll	37	65	66	72	65	67
Boat Puller .....	.....	.....	.....	.....	78	197
Retail Fish Dealer and Peddler	1176	1229	1159	1090	1011	954
Wholesale Fish Dealer	90	109	105	100	96	96
Broker .....	.....	.....	.....	.....	5	6
Shellfish Canner	9	1	6	7	4	8
Salmon Canner	14	14	16	20	22	19
Reduction Plant	3	3	5	6	5	5
Bagnet	(h)153	(g)46	(f)87	(e)165	(d)101	(c)97
Clam	3	3	2	1	.....	2
Crab .....	.....	.....	.....	.....	25	34
Crawfish .....	.....	.....	.....	.....	18	25
Setline	27	10	37	52	173	239
Bait Net .....	.....	.....	.....	3	1	.....
Buyer	67	71	69	63	45	.....
Carp Permit	6	9	11	14	8	.....
Crab-Shrimp-Crawfish	39	51	42	49	12	.....
Indian Gillnet	1	.....	.....	.....	.....	.....
Indian Bagnet	6	.....	.....	.....	.....	.....
Indian Wholesale Fish Dealer	1	.....	.....	.....	.....	.....
Indian Retail Fish Dealer	1	.....	.....	.....	.....	.....
Total Columbia River	2218	2365	2434	2586	2578	2627

(c) Includes 52 issued for Sandy River Smelt.

(d) Includes 62 issued for Sandy River Smelt.

(e) Includes 107 issued for Sandy River Smelt.

(f) Includes 52 issued for Sandy River Smelt.

(g) Includes 14 issued for Sandy River Smelt.

(h) Includes 103 issued for Sandy River Smelt.

COMPARATIVE STATEMENT OF LICENSES ISSUED—Continued

License Years Ending on March 31st

Licenses	1952	1951	1950	1949	1948	1947
Coos Bay and River						
Gillnet	7	11	10	21	34	60
Setnet	90	121	140	179	245	275
Boat Puller					23	39
Retail Fish Dealer and Peddler	88	81	66	55	53	51
Wholesale Fish Dealer	26	22	23	19	23	16
Shellfish Canner	3	3	2	1	1	2
Salmon Canner	2	2	1	2	1	1
Clam	17	15	22	10	15	28
Crab					52	100
Broker						1
Crawfish						1
Setline		2	2	22	35	48
Buyer	3	4	3	3	1	
Bait Net	1	1	3	5	3	
Crab-Shrimp-Crawfish	30	38	15	57	15	
Total Coos Bay and River	267	300	287	374	501	622
Coquille River						
Gillnet	40	36	39	53	47	29
Setnet	7	5	8	11	13	45
Boat Puller					1	2
Retail Fish Dealer and Peddler	17	16	11	10	13	13
Wholesale Fish Dealer	4	3	4	5	6	4
Clam	2	1	1	1	2	
Crab					1	7
Buyer	2	2	1	1	1	
Crab-Shrimp-Crawfish	1	4	2	5	1	
Salmon Canner		1				
Total Coquille River	73	68	66	86	85	100
Depoe Bay						
Retail Fish Dealer and Peddler	13	5	15	12	18	14
Wholesale Fish Dealer	4	2	5	5	4	3
Crab						
Salmon Canner			1	1	1	
Total Depoe Bay	17	7	21	18	23	17
Lincoln County Beaches						
Clam	10	17	11	7	17	7
Crab-Shrimp-Crawfish		1	1			
Total Lincoln County Beaches	10	18	12	7	17	7
Nehalem River						
Gillnet	46	57	62	71	71	60
Setnet						127
Boat Puller						5
Retail Fish Dealer and Peddler	14	14	16	17	17	16
Wholesale Fish Dealer	5	6	5	4	5	9
Clam	7	9	7	3	1	
Crab					3	8
Buyer	1	1	2	1	1	
Crab-Shrimp-Crawfish	3	6	6	1	1	
Salmon Canner	1	1	1			
Total Nehalem River	77	94	99	97	99	225

COMPARATIVE STATEMENT OF LICENSES ISSUED—Continued

License Years Ending on March 31st

Licenses	1952	1951	1950	1949	1948	1947
Nestucca River						
Retail Fish Dealer and Peddler	5	9	8	6	7	9
Clam .....	.....	.....	.....	.....	.....	.....
Crab .....	.....	.....	.....	.....	.....	.....
Wholesale Fish Dealer	1	2	2	2	2	.....
Salmon Canner	1	1	1	1	1	.....
Total Nestucca River	7	12	11	9	10	9
Netarts Bay						
Setnet	5	7	9	8	6	4
Retail Fish Dealer and Peddler	10	5	5	4	3	5
Crab .....	.....	.....	.....	.....	6	13
Wholesale Fish Dealer	1	1	1	1	1	.....
Crab-Shrimp-Crawfish	3	3	3	5	2	.....
Clam	5	4	4	1	.....	.....
Total Netarts Bay	24	20	22	19	18	22
Port Orford						
Retail Fish Dealer and Peddler	12	12	13	7	8	2
Wholesale Fish Dealer	5	6	7	4	3	1
Crab .....	.....	.....	.....	.....	4	7
Salmon Canner	2	2	2	.....	1	.....
Crab-Shrimp-Crawfish .....	.....	3	.....	1	3	.....
Shellfish Canner .....	.....	2	.....	.....	.....	.....
Total Port Orford	19	25	22	12	19	10
Salmon River						
Gillnet .....	.....	.....	.....	.....	.....	1
Setnet .....	.....	.....	.....	.....	.....	27
Boat Puller .....	.....	.....	.....	.....	.....	1
Retail Fish Dealer and Peddler .....	.....	.....	.....	.....	.....	7
Wholesale Fish Dealer .....	.....	.....	.....	.....	.....	2
Total Salmon River .....	.....	.....	.....	.....	.....	38
Sand Lake						
Setnet	5	8	10	10	12	5
Crab .....	.....	.....	.....	.....	.....	.....
Retail Fish Dealer .....	.....	.....	2	1	1	.....
Total Sand Lake	5	8	12	11	13	5
Sandy River						
Retail Fish Dealer and Peddler	12	4	9	10	4	.....
Wholesale Fish Dealer	4	.....	2	1	.....	.....
Total Sandy River	16	4	11	11	4	.....
Siletz River						
Gillnet	33	26	33	39	35	5
Setnet .....	.....	.....	.....	.....	.....	100
Boat Puller .....	.....	.....	.....	.....	.....	1
Retail Fish Dealer and Peddler	32	26	29	26	24	25
Wholesale Fish Dealer	3	3	4	3	4	6
Crab-Shrimp-Crawfish .....	.....	.....	2	.....	.....	.....
Total Siletz River	68	55	68	68	63	137

COMPARATIVE STATEMENT OF LICENSES ISSUED—Continued

License Years Ending on March 31st

Licenses	1952	1951	1950	1949	1948	1947
Siuslaw River						
Gillnet	25	28	30	51	43	35
Setnet	39	43	40	58	64	78
Boat Puller .....	.....	.....	.....	.....	2	10
Retail Fish Dealer and Peddler	39	44	39	34	29	30
Wholesale Fish Dealer	3	3	1	4	5	6
Clam	10	11	13	13	7	8
Crab .....	.....	.....	.....	.....	2	8
Buyer	1	1	1	1	1	.....
Crab-Shrimp-Crawfish .....	.....	1	.....	3	1	.....
Total Siuslaw River	117	131	124	164	154	175
Tillamook Bay						
Gillnet	70	78	97	106	113	90
Setnet	92	120	159	145	123	216
Boat Puller .....	.....	.....	.....	.....	.....	9
Retail Fish Dealer and Peddler	35	37	43	48	46	42
Wholesale Fish Dealer	10	10	14	17	17	16
Salmon Canner .....	.....	.....	.....	.....	2	4
Shellfish Canner .....	.....	3	1	1	.....	.....
Clam	36	56	43	22	19	20
Crab .....	.....	.....	.....	.....	22	39
Buyer	1	1	1	4	2	.....
Crab-Shrimp-Crawfish	12	17	15	25	11	.....
Oyster Tonger .....	.....	.....	1	.....	.....	.....
Bait Net	1	.....	1	.....	.....	.....
Total Tillamook Bay	257	322	375	368	355	436
Umpqua River						
Gillnet	26	39	40	57	85	86
Setnet (Smith River)	82	79	79	80	99	79
Troll .....	.....	.....	.....	.....	.....	2
Boat Puller .....	.....	.....	.....	.....	2	9
Retail Fish Dealer and Peddler	39	36	43	36	31	36
Wholesale Fish Dealer	7	8	6	8	7	9
Salmon Canner .....	.....	.....	1	1	1	1
Shellfish Canner .....	.....	.....	.....	.....	.....	.....
Clam	12	10	7	6	7	11
Crab .....	.....	.....	.....	.....	4	4
Buyer	1	1	3	1	1	.....
Crab-Shrimp-Crawfish	1	2	3	2	3	.....
Bait Net	1	2	4	1	.....	.....
Total Umpqua River	169	177	186	192	240	237
Yaquina Bay and River						
Gillnet	23	31	31	30	27	27
Setnet .....	.....	.....	.....	.....	.....	4
Boat Puller .....	.....	.....	.....	.....	.....	5
Retail Fish Dealer and Peddler	70	72	72	57	50	51
Wholesale Fish Dealer	15	12	15	14	11	15
Clam	11	27	20	19	17	29
Crab .....	.....	.....	.....	.....	13	63
Setline .....	.....	2	5	8	13	25
Shellfish Canner	2	1	2	2	2	2
Salmon Canner	1	2	2	2	2	3
Reduction Plant	1	1	1	1	1	1
Bait Net	1	2	3	4	4	.....
Crab-Shrimp-Crawfish	17	23	21	22	28	.....
Buyer .....	.....	.....	1	.....	.....	.....
Total Yaquina Bay and River	141	173	173	159	168	225

COMPARATIVE STATEMENT OF LICENSES ISSUED—Continued

License Years Ending on March 31st

Licenses	1952	1951	1950	1949	1948	1947
Miscellaneous						
Bait Net (Pacific Ocean)			1			
Troll (Pacific Ocean)	73	9	9	3	1	1
Delivery	871	910	1027	1194	1073	1106
Supplemental to Delivery	5	3	7	10	14	5
Personal	2302	2664	2640	2679	1073	
Shrimp-Crawfish-Crab (Pacific Ocean)	40	51	80	47	40	45
Broker	4	5	8	4		
Clam (Oregon Beaches)	462	160	63	20		
Salmon Canner (Rogue River)	1					
Retail Dealer Packaged						
Frozen Food Fish	342					
Wholesale Distributor	27					
Indian Personal	7					
Total Miscellaneous	4134	3802	3835	3957	2201	1157
Grand Totals	7912	8380	8513	8780	7289	7056
Recapitulation						
Gillnet	904	993	1040	1150	1114	1007
Setnet	320	491	597	739	813	1353
Trap		20	35	49	55	54
Seine		13	13	15	21	18
Troll	110	74	75	75	66	70
Boat Puller					108	281
Retail Fish Dealer and Peddler	1605	1631	1578	1452	1351	1295
Wholesale Fish Dealer	184	193	201	193	191	189
Broker	4	5	8	4	5	7
Salmon Canner	23	24	26	28	31	28
Shellfish Canner	18	15	13	13	7	12
Reduction Plant	4	4	6	7	6	6
Bagnet	(h)153	(g)46	(f)87	(e)165	(d)101	(c)97
Clam	760	972	806	587	679	833
Crab					189	357
Crawfish					18	26
Setline	27	14	44	82	221	312
Delivery	871	910	1027	1194	1073	1106
Supplemental to Delivery	5	3	7	10	14	5
Personal	2302	2664	2640	2679	1073	
Crab-Shrimp-Crawfish	152	210	205	236	84	
Buyer	75	84	81	75	53	
Bait Net	4	5	12	13	8	
Carp Permit	6	9	11	14	8	
Oyster Tonger			1			
Retail Dealer Packaged						
Frozen Food Fish	342					
Wholesale Distributor	27					
Indian Gillnet	1					
Indian Bagnet	6					
Indian Personal	7					
Indian Wholesale Fish Dealer	1					
Indian Retail Fish Dealer	1					
Totals	7912	8380	8513	8780	7289	7056

(c) Includes 52 issued for Sandy River Smelt.
 (d) Includes 62 issued for Sandy River Smelt.
 (e) Includes 107 issued for Sandy River Smelt.

(f) Includes 52 issued for Sandy River Smelt.
 (g) Includes 14 issued for Sandy River Smelt.
 (h) Includes 103 issued for Sandy River Smelt.

EGG TAKE

Number of Eggs Taken at Stations Operated by the Fish Commission

Fiscal Year Ending June 30, 1951

<i>Fisheries Station</i>	<i>Chinook</i>	<i>Silver Salmon</i>	<i>Steelhead</i>	<i>Blueback</i>	<i>Chum</i>	<i>Total</i>
Alsea		55,139				55,139
Bonneville	18,123,400					18,123,400
Coos		731,731				731,731
Klaskanine	258,015	130,633				388,648
McKenzie	684,901					684,901
Metolius	159,149			60,202		219,351
Nehalem		196,955				196,955
Ox Bow Springs	8,653,710					8,653,710
Sandy	597,520					597,520
North Santiam	443,279		2,517,798			2,961,077
South Santiam	1,556,345					1,556,345
Siletz		258,085				258,085
Tillasqua	1,510,922	761,078			585,784	2,857,784
Trask	1,557,443	350,037				1,907,480
Willamette	507,240					507,240
Total	34,051,924	2,483,658	2,517,798	60,202	585,784	39,699,366

Fiscal Year Ending June 30, 1952

<i>Fisheries Station</i>	<i>Chinook</i>	<i>Silver Salmon</i>	<i>Steelhead</i>	<i>Blueback</i>	<i>Chum</i>	<i>Total</i>
Alsea		295,452				295,452
Bonneville	19,410,000	1,574,100				20,984,100
Coos		1,023,727				1,023,727
Klaskanine	106,730	2,151,360				2,258,090
McKenzie	1,738,715					1,738,715
Metolius	349,653					349,653
Nehalem		755,224				755,224
Ox Bow Springs	7,423,000					7,423,000
Sandy	530,530					530,530
North Santiam	266,790		2,706,789			2,973,579
South Santiam	1,494,459					1,494,459
Siletz		933,500				933,500
Tillasqua	2,053,296	1,853,910				3,907,206
Trask	1,350,012	1,015,566				2,365,578
Willamette	3,018,712					3,018,712
Total	37,741,879	9,602,839	2,706,789			50,051,525

NUMBER OF FINGERLINGS AND FRY LIBERATED INTO THE WATERS OF THE STATE OF OREGON BY THE FISH COMMISSION

Fiscal Year Ending June 30, 1951

Fisheries Station	Chinook	Silver				Total	Where Liberated
		Salmon	Steelhead	Chum	Blueback		
Alsea	631,758	60,458	---	---	---	692,216	Fall Cr., Trib. Five Rivers R., Trib. Alsea R.
		17,366	---	---	---	17,366	Scott Cr., Trib. Alsea R.
		12,673	---	---	---	12,673	S. Fork Alsea R.
		8,132	---	---	---	8,132	Fish Creek, Trib. Siuslaw R.
		15,751	---	---	---	15,751	Condon Cr., Trib. Siuslaw R.
		9,842	---	---	---	9,842	Nelson Cr., Trib. Siuslaw R.
	248,560	---	---	---	---	248,560	Little Lobster Cr., Trib. Alsea R.
	85,200	---	---	---	---	85,200	Hatchery Cr., Trib. Alsea R.
Bonneville	10,673,848	310,005	77,161	---	---	11,061,014	Tanner Cr., Trib. Columbia R.
	4,502,128	---	---	---	---	4,502,128	Sandy R., Trib. Columbia R.
	503,200	---	---	---	---	503,200	Hood R., Trib. Columbia R.
	50,400	---	---	---	---	50,400	Multnomah Cr., Trib. Columbia R.
Coos	67,142	325,061	---	---	---	392,203	S. Coos R.
	141,781	29,978	---	---	---	171,759	N. Coquille R.
	150,552	---	---	---	---	150,552	S. Fork Coquille R.
	75,480	---	---	---	---	75,480	Lake Cr., Trib. Siuslaw R.
	75,480	---	---	---	---	75,480	Nelson Cr., Trib. Siuslaw R.
	75,480	---	---	---	---	75,480	Deadwood Cr., Trib. Siuslaw R.
	75,000	---	---	---	---	75,000	Indian Cr., Trib. Siuslaw R.
	50,000	---	---	---	---	50,000	Wildcat Cr., Trib. Siuslaw R.
	75,480	---	---	---	---	75,480	Mill Cr., Trib. Umpqua R.
	75,480	---	---	---	---	75,480	Smith R., Trib. Umpqua R.
	25,092	---	---	---	---	25,092	Paradise Cr., Trib. Umpqua R.
	75,072	---	---	---	---	75,072	Myrtle Cr., Trib. Coquille R.
Klaskanine	1,128,615	1,385,762	---	---	---	2,514,377	Klaskanine R., Trib. Columbia R.
		10,074	---	---	---	10,074	Walluski R., Trib. Columbia R.
		2,618	---	---	---	2,618	Youngs R., Trib. Youngs Bay
	95,638	59,660	---	---	---	155,298	Lewis & Clark R., Trib. Youngs Bay
		56,922	---	---	---	56,922	S. Fork Klaskanine R.
		21,282	---	---	---	21,282	Necanicum R.
McKenzie	363,000	---	---	---	---	363,000	McKenzie R., Trib. Willamette R.
	4,854	---	---	---	---	4,854	Cogswell Cr., Trib. McKenzie R.
	70,213	---	---	---	---	70,213	Willamette R., Trib. Columbia R.
	33,000	---	---	---	---	33,000	Row R., Trib. Willamette R.
Metolius	---	---	---	---	75,960	75,960	Headworks Res., Trib. Metolius R., Trib. Deschutes R.
	478,634	---	---	---	---	478,634	Spring Cr., Trib. Metolius R., Trib. Deschutes R.
Nehalem	---	140,411	---	---	---	140,411	Foley Cr., Trib. Nehalem R.
	115,180	19,649	---	---	---	134,829	Miami R., Trib. Tillamook Bay
		10,599	---	---	---	10,599	Gods Valley Cr., Trib. Nehalem R.
		14,703	---	---	---	14,703	Cook Cr., Trib. Nehalem R.
	114,920	11,271	---	---	---	126,191	Buchanan Cr., Trib. Nehalem R.
	115,960	---	---	---	---	115,960	Cronin Cr., Trib. Nehalem R.
	114,761	---	---	---	---	114,761	East Humbug Cr., Trib. Nehalem R.
Ox Bow Springs	3,486,108	---	---	---	---	3,486,108	Herman Cr., Trib. Columbia R.
N. Santiam	1,130,597	---	---	---	---	1,130,597	Marion Cr., Trib. N. Santiam R.
S. Santiam	1,230,915	---	---	---	---	1,230,915	S. Santiam R., Trib. Willamette R.
	140,760	---	---	---	---	140,760	Whitcomb Cr., Trib. S. Santiam R.
Siletz	---	50,000	---	---	---	50,000	Buck Cr., Trib. Siletz R.
		75,000	---	---	---	75,000	Sam Cr., Trib. Siletz R.
	100,000	253,591	---	---	---	353,591	Yaquina R.
	152,000	139,014	---	---	---	291,014	Rock Cr., Trib. Siletz R.
	150,000	60,000	---	---	---	210,000	Cedar Cr., Trib. Siletz R.
	100,320	---	---	---	---	100,320	Simpson Cr., Trib. Yaquina R.
		46,409	---	---	---	46,409	Teagles Cr., Trib. Yaquina R.

NUMBER OF FINGERLINGS AND FRY LIBERATED INTO THE WATERS OF THE STATE OF OREGON BY THE FISH COMMISSION

Fiscal Year Ending June 30, 1951—Continued

Fisheries Station	Chinook	Silver				Total	Where Liberated
		Salmon	Steelhead	Chum	Blueback		
Tillasqua	288,000	643,239	-----	-----	-----	931,239	Tillasqua R., Trib. Columbia R.
	-----	20,000	-----	-----	-----	20,000	Carcus Cr., Trib. Klaskanine R., Trib. Columbia R.
	-----	20,000	-----	-----	-----	20,000	N. Scappoose Cr., Trib. Columbia R.
	-----	10,000	-----	-----	-----	10,000	Fall Cr., Trib. Clatskanie R., Trib. Columbia R.
	-----	20,000	-----	-----	-----	20,000	Congers Cr., Trib. Clatskanie R., Trib. Columbia R.
	-----	10,000	-----	-----	-----	10,000	Little Clatskanie, Trib. Clatskanie R., Trib. Columbia R.
	90,480	50,000	-----	-----	-----	140,480	Clatskanie R., Trib. Columbia R.
	-----	10,000	-----	-----	-----	10,000	Little Cr., Trib. Tillasqua R., Trib. Columbia R.
	339,872	127,200	-----	-----	-----	467,072	Tillasqua R., Trib. Columbia R.
	93,600	-----	-----	-----	-----	93,600	Coon Cr., Trib. Tillasqua R., Trib. Columbia R.
	93,600	-----	-----	-----	-----	93,600	Pigpen Cr., Trib. Tillasqua R., Trib. Columbia R.
	-----	-----	-----	550,112	-----	550,112	Mill Cr., Trib. Tillasqua R., Trib. Columbia R.
Trask	1,251,445	-----	-----	-----	-----	1,251,445	Trask R.
	-----	33,125	-----	-----	-----	33,125	Gold Cr., Trib. Trask R.
	-----	15,400	-----	-----	-----	15,400	Fawcette Cr., Trib. Trask R.
	-----	20,475	-----	-----	-----	20,475	N. Fork Trask R.
	-----	4,850	-----	-----	-----	4,850	S. Fork Trask R.
	144,078	15,625	-----	-----	-----	159,703	Kilchis R., Trib. Tillamook Bay
	146,716	10,000	-----	-----	-----	156,716	Wilson R., Trib. Tillamook Bay
	-----	10,125	-----	-----	-----	10,125	Little Nestucca R., Trib. Nestucca R.
	69,802	10,300	-----	-----	-----	80,202	Moon Cr., Trib. Nestucca R.
	448,320	-----	-----	-----	-----	448,320	N. Fork and S. Fork Trask R.
	67,202	-----	-----	-----	-----	67,202	L. Nestucca, Trib. Nestucca R.
	31,590	-----	-----	-----	-----	31,590	Monson Cr., Trib. Trask R.
Willamette	527,037	-----	-----	-----	-----	527,037	Salmon Cr., Trib. Willamette R.
Total	30,374,450	4,176,570	77,161	550,112	75,960	35,254,253	

NUMBER OF FINGERLINGS AND FRY LIBERATED INTO THE WATERS OF THE STATE OF OREGON BY THE FISH COMMISSION

Fiscal Year Ending June 30, 1952

Fisheries Station	Chinook	Silver Salmon	Steelhead	Blueback	Total	Where Liberated
Alsea	451,549	270,798	-----	-----	722,347	Fall Cr., Trib. Five Rivers R., Trib. Alsea R.
		1,921	-----	-----	1,921	Hatchery Cr., Trib. Alsea R.
Bonneville	*10,967,220	100,000	-----	-----	11,067,220	Tanner Cr., Trib. Columbia R.
	500,000	-----	-----	-----	500,000	Hood R., Trib. Columbia R.
	200,000	50,000	-----	-----	250,000	Eagle Cr., Trib. Columbia R.
	200,000	-----	-----	-----	200,000	Clear Cr., Trib. Clackamas, Willamette, Columbia R.
	300,000	-----	-----	-----	300,000	Clackamas R., Trib. Columbia R.
	2,072,773	100,000	-----	-----	2,172,773	Sandy R., Trib. Columbia R.
	-----	75,000	-----	-----	75,000	Deep Cr., Trib. Clackamas R., Trib. Columbia R.
	-----	100,000	-----	-----	100,000	Roaring R., Trib. Clackamas R., Trib. Columbia R.
	-----	25,000	-----	-----	25,000	Molalla R., Trib. Willamette R., Trib. Columbia R.
	-----	25,000	-----	-----	25,000	Milk Cr., Trib. Willamette R., Trib. Columbia R.
	-----	75,000	-----	-----	75,000	Scappoose Cr., Trib. Columbia R.
Coos	549,443	143,667	-----	-----	693,110	Salmon Cr., Trib. Coos R.
	75,674	-----	-----	-----	75,674	Fish Cr., Trib. Coos R.
	75,340	-----	-----	-----	75,340	Nelson Cr., Trib. Siuslaw R.
	270,271	159,953	-----	-----	430,224	S. Coos R.
	-----	297,953	-----	-----	297,953	Salmon Cr., Trib. Coos R.
	-----	102,500	-----	-----	102,500	Rock Cr., Trib. Coquille R.
	-----	25,000	-----	-----	25,000	Nelson Cr., Trib. Siuslaw R.
	-----	26,000	-----	-----	26,000	Sweet Cr., Trib. Siuslaw R.
	-----	25,000	-----	-----	25,000	McLeod Cr., Trib. Siuslaw R.
	-----	103,600	-----	-----	103,600	Smith R., Trib. Umpqua R.
	-----	50,960	-----	-----	50,960	N. Coquille R.
	-----	53,200	-----	-----	53,200	Millacoma R., Trib. Coos R.
	-----	50,960	-----	-----	50,960	Lake Cr., Trib. Siuslaw R.
Klaskanine	953,018	-----	-----	-----	953,018	N. Fork Klaskanine R., Trib. Columbia R.
	98,736	-----	-----	-----	98,736	S. Fork Klaskanine R., Trib. Columbia R.
	53,040	231,875	-----	-----	284,915	Lewis & Clark R., Trib. Columbia R.
	-----	853,832	-----	-----	853,832	Klaskanine R., Trib. Columbia R.
McKenzie	2,420	-----	-----	-----	2,420	Cogswell Cr., Trib. McKenzie R.
	1,018,717	-----	-----	-----	1,018,717	McKenzie R., Trib. Willamette R.
Metolius	-----	-----	-----	55,200	55,200	Suttle Lake, Trib. Deschutes R.
	255,900	-----	-----	28,500	284,400	Metolius R., Trib. Deschutes R.
Nehalem	368,280	49,670	-----	-----	417,950	Miami R., Trib. Tillamook Bay
	323,630	76,595	-----	-----	400,225	Foley Cr., Trib. Nehalem R.
	-----	25,940	-----	-----	25,940	Cook Cr., Trib. Nehalem R.
Ox Bow Springs	3,619,164	-----	-----	-----	3,619,164	Herman Cr., Trib. Columbia R.
Sandy	1,945,953	-----	-----	-----	1,945,953	Cedar Cr., Trib. Sandy R., Trib. Columbia R.
N. Santiam	229,763	-----	1,672,644	-----	1,902,407	N. Santiam R., Trib. Willamette R.
	99,897	-----	-----	-----	99,897	Willamette R., Trib. Columbia R.
S. Santiam	80,975	-----	-----	-----	80,975	S. Santiam R., Trib. Willamette R.
	1,037,050	-----	-----	-----	1,037,050	Whitcomb Cr., Trib. S. Santiam R.
Siletz	11,746	500,700	-----	-----	512,446	Rock Cr., Trib. Siletz R.
	975,409	-----	-----	-----	975,409	Siletz R.
	-----	12,000	-----	-----	12,000	Steer Cr., Trib. Siletz R.
	-----	10,000	-----	-----	10,000	Cedar Cr., Trib. Siletz R.
Tillasqua	33,066	37,500	-----	-----	70,566	Carcus Cr., Trib. Klaskanine R.
	33,066	-----	-----	-----	33,066	Clatskanie R., Trib. Columbia R.
	1,725,568	1,240,798	-----	-----	2,966,366	Tillasqua R., Trib. Columbia R.
	29,520	-----	-----	-----	29,520	Gnat Cr., Trib. Columbia R.
	18,450	-----	-----	-----	18,450	N. Scappoose Cr., Trib. Columbia R.
	-----	91,800	-----	-----	91,800	Coon Cr., Trib. Tillasqua R., Trib. Columbia R.
	-----	72,900	-----	-----	72,900	Pigpen Cr., Trib. Tillasqua R., Trib. Columbia R.
	-----	40,500	-----	-----	40,500	Elk Cr., Trib. Tillasqua R., Trib. Columbia R.
	-----	49,500	-----	-----	49,500	Scappoose Cr., Trib. Columbia R.

**NUMBER OF FINGERLINGS AND FRY LIBERATED INTO THE WATERS OF
THE STATE OF OREGON BY THE FISH COMMISSION**

Fiscal Year Ending June 30, 1952—Continued

Fisheries Station	Chinook	<i>Silver</i> Salmon	Steelhead	Blueback	Total	Where Liberated
Trask	652,306	.....	.....	.....	652,306	Trask R.
	770,624	327,712	.....	.....	1,098,336	Gold Cr., Trib. Trask R.
	200,113	99,852	.....	.....	299,965	S. Fork Trask R.
	198,550	.....	.....	.....	198,550	Edwards Cr., Trib. Trask R.
	281,327	50,029	.....	.....	331,356	N. Fork Trask R.
	101,229	100,008	.....	.....	201,237	E. Fork Trask R.
	.....	50,114	.....	.....	50,114	Edwards Cr., Trib. Trask R.
	.....	74,053	.....	.....	74,053	N. Fork Wilson R.
	.....	50,311	.....	.....	50,311	Fall Cr., Trib. Wilson R.
	.....	25,108	.....	.....	25,108	Fawcett Cr., Trib. Tillamook R.
	.....	99,877	.....	.....	99,877	N. Fork Sam Dawn Cr., Trib. Wilson R.
	.....	25,002	.....	.....	25,002	Killam Cr., Trib. Tillamook R.
	.....	25,041	.....	.....	25,041	Simmons Cr., Trib. Tillamook R.
.....	94,040	.....	.....	94,040	S. Fork Wilson R.	
Willamette	631,079	.....	.....	.....	631,079	Salmon Cr., Trib. Willamette R.
	21,080	.....	.....	.....	21,080	Willamette R., Trib. Columbia R.
Total	31,431,946	6,176,269	1,672,644	83,700	39,364,559	

* Includes 327,690 fingerling escapement into Tanner Creek.

COUNTS OF SALMON PASSING OVER BONNEVILLE DAM

Years 1938 to 1952

CHINOOK

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952
January	*	6	.....	4	1	11	1	6	1	.....	10	.....	.....	.....	.....
February	*	12	.....	.....	15	6	2	.....	2	.....	.....	.....	21	32	255
March	*	121	504	1,260	3,560	43	65	81	25	141	251	5	6,630	28,801	8,130
April	22,371	51,410	37,253	51,391	9,566	12,172	15,670	17,148	14,179	83,320	21,205	5,765	50,638	86,055	107,807
May	8,221	25,159	23,621	19,445	30,915	53,268	15,127	26,276	53,313	49,899	20,262	44,304	16,667	54,889	62,491
June	6,556	17,845	14,938	9,395	12,821	8,044	4,363	11,293	30,051	25,502	44,137	24,232	32,937	24,394	21,800
July	.....	34,765	32,919	58,643	12,590	27,581	28,985	55,468	32,254	45,421	43,062	35,934	41,500	40,462	32,290
August	197,294	150,851	240,515	351,967	303,995	201,814	139,254	189,675	277,075	260,385	270,238	137,589	205,521	97,131	135,053
September	2,302	2,197	3,765	7,179	4,465	3,354	2,388	4,281	4,521	3,943	3,928	1,571	4,356	6,489	2,576
October	263	78	287	366	639	365	164	137	170	526	467	143	215	212	477
November	27	16	34	134	190	21	20	6	25	36	23	6	.....	.....	.....
December	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	271,799	286,216	391,588	461,458	401,908	313,123	240,763	297,468	445,743	480,376	419,555	277,697	387,375	331,788	420,879

STEELHEAD

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952
January	*	23	5	37	4	14	50	1,003	63	187	154	1	13	.....	.....
February	*	19	96	76	37	18	157	1,078	551	321	119	.....	.....	.....	.....
March	*	560	1,688	1,641	256	654	1,019	3,066	3,040	1,968	1,631	1,689	1,156	375	278
April	6,622	8,110	4,125	6,392	3,642	3,374	6,142	4,665	9,939	6,889	4,473	3,293	4,537	2,338	1,248
May	2,382	1,587	988	1,518	4,159	4,698	2,227	1,587	5,481	2,025	1,170	1,712	1,667	1,568	1,751
June	19,455	1,480	4,489	994	1,568	1,564	1,169	1,109	3,265	1,395	1,895	3,264	691	5,187	8,202
July	29,231	36,561	61,175	21,940	19,905	7,755	21,868	24,600	20,559	28,134	33,191	34,314	25,142	74,980	118,110
August	46,618	33,891	46,071	29,600	41,973	29,894	24,508	40,194	58,356	40,819	53,621	54,281	53,904	39,712	79,735
September	2,264	1,264	1,786	3,980	2,411	2,444	6,129	1,925	2,067	2,905	40,609	20,786	24,226	15,357	48,293
October	339	216	292	1,063	566	573	1,119	302	262	443	381	1,742	1,832	947	2,785
November	92	119	59	304	162	92	226	142	282	113	76	686	811	225	638
December	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	107,003	121,922	185,161	118,087	151,345	92,131	100,521	120,144	142,543	135,434	139,062	119,285	114,087	140,889	260,990

BLUEBACK

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952
January	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
April	48	.....	.....	239	.....	.....	1	10	.....	.....	.....	.....	.....	.....	7
May	1,025	189	206	1,052	13	9	16	51	67	5	.....	151	.....	25	1
June	17,811	29,386	59,639	23,536	12,624	4,525	3,098	1,507	7,805	59,378	12,023	9,013	341	81,045	136,939
July	53,864	43,124	85,885	39,193	41,301	33,613	11,171	6,903	64,704	108,175	117,652	41,820	75,784	87,104	47,188
August	2,097	616	3,063	1,615	1,477	1,697	6,559	498	1,746	3,564	1,850	655	1,826	1,214	487
September	235	19	11	50	60	1	127	11	23	17	14	10	42	40	30
October	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
November	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	75,040	73,382	148,805	65,745	55,475	39,845	15,072	9,502	74,356	171,142	131,543	51,450	77,983	169,428	184,645

SILVERSIDES

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952
January	*	3	3	2						12	1				
February	*									2					
March	*								10	4					
April	*									1					
May															
June															
July								2			11	17			10
August	3,070	1,810	1,451	1,317	1,193	762	1,052	289	227	217	158	270	1,570	197	2,581
September	10,995	12,226	10,212	16,061	11,061	1,676	3,021	533	3,609	10,928	3,893	703	8,543	4,773	5,131
October	972	310	213	369	147	89	103	16	1	10	10	5	36	225	22
November	141	15	33	160	20	20	29			3	3	8		6	24
December	7	18	5	2			2	1	24	1	5	1			
Total	15,185	14,382	11,917	17,911	12,401	2,547	4,207	791	3,897	11,174	4,081	1,004	10,151	5,201	7,768

CHUMS

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952
January	*	2					1								
February	*														
March	*														
April	*														
May															
June															
July															
August				1						1					2
September	1,245	700	860	1,116	700	125	191	118	303	59	192	215	288	60	163
October	799	411	835	4,130	1,149	623	666	585	309	110	2,966	1,719	770	984	1,340
November	73	49	34	23	16	42	96	20	63	29	478	94			
December															
Total	2,117	1,168	1,729	5,270	1,865	790	954	727	1,176	199	3,636	2,028	1,069	1,044	1,505

TOTAL COUNTS BY MONTHS

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952
January	*	34	8	43	5	25	52	1,011	64	209	165	1	14		
February	*	31	96	76	52	24	189	1,082	563	325	119				
March	*	681	2,182	3,001	260	697	1,085	3,157	3,069	2,110	1,882	1,694	1,177	407	540
April	*	59,568	41,378	58,192	13,148	15,546	21,812	21,884	24,027	90,409	25,678	9,058	11,167	31,139	9,379
May		30,018	26,938	29,825	22,015	35,087	57,975	17,370	28,354	58,861	51,929	46,167	52,305	87,648	109,561
June		28,414	36,478	71,156	31,543	26,028	11,529	8,630	13,909	41,121	86,475	34,509	17,699	141,121	207,632
July		79,875	97,550	161,998	70,528	74,027	49,412	41,280	47,882	106,245	149,667	173,954	98,451	133,863	186,478
August		69,163	73,407	109,228	45,123	72,224	61,338	81,687	73,474	105,750	87,663	91,563	96,706	97,762	74,908
September		255,142	196,993	315,115	418,620	391,738	244,142	178,309	230,415	319,004	321,354	314,754	159,098	238,334	117,301
October		6,789	4,471	6,625	12,644	7,743	6,012	8,811	6,341	6,894	6,921	5,876	6,622	7,721	5,498
November		1,544	720	1,447	6,219	2,354	1,978	1,024	1,241	1,082	3,817	2,628	1,724	1,427	2,487
December		199	202	132	467	388	344	169	881	180	582	199	8		
Total	471,144	497,073	739,200	668,471	623,084	448,436	361,517	428,652	667,720	798,325	697,877	451,464	560,675	648,150	875,787

* Data not available. Figures for 1938 are from May 7 to December 31, inclusive.

Figures show number of fish.

U. S. Engineers, Bonneville Division.

PACK OF CANNED SALMON ON THE COLUMBIA RIVER FROM THE
INCEPTION OF THE INDUSTRY TO 1951

Year	Number of Canned Cases	Chinook		Blueback		Silver-side		Chum or Keta		Steelhead Trout		Total	
		Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value
1866	—	—	—	—	—	—	—	—	—	—	—	4,000	\$ 64,000
1867	—	—	—	—	—	—	—	—	—	—	—	18,000	288,000
1868	—	—	—	—	—	—	—	—	—	—	—	28,000	392,000
1869	—	—	—	—	—	—	—	—	—	—	—	100,000	1,350,000
1870	—	—	—	—	—	—	—	—	—	—	—	150,000	1,800,000
1871	—	—	—	—	—	—	—	—	—	—	—	200,000	2,100,000
1872	—	—	—	—	—	—	—	—	—	—	—	250,000	2,225,000
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	—	—	—	—	—	—	—	—	—	—	—	360,000	2,052,000
1878	30	—	—	—	—	—	—	—	—	—	—	460,000	2,300,000
1879	30	—	—	—	—	—	—	—	—	—	—	480,000	2,640,000
1880	20	—	—	—	—	—	—	—	—	—	—	530,000	2,650,000
1881	—	—	—	—	—	—	—	—	—	—	—	541,300	2,800,000
1882	—	—	—	—	—	—	—	—	—	—	—	629,400	3,147,000
1883	—	—	—	—	—	—	—	—	—	—	—	620,000	2,915,000
1884	—	—	—	—	—	—	—	—	—	—	—	553,800	2,500,000
1885	—	—	—	—	—	—	—	—	—	—	—	446,500	2,135,000
1886	—	—	—	—	—	—	—	—	—	—	—	373,477	2,234,522
1887	—	—	—	—	—	—	—	—	—	—	—	309,885	1,809,820
1888	28	—	—	—	—	—	—	—	—	—	—	435,774	2,407,456
1889	21	266,697	\$1,600,182	17,797	\$101,051	—	—	—	—	—	—	399,553	2,440,964
1890	21	335,604	1,946,087	57,345	290,069	—	—	—	—	—	—	487,338	2,679,089
1891	22	353,907	2,038,566	15,482	284,242	—	—	—	—	—	—	629,400	2,695,934
1892	24	344,267	1,996,388	66,547	372,909	4,176	\$ 20,680	—	—	—	—	690,100	2,501,126
1893	24	298,773	1,559,374	30,459	152,295	29,107	116,428	—	—	—	—	634,696	3,110,997
1894	24	351,106	1,686,976	43,814	224,430	42,758	171,082	—	—	—	—	487,944	2,073,226
1895	24	444,909	2,428,658	16,015	86,523	99,601	329,683	—	—	—	—	552,721	2,218,311
1896	24	370,943	1,804,511	16,983	51,518	44,108	141,145	—	—	—	—	382,774	1,777,975
1897	22	432,753	1,804,221	12,972	51,888	60,850	197,762	—	—	—	—	358,772	2,232,296
1898	23	329,566	1,490,394	66,970	300,015	66,431	222,465	—	—	—	—	390,183	1,942,660
1899	17	255,324	1,458,175	23,969	134,723	29,608	112,055	—	—	—	—	317,143	1,644,509
1900	16	262,392	1,621,258	13,162	92,184	44,925	202,163	—	—	—	—	339,577	1,777,105
1901	—	—	—	—	—	—	—	—	—	—	—	395,104	2,242,678
1902	14	270,580	1,428,743	17,037	86,465	10,532	44,732	—	—	—	—	397,273	2,237,571
1903	16	301,762	1,610,614	8,383	42,867	12,181	49,669	—	—	—	—	394,898	2,149,062
1904	20	320,378	1,944,690	12,911	76,048	31,254	116,357	—	—	—	—	324,171	1,763,490
1905	19	327,106	1,962,636	7,768	46,608	26,826	114,011	—	—	—	—	—	—
1906	19	311,334	1,868,007	7,816	54,712	41,446	124,338	—	—	—	—	—	—
1907	19	259,433	—	5,504	—	31,757	—	—	—	—	—	—	—

1908	14	210,086	8,581	31,432	16,384	10,726	253,341	1,380,708
1909	15	162,131	1,203,545	27,908	214,561	42,172	185,070	24,542
1910	15	244,285	1,862,137	6,234	34,287	68,922	363,688	66,538
1911	15	405,862	2,204,185	5,988	47,904	79,416	549,478	53,471
1912	15	220,317	1,988,526	8,210	85,384	31,842	177,243	18,669
1913	15	192,116	1,664,670	11,152	93,677	40,969	175,412	13,303
1914	17	229,464	2,573,502	35,311	376,924	69,769	380,666	49,285
1915	19	406,466	3,624,361	5,459	56,707	33,336	173,234	86,530
1916	20	395,166	3,572,203	3,790	27,288	52,084	335,114	77,766
1917	20	403,637	5,023,529	7,968	111,552	64,299	700,690	53,659
1918	20	400,952	5,222,983	37,333	605,328	98,145	1,072,843	29,846
1919	21	392,125	5,435,550	7,268	145,360	90,728	1,142,767	75,493
1920	22	420,467	5,661,580	2,617	62,806	27,024	257,806	18,792
1921	20	267,582	3,761,321	6,945	120,900	34,381	233,372	4,831
1922	23	237,230	3,724,393	30,743	614,860	90,437	633,935	8,844
1923	23	239,566	4,967,657	38,309	766,180	101,554	673,954	25,508
1924	22	298,716	4,508,236	7,366	129,840	112,308	992,865	57,748
1925	21	350,309	5,423,129	5,650	106,220	113,554	1,468,855	55,812
1926	21	295,302	4,744,131	21,736	434,720	97,142	1,027,597	32,853
1927	22	339,446	5,559,202	6,387	147,378	74,879	565,816	68,449
1928	24	251,404	4,355,218	4,814	100,131	49,136	476,355	124,953
1929	21	242,938	4,234,214	10,072	161,296	90,684	917,561	54,619
1930	21	281,346	4,092,610	9,823	194,460	110,430	1,156,042	11,371
1931	20	294,793	3,754,929	4,125	66,000	39,268	247,878	3,518
1932	15	216,511	2,023,390	2,795	33,540	46,492	280,853	17,261
1933	14	351,357	2,719,303	6,921	96,894	36,430	263,190	24,388
1934	13	251,066	2,630,152	6,369	82,428	63,428	536,731	24,455
1935	10	505,670	2,479,450	1,302	17,619	95,194	725,869	15,495
1936	11	220,198	2,964,038	9,837	137,718	36,541	303,283	30,592
1937	11	291,343	4,256,619	7,526	126,436	60,801	725,968	30,592
1938	10	173,682	2,707,267	13,689	260,369	67,257	620,364	37,704
1939	—	207,595	3,336,209	5,301	102,359	69,082	730,549	15,201
1940	11	244,570	3,785,631	23,974	471,530	59,737	623,681	25,282
1941	9	328,009	5,558,254	33,070	661,400	35,727	481,834	83,144
1942	12	274,750	5,892,829	21,258	623,230	28,541	497,070	118,051
1943	11	130,373	3,094,505	2,880	77,526	5,707	611,065	12,459
1944	10	163,047	3,714,591	758	20,342	12,210	137,072	1,525
1945	8	132,014	3,095,228	112	3,001	22,154	244,060	1,032
1946	11	159,872	5,940,740	9,726	369,588	6,863	206,490	17,121
1947	10	250,318	8,613,000	15,079	654,000	42,789	1,278,000	17,121
1948	12	235,310	9,342,000	3,339	147,000	59,435	1,699,000	26,201
1949	12	133,347	3,682,000	(c) 6,630	225,000	16,740	415,000	12,386
1950	11	136,635	4,964,201	3,620	146,687	29,597	939,296	12,952
1951	11	142,915	5,865,924	4,545	190,890	29,110	873,300	11,565
								32,756,397
								\$320,197,920

(a) Includes 1,044 cases of Pinks canned from Puget Sound fish.
 (b) Includes 1,873 cases of Pinks canned from Puget Sound fish.
 (c) Mostly Quinalt River Blueback.

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