

Biennial Report
of the
FISH COMMISSION
of the
State of Oregon
1955



SILVER SALMON LIBERATION—TRIBUTARY YAMHILL RIVER

BIENNIAL REPORT
OF THE
FISH COMMISSION
OF THE STATE OF OREGON

TO THE
Governor and the Forty-eighth
Legislative Assembly

1955



FISH COMMISSION OF THE STATE OF OREGON

Hon. John C. Veatch, Chairman, Portland

Hon. Robert L. Jones, Clifton

Hon. Don C. Ellis, Garibaldi

M. T. Hoy, State Fisheries Director

Letters of Transmittal

Portland, Oregon, July 1, 1954

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

Gentlemen:

Herewith is transmitted the biennial report of the Fish Commission of the State of Oregon for the period from July 1, 1952 to June 30, 1954.

FISH COMMISSION OF THE STATE OF OREGON

John C. Veatch, Chairman.

Portland, Oregon, July 1, 1954

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, 1952 to June 30, 1954.

Respectfully submitted,

M. T. HOY,

State Fisheries Director.

Report of the State Fisheries Director

In the period covered by this report (July 1, 1952–June 30, 1954) the efforts of the Fish Commission have been directed toward increasing the effectiveness of the fisheries management activities. This has been done by improved operating methods and the construction of new facilities. These facilities are, for the most part, either for fish passage or fish culture. Many miles of stream for spawning and rearing have been made available by providing fishways over natural obstructions.

At Steelhead Falls on the North Fork of the Coquille River a new reinforced concrete fishway has been completed by Fish Commission crews. Several miles of excellent spawning area above this point is now being utilized by silver salmon and steelhead trout.

A new concrete fishway is nearing completion at Vaughan Falls (Stoll Falls) on the West Fork of the Millicoma River in Coos County. This 20 ft. natural barrier has been a complete block at most water stages to adult salmon and steelhead. This project will be completed by early summer in 1955 and will provide easy access for migratory fish to the upper reaches of this stream.

The Engineering staff through contact and negotiations with owners of private dams have prepared plans for fishways which have been installed at the following barriers:

- Albany Plywood Co. log pond dam on Wiley Creek at Foster, Oregon.
- Oregon Lumber Co. dam on East Fork of Hood River at Dee, Oregon.
- Pacific Power and Light Co. dam on Hood River.
- Simmons Dam on Simmons Creek, a tributary of Tillamook River.
- Irwin Lyons Lumber Co. splash dam on Coos River.

Two fishways have been constructed through road culverts on Beaver Creek, tributary of Sandy River, by Multnomah County Road Department.

Plans for a fishway at the City of Seaside Water Supply Dam on the South Fork of the Necanicum River have been submitted but the project is yet to be started.

Temporary fishways were installed under emergency conditions to pass spring chinook salmon at the City of Lostine water supply dam on the Lostine River and the City of Union Dam on Catherine Creek. Surveys have been completed at these dams for future construction of permanent fishways.

A large section of the abandoned Mountain States Power Company Dam at Mill City was removed by explosives to allow free passage of anadromous fish.

The abandoned Neimi Mill Dam on Bear Creek, tributary of Salmon River, was removed by blasting.

Fish Commission stream clearance crews have removed log jams from several salmon producing streams during the past biennium. On the Nehalem River near Timber, Oregon, a large jam which was a complete block to migratory fish was removed. Twenty-seven log jams in the lower five miles of Wolf Creek, a Nehalem tributary, have been completely removed. Two serious jams in the Wilson River and one huge jam in the North Fork of the Coquille River were also removed. A landslide consisting of earth and several large boulders completely blocked Gordon Creek, a tributary of the Sandy River. This barrier to migrating salmon and steelhead was removed by blasting by a joint Fish and Game crew.

The Engineering staff has completed surveys at four natural falls for future planning and construction of fishway facilities. These are Euchre Creek Falls on the Siletz system, a falls on the North Fork of the Nehalem River and Cherry Creek Falls and Middle Creek Falls on the Coquille River System.

Base lines were surveyed and range markers designating offshore areas which are closed to commercial fishing have been erected at the mouth of the Nehalem, Umpqua and Alsea Rivers.

The federally supported Lower Columbia River Salmon Rehabilitation Program has proceeded from the status reported in the last biennial report. Surveys to locate sites for hatcheries and areas of needed stream clearance are nearly complete. The construction portion of the program is well underway. The Klaskanine Hatchery on the Klaskanine River near Astoria has been completely rebuilt and is now in operation. The new facilities incorporated in this station include a modern hatchery building and a two hundred ton capacity cold storage plant with food preparation room combined under one roof. Twenty-two concrete rearing ponds of modern design will greatly increase the output capacity of this station. Three new concrete diversion dams each having an improved type diversion intake chamber and new pipeline, supply water for hatching and rearing purposes. Two new residences, a utility building, domestic water supply, fish trapping facilities and new roadways with vehicle bridge complete this project.

Bonneville Hatchery has been modernized and the rearing capacity more than doubled by the installation of a new concrete diversion dam and larger water supply pipelines. This increased water supply provides water for thirty-three new concrete rearing ponds plus the needs of the hatching house. Two new residences for housing hatchery personnel have been added bringing the total number of residences to six. A combination settling basin and water distribution chamber of concrete and a utility building for truck storage and shop are among the new facilities at this station.

Plans have been completed for further construction at the Ox Bow Hatchery on Herman Creek near Cascade Locks. Twenty concrete rearing ponds, a concrete diversion dam and pipeline, holding ponds for egg taking and a residence are to be added by this expansion.

Surveys have been completed and preliminary plans prepared for a new salmon hatchery on Eagle Creek, east of Bonneville.

Two gravity type fishways of reinforced concrete have been completed under the Lower River Program, one at Goble Creek Falls, an 18 foot natural rock barrier in Columbia County, and the other at Punch Bowl Falls located in the West Fork of Hood River near Dee, Oregon.

Plans have been completed for fishways at Tide Creek Falls in Columbia County and Middle Falls on Eagle Creek in Clackamas County.

Stream clearance of log jams and other waste timber debris continues to be of major importance. In Columbia County several miles of the North Fork of Scappoose Creek have been cleared of numerous jams. A six foot rock falls in this stream was also improved by blasting.

In Clackamas County a major project of stream clearance has been completed on Abernathy Creek. For many years this salmon spawning stream has been choked with old logging and slashing debris which has seriously impeded the migration of salmon and steelhead to the upstream spawning areas. Many miles of this stream are now more readily available to migratory salmon since completion of this improvement project.

The lower section of Cedar Creek on which the Cedar Creek Salmon Hatchery is located has been cleared of several log and brush jams.

A weir, for the purpose of research studies in upstream and downstream migration of anadromous fish, has been completed in Gnat Creek, a tributary of the Columbia River.

The work of propagating food fish and stocking public waters during the past biennium has been as successful as any similar period in the past. Although two of the larger fish cultural stations were inoperative during the period due to construction activities, the yield was greatly improved by changes in rearing methods which permitted the production of larger fish of better quality. This is reflected by the tables of liberation.

The total eggs collected of all species during the two year period was 71,725,546 of which 60,157,556 were chinook, 6,003,619 were silver salmon and 5,564,371 were steelhead. The total releases of young fish of all species were 63,770,000.

Upon release, these fish weighed 607,334 pounds. It required an average of 3.86 pounds of fish food to produce one pound of fingerlings. The total fish food required was approximately 2 1/3 million pounds. The food cost per pound of fish was \$0.386. This figure varied somewhat, depending upon the species, size released and station. In general, the colder water stations had poorer food conversion, and the longer the fish were reared the greater was the cost per pound. For the biennium, the food cost per pound of fish reared was \$0.261 in rearing 61,649 pounds of fall chinook fingerlings at the Bonneville station.

A sufficiently large number of reared fish was released at each hatchery to maintain a healthy stock of fish in the tributary from which the eggs were taken. The remainder were used to establish runs in areas recently made available to salmon and steelhead (such as Goble Creek and Scappoose Creek) or to augment existing runs of fish. The bulk of the latter type of operation has been supported by stations where the egg take exceeded the capacity of the rearing facilities. The total chinook egg take at the Bonneville station for the 1952 and 1953 spawning seasons was 35,321,000 with a somewhat greater potential. At the Ox Bow station the take was 13,537,000 eggs with perhaps a 17,000,000 egg potential. About 29,000 adult salmon entered the holding ponds at these two stations during this period. The facilities were insufficient to care for the young. Consequently, the surplus was distributed to streams in need of rehabilitation.

There is increasing evidence that the improved methods of operation are resulting in larger returns of adult salmon. Although all of the releases of young fish have not yielded equally well, yearling fish which were marked prior to planting have yielded over ten percent in usable mature fish in some instances.

The major problems which have confronted fish cultural operations have been those of plant inadequacy and disease. Kidney disease, particularly among chinook, has caused considerable loss and disturbance of the program. Measures have been taken to ameliorate the effects of kidney disease and it is believed that it can be eliminated.

Most of the stations were built to meet fish cultural needs and practices of 30 or more years ago. At that time, they functioned as egg collecting stations and the young were reared but a short time. Summer supplies of water were unimportant and often small initially. Increased land use and development has further depleted dry season flows at a large portion of the installations. After initial construction, meager operational funds made proper upkeep difficult.

Efforts to rebuild or relocate inefficient units have received support from two sources, state and federal. On the Lower Columbia River four of the existing stations have been or are being rebuilt and expanded through the use of federal funds and a new one is planned as mentioned earlier.

Of the five stations on the Oregon coastal streams, only the Alsea River installation has been modernized. It was relocated on Fall Creek in order to gain the necessary water supply. Although the station is in use, additional work is required for completion. The remainder of the coastal stations are in need of repair or relocation.

The adult salmon holding facilities which were constructed by the U. S. Army Engineers in connection with Dexter Dam on the middle Willamette River are almost complete. They will be used in the spring of 1955 for holding the chinook salmon which will be blocked by the new dam. The facility consists of two large ponds, each 200 feet long (One is 40 feet wide and the other is 80 feet wide.), a fishway leading to the ponds, watchman's quarters, troughs for eyeing eggs, and an egg taking site in the main river. The ponds are designed to hold spring chinook without injury. Special attention has been given to eliminate features which could bruise or abrade the fish. By this means it is hoped that the difficulties encountered in the adult holding facilities below Big Cliff dam on the North Santiam may be avoided.

The cooperative studies with the Washington State Department of Fisheries on the Columbia River have continued with minor shifts in emphasis. The operation of a trap near the mouth of the Columbia for the purpose of capturing salmon, steelhead, and sturgeon for tagging was curtailed during the winter of 1953. Over 20,000 salmon and steelhead were tagged by the two departments on the river since 1947. Future efforts will be directed toward the careful analysis of the recoveries received to evaluate the tagging program with consideration being given to time of passage, river of origin, rate of migration, fishing intensity and escapement, and contribution to the sport and commercial fisheries.

A combination of several factors has resulted in increased escapements of spring and summer chinook and steelhead over Bonneville Dam. The January through July Bonneville counts for 1953 and 1954 were the two highest since counting was begun in 1938. The commercial catches were relatively good also. Management practices have been instrumental in effecting these conditions. Seasonal restrictions in earlier recent years have permitted greater escapements which are now bearing fruit in the form of increased returns. The same is true of the steelhead runs and escapements. However, the fall chinook escapements are declining. An intensive study is underway to assess the cause or causes and recommend remedial measures. Other local fisheries agencies have initiated an extensive large scale program of screening upriver irrigation diversions which has been of immeasurable aid.

Fish Commission personnel, in conjunction with representatives of other fisheries agencies in the area—primarily the Washington Department of Fisheries—have continued to make close observations at McNary and The Dalles dams to determine the success of passage of anadromous fish at these structures. Recommendations for changes and the necessary remedial measures are followed through to completion. Close liaison has been maintained between the agencies and the Corps of Engineers in designing fish passage facilities at the major dams throughout the entire Columbia River system.

Plantings of fall chinook salmon in the Willamette system above Oregon City Falls have been made in recent years and the first fish returned in 1954. These plantings were planned in conjunction with the pollution abatement program which is being vigorously pursued by the Oregon Sanitary Authority. Very significant progress has been realized in the pollution cleanup of the Willamette River in the past two years as a direct result of this valuable and far reaching program.

Evaluation of the results of the Lower Columbia River Rehabilitation program has been initiated. The evaluation is (1) conducted by means of spawning ground surveys made annually over established survey units and the returns are compared from year to

year; (2) by fin-marking fingerlings and yearling salmon at various ages and sizes prior to liberation. The returning adults are examined for missing fins in the ocean troll, river commercial and sport fisheries, in the hatcheries, and on the spawning grounds. The results are compared to determine return and (3) by counting at ladders.

During the biennium, contracts between the Fish Commission and the U. S. Army Corps of Engineers were effected to conduct investigations of fish problems resulting from the construction of federal dams on the Columbia River system. These contracts are concerned with estimating the numbers of adult salmon and steelhead in the Snake River. The first half of the biennium was spent in developing plans for a field program, and it was not until November, 1953, that the actual field work began. At this time, a field headquarters was established at Lewiston, Idaho, with a staff of five biologists. Eight large cylindrical fish fyke nets covered with heavy gauge wire netting were placed in a 15 mile section of the Snake River near Lewiston to capture fish for tagging. A total of about 2,000 salmon and steelhead had been tagged by June 30, 1954.

In the coming period this Snake River salmonoid enumeration study will be expanded, and field work on determining the extent of adult salmon mortality and delay at dams, will be initiated.

A contract with the U. S. Fish and Wildlife Service was also made. Its purpose is to determine the number of adult salmon killed near Bonneville Dam.

The coastal river studies have been concerned with the improvement of watershed conditions by the removal or laddering of obstacles, and the evaluation of the relative abundance of the chinook, silver, and chum salmon runs in the coastal streams. These trends, as well as the pattern of commercial landings, are closely followed and form the basis for the management of this valuable resource. The combination of the quota and seasonal restrictions presently appears to be the best means of regulating the commercial fishery.

A tagging program conducted on the salmon runs in Tillamook Bay contributed valuable knowledge on the sport and commercial fishing intensity. Studies continued at the Spring Creek weir where much essential data are being collected on the success of spawning and early life history of silver salmon. The number of mature fish required to seed the stream will be determined.

During the biennium a very important study was begun on the relative abundance and composition of natural food of young salmon found in streams throughout the Columbia and coastal river drainages. The findings will be integrated with hatchery research procedures.

Further experimentation in conjunction with the Oregon State College Seafoods Laboratory at Astoria has been conducted along the lines of development of an economical, nutritious diet for young salmon, using principally ocean scrap fish, commercial fillet scrap, and cannery waste. The problem of hatchery diseases in general and kidney disease in particular is now being studied. Impetus to this experiment was lent by the recent finding of kidney disease organisms in adult spring chinook salmon returning to the Willamette River system. These studies will continue until complete eradication of this dread disease in Oregon hatcheries has been effected. Studies are under way to test algacides for possible use in hatchery ponds to eliminate the problems caused by excessive algal growths—a perennial hatchery problem. Further experimentation is planned in the use of end racks in place of screens in order to eliminate the problem of plugged screens.

The research on commercial ocean fisheries of interstate interest continues to be closely coordinated through the Pacific Marine Fisheries Commission. Alaska and Canada also cooperate in the work.

The troll salmon research, which involves all the fisheries agencies from California to Alaska, has reached the stage where definite conclusions regarding the relative magnitude of the ocean troll fishery, river fishery, sport fishery, and escapement are being obtained. This research involves the recoveries of marked silver and chinook salmon from the time they first enter the commercial troll fishery until the time of death on the spawning grounds. When these data are analyzed, it is believed that the contribution of the various streams to the ocean troll fishery will become apparent. It seems probable that the contribution of the hatcheries to the commercial fishery will also be obtained. Recovery of marked fish is effected by examination of catches from the various fisheries between central California and Alaska.

With the failure of the albacore fishery off the Pacific Northwest effort is being applied in a cooperative North Pacific albacore program with the aim of discovering the reasons for the absence of albacore. There is considerable speculation that the albacore may have changed their migration routes. This program will also attempt to locate the albacore, both the immature individuals which have been taken by the Oregon fleet in previous years, and the large, mature specimens which have never been taken in Pacific Northwest waters. As a preliminary to this study, negotiations are being conducted with the University of Washington Department of Oceanography to summarize the results of all previous North Pacific oceanographical work which might offer information to be correlated with albacore abundance and migrations.

A coast-wide study of the sablefish involving Alaska, Canada, and the three Pacific Coast states has been completed and a Pacific Marine Fisheries Commission bulletin giving the results of this work is now in print.

During the winter of 1953-54 a new deep water fishery for dover sole developed off the mouth of the Columbia River and about one-half million pounds of this species were landed in Astoria. If these fish belong to the same stocks that are fished heavily during the summer in relatively shallow water the extra intensity could have serious effect on the fishery. Consequently, a tagging program is being planned for the winter of 1954-55 with the objective of determining whether these fish remain in deep water or move into shallower water during the summer.

Commercial fishermen enjoyed one of the best crab seasons on record during the 1953-54 season. This supports the contention of the Fish Commission that this resource under present regulations appears to be safe from overfishing, but that natural fluctuations in abundance may be considerable.

Research investigations of the razor clam fishery have culminated in the revision of razor clam regulations, both for personal use and commercial use. The size limit for clams taken by commercial diggers has been increased, and the bag limit for personal use has been decreased. The objective has been to allow a greater percentage of the clams to live through the period of extremely rapid increase in weight. This will result in a greater take by weight because of a larger percentage of the older clams.

A survey conducted by airplane, boat, and automobile of the kelp resource along the entire Oregon coast has been completed. The beds of kelp are small compared with those of California, with enough potential for only a very small industry.

Several publications were prepared during the biennium. They include "Analysis of Factors Affecting the Production of Chum Salmon in Tillamook Bay" by Kenneth A. Henry, "Age and Growth Study of Tillamook Bay Chum Salmon" by Kenneth A. Henry, "The Bay Clams of Oregon" by Lowell D. Marriage, and "The 1951 Alsea River Silver Salmon Tagging Program" by Alfred R. Morgan and F. C. Cleaver. In addition to the above mentioned major papers which appeared as Contributions, five shorter reports appeared in Volume five Number one of Fish Commission Research Briefs.

Statement of Receipts and Disbursements

STATE GENERAL FUND ACCOUNTS

Biennial Period Ending June 30, 1954

RECEIPTS

	<i>Fiscal Year Ending June 30, 1953</i>	<i>Fiscal Year Ending June 30, 1954</i>
Appropriations:		
Unexpended Balance, 1949-1951	\$ 24,728.66	
Reverted to State General Fund	24,709.00	\$ 19.66
Unexpended Balance, 1951-1953	609,253.54	\$ 60,392.44
Unexpended Balance, 1951-1953 Emergency—Alsea Hatchery	62,136.60	4,017.56
Unexpended Balance, 1951-1953 Pacific Marine Fisheries Commission	2,500.00	
Unexpended Balance, 1949-1951 Emergency—Marion Forks Appropriation	\$ 13,177.95	
Reverted to State General Fund	13,177.95	
Appropriation, 1953-1955		1,369,655.00
Unexpended Balance, Surplus Equipment Account	3,336.38	4,430.48
Total	\$ 677,246.18	\$1,438,495.48
Licenses:		
Fishing	\$ 67,222.50	\$ 65,794.50
Dealers and Processors	21,005.50	20,595.50
Total License Receipts	\$ 88,228.00	\$ 86,390.00
Other Income:		
Poundage Fees	\$ 145,494.36	\$ 136,923.69
Fish and Crab Tag Sales	73.32	
Fines and Confiscated Property Sales	2,598.90	2,334.70
Miscellaneous	2,003.98	1,071.26
Total Other Income	\$ 150,170.56	\$ 140,329.65
Total Receipts	\$ 238,398.56	\$ 226,719.65
Total Appropriations and Receipts	\$ 915,644.74	\$1,665,215.13
Transferred to State General Fund	238,398.56	226,719.65
Available for Expenditure	\$ 677,246.18	\$1,438,495.48

Statement of Receipts and Disbursements

STATE GENERAL FUND ACCOUNTS

Biennial Period Ending June 30, 1954

DISBURSEMENTS

	<i>Fiscal Year Ending June 30, 1953</i>	<i>Fiscal Year Ending June 30, 1954</i>
Department of State Police	\$ 34,232.00	\$ 61,318.50
Pacific Marine Fisheries Commission	2,500.00	2,200.00
Division of Administration:		
Commissioners' Per Diem	1,100.00	830.00
Commissioners' Expenses	601.68	295.29
Salaries and Wages	63,985.08	63,745.74
General, Operating, Maintenance	32,855.59	34,808.46
Capital Outlays	1,014.13	1,272.11
Total	\$ 136,288.48	\$ 164,470.10
Division of Fish Culture:		
Salaries and Wages	\$ 132,802.29	\$ 122,122.19
General, Operating, Maintenance	63,174.03	105,304.14
Capital Outlays	75,532.36	12,177.32
Total	\$ 271,508.68	\$ 239,603.65
Division of Research:		
Salaries and Wages	\$ 115,566.63	\$ 121,755.33
General, Operating, Maintenance	30,102.59	40,698.96
Capital outlays	6,151.77	7,428.72
Total	\$ 151,820.99	\$ 169,883.01
Division of Engineering:		
Salaries and wages	\$ 27,891.01	\$ 43,292.81
General, Operating, Maintenance	19,413.92	20,873.13
Capital Outlays	2,576.72	4,941.32
Total	\$ 49,881.65	\$ 69,107.26
Total disbursements	\$ 609,499.80	\$ 643,064.02
Balance at End of Period	\$ 67,746.38	\$ 795,431.46

Statement of Receipts and Disbursements

SEAL FUND ACCOUNT

Biennial Period Ending June 30, 1954

			<i>Fiscal Year Ending June 30, 1953</i>		<i>Fiscal Year Ending June 30, 1954</i>
Fund Balance at Beginning of Period			\$24,882.99		\$26,521.99
	<i>Rate</i>	<i>Number Issued</i>		<i>Number Issued</i>	
Receipts—Sale of Seal Certificates:					
Gillnet	\$ 2.50	561	\$ 1,402.50	530	\$ 1,325.00
Setnet	2.50				
Troll	2.50	43	107.50	68	170.00
Seine	20.00				
Canner	50.00	12	600.00	9	450.00
Total Receipts		<u>616</u>	<u>\$ 2,110.00</u>	<u>607</u>	<u>\$ 1,945.00</u>
Less 10% Tithing to State General Fund			211.00		194.50
Total Beginning Balance and Net Receipts			<u>\$26,791.99</u>		<u>\$28,272.49</u>
Disbursements:					
Bounties Paid for Seals Destroyed		(26 @ \$10)	\$ 260.00	(35 @ \$10) (47 @ 15)	\$ 350.00 705.00
Total Seal Bounties			<u>\$ 260.00</u>		<u>\$ 1,055.00</u>
Fund Balance at End of Period			\$26,521.99		\$27,217.49

Statement of Allotments and Disbursements

FEDERAL AID—LOWER COLUMBIA RIVER SALMON REHABILITATION PROGRAM
U. S. Fish and Wildlife Service

Fiscal Year Ending June 30, 1953

	<i>Balance from Previous Year</i>	<i>Allotted</i>	<i>Disbursed</i>	<i>Reverted to Reserve</i>	<i>Balance</i>
Plans and Surveys	\$ 14,178.56	\$ 57,392.98	\$ 44,690.05	\$ 3,387.87	\$ 23,493.62
Hatchery Construction; Facilities; Equipment	407,885.08	357,000.00	423,626.97	18,981.08	322,277.03
Hatchery Operation and Maintenance	18,644.05	151,859.84	65,380.19	15,722.31	89,400.89
Fishways, Stream Gauging, Improvement, Maintenance	55,464.24	92,465.86	49,112.59	7,423.31	91,394.20
Equipment Warehouse Rental, Maintenance	812.94	2,000.00	844.72	736.34	1,231.88
Fisheries Research	47.40	78,083.00	22,928.56	45.61	55,156.23
Total	<u>\$497,032.27</u>	<u>\$738,801.68</u>	<u>\$606,583.08</u>	<u>\$ 46,297.02</u>	<u>\$582,953.85</u>

Fiscal Year Ending June 30, 1954

Plans and Surveys	\$ 23,493.62	\$ 29,375.00	\$ 18,420.32	\$ 85.58	\$ 34,362.72
Hatchery Construction; Facilities; Equipment	322,277.03	350,057.42	386,195.25	13,976.32	272,162.88
Hatchery Operation and Maintenance	89,400.89	14,900.00	87,963.09	8,802.23	7,535.57
Fishways, Stream Gauging, Improvement, Maintenance	91,394.20	25,700.00	85,083.23	5,963.49	26,047.48
Equipment Warehouse Rental, Maintenance	1,231.88	1,260.00	1,879.25	231.88	380.75
Fisheries Research	55,156.23	55,983.00	45,779.12	27.54	65,337.57
Total	<u>\$582,953.85</u>	<u>\$477,280.42</u>	<u>\$625,320.26</u>	<u>\$ 29,087.04</u>	<u>\$405,826.97</u>

Statement of Receipts and Disbursements

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

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

North Santiam River—Marion Forks Hatchery Fiscal Year Ending June 30, 1953

Unreimbursed Advances July 1, 1952	\$ 10,750.17	
Operating and Maintenance Expenditures	52,684.10	\$ 63,434.27
Reimbursed by U. S. Government, Army Engineers	\$ 37,624.94	
Reimbursed from Fish Commission Funds	5,618.04	
Total Reimbursed		43,242.98
Receivable from U. S. Government	\$ 19,649.62	
Receivable from Fish Commission Funds	541.67	
Unreimbursed Advances June 30, 1953		\$ 20,191.29

Fiscal Year Ending June 30, 1954

Unreimbursed Advances July 1, 1953	\$ 20,191.29	
Operating and Maintenance Expenditures	65,992.27	\$ 86,183.56
Reimbursed by U. S. Government, Army Engineers	\$ 68,045.23	
Reimbursed from Fish Commission Funds	8,515.04	
Total Reimbursed		\$76,560.27
Receivable from U. S. Government	\$ 9,081.62	
Receivable from Fish Commission Funds	541.67	
Unreimbursed Advances June 30, 1954		\$ 9,623.29

Willamette River—Oakridge Hatchery

Fiscal Year Ending June 30, 1953

Operating and Maintenance Expenditures		\$ 60,736.23
Reimbursed by U. S. Government, Army Engineers	\$ 29,392.00	
Reimbursed from Fish Commission Funds	4,898.44	
Total Reimbursed		34,290.44
Receivable from U. S. Government	\$ 25,792.74	
Receivable from Fish Commission Funds	653.05	
Unreimbursed Advances June 30, 1953		\$ 26,445.79

Fiscal Year Ending June 30, 1954

Unreimbursed Advances July 1, 1953	\$ 26,445.79	
Operating and Maintenance Expenditures	77,775.93	\$104,221.72
Reimbursed by U. S. Government, Army Engineers	\$ 82,422.08	
Reimbursed from Fish Commission Funds	7,836.60	
Total Reimbursed		90,258.68
Receivable from U. S. Government	\$ 13,309.99	
Receivable from Fish Commission Funds	653.05	
Unreimbursed Advances June 30, 1954		\$ 13,963.04

FEDERAL AID—U. S. ARMY ENGINEERS
Columbia River Fisheries Research Investigations

	<i>Balance from Previous Year</i>	<i>Allotted</i>	<i>Disbursed</i>	<i>Reverted</i>	<i>Balance</i>
Fiscal Year Ending June 30, 1953	\$	\$ 14,000.00	\$ 7,560.62	\$	\$ 6,439.38
Fiscal Year Ending June 30, 1954	6,439.38	56,429.00	34,589.12	493.74	27,785.52

Recapitulation

FEDERAL AID FUNDS

Allotments and Disbursements—Biennial Period July 1, 1952 to June 30, 1954

	<i>Balance July 1, 1952</i>	<i>Allotted</i>	<i>Disbursement</i>	<i>Reverted to Reserve</i>	<i>Balance June 30, 1954</i>
Lower Columbia River Salmon Rehabilitation program	\$497,032.27	\$1,216,082.10	\$1,231,903.34	\$ 75,384.06	\$405,826.97
(U. S. Fish and Wildlife Service)					
Willamette River Basin Program		257,188.53	257,188.53		
(U. S. Army Engineers)					
Columbia River Fisheries Research Investigation		70,429.00	42,149.74	493.74	27,785.52
(U. S. Army Engineers)					
Total	\$497,032.27	\$1,543,699.63	\$1,531,241.61	\$ 75,877.80	\$433,612.49

ARRESTS FOR VIOLATION OF COMMERCIAL FISHERIES CODE

	<i>Fiscal Year Ending June 30, 1953</i>	<i>Fiscal Year Ending June 30, 1954</i>
Fishing and delivering fish without a license	20	19
Fishing prohibited methods	14	16
Fishing closed season and closed waters	1	3
Dealing in food or shellfish without a license	49	33
Possession of over-limit of clams	31	53
Unlawful possession of food or shellfish	26	46
Pollution of waters	17	7
Failure to file dealer reports	9	6
Molesting spawning salmon	2	4
Miscellaneous violations	4	9
Total Arrests	173	196
Number of convictions	158	190
Number pending, dismissed or not guilty	15	6
Amount of fines imposed	\$ 6,349.50	\$ 7,081.00
Amount of fines suspended or remitted	\$ 2,470.00	\$ 1,823.00

COMPARATIVE STATEMENT OF LICENSES ISSUED
Fiscal Years Ending on June 30th

<i>Licenses</i>	1954	1953	1952	1951	1950	1949
Gillnet	818	863	897	956	1009	1134
Setnet	246	255	300	338	544	610
Trap .....	.....	.....	.....	.....	26	31
Seine .....	.....	.....	.....	4	14	12
Troll	290	118	139	91	79	60
Boatpuller .....	.....	.....	.....	.....	.....	.....
Personal	2223	2219	2341	1663	2756	2744
Retail Fish Dealer and Peddler	1414	1428	1477	1629	1690	1600
Wholesale Fish Dealer	159	165	162	192	204	193
Broker	4	2	3	4	6	7
Buyer	55	71	72	82	81	94
Salmon Canner	16	19	19	24	25	23
Shellfish Canner	9	8	14	18	14	13
Reduction Plant	3	4	2	4	4	7
Bagnet	(j)90	(i)142	(h)165	(g)148	(f)54	(e)152
Carp Permit	3	5	8	4	11	11
Clam	576	767	819	772	996	732
Crab	174	17	.....	.....	.....	.....
Crawfish	21	4	.....	.....	.....	.....
Crab-Shrimp-Crawfish .....	.....	136	135	116	217	229
Setline	26	33	36	19	18	66
Bait Net	9	4	3	5	7	18
Delivery	726	793	924	848	947	1212
Supplemental to Delivery	11	9	4	3	6	6
Oyster Tongers .....	.....	.....	1	.....	.....	1
Wholesale Distributor	41	33	41	19	.....	.....
Retail Dealer Packaged Frozen Food Fish	767	719	803	87	.....	.....
Indian Gillnet	5	2	1	.....	.....	.....
Indian Bagnet	1	3	8	.....	.....	.....
Indian Personal	15	4	9	.....	.....	.....
Indian Wholesale Fish Dealer .....	.....	.....	1	.....	.....	.....
Indian Retail Fish Dealer .....	.....	2	1	.....	.....	.....
Indian Clam	13	.....	.....	.....	.....	.....
Indian Troll	1	.....	.....	.....	.....	.....
Indian Crab	1	.....	.....	.....	.....	.....
Total Licenses	7717	7825	8385	7026	8708	8955

(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.

(i) Includes 12 issued for Sandy River Smelt.

(j) Includes 2 issued for Sandy River Smelt.

COMPARATIVE STATEMENT OF LICENSES ISSUED

Licenses	License Years Ending on March 31st					
	1954	1953	1952	1951	1950	1949
Alsea Bay and River						
Gillnet	41	53	49	74	69	90
Setnet .....	.....	.....	.....	.....	.....	.....
Retail Fish Dealer and Peddler	53	38	36	37	45	35
Wholesale Fish Dealer	5	3	4	4	6	3
Clam	4	4	5	7	11	4
Crab	6	.....	.....	.....	.....	.....
Crab-Shrimp-Crawfish	4	8	5	10	15	16
Salmon Canner .....	.....	1	1	1	1	1
Total Alsea Bay and River	113	107	100	133	147	149
Brookings Harbor						
Wholesale Fish Dealer .....	.....	.....	.....	.....	.....	1
Retail Fish Dealer and Peddler .....	.....	.....	.....	.....	1	.....
Crab .....	.....	.....	.....	.....	.....	.....
Total Brookings Harbor .....	.....	.....	.....	.....	1	1
Chetco Bay						
Retail Fish Dealer and Peddler	4	5	6	3	2	2
Wholesale Fish Dealer .....	.....	1	1	1	.....	1
Crab .....	.....	.....	.....	.....	.....	.....
Total Chetco Bay	4	6	7	4	2	3
Clatsop Beaches						
Retail Fish Dealer and Peddler .....	.....	.....	1	1	.....	2
Shellfish Canner .....	.....	.....	4	5	2	2
Clam	67	67	180	652	602	480
Crab .....	.....	.....	.....	.....	.....	.....
Wholesale Fish Dealer .....	.....	1	1	1	1	1
Buyer .....	.....	.....	.....	3	.....	1
Crab-Shrimp-Crawfish .....	.....	.....	1	.....	.....	3
Total Clatsop Beaches	67	68	187	662	605	489
Columbia River and Tributaries						
Gillnet	533	563	585	613	629	632
Setnet .....	.....	.....	.....	108	152	248
Trap .....	.....	.....	.....	20	35	49
Seine .....	.....	.....	.....	13	13	15
Troll	55	38	37	65	66	72
Retail Fish Dealer and Peddler	1025	1031	1176	1229	1159	1090
Wholesale Fish Dealer	80	83	90	109	105	100
Broker .....	.....	.....	.....	.....	.....	.....
Shellfish Canner	7	8	9	1	6	7
Salmon Canner	10	13	14	14	16	20
Reduction Plant	3	3	3	3	5	6
Bagnet	(j)144	(i)159	(h)153	(g)46	(f)87	(e)165
Clam .....	.....	1	3	3	2	1
Crab .....	.....	.....	.....	.....	.....	.....
Crawfish	13	.....	.....	.....	.....	.....
Setline	31	32	27	10	37	52
Bait Net .....	.....	.....	.....	.....	.....	3
Buyer	55	63	67	71	69	63
Carp Permit	5	7	6	9	11	14
Crab-Shrimp-Crawfish	12	23	39	51	42	49
Indian Gillnet	4	.....	1	.....	.....	.....
Indian Bagnet	3	2	6	.....	.....	.....
Indian Wholesale Fish Dealer .....	.....	2	1	.....	.....	.....
Indian Retail Fish Dealer	2	.....	1	.....	.....	.....
Total Columbia River	1982	2028	2218	2365	2434	2586

(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.

(i) Includes 59 issued for Sandy River Smelt.

(j) Includes 12 issued for Sandy River Smelt.

COMPARATIVE STATEMENT OF LICENSES ISSUED—Continued

Licenses	License Years Ending on March 31st					
	1954	1953	1952	1951	1950	1949
Coos Bay and River						
Gillnet	5	9	7	11	10	21
Setnet	59	75	90	121	140	179
Retail Fish Dealer and Peddler	66	73	88	81	66	55
Wholesale Fish Dealer	22	18	26	22	23	19
Shellfish Canner	1	2	3	3	2	1
Salmon Canner	1	1	2	2	1	2
Clam	13	12	17	15	22	10
Crab	2	.....	.....	.....	.....	.....
Broker .....	.....	.....	.....	.....	.....	.....
Crawfish .....	.....	.....	.....	.....	.....	.....
Setline .....	.....	.....	.....	2	2	22
Buyer	2	3	3	4	3	3
Bait Net	1	.....	1	1	3	5
Crab-Shrimp-Crawfish	18	19	30	38	15	57
Total Coos Bay and River	190	212	267	300	287	374
Coquille River						
Gillnet	30	35	40	36	39	53
Setnet	16	22	7	5	8	11
Retail Fish Dealer and Peddler	18	19	17	16	11	10
Wholesale Fish Dealer	4	5	4	3	4	5
Clam	1	.....	2	1	1	1
Crab	3	.....	.....	.....	.....	.....
Buyer	1	1	2	2	1	1
Crab-Shrimp-Crawfish .....	.....	2	1	4	2	5
Salmon Canner .....	.....	1	.....	1	.....	.....
Total Coquille River	73	85	73	68	66	86
Depoe Bay						
Retail Fish Dealer and Peddler	9	9	13	5	15	12
Wholesale Fish Dealer	5	5	4	2	5	5
Crab .....	.....	.....	.....	.....	.....	.....
Salmon Canner .....	.....	.....	.....	.....	1	1
Clam .....	.....	1	.....	.....	.....	.....
Total Depoe Bay	14	15	17	7	21	18
Lincoln County Beaches						
Clam .....	.....	3	10	17	11	7
Crab-Shrimp-Crawfish .....	.....	1	.....	1	1	.....
Total Lincoln County Beaches .....	.....	4	10	18	12	7
Nehalem River						
Gillnet	51	49	46	57	62	71
Setnet .....	.....	.....	.....	.....	.....	.....
Retail Fish Dealer and Peddler	13	13	14	14	16	17
Wholesale Fish Dealer	5	5	5	6	5	4
Clam	4	3	7	9	7	3
Crab .....	.....	.....	.....	.....	.....	.....
Buyer	1	2	1	1	2	1
Crab-Shrimp-Crawfish	2	3	3	6	6	1
Salmon Canner	1	1	1	1	1	.....
Total Nehalem River	77	76	77	94	99	97

COMPARATIVE STATEMENT OF LICENSES ISSUED—Continued

License Years Ending on March 31st

Licenses	1954	1953	1952	1951	1950	1949
Nestucca River						
Retail Fish Dealer and Peddler	6	6	5	9	8	6
Clam						
Crab						
Wholesale Fish Dealer	1	1	1	2	2	2
Salmon Canner	1	1	1	1	1	1
Total Nestucca River	8	8	7	12	11	9
Netarts Bay						
Setnet	7	7	5	7	9	8
Retail Fish Dealer and Peddler	7	9	10	5	5	4
Crab	5					
Wholesale Fish Dealer			1	1	1	1
Crab-Shrimp-Crawfish	1	5	3	3	3	5
Clam	7	10	5	4	4	1
Total Netarts Bay	27	31	24	20	22	19
Pacific Ocean and Beaches						
Bait Net	5	3			1	
Troll	80	91	73	9	9	3
Crab-Shrimp-Crawfish	43	44	40	51	80	47
Clam	609	629	462	160	63	20
Wholesale Fish Dealer	1	1				
Crab	17					
Total Pacific Ocean and Beaches ..	755	767	575	220	153	70
Port Orford						
Retail Fish Dealer and Peddler	8	7	12	12	13	7
Wholesale Fish Dealer	2	1	5	6	7	4
Crab	1					
Salmon Canner	1		2	2	2	
Crab-Shrimp-Crawfish	1			3		1
Shellfish Canner	1	1		2		
Total Port Orford	14	9	19	25	22	12
Sand Lake						
Setnet	6	7	5	8	10	10
Crab						
Retail Fish Dealer					2	1
Total Sand Lake	6	7	5	8	12	11
Sandy River						
Retail Fish Dealer and Peddler	5	11	12	4	9	10
Wholesale Fish Dealer			4		2	1
Total Sandy River	5	11	16	4	11	11
Siletz River						
Gillnet	31	29	33	26	33	39
Setnet						
Retail Fish Dealer and Peddler	27	25	32	26	29	26
Wholesale Fish Dealer	3	3	3	3	4	3
Crab-Shrimp-Crawfish					2	
Total Siletz River ...	61	57	68	55	68	68

COMPARATIVE STATEMENT OF LICENSES ISSUED—Continued

Licenses	License Years Ending on March 31st					
	1954	1953	1952	1951	1950	1949
Siuslaw River						
Gillnet	18	22	25	28	30	51
Setnet	21	34	39	43	40	58
Retail Fish Dealer and Peddler	30	31	39	44	39	34
Wholesale Fish Dealer	1	3	3	3	1	4
Clam	2	2	10	11	13	13
Crab .....	.....	.....	.....	.....	.....	.....
Buyer	1	1	1	1	1	1
Crab-Shrimp-Crawfish .....	.....	.....	.....	1	.....	3
Total Siuslaw River	73	93	117	131	124	164
Tillamook Bay						
Gillnet	67	59	70	78	97	106
Setnet	69	79	92	120	159	145
Retail Fish Dealer and Peddler	34	34	35	37	43	48
Wholesale Fish Dealer	15	9	10	10	14	17
Salmon Canner	1	1	.....	.....	.....	.....
Shellfish Canner .....	.....	.....	.....	3	1	1
Clam	23	26	36	56	43	22
Crab	20	.....	.....	.....	.....	.....
Buyer	2	1	1	1	1	4
Crab-Shrimp-Crawfish	9	18	12	17	15	25
Oyster Tonger .....	.....	1	.....	.....	1	.....
Bait Net .....	.....	.....	1	.....	1	.....
Total Tillamook Bay	245	228	257	322	375	368
Umpqua River						
Gillnet	26	32	26	39	40	57
Setnet (Smith River)	76	75	82	79	79	80
Troll .....	.....	.....	.....	.....	.....	.....
Retail Fish Dealer and Peddler	36	45	39	36	43	36
Wholesale Fish Dealer	8	7	7	8	6	8
Salmon Canner .....	.....	.....	.....	.....	1	1
Shellfish Canner .....	.....	.....	.....	.....	.....	.....
Clam	9	5	12	10	7	6
Crab	1	.....	.....	.....	.....	.....
Buyer	2	1	1	1	3	1
Crab-Shrimp-Crawfish .....	.....	3	1	2	3	2
Bait Net	1	.....	1	2	4	1
Total Umpqua River	159	168	169	177	186	192
Yaquina Bay and River						
Gillnet	24	28	23	31	31	30
Setnet .....	.....	.....	.....	.....	.....	.....
Retail Fish Dealer and Peddler	85	89	70	72	72	57
Wholesale Fish Dealer	15	16	15	12	15	14
Clam	11	16	11	27	20	19
Crab	12	.....	.....	.....	.....	.....
Sepline .....	.....	.....	.....	2	5	8
Shellfish Canner .....	.....	2	2	1	2	2
Salmon Canner .....	.....	1	1	2	2	2
Reduction Plant .....	.....	.....	1	1	1	1
Bait Net .....	.....	.....	1	2	3	4
Crab-Shrimp-Crawfish	6	13	17	23	21	22
Buyer	1	1	.....	.....	1	.....
Total Yaquina Bay and River	154	166	141	173	173	159

COMPARATIVE STATEMENT OF LICENSES ISSUED—Continued

License Years Ending on March 31st

Licenses	1954	1953	1952	1951	1950	1949
Miscellaneous						
Delivery	738	822	871	910	1027	1194
Supplemental to Delivery	7	10	5	3	7	10
Personal	2255	2236	2302	2664	2640	2679
Broker	3	3	4	5	8	4
Salmon Canner (Rogue River)	1	1	1	.....	.....	.....
Retail Dealer Packaged						
Frozen Food Fish	690	639	342	.....	.....	.....
Wholesale Distributor	38	34	27	.....	.....	.....
Indian Personal	5	.....	7	.....	.....	.....
Total Miscellaneous	3737	3745	3559	3582	3682	3887
Grand Totals	7764	7891	7912	8380	8513	8780
Recapitulation						
Gillnet	326	879	904	993	1040	1150
Setnet	254	299	320	491	597	739
Trap .....	.....	.....	.....	20	35	49
Seine .....	.....	.....	.....	13	13	15
Troll	135	129	110	74	75	75
Retail Fish Dealer and Peddler	1426	1445	1605	1631	1578	1452
Wholesale Fish Dealer	167	161	184	193	201	193
Broker	3	3	4	5	8	4
Salmon Canner	16	21	23	24	26	28
Shellfish Canner	9	13	18	15	13	13
Reduction Plant	3	3	4	4	6	7
Bagnet	(j)144	(i)159	(h)153	(g)46	(f)87	(e)165
Clam	755	779	760	972	806	587
Crab	67	.....	.....	.....	.....	.....
Crawfish	13	.....	.....	.....	.....	.....
Setline	31	32	27	14	44	82
Delivery	738	822	871	910	1027	1194
Supplemental to Delivery	7	10	5	3	7	10
Personal	2255	2236	2302	2664	2640	2679
Crab-Shrimp-Crawfish	96	139	152	210	205	236
Buyer	65	73	75	84	81	75
Bait Net	7	3	4	5	12	13
Carp Permit	5	7	6	9	11	14
Oyster Tonger .....	.....	1	.....	.....	1	.....
Retail Dealer Packaged						
Frozen Food Fish	690	639	342	.....	.....	.....
Wholesale Distributor	38	34	27	.....	.....	.....
Indian Gillnet	4	.....	1	.....	.....	.....
Indian Bagnet	3	2	6	.....	.....	.....
Indian Personal	5	.....	7	.....	.....	.....
Indian Wholesale Fish Dealer .....	.....	2	1	.....	.....	.....
Indian Retail Fish Dealer	2	.....	1	.....	.....	.....
Totals	7764	7891	7912	8380	8513	8780

(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.

(i) Includes 59 issued for Sandy River Smelt.

(j) Includes 12 issued for Sandy River Smelt.

EGG TAKE
Number of Eggs Taken at Stations Operated by the Fish Commission

Fiscal Year Ending June 30, 1953

<i>Fisheries Station</i>	<i>Chinook</i>	<i>Silver Salmon</i>	<i>Steelhead</i>	<i>Total</i>
Alsea				
Bonneville	24,984,000	621,000		25,605,000
Coos		375,460		375,460
Klaskanine		136,699		136,699
McKenzie	523,064			523,064
Metolius	139,000			139,000
Nehalem		248,671		248,671
Ox Bow Springs	9,190,000			9,190,000
Sandy	135,030			135,030
North Santiam	270,444		2,746,798	3,017,242
South Santiam	370,134			370,134
Siletz		311,089		311,089
Tillasqua	521,200	1,257,472		1,778,672
Trask	1,139,446	290,512		1,429,958
Willamette	168,270			168,270
Total	37,440,588	3,240,903	2,746,798	43,428,289

Fiscal Year Ending June 30, 1954

<i>Fisheries Station</i>	<i>Chinook</i>	<i>Silver Salmon</i>	<i>Steelhead</i>	<i>Total</i>
Alsea				
Bonneville	10,337,000			10,337,000
Coos		416,371		416,371
Klaskanine				
McKenzie	1,994,289			1,994,289
Metolius	253,400			253,400
Nehalem		514,764	25,110	539,874
Ox Bow Springs	4,347,040			4,347,040
Sandy	175,105	502,045	118,765	795,915
North Santiam	1,974,713		2,472,162	4,446,875
South Santiam	1,576,356			1,576,356
Siletz		47,603	7,000	54,603
Tillasqua	78,144	1,182,592	194,536	1,455,272
Trask	963,345	99,341		1,062,686
Willamette	1,017,576			1,017,576
Total	22,716,968	2,762,716	2,817,573	28,297,257

NUMBER OF SALMON AND STEELHEAD FINGERLING LIBERATED INTO THE WATERS OF THE STATE OF OREGON BY THE FISH COMMISSION

Fiscal Year Ending June 30, 1953

Fisheries Station	Chinook	Silver Salmon	Steelhead	Blueback	Total	Where Liberated
Alea						
Bonneville	13,557,671 500,000	175,888			13,733,559 500,000	Tanner Cr., Trib. of Columbia R. Clear Cr., Trib. of Clackamas R., Trib. of Willamette R.
	500,000				500,000	Deschutes R., Trib. of Columbia R.
	540,500				540,000	Hood River, Trib. of Columbia R.
	500,000				500,000	Eagle Creek, Trib. of Columbia R.
	500,580	40,000			540,580	John Day R., Trib. of Columbia R.
	1,000,000				1,000,000	Clackamas R., Trib. of Willamette R.
Coos	503,753	10,020 73,861 21,467 25,680			513,773 73,861 21,467 25,680	Salmon Cr., Trib. of S. Coos R., Trib. of Coos R. S. Coos R., Trib. of Coos R. Tioga Cr., Trib. of S. Coos R., Trib. of Coos R. Daniels Cr., Trib. of S. Coos R., Trib. of Coos R.
Klaskanine		428,067			428,067	Klaskanine R., Trib. of Columbia R.
Marion Forks	226,323		325,114 1,274,567		325,114 1,500,890	N. Santiam R., Trib. of Willamette R. Little N. Santiam R., Trib. of N. Santiam R., Trib. of Willamette R.
McKenzie	227,177				227,177	McKenzie R., Trib. of Willamette R.
Metolius	198,000				198,000	Metolius R., Trib. of Deschutes R., Trib. of Columbia R.
				101,800	101,800	Suttle Lake, Trib. of Lake Cr., Trib. of Metolius R.
Nehalem		449,970 62,610 14,400 14,400			449,970 62,610 14,400 14,400	Foley Cr., Trib. of Nehalem R. Miami R., Trib. of Tillamook Bay Yaquina R., Trib. of Yaquina Bay Gravel Cr., Trib. of N. F. Nehalem R., Trib. of Nehalem R.
Ox Bow	990,980				990,980	Ox Bow Springs, Trib. of Herman Cr., Trib. of Columbia R.
	152,064				152,064	Multnomah Falls Cr., Trib. of Columbia R.
	3,443,927				3,443,927	Herman Cr., Trib. of Columbia R.
Sandy	19,957 3,864,676 1,854,000	235,303			19,957 4,099,979 1,854,000	John Day R., Trib. of Columbia R. Cedar Cr., Trib. of Sandy R., Trib. of Columbia R. Gordon Cr., Trib. of Sandy R., Trib. of Columbia R.
	2,000,000				2,000,000	Sandy R., Trib. of Columbia R.
South Santiam	219,969				219,969	S. Santiam R., Trib. of Santiam R., Trib. of Willamette R.
Siletz		60,919			60,919	Reck Cr., Trib. of Siletz R.
Tillamook	1,938,525 192,776	385,580 266,015			2,322,105 458,791	Big Cr., Trib. of Columbia R. Klaskanine R., Trib. of Young's Bay, Trib. of Columbia R.
	29,520	28,120			57,640	Gnat Cr., Trib. of Columbia R.
	43,950				43,950	N. Scappoose Cr., Trib. of Columbia R.
	25,500				25,500	S. Scappoose Cr., Trib. of Columbia R.
	66,720				66,720	Carcus Cr., Trib. of Klaskanine R., Trib. of Young's Bay
		28,120			28,120	Elk Cr., Trib. of Big Cr., Trib. of Columbia R.
		9,120			9,120	Little Cr., Trib. of Big Cr., Trib. of Columbia R.
		22,800			22,800	Goble Cr., Trib. of Columbia R.
		56,240			56,240	Pig Pen Cr., Trib. of Big Cr., Trib. of Columbia R.
		56,240			56,240	Coon Cr., Trib. of Big Cr., Trib. of Columbia R.
Trask	297,179 25,000	45,827			343,006 25,000	Gold Cr., Trib. of Trask R., Trib. of Tillamook B. S. F. Trask River, Trib. of Trask R., Trib. of Tillamook Bay
	64,447				64,447	N. F. of Trask River, Trib. of Trask R., Trib. of Tillamook Bay
	25,000				25,000	E. F. of Trask R., Trib. of Trask R., Trib. of Tillamook Bay
	35,000				35,000	Edwards Cr., Trib. of Trask R., Trib. of Tillamook Bay
		10,094			10,094	Whiskey Cr., Trib. of Netarts Bay
Willamette	1,576,316 1,273,145				1,576,316 1,273,145	Willamette R., Trib. of Columbia R. Salmon Cr., Trib. of Willamette R., Trib. of Columbia R.
	51,240				51,240	Row R., Trib. of Willamette R., Trib. of Columbia R.
Total	36,441,895	2,520,741	1,599,681	101,800	40,664,117	

NUMBER OF SALMON AND STEELHEAD FINGERLING LIBERATED INTO THE WATERS OF THE STATE OF OREGON BY THE FISH COMMISSION

Fiscal Year Ending June 30, 1954

Fisheries Station	Chinook	Silver Salmon	Steelhead	Blueback	Total	Where Liberated	
Alsea		205,000			205,000	Fall Cr., Trib. of Alsea R.	
		25,000			25,000	Sweet Cr., Trib. of Siuslaw R.	
		15,000			15,000	McCleod Cr., Trib. of Siuslaw R.	
		15,000			15,000	Upper Yaquina R., Trib. of Yaquina R., Trib. of Yaquina Bay	
		15,000			15,000	Little Elk Creek, Trib. of Yaquina R., Trib. of Yaquina Bay	
Bonneville	306,030				306,030	Hood River, Trib. of Columbia R.	
	309,000				309,000	Deschutes R., Trib. of Columbia R.	
	321,360				321,360	John Day River, Trib. of Columbia R.	
	898,353				898,353	Willamette R., Trib. of Columbia R.	
	5,774,150				5,774,150	Tanner Creek, Trib. of Columbia R.	
Coos	57,750				57,750	Congdon Cr., Trib. of Siuslaw R.	
	30,800				30,800	E. F. Millicoma R., Trib. of Millicoma R., Trib. of Coos R.	
	34,650				34,650	Brummit Cr., Trib. of E. F. Coquille R., Trib. of Coquille R.	
	30,800				30,800	N. F. Coquille R., Trib. Coquille R.	
	43,020				43,020	Lake Cr., Trib. of Siuslaw R.	
	31,000				31,000	Rock Cr., Trib. of S. F. Coquille R.	
	20,920				20,920	Myrtle Cr., Trib. Middle F. Coquille R., Trib. Coquille R.	
	35,000				35,000	Millicoma R., Trib. of Coos R.	
	26,956				26,956	Tioga Cr., Trib. S. F. Coos R., Trib. Coos R.	
	34,388				34,388	S. F. Coos R., Trib. of Coos R.	
38,712				38,712	Sweet Cr., Trib. of Siuslaw R.		
50,072				50,072	Salmon Cr., Trib. of S. F. Coos R., Trib. Coos R.		
Klaskanine							
Marion Forks	366,012		1,669,123		2,035,135	N. Santiam R., Trib. of Santiam R., Trib. of Willamette R.	
McKenzie	887,885				887,885	McKenzie R., Trib. of Willamette R.	
	15,000				15,000	Cogswell Cr., Trib. of McKenzie R., Trib. of Willamette R.	
Metolius	108,302				108,302	Metolius R., Trib. of Deschutes R., Trib. of Columbia R.	
				164,300	164,300	Suttle Lake, Trib. of Lake Cr., Trib. of Metolius R.	
Nehalem		56,787			56,787	Miami R., Trib. of Tillamook Bay	
		49,500			49,500	Rock Cr., Trib. of Siletz R.	
	9,880	289,342	23,577		322,799	Foley Cr., Trib. of Nehalem R.	
Ox Bow	672,691	39,888			712,579	Herman Cr., Trib. of Columbia R.	
	660,060				660,060	Clackamas R., Trib. of Willamette R.	
	195,700				195,700	Clear Cr., Trib. of Clackamas R., Trib. of Columbia R.	
Sandy	2,614,025				2,614,025	Columbia R.	
	1,023,530	170,038			1,193,568	Cedar Cr., Trib. of Sandy R., Trib. Columbia R.	
	1,162,743				1,162,743	Sandy R., Trib. of Columbia R.	
	49,731				49,731	Gnat Cr., Trib. of Blind Slough, Trib. Columbia R.	
		60,000			60,000	S. F. Yamhill R., Trib. Yamhill R., Trib. Willamette R.	
		75,000			75,000	Tualatin R., Trib. Willamette R.	
	25,000			25,000	Molalla R., Trib. Willamette R.		
	25,000			25,000	Tanner Cr., Trib. Columbia R.		
Siletz							
South Santiam	14,110				14,110	S. F. Santiam R., Trib. Santiam R., Trib. Willamette R.	
	45,850				45,850	Soda F. S. Santiam R., Trib. Santiam R.	
	13,960				13,960	Middle F. Santiam R., Trib. Santiam R.	
	1,216,269				1,216,269	Santiam R., Trib. Willamette R.	
Tillasqua	74,100	320,148			394,248	Big Cr., Trib. Columbia R.	
		40,050			40,050	Elk Cr., Trib. Big Cr., Trib. Columbia R.	
		20,025			20,025	Tide Cr., Trib. Big Cr., Trib. Columbia R.	
		30,705			30,705	Fishhawk Cr., Trib. Nehalem R.	
		20,025			20,025	Young's R., Trib. Young's Bay, Trib. Columbia R.	
		40,500			40,500	N. Scappoose Cr., Trib. Scappoose Cr., Trib. Columbia R.	
		27,045			27,045	Goble Cr., Trib. Columbia R.	
		155,542			155,542	Upper Tillasqua R., Trib. Big Cr., Trib. Columbia R.	
	Trask		94,670			94,670	Miami R., Trib. Tillamook Bay
		419,218	120,821			540,039	Gold Cr., Trib. of Trask R.
210,618					210,618	S. F. Trask R., Trib. Trask R.	
242,037					242,037	N. F. Trask R., Trib. Trask R.	
144,542					144,542	E. F. Trask R., Trib. Trask R.	
113,841					113,841	Edwards Cr., Trib. Trask R.	
			617,711		825,883	Middle Willamette R., Trib. Willamette R.	
Willamette	208,172				208,172	Willamette R., Trib. Columbia R.	
	184,849				184,849	Willamette R., Trib. Columbia R.	
Totals	18,696,086	1,935,086	2,310,411	164,300	23,105,883		

COUNTS OF SALMON PASSING OVER BONNEVILLE DAM
Years 1938 to 1954

CHINOOK

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
January	*	6		4	1	11	1	6	1		10						
February	*	12		1,360	15	6	2	4	3				21	32	255	1,254	657
March	*	121	504	34	43	34	65	81	25	141	251	5	6,630	28,801	8,130	126,450	32,877
April	*	51,410	37,253	51,801	9,505	13,172	15,870	17,148	14,179	33,820	21,265	5,765	50,638	36,055	107,807	42,583	51,230
May	32,371	25,159	28,621	19,445	30,915	53,268	15,137	26,276	53,313	49,809	20,262	44,304	16,867	54,889	62,491	27,228	46,801
June	8,221	5,602	7,023	7,013	11,816	5,440	4,363	11,283	30,051	25,502	44,137	24,232	32,837	24,394	21,800	30,593	32,664
July	6,556	17,845	14,938	8,295	12,821	8,944	8,241	16,327	20,960	13,358	22,100	22,500	41,500	40,462	27,398	24,969	24,969
August	34,765	32,919	59,643	12,580	27,581	23,985	55,468	32,254	45,421	43,082	35,934	131,599	205,521	97,131	135,053	75,145	80,424
September	197,294	150,851	240,515	351,887	283,985	201,414	139,254	159,075	277,075	260,385	270,226	137,529	205,521	97,131	135,053	75,145	80,424
October	2,302	2,197	3,765	7,179	4,495	3,354	2,393	4,281	4,321	8,943	3,928	1,871	4,356	6,489	2,576	1,495	
November	283	78	227	855	639	365	164	137	170	526	487	215	143	212	477	333	
December	27	16	34	134	100	21	20	8	35	36	23	6					
Total	271,798	286,216	391,588	461,458	401,988	313,423	240,763	287,488	445,743	480,370	419,585	277,087	357,375	331,768	420,879	332,479	319,644

STEELHEAD

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
January	*	23	5	57	4	14	50	1,063	63	197	154	1	13				
February	*	19	96	76	37	13	157	1,078	551	321	119						
March	*	580	1,683	1,641	256	654	1,019	3,068	3,040	1,668	1,831	1,683	1,156	375	278	1,310	879
April	*	8,110	4,125	6,392	3,622	3,374	6,142	4,585	9,339	6,859	4,973	3,293	4,537	2,338	1,246	5,308	5,511
May	6,622	1,587	998	1,518	4,189	4,698	2,227	1,557	5,481	2,055	1,179	1,667	1,563	1,751	1,456	1,571	1,571
June	2,332	1,490	4,489	1,588	1,564	1,564	1,169	1,108	3,255	1,585	1,595	1,264	691	5,187	8,202	5,313	6,115
July	19,455	36,581	61,175	21,940	19,905	7,755	21,808	24,600	20,559	22,194	33,181	34,314	25,142	74,980	118,110	106,712	59,443
August	29,231	38,062	46,071	29,600	41,973	29,894	24,598	40,483	53,356	40,819	53,621	54,281	53,904	39,712	79,735	64,006	65,294
September	48,613	33,891	64,377	50,542	76,822	41,051	33,907	40,194	38,236	50,625	40,609	20,786	24,226	15,387	48,293	36,107	34,941
October	2,264	1,264	1,786	3,960	3,411	2,444	6,123	1,925	2,067	2,905	1,742	1,161	1,922	947	2,735	2,797	
November	339	216	292	1,063	566	873	1,119	302	282	443	381	895	811	325	633	905	
December	82	119	59	304	182	92	228	142	769	113	76	98	8				
Total	107,003	121,922	185,161	118,087	151,345	92,131	160,521	120,144	142,548	135,454	139,062	119,285	114,087	140,689	260,890	223,914	173,500

BLUEBACK

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
January	*																
February	*																
March	*						1										
April	*	48	189	269			51		9								
May	1,025	139	206	1,052	13	9	16	521	67	5		151		25	3	663	13
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	136,839	45,711	52,389
July	53,864	43,124	85,885	39,183	41,301	33,613	11,171	6,903	64,704	106,175	117,652	41,620	75,784	87,104	47,188	186,933	76,605
August	2,097	616	3,063	1,615	1,477	1,697	659	498	1,746	3,564	1,850	665	1,826	1,214	467	1,774	1,212
September		235	19	11	50	60	1	127	11	23	17	14	10	42	40	30	50
October		6						1		2	1	4	1				
November		2															
December																	
Total	75,040	73,382	148,805	65,745	55,475	39,845	15,072	9,802	74,356	171,142	131,543	51,450	77,983	169,428	194,645	235,215	130,107

SILVERSIDES

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
January	*	3	3	2						12	1						
February	*								10	2							
March	*								4	1							
April	*																
May																	
June																	
July								2	22		11	17					
August	3,070	1,810	1,451	1,317	1,193	762	1,052	239	227	217	158	270	1,570	197	2,581	7,094	668
September	10,505	12,226	10,212	16,061	11,061	1,676	3,021	533	3,609	10,928	3,893	703	8,545	4,773	5,131	5,890	3,319
October	972	310	213	369	147	89	103	16	1	10	10	5	38	225	22	22	
November	141	15	33	160		20	29			3	3	8		6	24	11	
December	7	18	5	2			2	1	24	1	5	1					
Total	15,105	14,382	11,917	17,911	12,401	2,547	4,207	791	3,397	11,174	4,061	1,004	10,151	5,201	7,768	13,018	3,987

CHUMS

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
January	*	2					1	2					1				
February	*																
March	*																
April	*																
May																	
June																	
July																	
August				1						1							
September	1,243	700	860	1,116	700	125	191	118	303	59	192	215	298	60	163	373	6
October	789	411	835	4,130	1,149	623	666	565	809	110	2,966	1,719	770	894	1,340	1,355	
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	1,728	6

TOTAL COUNTS BY MONTHS

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
January	*	34	8	43	5	25	52	1,011	64	209	165	1	14				
February	*	31	99	76	52	24	159	1,082	563	325	119						
March	*	681	2,192	3,001	290	697	1,085	3,157	3,069	2,110	1,882	1,694	1,177	407	540	2,621	1,337
April	*	59,568	41,378	58,192	13,148	15,546	21,312	21,884	24,027	90,409	25,678	9,068	11,167	31,139	9,379	131,785	88,388
May	30,013	26,938	29,825	22,015	35,067	57,975	17,370	23,354	56,861	51,929	21,432	46,187	52,305	87,648	109,561	44,702	52,814
June	28,414	36,478	71,156	31,543	26,028	11,529	6,630	13,909	41,121	86,475	58,055	34,509	17,689	141,121	207,632	78,252	105,275
July	79,875	97,550	161,998	70,528	74,027	49,412	41,280	47,832	106,245	149,667	173,954	98,451	133,863	186,478	187,108	324,239	168,632
August	69,163	73,407	106,228	45,123	72,224	61,386	81,687	73,474	105,750	87,663	91,563	96,706	97,762	74,908	165,073	100,273	92,083
September	95,142	186,993	315,115	418,920	391,738	244,142	178,309	230,415	319,004	321,555	314,754	159,098	238,334	117,301	188,509	117,192	116,707
October	6,789	4,471	6,625	12,644	7,743	6,012	8,811	6,341	6,894	6,921	5,876	2,953	6,622	7,721	5,498	4,687	
November	1,544	720	1,447	6,219	2,354	1,381	1,973	1,024	1,241	1,082	3,817	2,628	1,724	1,427	2,467	2,604	
December	189	202	132	487	388	155	344	169	881	180	582	199	8				
Total	471,144	487,073	1,385,200	666,471	623,034	448,436	361,517	428,652	667,720	798,325	697,877	451,484	560,675	648,150	875,797	806,354	627,244

* Data not available. Figures for 1938 are from May 7 to December 31, inclusive. Figures show number of fish, subject to revision pending final audit. U. S. Engineers, Bonnaville Division.

PACK OF CANNED SALMON ON THE COLUMBIA RIVER FROM THE INCEPTION OF THE INDUSTRY TO 1953

Year	Chinook		Blueback		Silverside		Chum or Keta		Steelhead Trout		Total		
	Number of Canneries	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
1890	21	335,604	1,946,067	57,345	290,069							42,825	171,360
1891	22	353,907	2,038,566	15,482	284,242							29,564	118,156
1892	24	344,267	1,996,368	66,547	372,909							72,349	288,892
1893	24	283,773	1,559,374	30,459	152,295	29,107						65,226	260,904
1894	24	351,106	1,896,976	43,814	224,430	42,758						52,422	269,638
1895	24	444,909	2,428,658	18,015	86,523	99,601						49,678	203,542
1896	24	370,943	1,804,511	16,963	51,518	44,108						49,663	198,652
1897	22	432,753	1,804,221	12,972	51,888	60,850						46,146	165,440
1898	23	329,566	1,490,394	66,670	300,015	65,451						26,277	60,352
1899	17	255,824	1,458,175	23,969	134,723	29,608						11,994	39,186
1900	16	262,392	1,821,258	13,162	92,184	44,925						20,597	102,985
1901												390,183	1,942,660
1902	14	270,580	1,428,743	17,087	86,465	10,532						8,593	42,985
1903	16	301,762	1,610,614	8,363	42,867	12,181						7,251	36,255
1904	20	320,378	1,944,690	12,911	78,048	31,254						9,868	46,892
1905	19	327,106	1,962,636	7,763	46,606	26,826						20,691	89,510
1906	19	311,334	1,868,007	7,816	54,712	41,446						25,751	65,206
1907	19	258,433		5,504		31,757						27,802	69,505
												6,500	32,500
												5,921	1,763,490

Year	Number of Canned Cases	Chinook		Blueback		Silverside		Chum or Keta		Steelhead Trout		Total
		Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	
1908	14	210,066	8,561	214,561	42,178	185,070	24,842	57,115	17,283	99,798	253,341	\$1,380,703
1909	15	162,131	27,908	34,227	6,234	363,688	66,538	232,883	5,436	31,203	374,087	1,760,088
1910	15	244,265	5,988	47,904	79,416	549,478	53,471	203,198	8,594	47,389	543,331	2,544,188
1911	15	405,822	8,210	1,988,526	31,842	177,243	18,659	46,590	6,958	22,108	285,668	3,052,164
1912	15	220,317	11,162	85,384	40,969	175,412	13,303	29,486	9,389	49,142	266,479	2,319,856
1913	15	192,116	35,311	376,924	69,769	590,665	69,205	89,551	10,772	3,695,969	464,621	2,012,387
1914	17	289,464	5,459	56,707	33,336	173,234	86,530	251,632	28,723	129,358	558,534	4,306,292
1915	19	408,488	3,790	3,572,203	7,988	335,114	337,335	307,463	19,999	318,957	547,805	4,361,075
1916	20	395,166	7,988	111,652	64,289	700,580	53,659	386,586	25,783	282,358	555,218	6,530,939
1917	20	403,637	7,988	605,329	98,145	1,072,843	20,846	215,663	24,605	350,071	591,381	7,466,924
1918	20	400,952	7,268	145,360	90,728	1,142,787	75,463	541,969	14,414	205,254	560,028	7,490,920
1919	21	392,125	2,617	62,806	27,024	257,806	18,792	99,564	19,645	316,859	481,545	6,198,617
1920	22	420,487	6,045	120,900	34,331	233,372	4,821	19,791	10,142	68,266	323,241	4,203,649
1921	22	267,582	30,743	614,860	90,437	633,935	8,844	47,130	24,920	186,675	392,174	5,206,993
1922	23	237,230	38,309	766,100	101,554	673,954	25,506	135,168	25,968	187,965	480,925	6,730,924
1923	23	289,586	7,366	129,640	112,308	592,865	57,749	303,356	29,734	265,107	500,872	6,219,404
1924	22	293,716	5,650	106,220	113,554	1,486,855	55,012	272,398	14,637	177,866	540,452	7,466,466
1925	21	350,809	21,736	434,720	97,142	1,027,597	32,853	181,216	32,690	356,418	479,723	6,744,064
1926	21	295,302	6,887	147,378	74,879	585,816	68,449	425,240	30,149	311,070	519,809	7,023,705
1927	22	329,446	4,314	100,131	49,136	478,355	124,935	747,619	16,339	222,139	446,646	5,903,462
1928	24	251,404	10,072	181,296	90,684	917,541	54,819	314,928	23,804	257,025	422,117	5,905,024
1929	21	242,938	9,823	194,460	110,480	1,186,082	11,371	43,324	16,535	171,541	428,506	5,668,177
1930	21	281,346	4,125	66,000	39,268	247,878	8,518	44,879	11,990	110,439	353,689	4,191,000
1931	20	294,798	2,795	33,540	46,492	280,853	17,261	44,879	13,132	91,924	296,191	2,474,586
1932	15	216,511	6,921	96,894	36,430	263,190	24,398	107,351	17,805	142,440	336,711	3,329,176
1933	14	251,157	6,969	82,423	65,428	536,781	24,455	92,608	14,901	121,000	362,721	3,462,919
1934	13	251,068	1,302	17,619	95,184	725,868	15,495	59,499	14,888	122,846	322,739	3,405,282
1935	10	265,870	9,837	137,713	36,541	303,263	30,597	110,149	19,282	317,867	316,445	3,833,055
1936	11	220,169	7,526	126,436	69,801	725,996	30,592	188,309	17,588	189,794	416,830	5,437,294
1937	11	291,343	13,889	260,369	67,257	630,364	37,704	143,275	15,248	152,450	307,930	3,693,755
1938	10	173,892	5,301	102,359	69,082	730,549	15,201	75,418	25,293	421,608	322,472	4,666,141
1939	11	207,585	23,974	471,530	59,737	623,681	28,232	135,420	33,436	373,514	386,999	5,379,826
1940	11	244,570	33,070	661,400	35,727	481,834	83,144	572,994	33,162	453,502	513,712	7,727,982
1941	9	323,609	23,256	625,230	26,541	497,070	118,051	911,538	21,803	429,679	464,401	8,156,445
1942	12	274,750	2,890	77,586	5,707	611,065	12,429	112,421	16,261	323,874	167,660	3,663,451
1943	11	130,373	758	20,342	12,210	137,072	1,525	11,590	19,222	375,838	196,762	4,259,433
1944	10	163,047	112	3,001	22,154	244,060	1,022	8,848	19,314	363,068	(a)175,670	3,723,456
1945	8	132,014	9,726	369,538	6,883	206,490	(b)115,617	247,382	17,373	510,720	(b)209,471	7,374,390
1946	11	156,972	15,079	664,000	42,789	1,276,000	17,121	232,000	21,969	650,000	347,306	11,457,000
1948	12	235,310	3,339	147,000	59,425	1,089,000	26,201	498,000	19,977	615,000	324,252	11,701,000
1949	12	133,347	(c)6,630	225,000	16,740	415,000	12,386	186,000	9,019	221,000	176,122	4,729,000
1950	11	136,635	3,630	146,687	29,507	939,296	12,952	234,457	10,266	360,830	192,990	6,645,471
1951	10	143,046	4,552	166,543	29,099	841,234	11,566	182,850	14,862	469,615	203,123	7,187,547
1952	9	85,353	9,234	413,774	29,701	875,380	16,979	214,887	16,979	562,159	167,616	5,623,159
1953	8	93,869	2,871	103,356	23,547	560,296	12,351	182,346	19,161	455,456	151,799	4,763,713
1953	9	38,869	3,461,259	103,356	23,547	560,296	12,351	182,346	19,161	455,456	151,799	\$330,187,049

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

(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.