

BOX 226
BAY CITY, OREGON

*Oregon Fish Comm.
Bay City Oregon*

BIENNIAL REPORT OF THE FISH COMMISSION STATE OF OREGON, 1919-1920



ROYAL CHINOOK SALMON — OREGON'S FINEST FOOD FISH

BIENNIAL REPORT
OF THE
FISH COMMISSION
of the State of Oregon
TO THE
GOVERNOR AND THE THIRTY-FIRST
LEGISLATIVE ASSEMBLY
1921



FISH COMMISSION OF THE STATE OF OREGON

HON. CHRIS SCHMIDT, *Chairman*Astoria
HON. FRANK WARRENPortland
HON. CHAS. HALL.....Marshfield

CARL D. SHOEMAKER.....*Executive Secretary*
R. E. CLANTON.....*Master Fish Warden*

LETTER OF TRANSMISSION

Portland, Oregon, December 31, 1920.

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

Gentlemen:

Agreeable to the provisions of law, I hand you herewith a brief resume of the work of the Fish Commission during the past two years. Attached to the resume will be found tables showing receipts and expenditures, and the operation of the patrol service.

Respectfully submitted,

CARL D. SHOEMAKER,
Executive Secretary.

Report of Carl D. Shoemaker

Executive Secretary of the Fish Commission,
State of Oregon.

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

Gentlemen :

DURING the fiscal year of 1920, the operations of the Fish Commission have been conducted through two separate commissions. In January the Special Session of the Legislature amended the old Fish and Game Commission law, which provided for a commission of five members, and divorced the commercial fishing interests from the sportsmen's or game interests. Under the new law, a Fish Commission consisting of three members was elected by the Legislature. A Game Commission consisting of five members was also created and its membership was likewise elected by the Legislature. The new commission act went into effect on March 1st. The offices of both commissions were maintained in the former offices of the Fish and Game Commission in the Oregon Building, in this city. On May 1st, a complete segregation of the two commissions was effected by the Fish Commission vacating its quarters in the Oregon Building and moving to new quarters in the Gasco Building. Since that time the two commissions have maintained separate identities.

All matters of joint interests have been satisfactorily settled between the two commissions, and just recently a complete segregation of the hatcheries has been effected. The Tumalo, Union Creek, Klamath, Butte Falls and McKenzie hatcheries were turned over to the Game Commission as trout hatcheries. Bonneville, Klaskanine, Alsea, Umpqua, Siuslaw and Coos hatcheries were designated as commercial or salmon hatcheries and turned over to the jurisdiction and control of the Fish Commission.

The Oak Ridge hatchery on the upper Willamette River has not yet been completed, although the site has been obtained from the United States Forestry Service. This location is sufficiently large to permit the establishment of hatching houses and nursery ponds for both trout and salmon operations; neither will interfere with the other. Within the next thirty days, a division of this site will be made and construction work started for the erection of suitable buildings and the screening off of ample nursery pond facilities for our work.

The Lower Santiam hatchery, for which an appropriation was made at the 1919 session of the Legislature, has been about completed. The hatching house and troughs have been installed and there remains yet only the bringing of the water supply to the hatching house itself to put the hatchery in operation. It was intended by the Legislature that this hatchery should be a joint salmon and trout hatchery.

The Nehalem or Salmonberry hatchery was made a joint salmon and trout hatchery by the appropriation act itself and will remain so.

The Gold Creek hatchery, in Tillamook County, located on the Trask River, a few miles from Tillamook, will for the time being be conducted as a joint hatchery, as neither the sportsmen nor the commercial fishermen of that locality desire to have it operated solely as either a salmon or trout hatchery.

PATROL WORK

The patrol service on the Columbia and coast streams has been as satisfactory as conditions would permit. The patrol boat used at the mouth of the Columbia has become less serviceable than in former years on account of its age, and if effective patrol service is to be maintained at the mouth of the Columbia and upstream, it will be necessary to purchase a new boat for this purpose. I have obtained estimates covering the cost of such a boat, and find that a 40-foot boat equipped with a six-cylinder 85 to 125 horsepower Sterling motor, will cost the sum of \$6,500. I recommend that the Commission request of the Legislature an appropriation in this amount for a new patrol boat to cover this important stretch of the river.

Mr. Clanton has discussed in his report the efficiency of the

hatchery service of the state and the constantly increasing results achieved therefrom. It is, therefore, vitally necessary that the patrol service be maintained at a high standard of effectiveness. The old boat in use at the mouth of the river at the present time would, in case we obtain a new boat, be brought to Portland and used in patrolling the upper drifts of the Columbia and those of the Willamette. The coast stream patrol work is even a more difficult problem than that of the Columbia, for the reason that funds are not sufficient to maintain a warden on each stream, and the two or three wardens who are employed must move constantly from one stream to another and do as effective work as is possible under these conditions. Small skiffs, with Evinrude motors attached, are owned by the department on Tillamook, Yaquina and Coos Bays. These serve our purpose well and no increase in their number is desired at this time.

The mouth of the Rogue River, where commercial fishing operations are conducted, offers a problem in itself. A deadline has been established below which commercial fishing is prohibited, and it is necessary to maintain a warden at this point throughout the season.

The dam at Winchester on the Umpqua, and the fishway at the Willamette Falls, at Oregon City, offer two special problems of the department, both of which must be dealt with according to the needs. The problem is made complex at both places because of the fact that in addition to the commercial character of the situation there is added the sportsmen's angle, which makes the burden of patrol service much heavier.

FINANCES

The revenues derived from the sale of licenses, confiscated property and fines are inadequate to the needs of the operations of the Commission. It has been definitely established that best results are achieved in salmon propagation by holding and feeding the young fry until they reach a length of four or five or more inches and an age equivalent to that growth. This entails a corresponding increase in operation and food expense, the hatcheries being in continuous operation throughout the year. The older the fry, the more food they consume and the more costly is this operation.

To meet this increased cost of the hatchery work, it is necessary to have an increased revenue for the department. This is best achieved by the imposition of a tonnage tax on all fish caught and sold. A careful estimate fixes the minimum tax needed to produce the necessary revenue at \$5.00 per ton. I therefore earnestly recommend that the Commission request the Legislature at the forthcoming session to provide additional revenue through the imposition of such a tax.

The Master Fish Warden's department consists of the Master Fish Warden, a deputy for District No. 1, a deputy for District No. 2, and a clerk. There should be an additional warden to act as a special patrol officer along the Columbia and the coast streams. This department has been maintained as an arm of the police force of the State through appropriations from the General Fund.

In order to adequately take care of the operation, construction and equipment costs of the coast stream hatcheries, an appropriation from the General Fund in the sum of \$30,000 should be provided. Our coast streams are constantly becoming a greater factor in the fresh fish market, and hatchery work should be extended and the facilities increased in order to take care of the increased demands upon these streams.

For the operation, construction and maintenance of hatcheries on the Columbia River and its tributaries, the sum of \$25,000 is needed for the biennium.

These appropriations mentioned are in addition to any contemplated revenue which may be derived from the sale of licenses and the imposition of a tonnage tax above referred to, and are necessary if the efficiency of the hatchery work is to be maintained and continued.

Respectfully submitted,

CARL D. SHOEMAKER,

Executive Secretary.

LETTER OF TRANSMISSION

Bonneville, Oregon, December 31, 1920.

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

Gentlemen:

I herewith submit for your consideration report covering the important features of the hatchery operations and tabulated figures showing the output of young salmon for the past two years at the various hatcheries operated by the Commission.

Respectfully submitted,

R. E. CLANTON,
Master Fish Warden and Superintendent of Hatcheries.

Report of R. E. Clanton

Master Fish Warden and Superintendent of Hatcheries

Fish Commission,
State of Oregon,
Portland, Oregon.

Gentlemen :

IN commenting upon the conditions of Oregon salmon fisheries, it can be said that while the fisheries of all other sections have almost universally for the past several years shown a rapid decline (some of the once most famous salmon streams now being almost depleted), Oregon fisheries for a like period of time have continued to show a healthy growth.

Notwithstanding that this state's industry is now on a stable basis, only a few years back the commercial fishing interests were faced by the same serious conditions which now confront the fishermen of other districts.

As it can be recalled, the Oregon salmon fishing industry likewise for a number of years showed a rapid decrease, the number of cases having reached bedrock in 1912 and 1913, only 285,666 and 266,479 cases, respectively, having been canned those years, this amount being a little more than one-third of the number packed in some of the former seasons.

It was not surprising that those who were vitally interested began to take pessimistic views of the future, and the prediction was general that the great salmon runs, which were once thought inexhaustible, were doomed, and that the millions of dollars invested in the canneries and other equipment bid fair to become almost a total loss.

Notwithstanding the gloomy outlook, there still were a few of the more substantial packers, who had three years previous got behind the fisheries department and assisted in putting into effect a new system of hatchery work; these men, having backed the movement, financially and otherwise, withheld their opinions, trusting that the experiment for which they were respon-

sible would prove of some benefit when the four year cycle, or the time the young fish could be expected to return, arrived.

That they were not disappointed can be seen, when it is known that the pack on the Columbia River at the end of the season of 1914 totaled up almost double that of either of the two previous years. Here it might not be amiss to say that to these few cannerymen, who by valuable advice and financial assistance, the larger part of the credit should be given for the inauguration of what is now known in all salmon sections as the Oregon hatchery system. This system has now been in effect for better than ten years, and has long since passed the experimental stage. And to prove that the same has been a success, we only have to point to the following tables, showing the pack for the past eight years:

| | | |
|------|-------|---------|
| 1912 | ..... | 285,666 |
| 1913 | ..... | 266,479 |
| 1914 | ..... | 454,621 |
| 1915 | ..... | 558,534 |
| 1916 | ..... | 547,805 |
| 1917 | ..... | 555,218 |
| 1918 | ..... | 591,381 |
| 1919 | ..... | 580,028 |

While the figures above apply only to the Columbia River, Oregon's many coast streams have likewise, for a number of years, shown an increase annually in salmon production, and there has, no doubt, more fish entered these rivers during the season just passed than any former years.

That the increased run of salmon annually, which have brought in millions of dollars into the State, is due almost entirely to Oregon hatchery methods, is the almost universal opinion of our packers and fishermen, as well as those interested in the business in other sections. Numerous articles commending the Fish Commission upon its efficient hatchery methods have appeared in the papers and fishery magazines published in the various sections of the Northwest.

Cannerymen of the Puget Sound and British Columbia who are interested in a project to rehabilitate the Frazer River have recently formed an organization, and have asked the Fish Commission for the services of the head of the hatchery department,

with a view to putting in the Oregon system in the headwaters of that stream.

HATCHERY OPERATIONS

Considering the age, size and healthy condition of the young salmon liberated, the hatchery operations as a whole for the past biennium were much more efficient than for any like previous period.

As can be seen from the following tables; there were liberated from our hatcheries into the various streams of the State more than 50,000,000 Spring or Royal Chinook salmon fingerlings, at an average age of 8 months. In addition there were nearly 40,000,000 of young fish of the less valuable varieties, consisting of the Fall Chinook, Silversides and Steelhead, making a total output for the past two years of approximately 90,000,000 fish.

| | 1919 | 1920 |
|------------------------------|------------|------------|
| Spring Chinook salmon..... | 30,057,291 | 20,196,162 |
| Fall Chinook salmon..... | 3,675,140 | 5,837,247 |
| Silversides | 9,140,769 | 2,775,785 |
| Sockeye | | 600,000 |
| Steelhead (Commercial) | 3,407,958 | 5,240,190 |
| | 46,281,158 | 34,649,384 |
| | | 46,281,158 |
| Biennial total..... | | 80,930,542 |
| Retained in feeding ponds— | | |
| Steelheads | 404,180 | |
| Fall Chinooks..... | 265,000 | |
| Sockeye | 2,589,478 | 3,258,658 |
| | | |
| A total of..... | | 84,189,200 |

It will be noted that the number of Spring salmon turned out the past season was less than in 1919. This was due to the unfavorable water conditions which affected our egg take; but having a smaller number to care for, we were enabled to hold and feed them for a much longer time, thereby increasing the age and size, which no doubt enabled them to better escape their

natural enemies in their migration to the ocean, and as the larger per cent of these fish had attained the size of 5 to 6 inches when liberated, there is very little doubt but what we can expect more beneficial results from the past year's work than any previous year since the Oregon hatchery system was put into effect.

Respectfully submitted,

R. E. CLANTON,

Master Fish Warden and Superintendent of Hatcheries.

RECEIPTS AND DISBURSEMENTS 1919

FOR HATCHERY FUND, DISTRICT NO. 1

RECEIPTS

| | Dec. 1, 1918, to Nov. 30, 1919 | |
|-----------------------------------|-----------------------------------|-------------|
| Balance on hand Dec. 1, 1918..... | | \$ 157,93 |
| Licenses issued..... | \$36,969.31 | |
| Additional fees..... | 2,472.56 | |
| Fines | 3,130.31 | |
| Donations | 1,300.00 | |
| Sale—Salmon Eggs..... | 226.82 | |
| Sundries | 5.26 | |
| Transfer fees..... | 26.00 | |
| Sale—Confiscated property..... | 2,300.80 | \$46,431.06 |
| | | <hr/> |
| | | \$46,588.99 |

DISBURSEMENTS

| | | |
|------------------------------------|-------------|-------------|
| Office | \$ 3,949.98 | |
| Commissioners | 276.52 | |
| Patrol service..... | 7,547.11 | |
| Repairs—Oregon City "Fishway"..... | 164.12 | |
| Fish car "Rainbow"..... | 1,388.29 | |
| State Game Warden..... | 449.65 | |
| Shad expense..... | 1,134.70 | |
| *SALMON PROPAGATION— | | |
| Operation | 10,077.28 | |
| Construction | 2,764.87 | |
| Equipment | 844.71 | \$28,597.23 |
| | | <hr/> |
| | | \$17,991.76 |

*Note—For distribution of Salmon Propagation see below.

SALMON PROPAGATION—1919
HATCHERY FUND, DISTRICT NO. 1

| | Operation | Construction | Equipment | Totals |
|--------------------|--------------------|--------------------|------------------|--------------------|
| Bonneville | \$ 5,634.29 | \$ 648.67 | \$ 182.96 | \$ 6,465.92 |
| Klaskanine | 1,450.70 | 1,427.65 | 168.36 | 3,046.71 |
| McKenzie | 1,086.51 | 63.65 | 470.39 | 1,620.55 |
| Herman Creek..... | 978.24 | 153.16 | ..... | 1,131.40 |
| Wallowa River..... | 23.00 | 315.39 | ..... | 338.39 |
| Willamette | 234.40 | 100.00 | 23.00 | 357.40 |
| Sandy River..... | 410.40 | ..... | ..... | 410.40 |
| Santiam | 259.74 | 30.00 | ..... | 289.74 |
| Eagle Creek..... | ..... | 26.35 | ..... | 26.35 |
| | <u>\$10,077.28</u> | <u>\$ 2,764.87</u> | <u>\$ 844.71</u> | <u>\$13,686.86</u> |

RECEIPTS AND DISBURSEMENTS 1919
FOR HATCHERY FUND, DISTRICT NO. 2

| RECEIPTS | | Dec. 1, 1918, to Nov. 30, 1919 |
|--|-------------|-----------------------------------|
| Balance on hand Dec. 1, 1918..... | | \$ 3,647.33 |
| Licenses issued..... | \$19,382.05 | |
| Additional fees..... | 1,046.86 | |
| Fines | 769.05 | |
| Sale—Confiscated property..... | 90.79 | |
| Transfer fees..... | 80.00 | |
| Sundries | 10.00 | |
| | | <u>\$21,378.75</u> |
| | | \$25,026.08 |
| DISBURSEMENTS | | |
| Operation— | | |
| Office | \$ 3,153.70 | |
| Commissioners | 259.34 | |
| Patrol service..... | 2,149.33 | |
| State Game Warden..... | 383.40 | |
| Superintendent of Hatcheries' Account..... | 9.00 | |
| Tillamook | 83.41 | |
| Alsea | 1,186.18 | |
| Siuslaw | 207.93 | |
| South Coos | 921.90 | |
| Coquille | 423.70 | |
| Umpqua | 1,025.01 | |
| Gold Creek..... | 599.35 | |
| Nehalem | 52.36 | |
| Construction— | | |
| Alsea | 205.02 | |
| Nehalem | 1,028.23 | |
| Umpqua | 22.50 | |
| Gold Creek..... | 644.39 | |
| Equipment— | | |
| Alsea | 6.40 | |
| South Coos..... | 111.70 | |
| Coquille | .45 | |
| Gold Creek..... | 10.50 | |
| | | <u>\$12,483.80</u> |
| | | \$12,542.28 |

*Note—For distribution of Salmon Propagation see below.

**SALMON PROPAGATION
1919**

HATCHERY FUND, DISTRICT NO. 2

| | Operation | Construction | Equipment | Totals |
|-----------------|--------------------|--------------------|------------------|--------------------|
| Tillamook | \$ 83.41 | ..... | ..... | \$ 83.41 |
| Aisea | 1,186.18 | 205.02 | 6.40 | 1,397.60 |
| Siuslaw | 207.93 | ..... | ..... | 207.93 |
| Umpqua | 1,025.01 | 22.50 | ..... | 1,047.51 |
| South Coos..... | 921.90 | ..... | 111.70 | 1,033.60 |
| Coquille | 423.70 | ..... | .45 | 424.15 |
| Gold Creek..... | 599.35 | 644.39 | 10.50 | 1,254.24 |
| Nehalem | 52.36 | 1,028.23 | ..... | 1,080.59 |
| | <u>\$ 4,499.84</u> | <u>\$ 1,900.14</u> | <u>\$ 129.05</u> | <u>\$ 6,529.03</u> |

RECEIPTS AND DISBURSEMENTS 1920

FOR HATCHERY FUND, DISTRICT NO. 1

RECEIPTS

| | Dec. 1, 1919, to Nov. 30, 1920 |
|-----------------------------------|-----------------------------------|
| Balance on hand Dec. 1, 1919..... | \$17,991.76 |
| Licenses issued..... | \$37,245.98 |
| Additional fees..... | 2,395.81 |
| Fines | 2,526.00 |
| Donations | 6,535.57 |
| Sundries | 546.12 |
| Transfer fees..... | 25.00 |
| Sale—Confiscated property..... | 1,083.48 |
| | <u>\$50,357.96</u> |
| | \$68,349.72 |

DISBURSEMENTS

| | |
|-----------------------------------|--------------------|
| Office | \$ 5,176.03 |
| Commissioners | 378.65 |
| Patrol service..... | 9,336.55 |
| Superintendent of Hatcheries..... | 70.16 |
| Fish car "Rainbow"..... | 160.01 |
| Fishways | 535.62 |
| State Game Warden..... | 153.52 |
| Industrial insurance..... | 624.85 |
| Government co-operative work..... | 998.75 |
| *SALMON PROPAGATION— | |
| Operation | 41,592.30 |
| Construction | 11,732.11 |
| Equipment | 3,181.38 |
| | <u>\$73,939.93</u> |
| Deficit | \$ 5,590.21 |

*Note—For distribution of Salmon Propagation see below.

SALMON PROPAGATION

1920

HATCHERY FUND, DISTRICT NO. 1

| | Operation | Construction | Equipment | Totals |
|--------------------|--------------------|--------------------|--------------------|--------------------|
| Bonneville | \$20,267.86 | \$ 1,756.59 | \$ 2,396.08 | \$24,420.53 |
| Klaskanine | 5,608.98 | 1,534.89 | 64.10 | 7,207.97 |
| McKenzie | 6,424.56 | 268.66 | 118.45 | 6,811.67 |
| Willamette | 2,088.33 | 450.30 | ..... | 2,538.63 |
| Santiam | 2,738.83 | 48.39 | 88.87 | 2,876.09 |
| Herman Creek..... | 3,820.28 | 2,208.91 | 64.90 | 6,094.09 |
| Wallowa | 8.15 | 3.35 | ..... | 11.50 |
| Sandy | .64 | ..... | ..... | .64 |
| Lower Santiam..... | ..... | 3,223.88 | 176.83 | 3,400.71 |
| Oakridge | 634.67 | 2,210.89 | 272.15 | 3,117.71 |
| Eagle Creek..... | ..... | 26.25 | ..... | 26.25 |
| | <u>\$41,592.30</u> | <u>\$11,732.11</u> | <u>\$ 3,181.38</u> | <u>\$56,505.79</u> |

SALMON PROPAGATION

1920

HATCHERY FUND, DISTRICT NO. 2

| | Operation | Construction | Equipment | Totals |
|------------------|--------------------|--------------------|------------------|--------------------|
| Tillamook | \$ 551.37 | \$ 24.67 | \$..... | \$ 576.04 |
| Alsea | 5,504.24 | 656.81 | 167.61 | 6,328.66 |
| Siuslaw | 1,577.18 | 139.27 | ..... | 1,716.45 |
| Umpqua | 5,217.51 | 45.00 | 41.50 | 5,304.01 |
| South Coos | 3,931.33 | 51.66 | 39.25 | 4,022.24 |
| Coquille | 924.73 | 20.00 | ..... | 944.73 |
| Nehalem | 2,234.74 | 1,290.93 | 3.03 | 3,528.70 |
| Gold Creek..... | 2,831.14 | ..... | 54.45 | 2,885.59 |
| | <u>\$22,772.24</u> | <u>\$ 2,228.34</u> | <u>\$ 305.84</u> | <u>\$25,306.42</u> |

RECEIPTS AND DISBURSEMENTS 1920

FOR HATCHERY FUND, DISTRICT NO. 2

RECEIPTS

| | Dec. 1, 1919, to Nov. 30, 1920 |
|-----------------------------------|-----------------------------------|
| Balance on hand Dec. 1, 1919..... | \$12,542.28 |
| Licenses issued..... | \$15,231.77 |
| Additional fees..... | 827.28 |
| Fines | 1,596.20 |
| Sale—Confiscated property..... | 181.76 |
| Transfer fees..... | 70.00 |
| Donation | 500.00 |
| Sundries | 222.43 |
| | \$18,629.44 |
| | \$31,171.72 |

DISBURSEMENTS

| | |
|-----------------------------------|-------------|
| Operation— | |
| Office | 3,136.20 |
| Commissioners | 480.26 |
| Patrol service..... | 3,484.17 |
| Industrial insurance..... | 289.84 |
| State Game Warden..... | 61.20 |
| Superintendent of Hatcheries..... | 70.15 |
| Fishways | 133.40 |
| Tillamook | 551.37 |
| Alsea | 5,504.24 |
| Siuslaw | 1,577.18 |
| Umpqua | 5,217.51 |
| South Coos..... | 3,931.33 |
| Coquille | 924.73 |
| Nehalem | 2,234.74 |
| Gold Creek..... | 2,831.14 |
| Construction— | |
| Tillamook | 24.67 |
| Alsea | 656.81 |
| Siuslaw | 139.27 |
| Umpqua | 45.00 |
| South Coos..... | 51.66 |
| Coquille | 20.00 |
| Nehalem | 1,290.93 |
| Equipment— | |
| Alsea | 167.61 |
| Umpqua | 41.50 |
| South Coos..... | 39.25 |
| Nehalem | 3.03 |
| Gold Creek..... | 54.45 |
| | \$32,961.64 |
| Deficit | \$ 1,789.92 |

**GENERAL FUND MASTER FISH WARDEN—SALARIES
AND EXPENSES**

January 1, 1919, to December 31, 1920.

| | | |
|---|-------------|-------------|
| Appropriation for two years ending Dec. 31, 1920..... | | \$20,400.00 |
| Master Fish Warden, salary | \$ 7,016.67 | |
| Master Fish Warden, traveling expense..... | 2,313.19 | |
| Master Fish Warden, office expense..... | 1,064.26 | |
| Deputy Fish Warden, Dist. No. 1, salary | 3,016.67 | |
| Deputy Fish Warden, Dist. No. 1, expense .. | 715.94 | |
| Deputy Fish Warden, Dist. No. 2, salary ... | 2,466.65 | |
| Deputy Fish Warden, Dist. No. 2, expense ... | 1,406.62 | |
| Clerk to the Master Fish Warden, salary..... | 2,400.00 | \$20,400.00 |
| | | <hr/> |
| Balance in fund December 31, 1920..... | | .00 |

SPECIAL APPROPRIATION

**FOR MAINTENANCE AND CONSTRUCTION OF FISH LADDERS
ON DESCHUTES RIVER**

| | | |
|------------------------------|------------|------------|
| Appropriation 1919-1920..... | | \$5,000.00 |
| Labor | \$3,468.55 | |
| Employees' expense..... | 301.90 | |
| Tools and equipment..... | 436.85 | |
| Powder | 312.95 | |
| Horse hire..... | 48.80 | |
| Supplies | 317.21 | |
| Fuel | 24.77 | |
| Lumber | 88.97 | \$5,000.00 |
| | | <hr/> |
| Balance in fund..... | | .00 |

SPECIAL APPROPRIATION

**FOR CONSTRUCTION AND IMPROVEMENTS OF OREGON
CITY "FISHWAY"**

| | | |
|------------------------------|-----------|------------|
| Appropriation 1919-1920..... | | \$5,000.00 |
| Supplies | \$ 724.86 | |
| Lumber | 246.34 | |
| Labor | 3,730.63 | |
| Tools | 90.18 | |
| Boots and coats..... | 41.83 | |
| Employees' expense..... | 27.69 | |
| Launch hire..... | 126.00 | |
| Expense | 12.47 | \$5,000.00 |
| | | <hr/> |
| Balance in fund..... | | .00 |

**CONSTRUCTION AND MAINTENANCE OF HATCHERY ON
SANTIAM RIVER**

| | | |
|-----------------------------------|------------|------------|
| Appropriation 1919-1920..... | | \$5,000.00 |
| Labor | 765.02 | |
| Tools | 197.50 | |
| Lumber | 3,488.48 | |
| Employees' expenses..... | 132.49 | |
| Office expense..... | 1.75 | |
| Boots and coats..... | 36.47 * | |
| Freight, cartage and express..... | 48.03 | |
| Equipment | 49.37 | |
| Transporting eggs..... | 10.89 | |
| Surveyor | 117.00 | |
| Lease of land..... | 144.00 | |
| Abstract | 9.00 | \$5,000.00 |
| *Operation | \$1,101.86 | |
| Construction | 3,848.77 | |
| Equipment | 49.37 | \$5,000.00 |
| Balance in fund..... | | .00 |

**CONSTRUCTION AND MAINTENANCE OF HATCHERY ON
WILLAMETTE RIVER**

| | | |
|------------------------------|------------|------------|
| Appropriation 1919-1920..... | | \$5,000.00 |
| Employees' expenses..... | \$ 56.12 | |
| Labor | 3,192.50 | |
| Boots and coats..... | 74.00 | |
| Supplies | 700.16 | |
| Transporting eggs..... | 1.60 | |
| Lumber | 952.11 | |
| Tools | 11.30 | |
| Fish food..... | 12.21 | \$5,000.00 |
| *Operation | \$1,309.61 | |
| Construction | 3,661.97 | |
| Equipment | 28.42 | \$5,000.00 |
| Balance in fund..... | | .00 |

*NOTE: Construction and Equipment accounts were paid from Hatchery Fund, No. 1, during the year 1920, on the Lower Santiam Hatchery, amounting to \$3,400.71.

Construction and Equipment accounts were paid from Hatchery Fund, No. 1, during the year 1920, on the Oakridge Hatchery, amounting to \$2,483.04. This makes a total, therefore, as follows:

| | |
|--|------------|
| Construction and Equipment Lower Santiam Hatchery..... | \$7,298.85 |
| Construction and Equipment Oakridge Hatchery..... | 6,173.43 |

SPECIAL APPROPRIATION
FOR RECONSTRUCTION AND OPERATION OF KLASKANINE
HATCHERY

| | | |
|-----------------------------------|-------------|-------------|
| Appropriation 1919-1920..... | | \$10,000.00 |
| Labor | \$ 5,932.38 | |
| Equipment | 1,482.50 | |
| Tools and supplies..... | 104.62 | |
| Employees' expenses..... | 146.50 | |
| Fish food..... | 355.54 | |
| Cement, sand and lumber..... | 116.77 | |
| Office expense..... | 4.95 | |
| Freight, cartage and express..... | 147.17 | |
| Surveyor | 135.20 | |
| Wood pipe..... | 1,532.25 | |
| Transporting eggs..... | 3.87 | |
| Boots and coats..... | 38.25 | \$10,000.00 |
| | <hr/> | |
| Operation | 3,686.22 | |
| Construction | 4,831.28 | |
| Equipment | 1,482.50 | \$10,000.00 |
| | <hr/> | |
| Balance in fund..... | | .00 |

SPECIAL APPROPRIATION
FOR OPERATION AND CONSTRUCTION OF HATCHERIES IN
DISTRICT NO. 1

| | | | | |
|-----------------------|-------------|--------------|-----------|-------------|
| Appropriation | | | | \$24,000.00 |
| | Operation | Construction | Equipment | Totals |
| Bonneville | \$ 8,589.92 | \$ 2,302.31 | \$ 331.28 | \$11,223.51 |
| McKenzie | 4,062.71 | 367.31 | 9.50 | 4,439.52 |
| Herman Creek..... | 1,986.75 | 174.45 | ..... | 2,161.20 |
| Eagle Creek ..... | ..... | 4,079.55 | ..... | 4,079.55 |
| Willamette River..... | 881.18 | 8.00 | 31.00 | 920.18 |
| Wallowa River..... | 63.25 | ..... | ..... | 63.25 |
| Klaskanine | 7.75 | ..... | ..... | 7.75 |
| Santiam | 495.80 | ..... | ..... | 495.80 |
| Sandy River..... | 609.24 | ..... | ..... | 609.24 |
| | <hr/> | <hr/> | <hr/> | <hr/> |
| | \$16,696.60 | \$ 6,931.62 | \$ 371.78 | \$24,000.00 |
| Balance in fund..... | | | | .00 |

SPECIAL APPROPRIATION

**FOR OPERATION AND CONSTRUCTION OF HATCHERIES IN
DISTRICT NO. 2**

| | | | | |
|-------------------------------|--------------------|--------------------|------------------|--------------------|
| Appropriation, 1919-1920..... | | | | \$20,000.00 |
| | Operation | Construction | Equipment | Totals |
| Gold Creek..... | \$ 1,756.34 | \$ 353.86 | \$..... | \$ 2,110.20 |
| Alsea River..... | 3,276.65 | 1,522.58 | 45.00 | 4,844.23 |
| South Coos..... | 3,151.66 | 18.37 | 8.00 | 3,178.03 |
| Coquille..... | 1,099.09 | 21.00 | 8.65 | 1,128.74 |
| Umpqua..... | 3,591.55 | 778.82 | ..... | 4,370.37 |
| Siuslaw..... | 1,207.78 | ..... | ..... | 1,207.78 |
| Nehalem..... | 460.38 | 2,037.00 | 86.90 | 2,584.28 |
| Tillamook..... | 576.37 | ..... | ..... | 576.37 |
| | <u>\$15,119.82</u> | <u>\$ 4,731.63</u> | <u>\$ 148.55</u> | <u>\$20,000.00</u> |
| Balance in fund..... | | | | .00 |

SPECIAL APPROPRIATION

**FOR MAINTENANCE AND OPERATION OF HATCHERY ON
NEHALEM RIVER**

| | | |
|-----------------------------------|-----------|------------|
| Appropriation 1919-1920..... | | \$3,000.00 |
| Employees' expense..... | \$ 377.91 | |
| Labor..... | 1,692.90 | |
| Freight, cartage and express..... | 78.82 | |
| Tools and supplies..... | 525.00 | |
| Fish food..... | 1.55 | |
| Equipment..... | 275.00 | |
| Boots..... | 37.86 | |
| Office expense..... | 10.96 | \$3,000.00 |
| Operation..... | 679.22 | |
| Construction..... | 2,045.78 | |
| Equipment..... | 275.00 | \$3,000.00 |
| Balance in fund..... | | .00 |

PATROL SERVICE RECORD

| Year | Number Arrests | Fines Collected | Confiscated |
|-----------|-------------------|--------------------|------------------|
| | | | Property Sold |
| 1915..... | 51 | \$ 700.57 | \$ 452.12 |
| 1916..... | 50 | 1,256.28 | 41.50 |
| 1917..... | 124 | 1,973.35 | 1,207.31 |
| 1918..... | 80 | 1,778.69 | 369.15 |
| 1919..... | 127 | 3,899.36 | 2,391.56 |
| 1920..... | 119 | 4,122.20 | 1,265.24 |

REPORT OF SALMON LIBERATED—SHOWING STATIONS AND STREAMS

1919

DISTRICT NO. 1

Spring Chinook—

| | | |
|---|------------|------------|
| Bonneville Station, liberated in Tanner Creek and Columbia River..... | 6,219,464 | |
| Shipped by truck to Herman Creek, liberated from feeding ponds—Columbia River..... | 5,290,144 | |
| Liberated Eagle Creek..... | 100,000 | |
| Shipped to The Dalles—Columbia River..... | 518,400 | |
| Shipped to Arlington..... | 328,860 | |
| Shipped to Hood River..... | 291,600 | |
| Shipped to Reserve—Willamette River..... | 87,500 | |
| Shipped to Oswego Lake..... | 32,500 | |
| Shipped to Jefferson..... | 282,690 | |
| Shipped to Seaside..... | 179,400 | |
| | 13,330,558 | |
| McKenzie Station, liberated McKenzie River..... | 4,057,299 | |
| Claskanine Station, liberated Klaskanine River..... | 7,011,463 | 24,399,320 |

DISTRICT NO. 2

| | | |
|--|-----------|------------|
| Gold Creek, liberated Gold Creek..... | 705,656 | |
| Siuslaw Station, liberated Middle Creek..... | 743,057 | |
| Umpqua Station, liberated Umpqua River..... | 3,259,258 | |
| Alsea Station, liberated Alsea River..... | 950,000 | 5,657,971 |
| Total Spring Chinook..... | | 30,057,291 |

DISTRICT NO. 2

Fall Chinook—

| | | |
|---|-----------|-----------|
| Alsea Station, liberated Alsea River..... | 251,720 | |
| South Coos Station, liberated Coos River..... | 1,932,210 | |
| Coquille Station, liberated Coquille River..... | 1,491,210 | 3,675,140 |
| Total Fall Chinook..... | | |

DISTRICT NO. 1

Sockeye (Alaska)—

| | | |
|--|-----------|--|
| Bonneville Station, shipped by truck to Herman Creek (held in feeding ponds)..... | 3,126,800 | |
| Shipped to Enterprise..... | 48,000 | |
| | 3,174,800 | |

Sockeye (Montana—Dwarf)—

| | | |
|--|--------|-----------|
| Bonneville Station (held in pond)..... | 25,000 | |
| Total Sockeye..... | | 3,199,800 |

NOTE—A good many of Sockeye at Herman Creek escaped during the year. This was determined when fish were measured up.

DISTRICT NO. 1

Silversides—

| | |
|--|-----------|
| Bonneville Station, liberated, Tanner Creek..... | 622,734 |
| Shipped by truck, liberated Eagle Creek..... | 392,000 |
| Shipped by truck, liberated Sandy River..... | 130,000 |
| Shipped to Oswego | 140,000 |
| | 1,284,734 |

DISTRICT NO. 2

| | |
|---|------------|
| Nehalem Station, liberated Salmonberry River..... | 1,257,132 |
| Gold Creek Station, liberated Gold Creek..... | 840,310 |
| Alsea Station, liberated Alsea River..... | 1,872,473 |
| South Coos Station, liberated Coos River..... | 2,416,680 |
| Coquille Station, liberated Coquille River..... | 1,469,440 |
| | 7,856,035 |
| Total Silversides..... | 9,140,769 |
| Total Salmon (liberated and held)..... | 46,073,000 |

**TABLE SHOWING NUMBER AND AGE OF SALMON
LIBERATED***

1919

Spring Chinook

| | | | | | |
|-----------|-----------|-----------|-----------|-----------|------------|
| 2 mo. | 3 mo. | 4 mo. | 5 mo. | 6 mo. | Total |
| 1,346,640 | 717,823 | 3,396,465 | 4,013,427 | 6,555,284 | |
| 7 mo. | 8 mo. | 9 mo. | 10 mo. | 11 mo. | |
| 6,923,332 | 2,174,105 | 2,091,215 | 1,839,000 | 1,000,000 | 30,057,291 |

Fall Chinook

| | | | |
|-----------|-----------|---------|-----------|
| 4 mo. | 5 mo. | 6 mo. | |
| 1,491,210 | 1,983,930 | 200,000 | 3,675,140 |

Silversides

| | | | | | |
|---------|-----------|-----------|---------|---------|-----------|
| 2 mo. | 3 mo. | 4 mo. | 5 mo. | 6 mo. | |
| 678,616 | 5,015,678 | 2,256,165 | 800,000 | 390,310 | 9,140,769 |

Sockeye

| | | | |
|--------|------------|---------|-----------|
| 9 mo. | 10 mo. | 11 mo. | |
| 48,000 | 3,126,800* | 25,000* | 3,199,800 |

Total 46,073,000

*Retained in ponds, 3,126,800 Sockeye at Herman Creek ponds, 25,000 Dwarf Sockeye at Bonneville.

STEELHEAD LIBERATED IN STREAMS WHERE THEY WOULD BE USED FOR COMMERCIAL PURPOSES

1919

DISTRICT NO. 1

| | | |
|--|---------|-----------|
| Bonneville Station, liberated in Tanner Creek (Columbia River) | 819,280 | |
| Shipped to Dee, liberated in tributaries to Hood River | 120,000 | |
| Shipped to Deschutes River | 211,200 | |
| Shipped to Hood River, liberated in Hood River and tributaries..... | 120,000 | |
| | | 1,270,480 |

DISTRICT NO. 2

| | | |
|---|-----------|-----------|
| Gold Creek Station, liberated Trask River | 384,370 | |
| Alsea Station, liberated Alsea River..... | 1,753,104 | 2,137,474 |
| | | 3,407,958 |
| Total | | 3,407,958 |

SUMMARY, 1919

| | |
|--|------------|
| Grand total Spring Chinook Salmon..... | 30,057,291 |
| Grand total Fall Chinook Salmon..... | 3,675,140 |
| Silversides, grand total..... | 9,140,769 |
| Sockeye, grand total..... | 3,199,800 |
| Steelhead (commercial)..... | 3,407,958 |
| | |
| | 49,480,958 |

REPORT OF SALMON LIBERATED, SHOWING STATIONS AND STREAMS

1920

DISTRICT NO. 1

Spring Chinook—

| | |
|---|------------|
| Bonneville, liberated Tanner Creek and Columbia River | 4,147,567 |
| Liberated Sandy River..... | 264,000 |
| Liberated Eagle Creek | 125,000 |
| To Herman Creek, held in feeding ponds and liberated in Columbia River..... | 4,004,880 |
| To Oakridge Station, held and liberated in Willamette River..... | 225,000 |
| | |
| Total | 8,766,447 |
| McKenzie Hatchery, liberated McKenzie River..... | 1,663,233 |
| Klaskanine Hatchery, liberated Klaskanine River... | 5,870,043 |
| | |
| Total Spring Chinook, District No. 1..... | 16,299,723 |

DISTRICT NO. 2

| | | |
|--|-----------|------------|
| Umpqua Hatchery, liberated Umpqua River..... | 3,896,439 | |
| Total Spring Shinook..... | | 20,196,162 |

DISTRICT NO. 1

Fall Chinook—

| | | |
|---|-----------|--|
| Bonneville, liberated Columbia River..... | 1,750,000 | |
|---|-----------|--|

DISTRICT NO. 2

| | | |
|---|-----------|-----------|
| Gold Creek, liberated Gold Creek..... | 1,077,090 | |
| Siuslaw, liberated Middle Creek..... | 738,182 | |
| Alsea, liberated Alsea River..... | 1,295,375 | |
| South Coos, liberated Coos and Salmon Rivers..... | 976,600 | |
| Total Fall Chinook, Districts 1 and 2..... | | 5,837,247 |

DISTRICT NO. 1

***Sockeye (Alaska)—**

| | | |
|--|-----------|-----------|
| Herman Creek Feeding Ponds, liberated in Columbia River (18 months old)..... | 600,000 | |
| Held in ponds November..... | 2,589,478 | |
| | | 3,189,478 |

DISTRICT NO. 2

Silversides—

| | | |
|--|-----------|------------|
| Nehalem, liberated in Salmonberry River..... | 472,285 | |
| Gold Creek, liberated in Gold Creek..... | 597,850 | |
| Alsea, liberated in Alsea River..... | 1,705,650 | 2,775,785 |
| Total Salmon liberated..... | | 29,409,194 |

*A number of these fish escaped during the summer through screens and some during the heavy snowstorm in the winter. The larger per cent of those escaping were about a year old.

STEELHEAD LIBERATED IN STREAMS WHERE THEY WOULD BE USED FOR COMMERCIAL PURPOSES

1920

DISTRICT NO. 1

Bonneville—

| | | |
|-----------------------------|---------|---------|
| Shipped to Hood River..... | 160,000 | |
| Liberated Tanner Creek..... | 170,000 | |
| Liberated Eagle Creek..... | 275,300 | |
| Total..... | | 605,300 |

DISTRICT NO. 2

| | | |
|---|-----------|-----------|
| Nehalem, liberated Salmonberry River..... | 105,020 | |
| Gold Creek, liberated Trask River..... | 721,975 | |
| Alsea, liberated Alsea River..... | 3,707,300 | |
| Siuslaw, liberated Middle Creek..... | 100,595 | 4,634,890 |
| Total..... | | 5,240,190 |

**TABLE SHOWING NUMBER AND AGE OF SALMON
LIBERATED 1920**

DISTRICT NO. 1

| | | | | |
|------------------------|-----------|-----------|---------|------------|
| Spring Chinook— | | | | |
| 6 mo. | 7 mo. | 8 mo. | 9 mo. | |
| 276,000 | 4,225,000 | 500,000 | 400,000 | |
| 10 mo. | 11 mo. | 12 mo. | 13 mo. | |
| 3,970,043 | 4,271,880 | 2,579,563 | 77,237 | 16,299,723 |
| Average age 9½ months. | | | | |

DISTRICT NO. 2

| | | | | |
|---|-----------|---------|-----------|-----------|
| 3 mo. | 4 mo. | 5 mo. | 6 mo. | |
| 650,000 | 1,450,000 | 720,000 | 1,076,439 | 3,896,439 |
| Early liberation necessary on account of lack of feeding pound space. | | | | |

DISTRICT NO. 1

| | | | | |
|----------------------|-----------|---------|---------|-----------|
| Fall Chinook— | | | | |
| 5 mo. | 6 mo. | 7 mo. | 8 mo. | |
| 500,000 | 1,000,000 | 500,000 | 545,375 | 2,545,375 |

DISTRICT NO. 2

| | | | | |
|-----------|---------|-----------|--|------------|
| 5 mo. | 6 mo. | 10 mo. | | |
| 1,238,182 | 976,600 | 1,077,090 | | 3,291,872 |
| | | | | <hr/> |
| | | | | 26,033,409 |

Silversides—

DISTRICT NO. 2

| | | | | |
|---------|---------|-----------|---------|-----------|
| 3 mo. | 4 mo. | 5 mo. | 9 mo. | |
| 472,285 | 500,000 | 1,205,650 | 597,850 | 2,775,785 |

DISTRICT NO. 1

| | | | | |
|---|--|--|--|------------|
| Sockeye (Alaska)— | | | | |
| 18 months old | | | | 600,000 |
| Total | | | | <hr/> |
| | | | | 29,409,194 |
| *Retained in ponds, Herman Creek, 2,589,478 Sockeye. At Bonneville, 404,180 Steelheads, 265,000 Fall Chinook. | | | | |

BIENNIAL SUMMARY, 1919-1920

| | 1919 | 1920 |
|------------------------------------|------------|------------|
| Grand total Spring Chinook Salmon | 30,057,291 | 20,196,162 |
| Grand total Fall Chinook Salmon | 3,675,140 | 5,837,247 |
| Grand total Silversides | 9,140,769 | 2,775,785 |
| Grand total Sockeye | 3,199,800 | *600,000 |
| Grand total Steelhead (commercial) | 3,407,958 | 5,240,190 |
| | <hr/> | <hr/> |
| | 49,480,958 | 34,649,384 |
| | | <hr/> |
| | | 49,480,958 |

Biennial total 84,130,342

*These fish were 18 months old.

On hand Bonneville—

| | | |
|---|-----------|-----------|
| Steelheads | 404,180 | |
| Fall Chinook | 265,000 | |
| Retained in ponds Herman Creek feeding station— | | |
| Sockeye | 2,589,478 | 3,258,658 |
| | <hr/> | <hr/> |

Total number liberated and held in feeding ponds 87,389,000