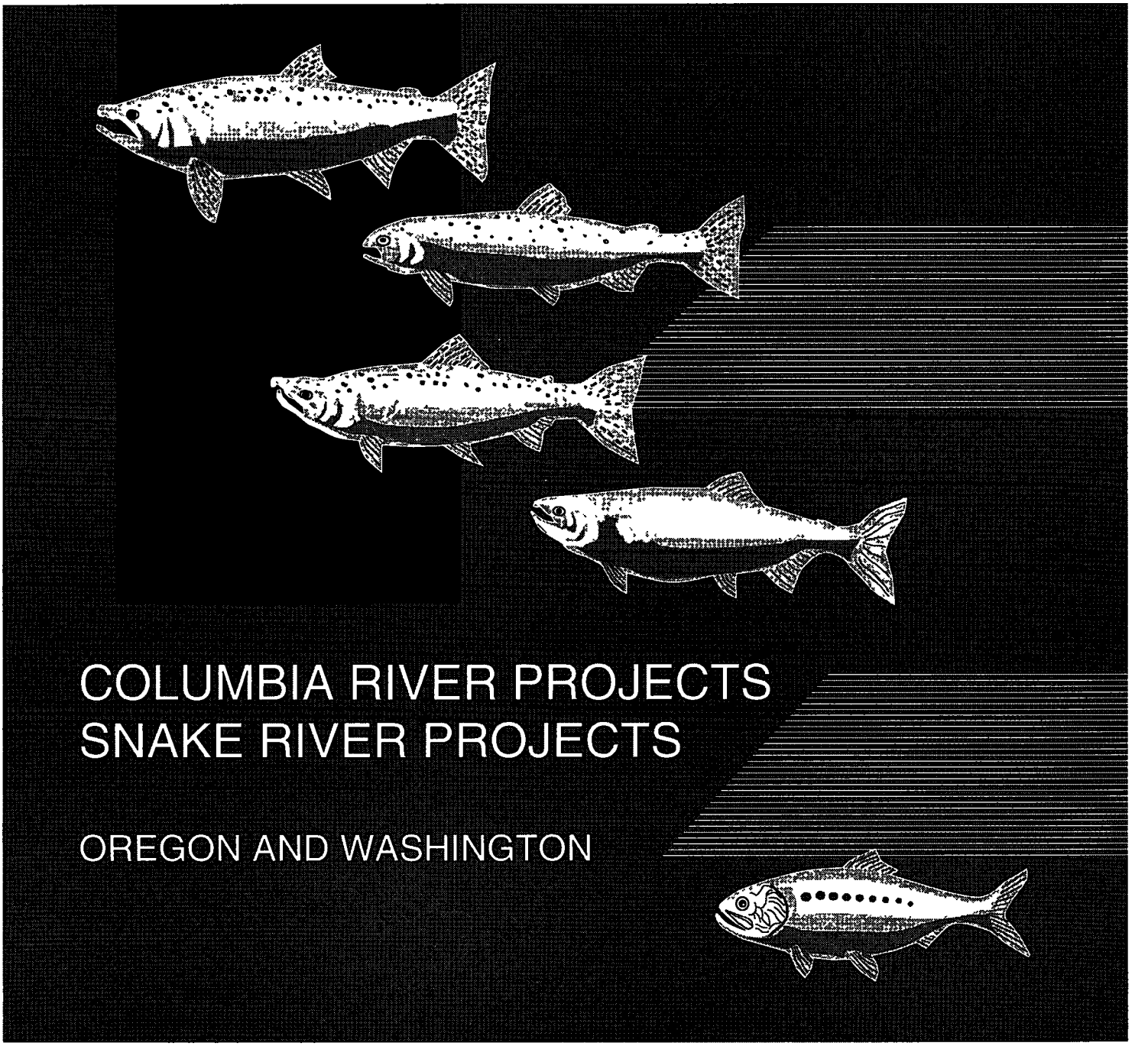
US Army Corps
of Engineers
Portland & Walla Walla District

Annual Fish Passage Report
1992



COLUMBIA RIVER PROJECTS
SNAKE RIVER PROJECTS

OREGON AND WASHINGTON

1992

ANNUAL FISH PASSAGE

REPORT

COLUMBIA AND SNAKE RIVERS

FOR

SALMON, STEELHEAD AND SHAD

BONNEVILLE DAM
THE DALLES DAM
JOHN DAY DAM
NcNARY DAM
ICE HARBOR DAM
LOWER MONUMENTAL DAM
LITTLE GOOSE DAM
LOWER GRANITE DAM
PRIEST RAPIDS DAM
ROCK ISLAND DAM
ROCKY REACH DAM
WELLS DAM

NORTH PACIFIC DIVISION
U.S. ARMY CORPS OF ENGINEERS

Prepared By:
U.S. Army Engineer Districts
Portland and Walla Walla

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ANNUAL FISH PASSAGE REPORT

COLUMBIA

and SNAKE RIVER PROJECTS

CALENDAR YEAR 1992

BONNEVILLE DAM

Fish Counting Schedule

1 Jan - 14 Mar	No counting.
15 Mar - 31 Mar	Fish were counted in both ladders for one 8-hour shift each day by direct observation, 0800-1600 hours PST.
1 Apr - 31 Oct	Fish were counted in both ladders for two 8-hour shifts each day by direct observation, 0400-2000 hours PST.
1 Nov - 15 Nov	Fish were counted in both ladders for one 8-hour shift each day by direct observation, 0800-1600 hours PST.
16 Nov - 31 Dec	No counting by direct observation.

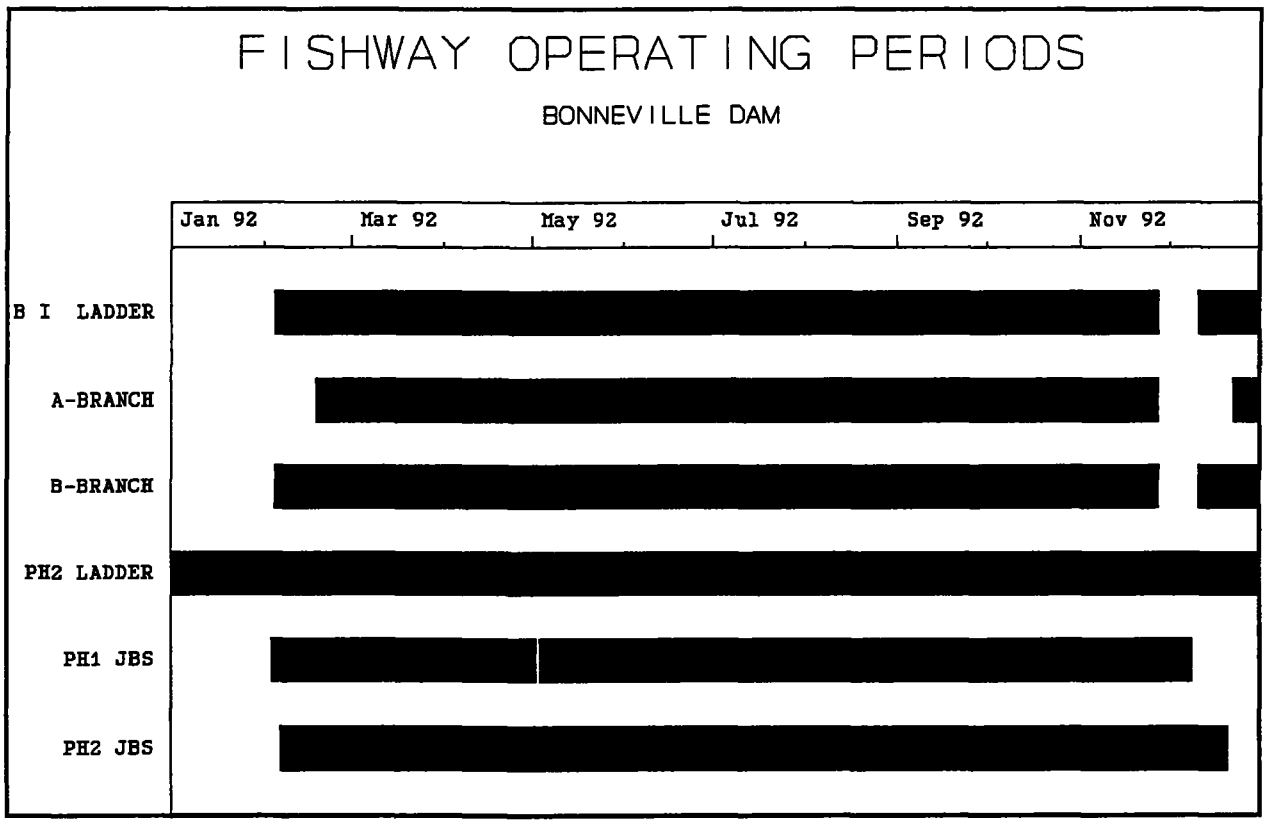
Beyond the counting described above, there was additional counting for the following purposes. These counts are presented separately, but, to preserve comparability, they have not been added to the other tables of this report.

(1) Counting was done in the summer to complete 24 h/d counting during the sockeye passage season. This was done by video monitoring from 2000 through 0400 hours PST daily, starting the evening of 31 May and ending the morning of 16 August.

(2) Video monitoring was done in the winter to provide 16 h/d counts to monitor possible impacts on fish passage of

in-water work activities associated with construction of the new navigation lock. Video counting was done 8 h/d from 1 November through 15 November 0400-0800 and 1600-2000 hours (supplementing regular counting described above) and 16 h/d 0400-2000 hours from 16 November through the end of the year (continuing until regular counting began in 1993).

Adult Fish Facilities Operating Schedule



Bradford Island Fish Ladder:

1 Jan - 4 Feb	Ladder was out of service for annual maintenance.
28 Nov - 10 Dec	Out of service for annual maintenance.

Bradford Is. A-branch:

1 Jan - 18 Feb	Branch was out of service for annual maintenance.
28 Nov - 22 Dec	Out of service for annual maintenance.

Bradford Is. B-branch:

1 Jan - 4 Feb	Branch was out of service for annual maintenance.
28 Nov - 10 Dec	Out of service for annual maintenance.

Second Powerhouse Fish Ladder:

No outage during the 1992 calendar year.

Fishway auxiliary water supply turbines (F1 & F2) were in service continuously with the following exceptions:

1 Jan - 12 Feb	F2	Annual maintenance.
15 Jan	F1	Installed fan above slip rings (.8 h).
16 Feb	F2	Speed signal shaft wobbling.
19 Feb - 24 Feb	F1	Replaced blade angle control unit.
4 May	F1	Water in turbine bearing (4.5 h).
14 Jul	F1	Out with transformer bank (.5 h).
15 Jul	F1	Out with transformer bank (.2 h).
2 Sep	F1	Oil in head gate slot (5.1 h).
3 Sep	F1	Oil in head gate slot (18.9 h).
10 Sep	F2	DC ground (.4 h).
14 Sep	F1	Head gate installation (7.4 h)
22 Sep	F1	Changed turbine guide bearing oil (1.4 h).
26 Sep	F1	Transformer bank cable failure (twice: 2.1 h and 8.7 h).
14 Oct	F1	Gen Diff. shutdown (no cause) (4.8 h).
3 Nov	F2	MVAR adjustment (.5 h).
4 Nov	F2	Voltage regulator cont (.9 h).
14 Nov	F2	Tripped on reg trouble (.3 h).
22 Nov	F1	Blown PT fuses (.8 h).
14 Dec	F2	Repaired exciter cooler fan (1.1 h).
27 Dec	F2	Exciter trouble (.2 h).

Cascades Island Fish Ladder:

No outage during calendar year 1992.

Downstream Migrant Facilities Operating Schedule

First Powerhouse:

1 Jan - 3 Feb	Out of service for annual maintenance.
3 May	Down 3.5 hours to repair broken trash sweep.
9 Dec - 31 Dec	Out of service for annual maintenance.

Second Powerhouse:

1 Jan - 6 Feb	Out of service for annual maintenance.
21 Dec - 31 Dec	Out of service for annual maintenance.

Fishway Activities.

The U.S. Army Corps of Engineers' fish transportation program used the Bradford Island fish release facility and the Hamilton Island boat launch area to release truck hauled fish transported from collection facilities at McNary, Little Goose and Lower Granite dams. Flow conditions appear to be better at the boat launch area for fish release when the tailwater drops to a low range.

The Corps of Engineers' Portland District Fisheries Field Unit continued a fishway operation evaluation. The work was done to identify problem areas related to fish passage and recommend long-term solutions.

The Corps of Engineers' Portland District Fisheries Field Unit tested split-beam hydroacoustics inside a turbine unit at the second powerhouse. This is part of their work in determining and evaluating non-lethal methods of determining Fish Guiding Efficiency of juvenile bypass system submersible traveling screens.

The Columbia River Inter-Tribal Fish Commission again used the second powerhouse Adult Fish Collection and Monitoring Facility to collect salmonids. The work is being done to satisfy a requirement of the U.S. - Canada Pacific Salmon Treaty to identify "indicator stocks". These stocks are monitored to annually evaluate the success of a program designed to rebuild depressed Columbia River salmon populations. Fish trapped were returned immediately to the fish ladder and there was no impact to the official fish count.

The Fish Passage Center continued to coordinate a fishway inspection program which involved once per month fishway inspections by a National Marine Fisheries Service inspector at Bonneville.

The National Marine Fisheries Service continued to use the Adult Fish Collection and Monitoring Facility at the second powerhouse to capture marked fish as part of an evaluation of juvenile salmonid transportation. Primary efforts involved observing branded, coded-wire tagged spring chinook salmon from Corps of Engineers funded studies at McNary Dam and similarly marked sockeye salmon from a Bonneville Power Administration-funded study at Lake Cle Elum. All fish were returned to the ladder after examination and were counted at the counting station as usual.

The National Marine Fisheries Service used the juvenile bypass system fish sampling facilities at both powerhouses to monitor passage of downstream migrants. The monitoring period was 11 March through 20 November. This year, the effort at the first powerhouse was expanded to 24 h/d and was reduced to 3 d/w at the second powerhouse. With relatively low flow passed through the second powerhouse and therefore fewer juvenile fish passing, the effort at the second powerhouse was primarily done to monitor fish condition rather than to estimate passage numbers.

The Pacific States Marine Fisheries Commission installed and maintained a PIT tag detector at Bonneville for the first time this year. The device automatically detected and recorded tags carried by fish after they had been processed by the National Marine Fisheries Service samplers at the first powerhouse. Pacific States Marine Fisheries Commission has been charged with building and maintaining a PIT tag information system to monitor salmonids in the Columbia River Basin.

The National Marine Fisheries Service continued to assess the effects of various passage routes on short and long term relative survival of sub-yearling fall chinook salmon during the summer migration period (late June through mid July). Comparisons were made between groups of fish released into turbines of both the first and second powerhouses; through the bypass at the first powerhouse; and into the river immediately downstream from the convergence of the tailraces of both powerhouses. The test fish were recovered by seining downstream at Jones' Beach. The United States Fish & Wildlife Service collected squawfish in the tailraces by electro-shocking in support of the National Marine Fisheries Service survival studies.

The National Marine Fisheries Service conducted tests at the second powerhouse in October to evaluate the effects of passage through the collection channel and energy dissipation area at the

dewatering screen. Fish were recovered by use of a net attached directly to the juvenile bypass outlet in the tailrace.

The National Marine Fisheries Service conducted Fish Guiding Efficiency studies at the first powerhouse to determine how well the turbine intake screens divert fish into the bypass system. The work included comparisons between the following conditions:

A. STS and operating gate in standard positions.

B. STS in standard position with a raised operating gate.

C. Lowered STS with a raised operating gate.

Raising operating gates increases velocity of water in the adjacent slots where the submersible traveling screen directs fish to the bypass system.

The following agencies participated at Bonneville Dam in the squawfish management and research program.

- The Oregon Department of Fish & Wildlife coordinated much of the Bonneville Power Administration funded squawfish management and research program, including the work described here for other agencies' squawfish work. They participated directly in sampling squawfish populations by boats and in sampling the catch of the Columbia River Inter-Tribal Fish Commission dam anglers.

- The Columbia River Inter-Tribal Fish Commission removed squawfish by angling from various locations on the dam. Squawfish are predators on juvenile salmonids and are believed to cause significant impact, particularly at locations such as the first powerhouse forebay, because prey and predators collect in large numbers. On a few occasions angling was supplemented by assistance from volunteers from The Dalles Rod & Gun Club.

- The Oregon State University collected and removed the squawfish caught by dam angling.

- The U.S. Fish & Wildlife Service, with assistance from the Oregon Department of Fish & Wildlife, investigated predator abundance and consumption rates through much of the Columbia River system. The work at Bonneville involved electro-shocking and gill-netting from boats in much of the area near the dam. The information is being used to help direct predator control management.

- The Washington Department of Wildlife implemented the sport reward fishery. One of several angler registration sites on

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The National Marine Fisheries Service conducted tests at the second powerhouse in October to evaluate the effects of passage through the collection channel and energy dissipation area at the

the river was located between the second powerhouse and the boat launch downstream on Hamilton Island.

The Oregon State University Cooperative Fishery Research Unit conducted a small part of their evaluation of facilities for collection, bypass and transportation of out-migrating chinook salmon at Bonneville Dam. The work at Bonneville involved collecting a few fish from barges to measure performance of fish after barging.

The U.S. Fish & Wildlife Service used the Adult Fish Collection and Monitoring Facility to collect early spawning (tule) fall chinook to supplement returns of adults to Spring Creek National Fish Hatchery. A total of 15 chinook (1 male and 14 females) were trapped on 12 and 13 September, and were transported to the hatchery. **These fish were not counted at the dam and counts were not adjusted for them**.

The U.S. Fish & Wildlife Service collected a few hundred salmonid smolts as part of a study of factors influencing seaward migration of fall chinook salmon through the river system.

The Washington Department of Fisheries and Oregon Department of Fish & Wildlife cooperated in conducting special fish counting again this year to update information on two stock components of the upriver fall chinook run. This work has continued since 1979.

The Washington Department of Wildlife counted adult fish under contract with the U.S. Army Corps of Engineers. Fish were counted according to the schedule above for 50 minutes of each hour. The 50 minute totals were multiplied by a factor of 1.2 to estimate passage for each full hour. Washington Department of Wildlife also conducted the additional special counting by video recording that is described above in the fish counting schedule.

Guiding efficiency of the juvenile fish bypass system at the second powerhouse was still considered unsatisfactory this year. So, special operation was executed designed to achieve 70 percent fish passage efficiency (FPE) in the spring and 50 percent FPE in the summer. FPE is the proportion of juvenile fish passing the dam which pass through non-turbine routes. This required provision of certain levels of spill with some limitations. Spill was limited to 75,000 cfs during daytime to prevent adult fish from falling back from upstream (adult fish passage is much reduced at night). Also, National Marine Fisheries Service research occasionally impacted the amount of spill provided during their survival tests in June and July. Between 15 April and 12 June, daily average spill was 53% of the river flow. Between 12 June and 22 August, spill was 41.5% of daily average flow, with the exceptions noted above for research.

Also because of unsatisfactory bypass effectiveness at the second powerhouse, special operations were executed to protect early releases of fish from nearby Spring Creek National Fish Hatchery. This special operation occurred from 0600 on 20 February to 0600 on 27 February and from 0600 on 6 March to 0600 on 13 March. During this time the second powerhouse was not operated, and 49% of the daily average river flow was spilled. Survival of fish is believed to be much better when fish pass through spill rather than through turbines.

Construction of a new navigation lock continues. Discharge through the first powerhouse was restricted to 28 kcfs (usually 3 of the 10 generating units) starting on 12 November and is planned to continue until mid-March. This is to provide safe conditions for in-water work in the forebay.

The spill pattern for use during night for efficient passage of juvenile fish was revised in coordination with the Columbia Basin Fish and Wildlife Authority. The new pattern was implemented on 14 July.

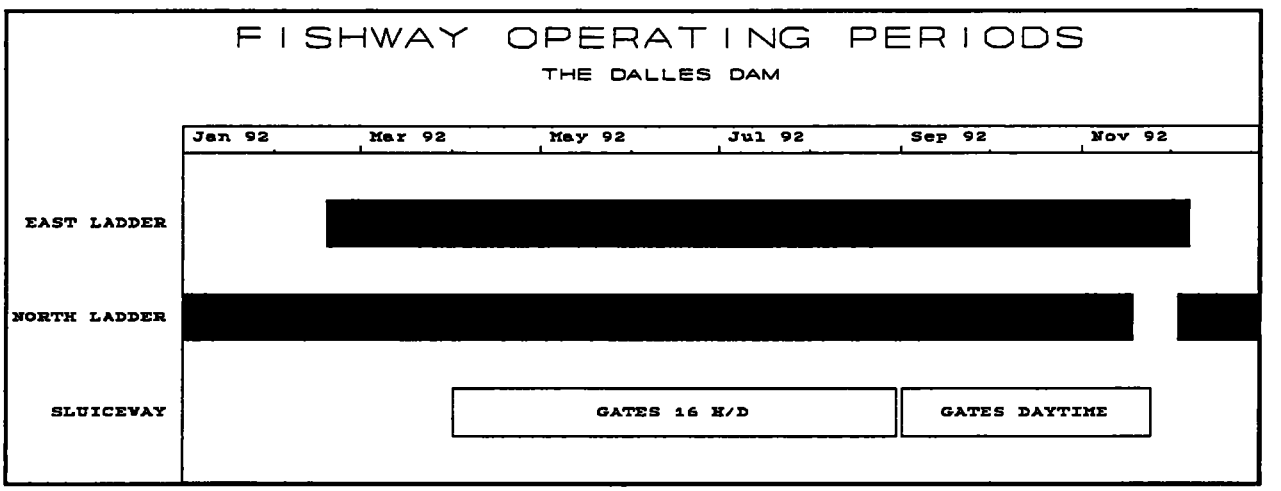
As a result of invocation of the Endangered Species Act, initially for Snake River Sockeye Salmon in December of 1991, the Bonneville Power Administration produced Bonneville Power Administration's System Load Shaping Guidelines to Enable Operating Turbines at Peak Efficiency. Better fish survival is related to efficient turbine operation. So, with some specific exceptions, the target is to operate units within peak efficiency ±1%, especially between 15 March and 31 October each year.

THE DALLES DAM

Fish Counting Schedule

1 Jan - 31 Mar	No counting.
1 Apr - 31 Oct	Fish were counted in both ladders for two 8-hour shifts each day, 0400-2000 hours PST.
1 Nov - 31 Dec	No counting.

Adult Fish Facilities Operating Schedule



East Fish Ladder:

1 Jan - 18 Feb	Out of service for annual maintenance.
8 Dec - 31 Dec	Out of service for annual maintenance.

North Fish Ladder:

19 Nov - 3 Dec	Out of service for annual maintenance.

Fishway auxiliary water supply turbines (F1 & F2) were in service continuously with the following exceptions:

1 Jan - 18 Feb	F1	Unit Overhaul.
1 Jan - 26 Feb	F2	Unit Overhaul.
14 Aug - 15 Aug	F1	Change Brushes.

21 Aug - 22 Aug	F2	Breaker Semiannual.
7 Dec - 31 Dec	F1 & F2	Annual Inspection.

Downstream Migrant Facilities Operating Schedule

1 Jan - 31 Mar	Operated with gate-well orifice flow.
1 Apr - 31 Aug	Operated with gate-well orifice flow. Sluiceway gate 1-1, 1-2, and 1-3 open 16 hours daily including sunrise to sunset.
1 Sep - 25 Nov	Operated with gate-well orifice flow. Sluiceway gates 1-1, 1-2, and 1-3 open at least from sunrise to sunset.
26 Nov - 31 Dec	Operated with gate-well orifice flow.

Fishway Activities.

The Corps of Engineers' Portland District Fisheries Field Unit continued the fishway operation evaluation. The work was done to identify problem areas related to fish passage and recommend long-term solutions.

The Fish Passage Center continued to coordinate a fishway inspection program which involved once per month fishway inspections by an Oregon Department of Fish & Wildlife inspector at The Dalles Dam.

Operation of the Northern Wasco County People's Utility District 5MW turbine on the north fishway auxiliary water system continued this year. During unit down time, auxiliary water was supplied to the fishway via two sluice gates in the intake structure of the facility, bypassing the turbine unit and juvenile fish bypass system.

The following agencies participated at The Dalles Dam in the squawfish management and research program.

- The Oregon Department of Fish & Wildlife coordinated much of the Bonneville Power Administration funded squawfish management and research program, including the work described here for other agencies' squawfish work. They participated directly in sampling squawfish populations by boats and in sampling the catch of the Columbia River Inter-Tribal Fish Commission dam anglers.

- The Oregon Cooperative Fisheries Research Unit began studies on migrating juvenile salmonids by radio tagging yearling

fish, releasing them at various locations around the project, and tracking their movements. This work will be used in conjunction with other squawfish work in hopes of documenting a predator/prey relationship between the two species.

- The Columbia River Inter-tribal Fish Commission removed squawfish by angling from various locations on the dam. Squawfish are predators on juvenile salmonids and are believed to cause significant impact, particularly at certain locations where prey and predators collect in large numbers. Fish collected were removed from the project by Oregon State University.

- The University of Washington operated a Merwin type squawfish trap in the cul-de-sac area beside the East fish ladder. A second, more mobile trap was under investigation for deployment in other areas. They also tried purse seining and electro-fishing to evaluate its use as a squawfish collection technique.

The U.S. Department of Agriculture Animal Damage Control unit continued the task of controlling gull predation on juvenile salmonids. They improved the installation of gull inhibiting lines across the river near the outfall of the ice and trash sluiceway and used noise makers, pyrotechnics and eradication techniques in an attempt to control gull populations.

The Washington Department of Wildlife counted adult fish under contract with the U.S. Army Corps of Engineers. Fish were counted according to the schedule above for 50 minutes of each hour. The 50 minute totals were multiplied by a factor of 1.2 to estimate passage for each full hour.

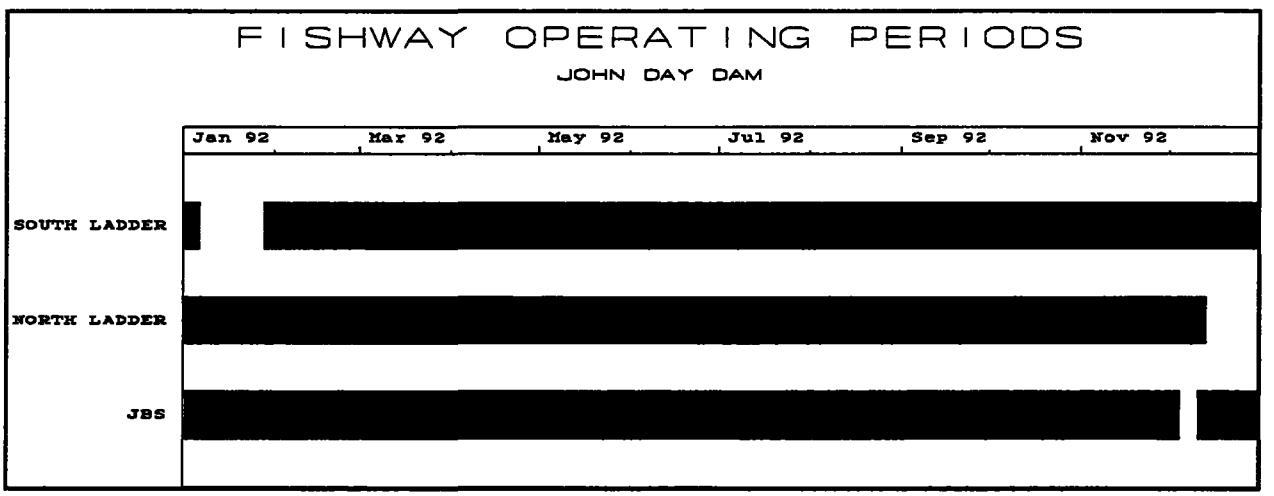
The Dalles Dam was involved in the agreement to provide spill for improved juvenile fish passage again this year. Survival is better for fish passing through spill than through turbines. The agreement provides spill for this purpose between 1 May and 22 August.

JOHN DAY DAM

Fish Counting Schedule

1 Jan - 31 Mar	No counting.
1 Apr - 31 Oct	Fish were counted in both ladders for two 8-hour shifts each day, 0400-2000 hours PST.
1 Nov - 31 Dec	No counting.

Adult Fish Facilities Operating Schedule



South Fish Ladder:

7 Jan - 28 Jan	Out of service for annual maintenance.

North Fish Ladder:

14 Dec - 31 Dec	Out of service for annual maintenance.

Auxiliary water for the fishways is supplied by three pumps at the south ladder and six pumps at the north ladder. Normal operation requires all three pumps at the south ladder and three of the six pumps at the north ladder. The following outages resulted in less than standard conditions at the respective fishway entrances.

South ladder:		
5 Jan - 4 Feb	Pump 1	Out for annual maintenance.
5 Jan - 29 Jan	Pump 2	Out for annual maintenance.
5 Jan - 13 Feb	Pump 3	Out for annual maintenance.
21 Sep (1.5 hours)	Pump 1	Gear reducer oil pump repair.
7 Dec (3 hours)	All pumps	Remove water from FCQ4.
9 Dec (3 hours)	Pump 1	Ground in thrust bearing oil pump.
North ladder:		
29 Jul - 30 Jul	All pumps	Dam feeder #1 relayed out.
10 Dec - 31 Dec	All pumps	Annual Maintenance.

Downstream Migrant Facilities Operating Schedule

5 Dec - 10 Dec	Out of service for annual inspection and maintenance.

Fishway Activities

The Corps of Engineers' Portland District Fisheries Field Unit continued with the fishway operation evaluation. The work was done to identify problem areas related to fish passage and recommend long-term solutions.

The Fish Passage Center continued to coordinate a fishway inspection program which involved once per month fishway inspections by an Oregon Department of Fish & Wildlife inspector at John Day Dam.

The National Marine Fisheries Service continued to operate an airlift fish sampling device to monitor juvenile fish passage. The sampling was done in a gate-well of unit 3. Sampling began on 7 April, continuing through October.

The following agencies participated at John Day Dam in the squawfish management and research program.

- The Oregon Department of Fish & Wildlife coordinated much of the Bonneville Power Administration funded squawfish management and research program, including the work described here for other agencies' squawfish work. They

participated directly in sampling squawfish populations by boats and in sampling the catch of the Columbia River Inter-Tribal Fish Commission dam anglers.

- The Columbia River Inter-Tribal Fish Commission contracted the Yakima Indian Nation to remove squawfish by angling from various locations on the dam. Squawfish are predators on juvenile salmonids and are believed to cause significant impact, particularly at certain locations where prey and predators collect in large numbers. Fish collected were removed from the project by Oregon State University.

- The U.S. Fish & Wildlife Service investigated predator abundance and consumption rates through much of the Columbia River system. The work at John Day involved electro-shocking and gill-netting from boats in much of the area near the dam. The information will be used to help direct predator control management in the future.

The U.S. Fish & Wildlife Service collected a few hundred salmonid smolts as part of a study of factors influencing seaward migration of fall chinook salmon through the river system.

The Washington Department of Wildlife conducted the 1992 fish counting under contract with the U.S. Army Corps of Engineers. Fish were counted according to the schedule above for 50 minutes of each hour. The 50 minute totals were multiplied by a factor of 1.2 to estimate passage for each full hour.

John Day Dam was involved in the agreement to provide spill for improved juvenile fish passage, again this year. Survival is better for fish passing through spill than through turbines. The agreement calls for spill to be provided for this purpose in the summer between 7 June and 22 August.

MCNARY DAM

Fish Counting Schedule

1 Jan - 31 Mar	No counting.
1 Apr - 31 Oct	Counting daily 0400-2000 hours PST.
1 Nov - 31 Dec	No counting.

Fish Ladder Operating Schedule

North Ladder:

1 Jan - 20 Jan	In Service
21 Jan - 27 Feb	Out of service for annual inspection and maintenance.
28 Feb - 31 Dec	In service.

South Ladder:

1 Jan - 5 Jan	In service.
6 Jan - 15 Jan	Out of service for annual inspection and maintenance.
16 Jan - 31 Dec	In service.

Fishway Activities

Two 8-hour counting shifts were conducted from 0400-2000 hours PST from 1 April through 31 October. Both fish ladders were counted by direct observation. Fish counting in 1992 was accomplished under contract by Washington Department of Wildlife.

The juvenile collection system was in operation from 25 March to 7 December.

National Marine Fisheries Service conducted fish guiding efficiency research using extended length screening devices in turbine units five and six in 1992.

ICE HARBOR DAM

Fish Counting Schedule

1 Jan - 31 Mar	No counting.
1 Apr - 31 Oct	Counting daily 0400-2000 hours PST.
1 Nov - 31 Dec	No counting.

Fish Ladder Operating Schedule

North Ladder:

1 Jan - 9 Feb	In service.
10 Feb - 26 Feb	Out of service for annual inspection and maintenance.
27 Feb - 31 Dec	In service

South Ladder:

1 Jan - 3 Feb	In service.
4 Feb - 6 Feb	Out of service for annual inspection and maintenance.
7 Feb - 31 Dec	In service

Fishway Activities

Two 8-hour counting shifts were conducted from 0400-2000 hours PST from 1 April through 31 October. One counter counted the south ladder by direct observation and the north ladder by closed circuit television. From 15 June through 31 August fish passage from 2000 to 0400 hours PST was video taped and later interrogated for fish numbers. This additional counting was to gather information on sockeye salmon passage, which is listed as an endangered species under the Endangered Species Act. Fish counting in 1992 was accomplished under contract by Washington Department of Wildlife.

The ice and trash sluiceway was operated as a juvenile bypass from 1 April to 31 August.

The University of Idaho trapped adult salmonids at Ice Harbor Dam in 1992 as part of a Corps funded Lower Snake River adult fish passage evaluation. Adult fish were radio tagged, released at the mouth of the Snake River, and monitored when passing Ice Harbor Dam.

Washington Department of Fisheries trapped and collected adult fall chinook in the south ladder during September and October for brood stock for Lyons Ferry Salmon Hatchery.

LOWER MONUMENTAL DAM

Fish Counting Schedule

1 Jan - 31 Mar	No counting.
1 Apr - 31 Oct	Counting daily 0400-2000 hours PST.
1 Nov - 31 Dec	No counting.

Fish Ladder Operating Schedule

North Ladder:

1 Jan - 5 Feb	In service.
6 Feb - 4 Mar	Out of service for annual inspection and maintenance and for installing pipeline for adding excess juvenile bypass system water to the adult facilities.
5 Mar - 31 Dec	In service

South Ladder:

1 Jan - 3 Feb	in service.
4 Feb - 5 Feb	Out of service for annual inspection and maintenance.
6 Feb - 31 Dec	In service

Fishway Activities

Two 8-hour counting shifts were conducted from 0400-2000 hours PST from 1 April through 31 October. One counter counted the north ladder by direct observation and the south ladder by closed circuit television. Fish counting in 1992 was accomplished under contract by the Washington Department of Wildlife.

National Marine Fisheries Service conducted fish guiding efficiency and orifice passage efficiency research in turbine unit four in 1992.

The University of Idaho monitored radio tagged adult salmonids at Lower Monumental Dam in 1992 as part of a Corps funded Lower Snake River adult fish passage study.

The juvenile bypass system was in operation from 30 March through 31 November with the exceptions of 8 April through 10 April and

21 April through 24 April, when the bypass system was unwatered to correct settling problems with the transportation channel.

LITTLE GOOSE DAM

Fish Counting Schedule

1 Jan - 14 Apr	No counting.
15 Apr - 31 Oct	Counting daily 0400-2000 hours PST.
1 Nov - 31 Nov	Counting daily 0700-1700 hours PST.
1 Dec - 31 Dec	No counting.

Fish Ladder Operating Schedule

Project Ladder:

1 Jan - 5 Jan	In service.
6 Jan - 9 Feb	Out of service for annual inspection and maintenance and removal of electronic tunnel equipment.
10 Feb - 15 Mar	In service.
16 Mar - 25 Mar	Out of service for reservoir drawdown test.
26 Mar - 31 Dec	In service

Fishway Activities

Two 8-hour counting shifts were conducted from 0400-2000 hours PST from 15 April through 31 October. One 10-hour counting shift was conducted from 0700 to 1700 hours PST from 1 November through 15 December. Fish counting in 1992 was accomplished under contract by the Washington Department of Wildlife as part of the Lower Snake River adult fish passage research.

The University of Idaho monitored radio tagged adult salmonids at Little Goose Dam in 1992 as part of the Corps funded Lower Snake River adult fish passage research.

A drawdown test of Lower Granite and Little Goose reservoirs was conducted during March 1992. Little Goose reservoir was drawn down from its minimum operating pool elevation of 633 msl to elevation 621 msl. The fish ladder was unwatered on 16 March when the reservoir dropped below the effective range of fish ladder operation. Operation of the fish ladder resumed on 26 March when the reservoir reached minimum operating pool.

The juvenile collection system was in operation from 26 March to 31 November.

LOWER GRANITE

Fish Counting Schedule

1 Jan - 28 Feb	No counting.
1 Mar - 12 Mar and 31 Mar	Counting daily 0800-1600 hours PST.
13 Mar - 30 Mar	No counting due to reservoir drawdown test.
1 Apr - 31 Oct	Counting daily 0400-2000 hours PST.
1 Nov - 15 Dec	Counting daily 0600-1600 hours PST.
16 Dec - 31 Dec	No counting.

Fish Ladder Operating Schedule

Project Ladder:

1 Jan - 5 Jan	In service.
6 Jan - 22 Jan	Out of service for annual inspection and maintenance and installation of electronic tunnel equipment.
22 Jan - 12 Mar	In service.
13 Mar - 30 Mar	Out of service for reservoir drawdown test.
31 Mar - 31 Dec	In service.

Fishway Activities

One 8-hour counting shift was conducted from 0800-1600 hours PST from 1 March through 12 March and on 31 March. Two 8-hour counting shifts were conducted from 0400-2000 hours PST from 1 April through 31 October. One 10-hour counting shift was conducted from 0600 to 1600 hours PST from 1 November through 15 December. Fish counting in 1992 was accomplished under contract by Washington Department of Wildlife.

A drawdown test of Lower Granite and Little Goose reservoirs was conducted during March 1992. Lower Granite reservoir was drawn down from its minimum operating pool elevation of 733 msl to elevation 696 msl. The auxiliary fish ladder exit was used from 2 March to 12 March when the fish ladder was unwatered as the reservoir dropped below the effective range of the auxiliary

exit. Operation of the fish ladder resumed on 31 March when the reservoir reached minimum operating pool.

The University of Idaho monitored radio tagged adult salmonids at Lower Granite Dam in 1992 as part of the Corps funded Lower Snake River adult fish passage research. Oregon Department of Fish & Wildlife conducted an adult fishway electronic tunnel study as part of the same research program.

National Marine Fisheries Service operated the adult trap as part of the juvenile fish transportation program evaluation.

The juvenile collection system was in operation from 31 March to 31 November.

PRIEST RAPIDS DAM

Fish Counting Schedule

1 Jan - 15 Apr	No counting
16 Apr	Fish Counter training and review
17 Apr - 15 Nov	Counting daily 0000 - 2400 hours PST.
16 Nov - 31 Dec	No counting.

Fish Ladder Operating and Maintenance Schedule

Left Bank Ladder:

1 Jan - 30 Nov	In-service.
1 Dec - 31 Dec	Out of service for annual inspection and maintenance.

Right Bank Ladder:

2 Jan - 16 Feb	Out of service for annual inspection and maintenance.
17 Feb - 31 Dec	In-service.

Fishway Activities

Public Utility District No. 2 of Grant County conducted the 1992 fish counting differently from previous years. The special 24-hour counting was accomplished in three 8-hour shifts from 17 April through 15 November. Both ladders were counted by direct observation.

The Washington Department of Wildlife trapped and examined steelhead once a week from 1 August through 23 October.

The Washington Department of Fisheries trapped and examined fall chinook for one day on 10 September.

Fish Counting Schedule

1 Jan - 30 Apr	No counting.
1 May - 30 Oct	Counting daily 0500 - 2100 hours PDT.
31 Oct - 15 Nov	Counting daily 0400 - 2000 hours PST.
16 Nov - 31 Dec	No counting.

Fish Ladder Operating and Maintenance Schedule

Left Bank Ladder:

1 Jan - 31 Dec	In-service.

Right Bank Ladder:

1 Jan - 14 Nov	In service.
15 Nov - 31 Dec	Out of service for annual inspection and maintenance.

Fishway Activities

Public Utility District of Chelan County has conducted the fish counting at Rock Island Dam since 1973 and at Rocky Reach Dam since 1962. Fish are counted by direct observation at the one ladder at Rocky Reach Dam.

In 1992, the District counted the three ladders at Rock Island Dam with video taping over a 24-hour basis.

Fish Counting Schedule

1 Jan - 30 Apr	No counting.
1 May - 30 Oct	Counting daily 0500 - 2100 hours PDT.
31 Oct - 15 Nov	Counting daily 0400 - 2000 hours PST.
16 Nov - 31 Dec	No counting.

Fish Ladder Operating and Maintenance Schedule

Left Bank Ladder:

1 Jan - 31 Dec	In-service.

Right Bank Ladder:

1 Jan - 14 Nov	In service.
15 Nov - 31 Dec	Out of service for annual inspection and maintenance.

Fishway Activities

Douglas County Public Utility District operated the two ladders at Wells Dam as per agreement between the fisheries agencies and Tribal agencies. Fish counting at Wells is accomplished using close circuit television each day for two eight hour shifts. Daily counts from these combined eight hour shifts was sent to the Corps of Engineers in Portland, Oregon. In 1992, a video recording was made during mon-counting hours (2200 - 0500 PST) to assess passage at night. These numbers show that from 6 % to 16 % of passage, depending on the population, is done outside of the normal counting period.

The Washington Department of Fisheries operated a trap in the east ladder to collect summer chinook broodstock for the East Bank Hatchery and Wells Hatchery. The trap is operated no more than three days a week between June 28 and August 27. The Columbia River Inter-Tribal Fish Commission coordinates a sockeye sampling program during the summer chinook brood collection. The Washington Department of Wildlife operates a trap in the west ladder from August 1 through October 31 for the collection of summer steelhead broodstock.

TABLE 1

FISH ESCAPEMENT AT MAIN STEM DAMS
COLUMBIA AND SNAKE RIVERS 1988-1992

SPECIES	BONNEVILLE	THE DALLES	JOHN DAY	MCNARY	ICE HARBOR	LOWER MONUMENTAL	LITTLE GOOSE	LOWER GRANITE
1988								
CHINOOK*	494,025	378,080	277,251	243,608	48,066	44,262		37,882
Spring	94,746	73,663	55,195	51,178	34,394	34,618		30,419
Summer	36,524	29,892	23,569	23,621	7,790	6,613		6,507
Fall	362,755	274,525	198,487	168,809	5,882	3,031		956
Jacks	82,129	69,631	51,330	58,718	3,510	2,758		1,615
STEELHEAD	279,072	198,499	164,650	151,765	99,714	84,746		87,040
SOCKEYE	79,714	55,802	48,095	50,080	22	35		23
COHO*	39,620	9,226	6,813	2,010		3		
Adults	27,054	6,525	4,243	1,111		2		
Jacks	12,566	2,701	2,570	899		1		
SHAD	1,164,320	2,008,572	890,997	665,925	112,081	55,787		2,977
1989								
CHINOOK*	416,117	282,168	208,254	176,407	27,234	25,590		19,557
Spring	87,259	53,014	37,773	35,954	17,029	18,286		14,504
Summer	32,975	30,555	23,868	24,708	4,215	4,386		4,071
Fall	295,883	198,599	146,613	115,745	5,990	2,918		982
Jacks	42,912	28,671	25,092	24,908	3,767	3,916		2,727
STEELHEAD	287,798	235,639	193,460	170,467	151,101	129,618		132,579
SOCKEYE	41,884	39,672	39,374	41,318	4	9		2
COHO*	39,281	12,611	9,663	3,383		17		
Adults	27,418	7,830	6,051	1,925		3		
Jacks	11,863	4,781	3,612	1,458		14		
SHAD	1,877,404	2,971,017	1,773,938	1,076,467	119,199	43,043		1,310
1990								
CHINOOK*	340,990	207,556	156,313	147,439	31,841	28,215		23,345
Spring	96,252	57,424	43,127	44,499	20,730	20,076		17,549
Summer	28,021	22,615	20,532	22,248	5,794	5,738		5,221
Fall	216,717	127,517	92,654	80,692	5,317	2,401		575
Jacks	44,443	32,794	22,195	26,280	2,229	1,615		552
STEELHEAD	183,027	129,271	107,849	95,061	54,758	44,907		56,859
SOCKEYE	49,581	40,230	42,077	46,145	1			
COHO*	24,845	4,645	3,023	2,059	1	1		
Adults	11,627	2,305	1,520	1,054	1	1		
Jacks	13,218	2,340	1,503	1,005				
SHAD	2,947,865	3,706,856	1,641,943	866,940	90,164	25,891		2,804
1991								
CHINOOK*	274,622	153,023	118,921	114,841	23,175	18,210	13,737	13,618
Spring	61,228	32,359	21,847	22,631	11,288	9,697	7,774	7,603
Summer	21,953	18,467	16,872	17,588	5,861	5,268	4,750	4,988
Fall	191,441	102,197	80,202	74,622	6,026	3,245	1,213	1,027
Jacks	48,211	36,820	28,646	32,131	3,790	3,104	2,379	2,556
STEELHEAD	274,545	199,853	160,257	168,962	123,762	98,315	96,830	100,381
SOCKEYE	76,481	63,405	63,760	69,365	9	6	10	8
COHO*	64,057	9,601	8,021	2,272	1	5	1	
Adults	58,868	8,548	6,692	1,609	1	2	1	
Jacks	5,189	1,053	1,329	663		3		
SHAD	1,914,417	2,191,077	1,382,009	674,483	58,571	20,484	3,889	722
1992								
CHINOOK*	256,299	168,507	132,025	135,707	36,021	30,145	26,746	26,193
Spring	90,582	58,451	45,457	50,590	26,114	24,129	22,226	21,924
Summer	19,245	14,976	13,910	14,414	4,377	3,523	3,091	3,312
Fall	146,472	95,080	72,658	70,703	5,530	2,493	1,429	957
Jacks	36,611	27,160	22,084	23,984	1,932	1,255	1,195	933
STEELHEAD	314,975	232,179	195,194	194,026	160,614	130,419	117,698	121,459
SOCKEYE	84,992	66,384	69,731	68,737	33	15	12	15
COHO*	18,126	3,825	2,633	1,801				
Adults	14,369	2,586	1,710	1,196				
Jacks	3,757	1,239	923	605				
SHAD	2,551,439	2,824,313	1,963,060	1,635,089	171,607	123,037	72,629	22,298

ASSUMED DATES FOR CHINOOK RUN (MAY VARY FROM PREVIOUS YEARS)

SPRING	1 MARCH - 31 MAY	1 APRIL - 3 JUNE	1 APR - 5 JUN	1 APR - 8 JUN	1 APR - 11 JUN	1 APR - 13 JUN		1 MAR - 17 JUN
SUMMER	1 JUN - 31 JUL	4 JUN - 3 AUG	6 JUN - 5 AUG	9 JUN - 8 AUG	12 JUN - 11 AUG	14 JUN - 13 AUG		18 JUN - 17 AUG
FALL	1 AUG - 30 NOV	4 AUG - 31 OCT	6 AUG - 31 OCT	9 AUG - 31 OCT	12 AUG - 31 OCT	14 AUG - 31 OCT		18 AUG - 15 DEC

*Includes Jack Counts.

TABLE 1

(Continued)

FISH ESCAPEMENT AT PUBLIC UTILITY DISTRICT PROJECTS 1988-1992

SPECIES	PRIEST RAPIDS	ROCK ISLAND	ROCKY REACH	WELLS
1988				
CHINOOK*	53,963	43,292	13,261	7,835
Spring	13,342	15,368	4,824	3,126
Summer	13,841	16,317	3,581	2,771
Fall	26,780	11,607	4,856	1,938
Jacks	5,286	4,929	1,750	941
STEELHEAD	10,208	9,241	5,677	4,426
SOCKEYE	51,135	49,159	34,090	33,979
COHO*	68	715 *	306 *	79 *
Adults	52			
Jacks	16			
SHAD	31,780			
1989				
CHINOOK*	49,246	37,614	13,090	6,500
Spring	11,991	10,690	3,168	1,732
Summer	20,162	18,574	4,938	3,333
Fall	17,093	8,350	4,984	1,435
Jacks	3,099	2,573	832	424
STEELHEAD	10,730	9,351	6,039	4,600
SOCKEYE	45,301	37,360	16,176	15,895
COHO*	32	287 *	155 *	14 *
Adults	30			
Jacks	2			
SHAD	30,836			
1990				
CHINOOK*	36,257	27,251	9,108	4,755
Spring	12,288	7,720	1,909	660
Summer	15,976	14,232	4,361	3,356
Fall	7,993	5,299	2,838	739
Jacks	2,410	2,925	1,157	406
STEELHEAD	7,830	6,946	5,033	3,737
SOCKEYE	46,331	44,143	9,296	7,597
COHO*	31	104 *	62 *	25 *
Adults	28			
Jacks	3			
SHAD	23,602			
1991				
CHINOOK*	31,482	21,493	6,628	3,644
Spring	8,008	5,781	1,323	785
Summer	15,173	11,024	3,274	2,046
Fall	8,301	4,688	2,031	813
Jacks	4,240	3,374	1,106	610
STEELHEAD	13,939	10,927	7,645	7,785
SOCKEYE	71,245	62,533	27,439	27,482
COHO*	22	166 *	41 *	19 *
Adults	15			
Jacks	7			
SHAD	27,638			
1992				
CHINOOK*	37,752	29,921	8,383	5,064
Spring	20,036	15,634	2,714	1,573
Summer	9,896	9,711	3,010	1,974
Fall	7,820	4,576	2,659	1,472
Jacks	5,286	4,747	2,153	1,364
STEELHEAD	13,733	12,476	7,516	7,073
SOCKEYE	80,857	68,359	41,804	41,951
COHO*	1	49 *	74 *	28 *
Adults	1			
Jacks				
SHAD	121,547			

ASSUMED DATES FOR CHINOOK RUNS

SPRING	16 APR - 13 JUN	15 APR - '17 JUN	18 APR - 19 JUN	1 MAY - 28-Jun
SUMMER	14 JUN - 13 AUG	18 JUN - '17 AUG	20 JUN - 19 AUG	29 JUN - 28-Aug
FALL	14 AUG - 15 NOV	18 AUG - 15 NOV	20 AUG - 15 NOV	29 AUG - 15 NOV

*Includes Jack Counts.

1992 counting at Priest Rapids Project was 24 hours a day. All other years are two 8-hour shifts per day with one 8-hour shift in April and November.

TABLE 2

STEELHEAD OVER COLUMBIA AND SNAKE RIVER DAMS 1953-1992

BY RUN-YEAR (1 JUNE - 31 MAY)

Estimating the size of the upriver steelhead run has previously been hampered because of the calendar year approach used in the summary tables. Problems in accountability arise due to overwintering behavior of summer steelhead; especially Snake River stocks, which often have sizeable proportions of the run remaining below mainstem projects during the winter months. Movement of these steelhead commences again the following spring when warming reservoir temperatures trigger upstream movement. For this reason, an additional table has been prepared which summarizes steelhead counts at each project on a "fish year" basis; 1 June - 31 May. Because all stocks of Steelhead cross Bonneville Dam during the calendar year, those summary counts have not been modified.

RUN-YEAR	THE DALLES	JOHN DAY	MCNARY	ICE HARBOR	LOWER MONUMENTAL	LITTLE GOOSE**	LOWER GRANITE
1953-54			8,252 *				
1954-55			72,913				
1955-56			84,434				
1956-57	3,531 *		40,660				
1957-58	128,124		105,136				
1958-59	120,170		87,413				
1959-60	155,892		111,288				
1960-61	110,955		95,556				
1961-62	134,740		104,679	9,474 *			
1962-63	163,125		163,333	108,186			
1963-64	118,899		113,676	76,788			
1964-65	110,509		99,872	58,025			
1965-66	142,376		120,469	62,566			
1966-67	144,267	*	144,461	64,987			
1967-68	122,231	6,598	83,948	47,536			
1968-69	147,844	122,649	107,806	85,273	16,240 *		
1969-70	111,617	81,623	74,933	58,172	63,269		
1970-71	99,319	81,238	68,598	54,445	58,430	54,257 *	
1971-72	151,329	117,402	110,450	66,196	68,704	70,867	
1972-73	135,730	149,704	95,837	63,584	66,650	63,033	
1973-74	100,924	93,951	62,158	37,245	38,288	37,099	
1974-75	71,336	40,868	26,191	12,170	14,851	13,818	2,789 *
1975-76	57,695	33,640	25,150	15,895	17,236	15,177	16,592
1976-77	83,194	59,368	54,409	24,140	21,801	21,109	22,562
1977-78	133,096	102,193	86,962	54,911	48,160	47,617	57,029
1978-79	58,995	43,554	34,580	27,252	19,849	24,050	26,473
1979-80	86,317	59,825	54,213	26,790	20,073	23,816	28,758
1980-81	93,309	77,113	63,957	47,778	32,599	36,680	37,996
1981-82	112,265	96,663	62,955	43,274	37,755		42,420
1982-83	116,178	105,438	72,246	70,236	60,775		72,384
1983-84	172,033	157,602	126,706	90,030	82,555		88,760
1984-85	221,299	204,595	142,246	101,008	92,947		104,417
1985-86	274,826	245,087	181,635	123,187	104,400		116,147
1986-87	280,671	234,651	193,096	142,273	121,107		129,983
1987-88	219,822	172,290	151,587	77,565	64,717		71,280
1988-89	197,669	163,283	150,361	98,950	81,324		79,747
1989-90	236,584	193,951	170,014	149,361	131,050		131,420
1990-91	128,123	107,117	94,522	54,370	44,518		56,865
1991-92	199,244	105,650	168,156	122,874	97,454	96,421	99,052
Total	4,944,238	2,856,053	3,649,259	2,074,541	1,404,752	503,944	1,184,674
10-Year Average	204,645	168,966	145,057	102,985	88,085	35,327	95,006

***Because counting started at each dam early in the year after construction was complete, these figures are for the latter part of the run year only. That part of the run year starting after June 1st of of the previous year passed the dams without being counted.**

****1981 was the last year visual counts were made at Little Goose Project until 1991. The 10-yr. average shown is for the years 1971-72 through 1980-81.**

TABLE 2
(Continued)

STEELHEAD OVER COLUMBIA RIVER PUD PROJECTS 1959-1992

BY RUN-YEAR (1 JUNE - 31 MAY)

RUN-YEAR	PRIEST RAPIDS	ROCK ISLAND	ROCKY REACH	WELLS
1959-60	810 *			
1960-61	7,277			
1961-62	8,970			
1962-63	9,408			
1963-64	8,808			
1964-65	6,137			
1965-66	9,055			
1966-67	13,159			
1967-68	8,402			
1968-69	9,672			
1969-70	6,140			
1970-71	5,764			
1971-72	11,331			
1972-73	6,006			
1973--74	6,881			
1974-75	2,955			
1975-76	2,558			44 *
1976-77	9,490			4,636
1977-78	9,632			5,464
1978-79	4,479			1,475
1979-80	8,704			3,771
1980-81	8,308			3,363
1981-82	9,122	7,607 *	5,567 *	4,107
1982-83	10,948	9,737	6,037	7,805
1983-84	32,103	29,885	19,864	19,540
1984-85	26,566	25,287	17,349	16,663
1986-86	34,007	31,813	22,621	19,712
1986-87	22,332	22,766	15,060	13,251
1987-88	14,054	12,887	7,243	5,565
1988-89	10,138	9,100	5,573	4,358
1989-90	10,720	9,244	5,991	4,577
1990-91	7,858	6,926	5,023	3,842
1991-92	14,047	11,125	7,788	7,823
Total	355,031	176,377	118,116	125,996
10-Year Average	18,277	16,877	11,255	10,314

*Partial year

STEELHEAD KELT COUNT

PORTLAND and WALLA WALLA DISTRICT PROJECTS

The majority of steelhead migrating up the Columbia River past Corps of Engineers dams are summer-run steelhead. Most of these fish enter freshwater between March and October and migrate upstream toward their place of origin. During the spawning run, a steelhead's feeding is greatly diminished and it must rely on stored fat reserves for sustenance while in freshwater. Since most of these fish are spring spawners (March - June), their original body weight is reduced by up to 40 % after spawning. After a steelhead has completed spawning, it is called a "kelt". If a steelhead kelt can successfully reach the ocean and survive, it may return to freshwater to spawn again.

Washington Department of Wildlife fish-counting staff have observed a downstream movement of kelts at Corps of Engineers projects. Peak downstream migration of kelts occurs in May and they are most often sighted at McNary and John Day Dams. These fish are emaciated, gaunt, and weak. The torpedo-shape, characteristic of a steelhead fresh from the ocean, has deteriorated into a snake-like shape with a large head. Most kelts appear to be females. They are oriented into the current but allow the current to carry them downstream past the counting window. After a meeting with the Corps of Engineers, fisheries agencies, and tribal biologists in 1989, it was agreed that the Washington Department of Wildlife fish-counting staff would count kelts. The downstream movement of steelhead kelts is presented on the following page in Table 2-A.

TABLE 2-A

TABLE 2-A

STEELHEAD KELT COUNT - 1992
PORTLAND AND WALLA WALLA DISTRICT PROJECTS

	MAR		APR		MAY		JUN		JUL		AUG				
PROJECT	OR	WA	OR	WA	OR	WA	OR	WA	OR	WA	OR	WA	TOTAL	OR	WA
BONNEVILLE	0	0	10	6	2	8	1	0	0	0	0	0	27	13	14
THE DALLES	0	0	0	0	19	0	15	0	2	0	0	0	36	36	0
JOHN DAY	0	0	4	14	146	216	46	92	0	1	0	0	519	196	323
MCNARY	0	0	156	173	234	359	141	192	6	11	0	1	1273	537	736
ICE HARBOR	0	0	0	0	0	0	0	5	0	0	0	0	5	0	5
LWR MONUMENTAL	0	0	0	2	5	79	3	25	0	4	0	0	118	8	110
LITTLE GOOSE	0		36		106		53		6		0		201	201	0
LWR GRANITE	0		1		0		0		0		0		1	1	0

COLUMBIA RIVER TABLES

TABLE 3

YEARLY TOTALS OF SALMONIDS COUNTED OVER BONNEVILLE DAM

1938 - 1992

YEAR	CHINOOK*	STEELHEAD	SOCKEYE	COHO*	CHUM	PINK	TOTAL SALMONID
1938	271,799	107,003	75,040	15,185	2,117		471,144
1939	286,189	122,032	73,382	14,383	1,168		497,154
1940	391,587	185,174	148,807	11,917	1,729		739,214
1941	461,443	118,089	65,741	17,911	5,269	4	668,457
1942	401,942	151,800	55,464	12,402	1,865	11	623,484
1943	313,123	92,133	39,845	2,547	788		448,436
1944	240,764	100,518	15,072	4,207	954	1	361,516
1945	297,478	120,133	9,501	790	728	1	428,631
1946	446,052	142,807	74,376	3,898	1,178	2	668,313
1947	480,377	135,444	171,139	11,174	199	3	798,336
1948	419,555	139,062	131,541	4,081	3,636	2	697,877
1949	277,697	119,285	51,444	1,004	2,028	6	451,464
1950	357,375	114,087	77,993	10,151	1,069	8	560,683
1951	331,788	140,689	169,428	5,201	1,044	7	648,157
1952	420,879	260,990	184,645	7,768	1,505	9	875,796
1953	332,479	223,914	235,215	13,018	1,728	10	806,364
1954	320,947	176,260	130,107	4,062	1,569	4	632,949
1955	359,853	198,411	237,748	3,725	318	9	800,064
1956	300,917	131,116	156,418	6,127	693	4	595,275
1957	403,286	139,183	82,915	4,675	569	12	630,640
1958	426,419	131,437	122,389	3,673	455	6	684,379
1959	345,028	129,026	86,560	2,695	906	22	564,237
1960	256,049	113,676	59,713	3,268	1,026		433,732
1961	281,980	139,719	17,111	3,456	896	12	443,174
1962	286,625	164,025	28,179	14,788	1,013	27	494,657
1963	278,560	129,418	60,319	12,658	739	34	481,728
1964	344,422	117,252	99,856	53,602	632	45	615,809
1965	317,957	166,453	55,125	76,032	496	64	616,127
1966	340,111	143,661	156,661	71,891	872	58	713,254
1967	366,237	121,872	144,158	96,488	352	50	729,157
1968	341,154	106,974	108,207	63,488	79	21	619,923
1969	507,543	140,782	59,636	49,378	143	86	757,568
1970	384,780	113,510	70,762	80,116	209	150	649,527
1971	405,702	193,966	87,447	75,989	29	176	763,309
1972	394,456	185,886	56,323	65,932	1	51	702,649
1973	398,635	157,823	58,979	54,609	43	12	670,101
1974	366,759	137,054	43,837	60,955	23	2	608,630
1975	425,566	85,540	58,212	58,307	11	309	627,945
1976	507,773	124,177	43,611	53,150	11	2	728,724
1977	366,657	193,437	99,829	19,408	17		679,348
1978	394,600	104,431	18,436	52,590	28		570,085
1979	276,306	113,979	52,628	45,328	1	23	488,265
1980	245,518	129,254	58,882	22,052	44		455,750
1981	285,650	159,270	56,037	30,510	4	20	531,491
1982	322,809	157,640	50,219	73,832	12		604,512
1983	244,346	218,439	100,545	15,173	50	52	578,605
1984	324,425	315,560	152,541	29,487	64	8	822,085
1985	463,873	343,987	166,340	56,857	97	147	1,031,301
1986	570,881	379,891	58,123	130,853	77	23	1,139,848
1987	547,494	303,081	116,993	27,635	147	20	995,370
1988	494,025	279,072	79,714	39,620	60	6	892,497
1989	416,117	287,798	41,884	39,281	16	12	785,108
1990	340,990	183,027	49,581	24,845	26		598,469
1991	274,622	274,545	76,481	64,057	5	550	690,260
1992	256,299	314,975	84,992	18,126	39	24	674,455
Total	19,915,898	9,278,767	4,866,131	1,744,355	38,777	2,105	35,846,033
10-Year Average	393,307	290,038	92,719	44,593	58	84	820,800

*Jacks included

TABLE 4

TABLE 4

MONTHLY TOTALS OF SALMONID AND SHAD COUNTED OVER BONNEVILLE DAM
1992

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*			2,188	68,073	20,321	11,871	7,374	28,537	107,620	10,043	272		256,299
STEELHEAD			646	1,964	3,239	9,708	55,090	135,162	103,792	4,918	456		314,975
SOCKEYE					20	54,292	30,409	271					84,992
COHO*							19	222	10,304	5,953	1,628		18,126
MINI-JACKS**				2	63	4,064	2,720	1,665	1,197	139	25		9,875
CHUM								1		1	37		39
PINK						1	2		1	20			24
TOTAL			2,834	70,039	23,643	79,936	95,614	165,858	222,914	21,074	2,418		684,330
SHAD				256	685,939	1,767,696	93,446	4,102					2,551,439

*Jacks included

**Salmonid fish under 12 inches in length.

TABLE 5

DISCHARGE AND WATER QUALITY DATA

BONNEVILLE PROJECT - 1992

JANUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	123.8	0.0	5.2	43.0
2	132.1	0.0	5.2	43.0
3	160.5	0.0	5.5	43.0
4	131.1	0.0	5.5	43.0
5	133.3	0.0	5.5	43.0
6	152.4	0.0	5.5	43.0
7	175.9	0.0	7.0	43.0
8	166.0	0.0	6.0	43.0
9	158.9	0.0	6.0	43.0
10	173.8	0.0	6.5	43.0
11	170.4	0.0	6.5	43.0
12	139.8	0.0	6.5	43.0
13	150.5	0.0	6.5	43.0
14	152.4	0.0	7.0	43.0
15	157.6	0.0	7.5	43.0
16	151.7	0.0	7.2	43.0
17	147.5	0.0	6.8	43.0
18	146.6	0.0	5.5	43.0
19	121.1	0.0	5.0	43.0
20	137.9	0.0	5.0	43.0
21	148.0	0.0	6.0	42.0
22	157.3	0.0	1.5	42.0
23	157.2	0.0	3.0	42.0
24	150.3	0.0	5.5	42.0
25	149.0	0.0	5.5	42.0
26	124.0	0.0	5.0	42.0
27	119.7	0.0	3.0	43.0
28	126.8	0.0	4.0	42.0
29	125.0	0.0	3.5	42.0
30	125.5	0.0	3.5	43.0
31	129.3	0.0	3.5	44.0
AVG.	145.0	0.0	5.3	42.8

FEBRUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	135.8	0.0	3.5	42.0
2	119.7	0.0	3.6	43.0
3	121.0	0.0	3.6	43.0
4	118.9	0.0	6.2	43.0
5	135.2	0.0	5.7	42.0
6	125.4	0.0	4.7	43.0
7	125.4	0.0	5.5	43.0
8	124.1	0.0	6.8	43.0
9	108.2	0.0	7.0	43.0
10	123.1	0.0	6.5	43.0
11	116.0	0.0	5.7	43.0
12	120.4	0.0	5.7	43.0
13	131.0	0.0	5.5	43.0
14	119.3	0.0	5.1	43.0
15	118.6	0.0	5.0	45.0
16	95.8	0.0	5.5	43.0
17	129.7	0.0	5.5	43.0
18	132.2	0.0	4.5	43.0
19	132.9	0.0	2.5	43.0
20	154.9	57.4	2.5	43.0
21	191.8	88.0	2.0	43.0
22	174.4	93.4	1.5	44.0
23	153.1	75.0	3.0	44.0
24	174.1	87.2	1.8	44.0
25	160.5	79.4	3.0	44.0
26	161.3	79.3	3.0	44.0
27	165.3	18.2	3.3	45.0
28	160.1	0.0	3,4	45.0
29	167.7	0.0	3.4	45.0
AVG.	137.8	19.9	4.3	43.4

TABLE 5

TABLE 6

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 6

BONNEVILLE PROJECT

MARCH 1992

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	KCFS	KCFS	SECCHI	DEG F
1											146.8	0.0	4.0	45.0
2											162.9	0.0	4.8	45.0
3											178.4	0.0	6.0	45.0
4											181.7	0.0	4.0	45.0
5											182.6	0.0	5.2	45.0
6											161.5	57.8	5.3	45.0
7											171.5	84.1	5.8	446.0
8											186.5	92.2	5.0	46.0
9											200.8	99.2	5.8	47.0
10											179.4	88.4	5.8	47.0
11											204.4	101.0	5.5	48.0
12											179.8	87.1	5.5	47.0
13											169.1	19.4	4.7	47.0
14											161.2	0.0	5.0	48.0
15	15			0				34			155.5	0.0	5.0	48.0
16	54			0				30			158.8	0.0	4.5	48.0
17	46			1				22			146.4	0.0	4.0	48.0
18	37			0				24			175.1	0.0	4.0	48.0
19	80			0				27			174.6	0.0	4.5	48.0
20	55			0				46			159.7	0.0	4.5	48.0
21	68			0				32			121.3	0.0	4.5	8.0
22	87			0				26			114.5	0.0	4.5	48.0
23	118			0				46			115.8	0.0	4.5	48.0
24	124			0				39			127.0	0.0	6.0	49.0
25	105			0				31			133.7	0.0	6.0	49.0
26	180			0				40			132.8	0.0	6.0	49.0
27	129			2				65			138.0	0.0	4.3	49.0
28	331			2				50			113.2	0.0	4.5	49.0
29	350			1				57			100.5	0.0	4.7	50.0
30	212			0				46			107.6	0.0	5.0	50.0
31	191			0				31			123.6	0.0	5.2	50.0
TOTAL	2,182			6				646			153.7	20.3	5.0	59.1
AVG	128							38						

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 7

BONNEVILLE PROJECT

APRIL 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	873			9				69	0	0	128.2	0.0	5.2	50.0
2	1,204			8				81	0	0	120.3	0.0	5.4	50.0
3	1,311			4				52	0	0	132.1	0.0	3.0	52.0
4	879			0				47	0	0	120.7	0.0	4.2	52.0
5	593			1				61	0	0	128.0	0.0	4.3	52.0
6	826			7				49	0	0	144.5	0.0	4.5	51.0
7	1,603			7				90	0	0	151.1	0.0	4.5	51.0
8	1,540			12				65	0	0	140.9	0.0	4.5	51.0
9	1,969			7				70	0	0	159.8	0.0	4.0	51.0
10	2,977			17				81	0	0	150.6	0.0	3.8	51.0
11	2,955			10				78	0	0	110.8	0.0	4.0	51.0
12	2,277			15				51	0	0	101.8	0.0	3.7	52.0
13	3,654			17				77	0	1	114.7	0.0	4.2	52.0
14	2,889			18				53	1	0	119.5	0.0	3.5	52.0
15	3,888			25				66	1	0	138.5	12.5	4.0	52.0
16	2,955			25				78	5	0	135.4	72.8	3.5	52.0
17	3,103			25				101	0	0	129.0	69.2	3.5	52.0
18	3,374			35				80	2	0	146.7	78.5	3.0	52.0
19	2,570			33				46	0	0	159.1	84.6	3.5	52.0
20	2,092			17				54	0	0	150.2	80.3	4.0	53.0
21	1,710			17				58	0	0	173.2	86.1	3.8	53.0
22	2,163			26				47	1	0	164.5	88.0	3.5	53.0
23	1,500			23				29	1	0	211.9	102.7	3.5	53.0
24	1,611			31				37	4	0	180.4	95.9	3.0	54.0
25	1,334			27				43	14	0	179.4	95.2	2.3	54.0
26	1,881			45				65	11	1	179.9	95.6	2.7	55.0
27	2,699			76				66	6	0	164.5	87.8	2.4	55.0
28	3,835			86				84	40	0	178.6	95.1	3.0	55.0
29	4,237			145				95	118	0	178.1	93.6	2.7	56.0
30	2,686			117				91	52	0	193.2	103.0	2.5	57.0
TOTAL	67,188			885				1,964	256	2				
AVG	2,240			30				65			149.5	44.7	3.7	52.5

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	69,370	891

STEELHEAD	SHAD	MINI-JCK
2,610	256	2

TABLE 8

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 8

BONNEVILLE PROJECT
MAY 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK
1	2072			116			0	115	18	0
2	1731			93			0	48	82	0
3	1334			98			0	66	287	0
4	1033			76			0	71	712	0
5	1008			72			0	70	1742	0
6	978			71			0	76	2122	0
7	788			60			0	66	2614	0
8	727			60			0	101	1968	0
9	512			54			0	87	2369	0
10	662			61			0	88	1679	0
11	559			63			0	98	2402	0
12	516			47			0	98	2168	1
13	378			22			0	84	3501	0
14	516			33			0	100	12226	0
15	378			31			0	86	10044	0
16	347			35			0	120	7162	0
17	373			24			0	113	17912	0
18	342			20			0	118	22285	0
19	317			23			0	126	28992	1
20	382			17			0	117	18210	0
21	437			18			0	113	9162	0
22	408			15			0	106	19763	1
23	261			18			0	106	15539	0
24	333			12			0	140	41218	1
25	361			12			0	124	58033	0
26	330			19			0	117	67335	4
27	366			27			1	153	67652	7
28	494			24			2	151	35895	4
29	429			10			4	162	45114	9
30	373			18			7	99	77725	12
31	310			17			6	120	110008	23
TOTAL	19,055			1,266			20	3,239	685,939	63
AVG	615			41				104	42,871	4

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	212.2	110.3	3.2	57.0
2	208.6	111.0	3.5	57.0
3	201.5	106.9	3.5	57.0
4	200.6	106.3	2.5	57.0
5	203.3	107.8	3.0	58.0
6	209.0	111.1	3.8	58.0
7	223.0	118.2	3.5	58.0
8	223.5	118.4	3.7	58.0
9	214.2	113.8	3.2	58.0
10	181.4	98.1	3.2	58.0
11	213.1	113.8	3.3	58.0
12	212.8	112.6	3.5	58.0
13	215.4	114.2	3.8	59.0
14	211.9	112.2	3.3	59.0
15	218.4	115.8	3.3	60.0
16	216.4	114.8	3.5	60.0
17	200.5	106.3	4.5	60.0
18	208.7	109.9	4.5	60.0
19	197.2	105.2	4.5	60.0
20	206.5	109.9	4.0	60.0
21	220.1	116.8	4.2	60.0
22	234.0	124.2	4.2	60.0
23	199.0	106.0	3.2	59.0
24	176.2	93.4	3.5	60.0
25	180.2	96.0	4.0	60.0
26	210.5	112.1	4.0	61.0
27	215.2	114.6	3.8	62.0
28	207.1	110.8	3.3	62.0
29	205.0	109.0	3.6	61.0
30	194.0	103.5	3.5	61.0
31	175.6	93.4	4.0	62.0
AVG	206.3	109.6	3.6	59.3

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	88,425	2,157

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
20	5,849	686,195	65

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 9

BONNEVILLE PROJECT
JUNE 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1		434		24			18	112	152587	20	176.1	93.7	4.5	62.0
2		395		16			12	114	72922	32	171.6	91.5	4.0	63.0
3		344		24			20	115	78073	57	176.3	93.6	4.0	62.0
4		410		13			73	102	72304	48	180.9	96.4	3.8	64.0
5		368		17			83	100	53141	42	182.1	96.8	4.0	64.0
6		325		21			91	91	78763	38	163.2	87.0	4.0	64.0
7		391		22			142	142	71269	76	143.1	76.0	4.5	62.0
8		462		39			301	151	62920	126	163.4	86.7	4.5	62.0
9		377		18			353	148	76368	104	175.1	92.9	5.0	63.0
10		328		16			465	187	65942	124	185.5	98.5	4.5	63.0
11		336		15			446	193	57852	111	192.2	101.8	4.5	64.0
12		423		26			630	202	66232	109	182.0	92.8	4.0	66.0
13		392		22			528	210	57972	118	194.0	80.5	3.8	65.0
14		329		21			502	236	95627	144	176.5	73.3	5.0	66.0
15		372		26			718	276	76104	138	190.7	79.1	5.0	66.0
16		283		31			829	308	57951	164	187.1	77.7	5.0	66.0
17		342		40			998	363	49230	186	203.0	84.3	5.0	63.0
18		351		42			1368	323	86844	297	209.7	87.2	5.0	64.0
19		355		44			1818	362	15724	244	207.2	86.6	4.5	65.0
20		342		58			3023	400	63294	271	188.5	78.5	4.2	65.0
21		399		59			3688	417	58382	222	175.8	73.1	4.4	65.0
22		378		102			4191	541	53180	214	203.4	84.3	4.9	68.0
23		337		108			5238	642	42166	196	211.6	87.9	4.7	68.0
24		370		83			4867	590	26853	168	192.5	80.2	4.7	68.0
25		399		102			4795	712	30165	162	208.8	86.8	4.5	68.0
26		323		76			3580	546	19357	152	213.4	88.7	3.8	68.0
27		272		69			3524	507	23425	149	204.0	84.8	3.5	68.0
28		240		64			4108	523	11773	102	173.7	72.0	3.5	68.0
29		197		62			3747	475	10225	124	190.7	79.2	4.0	68.0
30		244		93			4136	620	17410	126	159.5	66.2	4.5	68.0
TOTAL		10,518		1,353			54,292	9,708	1,767,696	4,064				
AVG		351		45			1,810	324	56,802	135	186.1	85.3	4.4	65.2

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	88,425	2,157
SUMMER	10,518	1,353
TOTAL	98,943	3,510

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
54,312	15,557	2,453,891	4,129

PINK
1

Bonneville had one Pink on the Washington side on the 26th.

RIVER CONDITIONS

TABLE 10

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 10

BONNEVILLE PROJECT

JULY 1992

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
		FISH COUNTS									RIVER CONDITIONS			
1		249		97	0	0	2980	600	10598	104	112.8	22.9	4.5	68.0
2		221		114	0	0	2554	567	9649	131	115.8	23.3	5.0	68.0
3		222		84	0	0	2204	613	7305	130	105.6	22.0	5.0	68.0
4		171		103	0	0	1917	696	8274	125	106.6	21.6	5.0	69.0
5		189		103	0	0	1686	745	7033	145	106.4	21.6	5.0	68.0
6		207		110	0	0	813	703	8635	111	107.1	21.7	5.3	69.0
7		179		76	0	0	1078	644	6462	81	114.8	23.7	5.0	69.0
8		195		105	0	0	1686	737	3478	75	114.4	23.6	5.0	69.0
9		144		90	0	0	1294	693	2457	114	117.7	41.5	4.0	69.0
10		98		88	0	0	1115	683	4576	78	148.4	62.0	5.0	68.0
11		153		134	0	0	1957	806	3521	80	150.7	63.0	5.0	68.0
12		228		134	0	0	1851	1030	4048	127	115.1	47.8	5.5	69.0
13		185		101	0	0	1393	1179	2447	106	125.1	53.4	5.5	69.0
14		156		100	0	0	1369	1329	1382	63	156.2	65.0	5.5	70.0
15		99		84	0	0	936	1138	1153	66	144.1	60.1	5.5	70.0
16		115		67	0	0	975	1542	1539	64	151.5	63.1	5.5	70.0
17		155		109	0	0	1079	1805	1683	85	159.7	66.4	5.6	70.0
18		121		105	0	0	784	2120	1673	83	145.0	60.2	5.2	70.0
19		166		114	1	0	628	2954	1140	83	132.5	55.1	5.0	72.0
20		131		90	0	1	555	3014	1005	180	133.4	55.4	5.0	72.0
21		80		96	0	0	310	2653	803	140	145.2	60.2	5.3	72.0
22		87		63	0	0	262	1975	584	58	144.9	60.2	5.1	72.0
23		107		62	0	0	184	3003	750	73	117.2	48.7	4.8	72.0
24		86		63	0	0	216	1767	525	54	138.6	57.5	5.1	71.0
25		117		54	0	0	130	1799	566	36	115.2	47.8	6.8	70.0
26		108		71	5	0	97	2197	304	55	100.9	42.0	6.0	70.0
27		114		79	3	0	122	2532	366	66	117.2	50.0	5.8	72.0
28		115		91	1	0	78	2791	591	42	124.7	51.9	5.5	72.0
29		148		96	4	0	71	3404	318	62	131.5	54.5	5.0	72.0
30		96		74	4	0	33	3792	226	54	133.1	55.1	5.5	73.0
31		103		72	0	0	52	5579	355	49	118.2	49.0	5.5	73.0
TOTAL		4,545		2,829	18	1	30,409	55,090	93,446	2,720				
AVG		147		91			981	1,777	3,014	88	127.4	46.8	5.2	70.1

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	88,425	2,157
SUMMER	15,063	4,182
TOTAL	103,488	6,339

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK
18	1	84,721	70,647	2,547,337	6,849

PINK
3

Bonneville had one Pink on the Bradford Island side on the 3rd and one on the 17th.

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 11

BONNEVILLE PROJECT
AUGUST 1992

DATE	FISH COUNTS: CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	RIVER CONDITIONS: DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1			103	73	0	0	29	5203	361	37	123.2	51.2	5.5	73.0
2			114	55	0	0	23	4984	198	37	113.7	47.2	5.5	73.0
3			98	83	0	0	30	4757	254	54	119.6	49.6	6.2	72.0
4			107	51	1	0	23	3756	231	38	113.6	47.3	5.5	72.0
5			74	61	0	0	19	3711	132	58	127.0	52.8	5.5	72.0
6			95	54	1	0	15	3222	313	37	114.7	47.7	5.5	72.0
7			102	43	0	0	15	3127	332	29	107.8	45.0	4.8	72.0
8			138	65	0	0	17	3564	108	38	94.6	39.3	7.0	71.0
9			182	68	2	0	13	3137	175	45	91.6	38.4	7.0	71.0
10			189	65	0	0	12	4276	136	50	96.9	40.3	7.0	71.0
11			160	86	1	0	8	4997	231	36	118.0	49.1	6.0	71.0
12			240	123	1	0	6	5456	280	35	130.2	54.0	6.0	71.0
13			228	70	1	0	1	5477	175	56	135.0	56.0	7.0	72.0
14			288	60	0	0	7	5835	128	28	150.4	62.4	6.0	72.0
15			252	82	2	0	4	4802	119	31	114.7	47.6	5.8	73.0
16			286	56	0	1	4	3852	59	34	96.4	40.1	5.7	73.0
17			389	65	0	0	5	3997	76	100	133.7	55.5	6.1	72.0
18			545	60	1	1	3	3857	42	56	143.1	59.6	5.9	72.0
19			465	72	0	2	0	4202	35	145	134.7	56.3	6.0	73.0
20			454	69	3	0	0	4313	17	117	129.0	53.7	5.8	72.0
21			445	61	2	1	2	3988	91	124	123.9	51.5	5.5	72.0
22			685	71	2	0	0	3915	72	42	102.4	42.6	5.5	71.0
23			1134	96	0	0	4	3784	129	89	99.4	9.0	5.7	72.0
24			1160	97	4	1	1	3305	66	75	99.3	0.0	5.7	71.0
25			1333	126	4	2	0	3054	47	30	93.0	0.0	5.7	70.0
26			2997	151	3	2	5	3568	35	51	89.1	0.0	5.7	71.0
27			3211	210	14	5	13	4029	51	64	85.1	0.0	6.0	71.0
28			2669	210	9	0	10	4894	26	46	90.6	0.0	5.8	72.0
29			1878	272	29	10	1	5450	50	27	103.7	0.0	5.8	71.0
30			2559	285	31	8	1	5923	79	12	78.0	0.0	6.4	71.0
31			2724	293	55	23	0	6727	54	44	78.2	0.0	6.0	72.0
TOTAL			25,304	3,233	166	56	271	135,162	4,102	1,665				
AVG			816	104	5.4	2	9	4,360	132	54	110.7	35.4	5.9	71.7

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	88,425	2,157
SUMMER	15,063	4,182
FALL	25,304	3,233
TOTAL	128,792	9,572

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK
184	57	84,992	205,809	2,551,439	8,514

PINK	CHUM
3	1

Bonneville had one Chum on the Bradford Island side on the 24th.

TABLE 11

TABLE 12

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 12

BONNEVILLE PROJECT
SEPTEMBER 1992

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	KCFS	KCFS	SECCHI	DEG F
1			2389	203	63	23		5438		26	78.6	0.0	6.0	72.0
2			3042	309	89	30		5192		16	83.9	0.0	6.2	71.0
3			4256	420	82	22		5055		26	93.0	0.0	6.2	71.0
4			5503	469	84	34		6026		14	83.0	0.0	5.5	70.0
5			5288	497	100	34		5421		42	98.8	0.0	5.5	70.0
6			5686	592	126	48		4810		41	94.5	0.0	5.5	70.0
7			5227	487	117	28		4270		25	83.0	0.0	6.0	70.0
8			7801	789	222	55		5244		33	102.0	0.0	6.0	68.0
9			5600	1014	251	79		5212		61	99.3	0.0	6.2	67.0
10			3677	692	232	61		4913		30	98.2	0.0	7.0	67.0
11			4988	800	218	80		6573		41	88.2	0.0	5.8	67.0
12			4393	1130	389	89		6822		63	78.2	0.0	6.0	67.0
13			3654	1054	423	96		5250		58	99.5	0.0	5.7	67.0
14			3012	771	556	140		3973		40	117.5	0.0	5.8	66.0
15			2077	556	440	122		3280		34	101.8	0.0	6.3	66.0
16			2556	942	646	146		4067		68	102.4	0.0	6.1	66.0
17			1569	657	504	93		2821		37	102.4	0.0	6.3	66.0
18			2258	799	400	109		2359		53	118.7	0.0	6.2	66.0
19			1678	855	618	115		3088		85	89.8	0.0	7.0	66.0
20			1878	1030	568	122		2976		80	85.3	0.0	7.0	66.0
21			3189	1163	459	102		2305		61	98.5	0.0	8.0	66.0
22			1559	840	322	87		1877		32	93.1	0.0	6.4	66.0
23			1457	863	254	118		1416		41	87.8	0.0	6.2	66.0
24			1696	1151	332	91		1411		64	105.7	0.0	6.0	66.0
25			447	537	184	39		748		32	118.8	0.0	6.0	66.0
26			299	477	139	22		769		31	99.7	0.0	5.7	66.0
27			316	455	116	30		723		15	78.7	0.0	6.2	66.0
28			448	500	78	19		771		16	90.0	0.0	6.0	65.0
29			330	500	92	33		561		12	102.8	0.0	6.0	64.0
30			292	503	97	36		421		20	113.6	0.0	5.5	64.0
TOTAL			86,565	21,055	8,201	2,103		103,792		1,197				
AVG			2,886	702	273	70		3,460		40	96.2	0.0	6.1	67.1

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	88,425	2,157
SUMMER	15,063	4,182
FALL	111,869	24,288
TOTAL	215,357	30,627

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK
8,385	2,160	84,992	309,601	2,551,439	9,711

PINK	CHUM
4	1

Bonneville had one Pink on the Bradford Island side on the 6th.

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 13

BONNEVILLE PROJECT

OCTOBER 1992

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	PINK	MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1			239	364	97	19		359	0	6	104.5	0.0	6.0	65.0
2			248	357	74	18		458	0	6	92.9	0.0	6.0	65.0
3			397	536	94	18		483	0	15	91.5	0.0	6.0	64.0
4			333	561	51	18		421	0	17	101.5	0.0	6.0	64.0
5			237	426	43	13		322	0	11	99.2	0.0	6.0	64.0
6			257	392	50	9		310	1	13	103.3	0.0	5.5	64.0
7			297	310	50	26		233	0	5	94.4	0.0	5.5	63.0
8			194	287	60	33		236	2	19	99.6	0.0	5.5	63.0
9			142	340	69	21		203	0	-4	95.5	0.0	6.0	63.0
10			132	393	106	48		156	0	5	90.8	0.0	6.0	62.0
11			139	193	80	30		140	0	-1	83.1	0.0	6.0	63.0
12			164	222	105	64		129	0	10	93.5	0.0	5.8	63.0
13			154	214	97	41		98	0	8	102.6	0.0	6.0	63.0
14			109	170	111	15		109	0	2	102.2	0.0	6.5	63.0
15			79	97	138	47		108	0	13	111.7	0.0	6.5	62.0
16			45	68	80	22		81	1	-1	95.1	0.0	7.0	62.0
17			77	88	119	41		97	0	5	90.5	0.0	7.5	62.0
18			57	98	119	24		114	2	0	91.2	0.0	7.5	62.0
19			85	73	176	33		108	4	0	109.6	0.0	7.8	60.0
20			48	63	101	31		71	4	-2	98.0	0.0	7.5	60.0
21			80	64	229	79		106	1	6	97.7	0.0	7.0	60.0
22			118	84	319	102		101	0	0	91.3	0.0	7.5	60.0
23			79	90	371	37		89	0	-1	90.2	0.0	8.0	60.0
24			83	96	269	48		81	0	-9	78.4	0.0	8.1	60.0
25			88	79	258	54		74	0	-2	81.9	0.0	8.3	61.0
26			61	60	299	60		19	0	5	95.1	0.0	8.1	61.0
27			61	55	209	62		41	5	3	105.0	0.0	6.0	60.0
28			32	19	186	71		32	0	10	98.6	0.0	6.0	60.0
29			55	32	168	29		45	0	2	102.9	0.0	6.5	59.0
30			51	24	279	68		46	0	2	115.2	0.0	7.0	59.0
31			22	25	256	109		48	0	-4	90.7	0.0	0.4	59.0
TOTAL			4,163	5,880	4,663	1,290		4,918	20	139				
AVG			134	190	150	42		159		4	96.7	0.0	6.4	61.8

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	88,425	2,157
SUMMER	15,063	4,182
FALL	116,032	30,168
TOTAL	219,520	36,507

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK
13,048	3,450	84,992	314,519	2,551,439	9,850

PINK	CHUM
24	2

Bonneville had one Chum on the Washington side on the 21st.

TABLE 13

TABLE 14

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 14

BONNEVILLE PROJECT
NOVEMBER 1992

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	CHUM	MINI-JK	KCFS	KCFS	SECCHI	DEG F
1			28	6	210	60		24	0	-1	85.0	0.0	6.5	59.0
2			15	5	136	31		21	1	0	102.0	0.0	6.5	58.0
3			22	23	186	26		42	1	-1	111.0	0.0	6.5	58.0
4			24	6	72	12		28	2	2	106.4	0.0	6.5	57.0
5			8	9	84	23		43	6	-2	107.1	0.0	6.1	57.0
6			7	9	97	24		40	1	4	110.0	0.0	6.2	57.0
7			3	11	95	9		46	1	0	97.4	0.0	6.0	57.0
8			11	3	44	16		17	2	2	92.5	0.0	5.8	57.0
9			14	5	89	19		34	0	6	113.7	0.0	6.0	57.0
10			2	4	57	13		51	10	1	131.9	0.0	7.0	56.0
11			5	3	60	12		26	2	-1	112.5	0.0	6.1	56.0
12			1	6	55	14		27	3	6	101.5	0.0	7.0	55.0
13			19	6	59	27		9	3	0	106.0	0.0	6.5	54.0
14			5	1	37	10		20	5	8	113.3	0.0	6.5	55.0
15			4	7	40	11		28	0	1	107.9	0.0	6.2	54.0
16											99.7	0.0	5.0	54.0
17											116.1	0.0	5.0	54.0
18											121.3	0.0	5.7	54.0
19											115.3	0.0	3.6	54.0
20											97.1	0.0	5.0	54.0
21											132.8	0.0	4.4	53.0
22											125.1	0.0	4.0	53.0
23											152.2	0.0	5.3	52.0
24											159.4	0.0	4.0	52.0
25											145.4	0.0	4.0	52.0
26											140.0	0.0	4.5	51.0
27											100.7	0.0	5.0	50.0
28											100.2	0.0	5.0	50.0
29											100.3	0.0	7.6	49.0
30											114.3	0.0	3.5	49.0
TOTAL			168	104	1,321	307		456	37	25				
AVG			11	7	88	20		30	2	2	113.9	0.0	5.6	54.3

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	88,425	2,157
SUMMER	15,063	4,182
FALL	116,200	30,272
TOTAL	219,688	36,611

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK
14,369	3,757	84,992	314,975	2,551,439	9,875

PINK	CHUM
24	39

TABLE 15

DISCHARGE AND WATER QUALITY DATA

BONNEVILLE PROJECT - 1992

DECEMBER

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	139.9	0.0	4.0	50.0
2	121.2	0.0	4.3	49.0
3	141.3	0.0	4.3	49.0
4	166.3	0.0	4.8	48.0
5	133.1	0.0	4.8	48.0
6	152.8	0.0	4.8	46.0
7	151.9	0.0	3.8	45.0
8	145.3	0.0	4.8	45.0
9	148.0	0.0	5.8	45.0
10	152.1	0.0	5.0	45.0
11	155.4	0.0	5.2	45.0
12	128.0	0.0	6.0	45.0
13	119.3	0.0	5.0	45.0
14	129.4	0.0	4.0	44.0
15	159.8	0.0	3.0	44.0
16	160.9	0.0	4.4	44.0
17	170.2	0.0	5.5	44.0
18	139.1	0.0	5.0	43.0
19	141.0	0.0	5.5	43.0
20	124.8	0.0	5.3	43.0
21	133.6	0.0	5.7	42.0
22	131.0	0.0	3.5	43.0
23	136.8	0.0	4.0	43.0
24	112.2	0.0	4.0	43.0
25	101.9	0.0	5.5	44.0
26	100.5	0.0	6.1	44.0
27	97.2	0.0	6.0	43.0
28	132.7	0.0	4.0	43.0
29	150.5	0.0	4.5	43.0
30	148.2	0.0	4.5	42.0
31	161.3	0.0	4.5	43.0
AVG.	138.2	0.0	4.8	44.6

TABLE 15

The following tables contain

the special Night Counts

from 2000 hours PST until 0500 hours PST
during June, July and August 1992

and

the Video Counts done in November and December of 1992

1-15 November 0400-0800 and 1600-2000 PST
16 November - 31 December 0400-2000 PST

TABLE 16

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND
FISH COUNTS

SPECIAL NIGHT COUNTING
at Bonneville
Jun-92

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	SOCKEYE	STEELHEAD	MINI-JCK
1		0		0	0	4	0
2		0		-1	0	-2	0
3		2		-1	-1	2	0
4		7		1	-1	7	0
5		4		0	2	8	0
6		6		0	4	2	0
7		5		0	3	7	0
8		7		2	7	2	0
9		3		0	12	5	0
10		7		0	9	4	0
11		4		1	13	9	0
12		1		0	18	7	0
13		7		2	16	10	0
14		8		0	27	13	0
15		10		1	40	13	0
16		6		0	32	15	0
17		11		0	38	26	0
18		18		0	74	26	0
19		25		1	82	24	2
20		19		0	169	27	1
21		17		1	270	12	3
22		14		0	375	17	3
23		14		0	398	28	0
24		15		0	384	22	0
25		9		1	413	54	0
26		10		0	260	19	0
27		9		0	247	22	0
28		11		0	275	13	0
29		7		0	177	12	0
30		10		1	396	21	0
TOTAL		266		9	3,739	429	9
AVG.		9			125	14	

CUMULATIVE NIGHT COUNTS	CHINOOK ADULT	CHINOOK JACK
	266	9

SOCKEYE	STEELHEAD	MINI-JCK
3,739	429	9

Counts start the previous day at 2000 hours and end at 0500 hours of the day shown .

TABLE 16

TABLE 17

TABLE 17

MONTHLY FISH PASSAGE SUMMARY REPORT **SPECIAL NIGHT COUNTING**
U.S. ARMY ENGINEER DISTRICT, PORTLAND **at Bonneville**

FISH COUNTS **Jul-92**

DATE	SPRING	CHINOOK ADULT SUMMER	FALL	CHINOOK JACK	SOCKEYE	STEELHEAD	MINI-JCK
1		16		1	327	36	0
2		11		6	192	13	0
3		9		0	308	28	3
4		8		5	195	16	0
5		10		3	116	21	0
6		6		1	90	14	0
7		15		0	39	16	0
8		17		1	114	23	0
9		11		-1	95	30	0
10		10		5	104	32	0
11		5		4	87	20	0
12		4		2	201	33	2
13		9		2	145	51	0
14		8		0	135	42	0
15		8		0	122	19	0
16		5		1	125	38	0
17		6		4	67	12	1
18		2		1	54	12	1
19		6		2	63	29	1
20		4		0	46	77	4
21		8		1	14	53	3
22		4		0	23	34	0
23		4		1	7	28	1
24		5		0	13	30	0
25		3		3	20	45	2
26		6		0	14	29	3
27		12		2	23	65	0
28		5		0	12	37	0
29		6		2	8	56	2
30		12		0	5	108	1
31		2		2	5	73	1
TOTAL		237		48	2,769	1,120	25
AVG		8		1.5	89	36	1

CUMULATIVE NIGHT COUNTS

CHINOOK ADULT	CHINOOK JACK
503	57

SOCKEYE	STEELHEAD	MINI-JCK
6,508	1,549	34

Counts start the previous day at 2000 hours and end at 0500 hours of the day shown .

TABLE 20

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND
FISH COUNTS

This report contains Bonneville's video counts only;
made before and after normal counting shifts.
Dec-92

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	CHUM	MINI-JK
1	BRADFORD ISLAND		0		0	6		30		1
2	LADDER		1		2	4		11		1
3	OUT OF		1		2	1		27		0
4	SERVICE		0		0	0		37		0
5	1 thru 9 December		0		1	4		19		0
6			0		0	0		17		0
7			1		0	2		15		0
8			0		0	0		13		1
9			1		2	3		23		0
10			0		-1	2		21		0
11			-1		1	0		31		0
12			0		1	2		30		0
13			0		-1	2		18		1
14			0		1	0		11		0
15			0		1	0		24		0
16			0		2	1		18		0
17			0		0	0		16		0
18			0		1	1		19		0
19			1		0	1		23		0
20			0		0	0		11		0
21			0		1	0		46		0
22			0		0	0		64		0
23			0		2	1		56		1
24			0		0	-1		46		1
25			0		0	0		38		0
26			0		-1	0		36		0
27			1		0	0		61		0
28			0		0	0		49		0
29			0		1	0		31		0
30			0		0	0		38		0
31			0		0	0		27		0
TOTAL			5		15	29		906		6
								29		

CHINOOK ADULT	CHINOOK JACK
222	143

COHO ADULT	COHO JACK
2,197	925

STEELHEAD	CHUM	MINI-JK
1,952	74	63

TABLE 20

TABLE 21

TABLE 21

MONTHLY COUNT OF CHINOOK SALMON
BONNEVILLE DAM - 1938 - 1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL*	SPRING Jan1- May 31	SUMMER Jun 1- Jul 31	FALL Aug - Dec 31
1938					22,371	8,221	6,556	34,765	197,294	2,302	263	27	271,799	22,371	14,777	234,651
1939	6	12	121	51,410	25,159	5,602	17,828	32,909	150,851	2,197	78	16	286,189	76,708	23,430	186,051
1940			504	37,253	28,621	7,027	14,938	58,643	240,515	3,765	287	34	391,587	66,378	21,965	303,244
1941	4		1,360	51,486	19,445	7,013	9,395	12,590	351,967	7,179	866	138	461,443	72,295	16,408	372,740
1942	1	15	34	9,506	30,915	11,816	12,821	27,581	303,939	4,485	639	190	401,752	40,471	24,637	336,644
1943	11	6	43	12,172	53,268	5,440	8,044	28,985	201,414	3,354	365	21	313,123	65,500	13,484	234,139
1944	1	2	65	15,671	15,127	4,363	8,241	55,468	139,254	2,388	164	20	240,764	30,866	12,604	197,294
1945	6	4	81	17,148	26,276	11,293	16,317	32,254	189,675	4,281	137	6	297,478	43,515	27,610	226,353
1946	1	2	25	14,196	53,313	30,253	20,967	45,422	277,152	4,523	173	25	446,052	67,537	51,220	327,295
1947		2	141	83,520	49,899	25,502	13,358	43,062	260,385	3,945	526	37	480,377	133,562	38,860	307,955
1948	10		251	21,205	20,262	44,137	23,100	35,934	270,238	3,928	467	23	419,555	41,728	67,237	310,590
1949			5	5,765	44,304	24,232	22,500	41,500	137,599	1,571	215	6	277,697	50,074	46,732	180,891
1950			21	6,630	50,638	16,667	32,937	40,462	205,521	4,356	143		357,375	57,289	49,604	250,482
1951			32	28,801	86,055	54,889	24,394	33,785	97,131	6,489	212		331,788	114,888	79,283	137,617
1952			255	8,130	107,807	62,491	21,800	82,290	135,053	2,576	477		420,879	116,192	84,291	220,396
1953			1,254	126,450	42,583	27,228	30,593	27,398	75,145	1,495	333		332,479	170,287	57,821	104,371
1954		2	657	82,877	51,230	46,801	32,596	24,969	80,426	1,189	200		320,947	134,766	79,397	106,784
1955			1,391	84,436	85,769	45,502	37,437	32,833	70,558	1,803	124		359,853	171,596	82,939	105,318
1956			161	8,850	54,438	64,262	36,938	42,203	92,030	1,854	179	2	300,917	63,449	101,200	136,268
1957			328	90,984	45,128	104,243	30,790	34,829	95,457	1,352	175		403,286	136,440	135,033	131,813
1958			468	15,361	59,377	74,375	27,524	19,735	227,504	1,948	127		426,419	75,206	101,899	249,314
1959			182	26,944	34,007	39,581	49,371	24,945	168,187	1,643	168		345,028	61,133	88,952	194,943
1960			184	37,064	32,349	65,247	19,923	22,719	76,327	2,012	224		256,049	69,597	85,170	101,282
1961			476	72,526	25,693	41,302	25,159	22,675	90,688	3,108	353		281,980	98,695	66,461	116,824
1962			1,278	56,201	33,637	52,392	25,093	23,526	91,320	2,759	419		286,625	91,116	77,485	118,024
1963			2,802	43,859	28,810	36,836	27,178	28,586	104,415	5,571	503		278,560	75,471	64,014	139,075
1964			2,418	69,031	19,979	35,814	44,717	26,546	141,525	4,157	235		344,422	91,428	80,531	172,463
1965			1,238	47,083	35,945	38,482	37,515	38,727	112,664	6,074	229		317,957	84,266	75,997	157,694

TABLE 21

(Continued)

MONTHLY COUNT OF CHINOOK SALMON

BONNEVILLE DAM - 1938 - 1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL*	SPRING Jan1- May 31	SUMMER Jun 1- Jul 31	FALL Aug - Dec 31
1966			2,168	92,637	17,864	40,233	31,764	20,608	128,421	6,052	364		340,111	112,669	71,997	155,445
1967			1,620	71,957	11,358	41,847	53,812	25,760	154,323	5,405	155		366,237	84,935	95,659	185,643
1968			1,342	69,420	28,425	46,793	36,126	27,779	126,994	4,010	265		341,154	99,187	82,919	159,048
1969			1,910	65,371	106,281	59,177	42,976	38,456	187,502	5,511	359		507,543	173,562	102,153	231,828
1970			2,020	78,605	30,351	35,091	29,811	44,559	159,710	4,364	269		384,780	110,976	64,902	208,902
1971			683	60,849	63,985	37,757	40,154	26,749	166,346	8,820	359		405,702	125,517	77,911	202,274
1972			426	154,443	31,271	36,758	34,072	23,577	109,820	3,939	150		394,456	186,140	70,830	137,486
1973			1,585	128,495	12,068	24,164	21,196	31,513	170,895	8,457	262		398,635	142,148	45,360	211,127
1974			434	57,516	76,585	13,424	32,472	15,554	156,543	13,923	308		366,759	134,535	45,896	186,328
1975			162	48,295	55,647	16,989	27,362	37,907	234,145	4,847	212		425,566	104,104	44,351	277,111
1976			587	58,978	53,883	39,130	29,883	48,776	262,615	13,395	526		507,773	113,448	69,013	325,312
1977			3,569	98,710	17,229	21,790	19,233	21,992	171,303	11,805	1,026		366,657	119,508	41,023	206,126
1978			4,291	100,712	44,860	27,125	17,198	23,513	165,411	11,104	386		394,600	149,863	44,323	200,414
1979			790	29,751	20,921	15,924	18,293	41,273	142,241	6,865	248		276,306	51,462	34,217	190,627
1980			535	30,732	29,720	15,384	15,681	26,106	118,669	8,404	287		245,518	60,987	31,065	153,466
1981			1,853	41,917	21,239	13,262	13,667	32,519	154,696	6,288	209		285,650	65,009	26,929	193,712
1982			312	30,282	45,450	15,439	11,175	34,058	174,348	11,487	258		322,809	76,044	26,614	220,151
1983			144	25,423	31,154	12,793	10,665	26,147	116,879	20,458	683		244,346	56,721	23,458	164,167
1984			351	27,185	23,509	13,060	15,447	41,909	180,867	21,673	424		324,425	51,045	28,507	244,873
1985			2,036	52,145	36,780	16,763	13,107	64,899	255,020	22,099	1,024		463,873	90,961	29,870	343,042
1986			2,292	82,356	38,395	18,365	12,676	38,737	337,721	39,511	828		570,881	123,043	31,041	416,797
1987			2,727	68,866	30,214	22,728	14,979	82,500	298,865	25,614	1,001		547,494	101,807	37,707	407,980
1988			2,663	69,689	22,394	18,191	18,333	111,905	236,662	13,656	532		494,025	94,746	36,524	362,755
1989			36	56,583	30,640	15,659	17,316	102,573	181,691	11,218	401		416,117	87,259	32,975	295,883
1990			677	67,536	28,039	16,990	11,031	59,066	149,404	8,015	232		340,990	96,252	28,021	216,717
1991			601	41,431	19,196	12,755	9,198	21,959	159,068	10,116	298		274,622	61,228	21,953	191,441
1992			2,188	68,073	20,321	11,871	7,374	28,537	107,620	10,043	272		256,299	90,582	19,245	146,472
TOTAL	40	45	53,777	2,902,516	2,130,184	1,650,473	1,283,031	2,074,272	9,392,013	409,383	19,619	355	19,915,708	5,086,562	2,933,504	11,895,642
10-Year Average			1,372	55,929	28,064	15,918	13,013	57,823	202,380	18,240	570		393,307	85,364	28,930	279,013

*Jacks included

TABLE 21

TABLE 22

MONTHLY COUNT OF SOCKEYE SALMON

'BONNEVILLE DAM; 1938 - 1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1938					1,025	17,811	53,864	2,097	235	6	2		75,040
1939				48	189	29,386	43,124	616	19				73,382
1940					206	59,639	85,885	3,063	13	1			148,807
1941				299	1,052	23536	39,193	1,615	46				65,741
1942					13	12,624	41,301	1,477	49				55,464
1943					9	4525	33,613	1,697	1				39,845
1944			1		16	3099	11,171	659	126				15,072
1945			10	51	521	1,507	6,903	498	10	1			9,501
1946				9	67	7,815	64,715	1,747	21	2			74,376
1947					5	59,378	108,175	3,564	15	1		1	171,139
1948						12,023	117,652	1,849	13	4			131,541
1949					151	9,013	41,619	655	6				51,444
1950						341	75,784	1,826	42				77,993
1951					25	81,045	87,104	1,214	40				169,428
1952			7	1	3	136,939	47,188	467	30	2	8		184,645
1953			57	27	663	45,711	186,933	1,774	50				235,215
1954			1		13	52,359	76,505	1,212	17				130,107
1955					79	21,923	214,860	866	11	9			237,748
1956					10	29,649	125,185	1,564	7	3			156,418
1957					21	38,616	43,938	323	14	3			82,915
1958					25	38,736	82,719	878	23	8			122,389
1959				2	153	10,155	75,325	906	14	5			86,560
1960					4	41,758	17,615	321	15				59,713
1961				3	22	7,960	9,059	56	9	2			17,111
1962				1	21	9,713	18,310	82	47	5			28,179
1963					492	25,010	34,275	216	304	17	5		60,319
1964				3	570	32,079	66,857	213	110	10	14		99,856
1965					457	21,860	31,776	744	285	3			55,125
1966				10	338	57,509	97,845	800	155	4			156,661
1967				18	38	36,091	107,558	344	106	3			144,158
1968				54	372	74,226	33,245	199	101	9	1		108,207
1969				5	165	24,238	34,970	120	124	13	1		59,636
1970				5	269	22,977	46,062	1,147	290	12			70,762

TABLE 22
(Continued)

MONTHLY COUNT OF SOCKEYE SALMON

'BONNEVILLE DAM; 1938 - 1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1971					70	14,789	72,203	313	69	2	1		87,447
1972					614	16,505	37,939	1,254	9	2			56,323
1973					17	29,314	29,308	337	3				58,979
1974					14	8,073	35,407	340	3				43,837
1975					2	17,961	40,050	192	7				58,212
1976					94	22,532	20,661	297	26	1			43,611
1977				1	38	74,551	25,178	61					99,829
1978				1	2	12,442	5,884	101	6				18,436
1979					1	25,474	26,297	826	30				52,628
1980						22,949	35,764	164	4	1			58,882
1981					1	36,931	19,001	100	4				56,037
1982					12	20,731	29,207	264	4	1			50,219
1983						52,134	48,004	400	5	2			100,545
1984					6	106,892	45,141	494	7	1			152,541
1985				3	13	112,054	53,842	422	4	2			166,340
1986					2	27,303	30,279	475	63	1			58,123
1987					1	75,674	40,930	383	5				116,993
1988					11	44,409	35,168	121	5				79,714
1989					3	24,638	17,000	231	11	1			41,884
1990						26,141	23,244	195	1				49,581
1991						22,318	53,699	457	7				76,481
1992					20	54,292	30,409	271					84,992
TOTAL			76	541	7,915	1,897,358	2,914,943	42,507	2,621	137	32	1	4,866,131
10-Year Average					6	54,586	37,772	345	11				92,719

TABLE 22

TABLE 23

MONTHLY COUNT OF COHO SALMON

BONNEVILLE DAM; 1938-1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL*	JACKS
1938	3							3,070	10,995	972	141	7	15,188	
1939	3							1,811	12,226	310	15	18	14,383	
1940	2							1,451	10,212	213	33	5	11,916	
1941								1,317	16,061	369	160	2	17,909	
1942								1,193	11,062	147			12,402	
1943								762	1,676	89	20		2,547	
1944								1,052	3,021	103	29	2	4,207	
1945							2	239	533	15		1	790	
1946		10	4				22	228	3,609	1		24	3,898	
1947	12	2	1					217	10,928	10	3	1	11,174	
1948	1						11	158	3,893	10	3	5	4,081	
1949							17	270	703	5	8	1	1,004	
1950								1,570	8,545	36			10,151	
1951								197	4,773	225	6		5,201	
1952							10	2,581	5,131	22	24		7,768	
1953							1	7,094	5,890	22	11		13,018	
1954								668	3,319	74	1		4,062	
1955								443	3,188	94			3,725	
1956							7	1,158	4,879	83			6,127	
1957								1,564	3,046	63	2		4,675	
1958								341	3,220	99	13		3,673	
1959								122	2,551	22			2,695	
1960								538	2,502	224	4		3,268	
1961								277	2,867	306	6		3,456	
1962							1	1,116	13,091	543	37		14,788	
1963							4	1,071	8,664	2,724	195		12,658	
1964							23	3,776	46,535	3,069	199		53,602	
1965						2	21	5,911	61,335	8,566	197		76,032	
1966						46	874	4,921	59,457	6,361	232		71,891	34,919
1967						33	715	3,814	87,254	4,560	112		96,488	47,893
1968						48	124	10,450	50,900	1,868	98		63,488	20,435
1969						38	443	4,671	41,176	2,998	52		49,378	25,216
1970						2	128	6,604	70,631	2,631	120		80,116	25,248

TABLE 23

(Continued)

MONTHLY COUNT OF COHO SALMON

BONNEVILLE DAM; 1938-1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL*	JACKS
1971							57	7,292	58,235	9,753	652		75,989	22,172
1972							66	9,481	52,456	3,792	137		65,932	31,716
1973							636	12,656	33,736	6,715	866		54,609	28,760
1974							539	8,805	40,761	8,631	2,219		60,955	29,350
1975							56	5,373	39,167	11,892	1,819		58,307	25,535
1976							143	5,970	40,505	5,417	1,115		53,150	16,484
1977							55	1,134	15,163	2,582	474		19,408	10,083
1978				1			2	2,643	38,308	10,531	1,105		52,590	22,312
1979							68	7,324	28,732	7,583	1,621		45,328	15,716
1980							10	781	13,601	3,327	4,333		22,052	9,078
1981							4	3,162	23,962	3,108	274		30,510	8,575
1982							79	3,687	55,743	13,182	1,141		73,832	18,016
1983							44	319	7,237	5,020	2,553		15,173	6,775
1984							41	1,394	20,174	6,229	1,649		29,487	12,728
1985			1			7	92	3,977	46,749	5,670	361		56,857	18,307
1986							181	2,502	110,714	14,436	3,020		130,853	22,204
1987							464	2,364	21,002	3,556	249		27,635	9,713
1988							78	3,377	26,303	8,614	1,248		39,620	12,566
1989							60	2,353	24,089	9,543	3,236		39,281	11,863
1990							9	587	18,202	5,230	817		24,845	13,218
1991							5	941	46,331	13,713	3,067		64,057	5,189
1992							19	222	10,304	5,953	1,628		18,126	3,757
TOTAL	21	12	6	1	0	176	5,111	156,999	1,345,347	201,311	35,305	66	1,744,355	507,828
10 Year verage							99	1,804	33,111	7,796	1,783		44,593	11,632

*Jacks included

TABLE 23

TABLE 24

MONTHLY COUNT OF STEELHEAD
BONNEVILLE DAM; 1938-1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	A-Run Jan 1- Aug 25	B-Run Aug 26- Dec 31
1938					6,622	2,382	19,455	29,231	46,618	2,264	339	92	107,003	49,306	57,697
1939	23	19	570	8,110	1,587	1,490	36,681	38,062	33,891	1,264	216	119	122,032	80,096	41,936
1940	5	96	1,688	4,125	998	4,489	61,188	46,071	64,377	1,786	292	59	185,174	106,724	78,450
1941	37	76	1,641	6,392	1,518	996	21,940	29,600	50,542	3,980	1,063	304	118,089	58,109	59,980
1942	4	37	256	3,642	4,159	1,588	19,905	41,973	77,076	2,412	566	182	151,800	65,219	86,581
1943	14	18	654	3,374	4,698	1564	7,755	29,894	41,051	2,444	573	94	92,133	41,219	50,914
1944	50	157	1,019	6,142	2,224	1169	21,868	24,508	35,907	6,129	1,119	226	100,518	51,585	48,933
1945	1,003	1078	3,008	4,685	1,557	1,109	24,537	40,593	40,194	1,925	302	142	120,133	72,685	47,448
1946	64	551	3,040	9,839	5,482	3,265	20,600	58,466	38,399	2,070	262	769	142,807	93,422	49,385
1947	197	321	1,968	6,889	2,025	1,595	28,134	40,819	50,025	2,905	443	123	135,444	75,035	60,409
1948	154	119	1,631	4,473	1,170	1,895	33,191	53,621	40,609	1,742	381	76	139,062	87,453	51,609
1949	1		1,689	3,293	1,712	1,264	34,314	54,281	20,786	1,161	686	98	119,285	90,762	28,523
1950	13	8	1,156	4,537	1,667	691	25,142	53,904	24,226	1,932	811		114,087	80,191	33,896
1951			375	2,338	1,568	5,187	74,980	39,712	15,357	947	225		140,689	121,100	19,589
1952			278	1,248	1,751	8,202	118,110	79,735	48,293	2,735	638		260,990	190,012	70,978
1953			1,310	5,308	1,456	5,313	106,712	64,006	36,107	2,797	905		223,914	173,135	50,779
1954		6	679	5,511	1,571	6,115	59,443	65,234	34,941	2,209	551		176,260	126,085	50,175
1955			1,006	2,100	1,149	2,418	79,124	84,746	24,239	3,361	268		198,411	161,614	36,797
1956			1,409	2,718	1,582	3,122	48,306	47,148	23,343	2,846	635	7	131,116	99,692	31,424
1957			926	2,081	760	8,434	66,738	34,915	24,029	1,069	231		139,183	105,179	34,004
1958			495	651	1,457	5,645	53,734	22,827	44,478	1,859	291		131,437	79,533	51,904
1959			219	746	1,236	2,562	60,549	38,417	23,579	1,540	178		129,026	98,198	30,828
1960			412	904	1,090	4,314	44,026	33,571	28,058	1,090	211		113,676	77,141	36,535
1961			374	1,161	692	2,246	44,379	41,237	47,409	1,561	660		139,719	79,269	60,450
1962			381	1,957	1,491	3,737	49,789	40,177	64,084	1,798	611		164,025	86,990	77,035
1963			503	1,035	1,385	4,192	51,951	31,441	35,446	2,920	545		129,418	83,858	45,560
1964			490	1,609	769	1,940	50,640	26,892	32,406	1,954	552		117,252	76,135	41,117
1965			211	1,516	1,419	4,265	89,405	29,506	37,529	1,971	631		166,453	120,560	45,893

TABLE 24
(Continued)
MONTHLY COUNT OF STEELHEAD
BONNEVILLE DAM - 1938-1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	Jan 1-Aug 25	Aug 26-Dec 31
1966			658	2,682	2,389	13,051	57,975	25,779	37,733	2,657	737		143,661	97,545	46,116
1967			416	1,182	899	3,062	40,881	36,787	35,472	2,701	472		121,872	78,794	43,078
1968			340	861	1,315	3,664	29,773	41,006	27,865	1,645	505		106,974	68,423	38,551
1969			911	2,164	2,897	6,889	63,222	36,077	26,565	1,484	573		140,782	104,051	36,731
1970			244	1,267	1,331	4,208	30,866	46,307	27,073	1,909	305		113,510	78,106	35,404
1971			463	1,377	1,810	4,469	84,877	58,249	38,619	3,739	363		193,966	141,054	52,912
1972			492	2,562	2,137	3,444	59,933	48,223	65,523	3,432	140		185,886	107,227	78,659
1973			830	2,534	1,367	5,360	53,820	46,399	43,275	3,918	320		157,823	100,011	57,812
1974			1,292	4,127	5,547	6,349	57,212	44,266	14,654	3,080	527		137,054	84,402	52,652
1975			1,080	4,284	4,324	6,058	30,823	28,623	9,106	904	338		85,540	71,586	13,954
1976			1,285	3,459	3,677	9,130	38,907	44,204	21,084	1,953	478		124,177	92,370	31,807
1977			1,159	4,121	4,115	11,395	67,554	35,161	66,084	3,298	550		193,437	113,682	79,755
1978			1,750	3,327	4,587	10,883	25,284	25,637	30,461	2,168	334		104,431	64,188	40,243
1979			1,333	1,905	1,785	7,585	33,379	39,399	23,592	4,710	291		113,979	79,472	34,507
1980			1,139	3,378	1,409	7,790	28,448	51,073	32,277	3,233	507		129,254	85,010	44,244
1981			1,031	3,812	3,887	12,628	56,787	52,435	25,737	2,650	303		159,270	121,785	37,485
1982			1,239	4,188	5,335	8,636	39,159	51,329	44,456	3,146	152		157,640	103,159	54,481
1983			458	1,253	1,638	6,017	69,036	86,066	48,920	4,636	415		218,439	148,853	69,586
1984			579	2,106	4,216	14,454	92,546	93,866	102,877	4,463	453		315,560	189,365	126,195
1985			977	2,956	3,997	13,036	102,256	152,455	63,575	4,088	647		343,987	251,723	92,264
1986			2,712	3,674	4,500	16,655	136,622	129,089	76,532	9,280	827		379,891	279,154	100,737
1987			1,189	2,112	3,233	12,443	104,615	115,481	58,815	4,331	862		303,081	227,013	79,120
1988			1,158	3,728	5,016	13,615	72,718	113,791	63,864	4,421	761		279,072	190,030	89,042
1989			630	2,213	3,343	10,176	62,913	117,686	84,665	5,419	753		287,798	176,965	110,833
1990			966	2,563	4,501	11,643	37,140	52,327	65,813	7,522	552		183,027	89,144	93,883
1991			640	2,082	2,196	6,601	52,187	110,027	93,152	6,947	713		274,545	150,542	124,003
1992			646	1,964	3,239	9,708	55,090	135,162	103,792	4,918	456		314,975	175,218	139,757
TOTAL	1,565	2,486	53,005	168,265	139,485	330,138	2,936,619	3,037,491	2,414,580	165,323	27,519	2,291	9,278,767	6,099,179	3,182,640
10-Year Average			996	2,465	3,588	11,435	78,512	110,595	76,201	5,603	644		290,038	187,801	102,542

TABLE 25

MONTHLY COUNT OF SHAD at BONNEVILLE DAM 1938-1992

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1938						39	3,184	1,502	527	21			5,273
1939					14	1,539	3,065	157	28				4,803
1940					48	12,931	9,178	72	1				22,230
1941					5	2,417	16,010	197	12	16			18,657
1942					2	38	11,341	1,473	5				12,859
1943						18	2,545	265	20				2,848
1944						287	16,568	248					17,103
1945						2,801	90,773	948	4				94,526
1946						3,895	16,073	415					20,383
1947					8	5,645	20,280	105	3				26,041
1948						8	6,458	1,953	2	1			8,422
1949						2,647	19,609	322	1				22,579
1950							7,265	548	3				7,816
1951						1,269	6,792	277	15				8,353
1952						487	2,595	45	4				3,131
1953						53	14,856	1,502	19				16,430
1954						34	3,848	1,136	11				5,029
1955						21	4,411	1,358	18				5,808
1956					1	67	6,838	1,168	11				8,085
1957						1,695	11,039	422	1	2			13,159
1958						3,885	6,257	59					10,201
1959					3	32	6,315	369	1				6,720
1960						35,259	57,443	594	72				93,368
1961						18,952	245,471	1,236	33	5			265,697
1962						43,689	387,554	4,657	82	4	2		435,988
1963					70	77,961	307,466	4,044	217	14			389,772
1964					19	3,203	236,321	13,008	121	2			252,674
1965					1	33,815	570,432	12,844	194	35	2		617,323
1966					94	181,187	367,643	7,988	545	51	5		557,513
1967			1	1		6,673	212,681	2,944	152	8			222,460
1968					800	107,881	183,878	1,387	121	10	1		294,078
1969			2	5	158	233,018	81,159	2,846	163	7			317,358
1970				2	250	228,519	99,659	566	262	18			329,276

TABLE 25
(Continued)

MONTHLY COUNT OF SHAD at
BONNEVILLE DAM 1938-1992

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1971					30	34,345	154,215	951	55	1			189,597
1972					38	16,689	192,608	5,301	88	1			214,725
1973					116,057	377,830	24,701	577	38	4			519,207
1974					7	6,122	91,302	1,496	17	1			98,945
1975					11	43,712	219,133	1,349	38	3			264,246
1976					4	123,053	179,994	2,112	49	7			305,219
1977					51,709	431,540	11,818	568	76	12			495,723
1978					30	802,110	57,997	991	33	5			861,166
1979					800	994,253	43,734	658	258	141	13		1,039,857
1980					1,460	766,473	170,705	685	51	15	1		939,390
1981				2	20,976	708,295	150,730	1,080	79	17			881,179
1982				1	6,888	655,037	117,325	914	37	9	1		780,212
1983					78,105	1,224,342	118,975	1,103	112	37			1,422,674
1984					553	950,406	320,526	4,097	153	55	1		1,275,791
1985					101,770	816,288	55,233	1,410	206	39	5		974,951
1986					104,724	722443	29,622	1,164	166	47	4		858,170
1987				28	254,326	678,850	10,254	379	32	5	1		943,875
1988				20	408,822	734,635	20,146	697					1,164,320
1989				1	199,327	1,651,338	24,697	2,041					1,877,404
1990				4	532,617	2,296,098	116,799	2,347					2,947,865
1991				1	37,677	1,566,933	307,835	1,971					1,914,417
1992				256	685,939	1,767,696	93,446	4,102					2,551,439
TOTAL			3	321	2,603,343	18,378,453	5,546,802	102,648	4,136	593	36		26,636,335
10 Year Average					240,386	1,240,903	109,753	1,931					1,593,091

TABLE 25

TABLE 26

MONTHLY TOTALS OF SALMONIDS AND SHAD COUNTED OVER THE DALLES DAM

1992

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*				38,141	19,414	9,595	5,797	14,589	71,281	9,690			168,507
STEELHEAD				1,104	743	3,494	18,753	37,269	157,216	13,600			232,179
SOCKEYE					16	38,319	27,812	232	4	1			66,384
COHO*								11	3,119	695			3,825
CHUM													
PINK								1	2				3
MINI-JACKS**				18	3	926	1,540	471	1,142	210			4,310
TOTAL				39,263	20,176	52,334	53,902	52,573	232,764	24,196			475,208
SHAD				734	726,093	1,958,259	134,520	4,707					2,824,313

*Jacks included

**Salmonid fish under 12 inches in length.

TABLE 27

DISCHARGE AND WATER QUALITY DATA

THE DALLES PROJECT - 1992

JANUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	122.5	0.0	5.0	44.0
2	132.1	0.0		
3	160.2	0.0		
4	131.7	0.0		
5	132.1	0.0		
6	156.7	0.0		
7	176.4	0.0		
8	160.3	0.0		
9	160.4	0.0		
10	175.1	0.0		
11	168.5	0.0		
12	136.4	0.0		
13	148.0	0.0		
14	153.1	0.0		
15	156.1	0.0		
16	150.2	0.0		
17	143.2	0.0		
18	143.7	0.0		
19	117.1	0.0		
20	145.7	0.0		
21	142.4	0.0		
22	160.7	0.0		
23	156.3	0.0		
24	144.5	0.0		
25	133.0	0.0		
26	104.1	0.0		
27	115.9	0.0		
28	109.8	0.0		
29	133.8	0.0		
30	116.3	0.0		
31	130.7	0.0		
AVG.	142.5	0.0		

FEBRUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	116.2	0.0		
2	112.7	0.0		
3	118.7	0.0		
4	109.3	0.0		
5	138.9	0.0		
6	119.1	0.0		
7	122.6	0.0		
8	120.7	0.0		
9	104.8	0.0		
10	115.7	0.0		
11	114.4	0.0		
12	112.3	0.0		
13	118.9	0.0		
14	112.9	0.0		
15	110.9	0.0		
16	95.5	0.0		
17	127.6	0.0		
18	133.2	0.0		
19	138.2	0.0		
20	139.3	0.0		
21	161.5	0.0		
22	145.1	0.0		
23	122.6	0.0		
24	147.1	0.0		
25	135.4	0.0		
26	131.4	0.0		
27	161.7	0.0		
28	155.6	0.0		
29	149.8	0.0		
AVG.	127.3	0.0		

MARCH

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	140.9	0.0		41.0
2	156.1	0.0		
3	181.5	0.0		40.0
4	169.9	0.0	3.0	40.0
5	180.6	0.0	2.5	40.0
6	154.6	0.0	2.5	40.0
7	155.6	0.0	2.5	40.0
8	177.5	0.0		
9	183.0	0.0		
10	175.8	0.0		
11	189.1	0.0		
12	151.9	0.0		
13	164.8	0.0		
14	158.6	0.0		
15	147.0	0.0		
16	155.2	0.0		
17	143.8	0.0		
18	168.4	0.0		
19	186.8	0.0		
20	167.6	0.0		
21	113.4	0.0		
22	113.6	0.0		
23	122.5	0.0		
24	119.7	0.0		
25	124.7	0.0		
26	117.1	0.0		
27	139.1	0.0		
28	120.2	0.0		
29	90.8	0.0		
30	110.4	0.0	4.2	49.0
31	118.1	0.0	4.2	49.0
AVG.	148.3	0.0	3.2	42.4

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 28

THE DALLES PROJECT

APRIL 1992

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	KCFS	KCFS	SECCHI	DEG F
1	324			1				32	1	1	126.7	0.0	4.2	49.0
2	392			1				36	0	0	120.0	0.0	2.2	49.0
3	621			6				86	1	2	133.7	0.0	4.0	49.0
4	631			3				76	1	2	120.2	0.0	4.0	50.0
5	686			1				52	0	0	119.9	0.0	4.0	50.0
6	460			2				49	5	1	147.3	0.0	4.0	50.0
7	557			5				54	5	0	148.0	0.0	3.5	50.0
8	620			4				62	2	1	136.2	0.0	3.0	50.0
9	996			7				33	13	0	160.0	0.0	3.0	50.0
10	1203			5				47	6	1	145.1	0.0	3.0	51.0
11	1233			5				53	8	0	110.5	0.0	3.0	50.0
12	1569			12				42	4	0	86.7	0.0	2.5	51.0
13	1605			7				28	11	0	117.3	0.0	3.0	50.0
14	1627			10				39	22	2	115.5	0.0	3.0	51.0
15	1473			5				24	1	4	128.5	0.0	3.5	51.0
16	1799			25				17	20	1	137.8	0.0	3.5	51.0
17	1724			12				49	7	0	111.6	0.0	3.5	51.0
18	2854			14				38	17	0	133.9	0.0	2.5	52.0
19	1992			8				30	18	0	140.7	0.0	3.5	52.0
20	1379			12				46	25	0	139.3	0.0	3.5	53.0
21	1306			7				22	6	0	163.9	0.0	3.5	53.0
22	1592			17				21	5	0	159.6	0.0	3.4	52.0
23	1455			8				17	14	0	192.4	0.0	3.5	52.0
24	1035			17				28	25	2	178.8	0.0	4.1	52.0
25	1152			20				12	22	0	175.8	0.0	3.5	52.0
26	1384			17				21	42	1	170.5	0.0	3.6	54.0
27	1121			17				11	65	0	155.4	0.0	3.5	54.0
28	1145			23				28	85	0	162.1	0.0	3.2	53.0
29	1538			48				27	114	0	172.2	0.0	3.5	55.0
30	2294			55				24	189	0	185.4	0.0	3.2	53.0
TOTAL	37,767			374				1,104	734	18				
AVG.	1,259			12				37	24		143.2	0.0	3.4	51.3

TABLE 28

TABLE 29

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 29

THE DALLES PROJECT

MAY 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK
1	2517			78			0	32	227	0
2	1684			79			0	21	234	0
3	1643			69			0	31	254	0
4	1104			73			0	25	354	0
5	896			49			2	16	684	0
6	1022			72			0	21	1557	0
7	911			52			0	19	2614	0
8	654			45			0	28	2944	0
9	597			36			0	19	3872	0
10	532			42			0	20	3365	0
11	465			42			0	21	1639	0
12	368			52			0	15	2784	0
13	404			42			0	20	4803	0
14	437			48			0	19	5124	0
15	328			18			0	19	9547	0
16	303			35			0	30	15555	0
17	321			17			0	17	17754	1
18	309			21			0	16	19453	1
19	260			14			0	28	26713	0
20	312			19			1	22	25992	0
21	253			11			0	22	29956	0
22	323			18			0	29	26358	0
23	238			18			0	17	22234	0
24	324			15			0	36	35223	0
25	258			24			1	23	47460	0
26	254			8			1	31	65839	0
27	283			17			0	36	51939	0
28	299			18			2	29	90297	0
29	268			16			0	26	72789	0
30	422			20			4	38	47081	0
31	350			7			5	17	91448	1
TOTAL	18,339			1,075			16	743	726,093	3
AVG.	592			35				24	23,422	

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	206.6	11.5	2.8	54.0
2	208.5	22.6	3.0	53.0
3	192.7	21.3	2.3	53.0
4	184.3	19.4	4.0	54.0
5	202.0	21.7	3.7	56.0
6	205.1	21.9	3.7	54.0
7	210.3	21.9	3.4	57.0
8	226.2	24.5	3.4	57.0
9	217.8	23.1	3.7	57.0
10	146.4	18.9	2.5	56.0
11	220.8	24.6	3.2	57.0
12	208.8	22.5	3.0	58.0
13	207.2	21.4	3.3	57.0
14	209.2	22.6	3.5	57.0
15	215.2	22.8	3.5	57.0
16	214.0	22.6	3.3	58.0
17	193.1	20.9	3.2	57.0
18	199.8	19.5	3.5	58.0
19	198.0	20.4	3.5	54.0
20	207.6	22.5	3.5	54.0
21	216.9	23.2	3.5	58.0
22	232.3	24.9	3.5	58.0
23	189.7	20.9	3.5	57.0
24	165.6	18.2	3.5	59.0
25	168.6	18.6	4.0	58.0
26	215.1	22.5	3.5	58.0
27	213.6	22.7	3.5	59.0
28	208.2	21.8	3.8	59.0
29	194.9	20.5	3.5	60.0
30	185.0	20.2	5.3	59.0
31	171.3	18.5	3.5	60.0
AVG.	201.1	21.2	3.5	56.9

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	56,106	1,449

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
16	1,847	726,827	21

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 30

THE DALLES PROJECT

JUNE 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK
1	271			6			5	32	124,143	4
2	232			15			3	15	124,648	1
3	354			18			10	31	104,847	1
4		266		12			23	25	85,428	1
5		333		12			41	37	89,158	1
6		444		14			62	27	71,764	2
7		331		13			72	39	66,632	0
8		329		10			109	24	83,905	1
9		326		19			157	37	58,930	10
10		409		13			252	51	76,728	8
11		283		7			269	55	61,293	7
12		256		10			456	47	51,340	13
13		260		9			435	49	52,310	8
14		330		19			473	56	65,653	13
15		239		22			389	56	64,997	14
16		269		20			396	58	73,215	15
17		210		15			414	86	66,092	23
18		261		30			602	70	62,218	18
19		299		30			949	100	73,228	20
20		258		42			1084	116	74,918	43
21		287		27			1198	161	94,271	42
22		356		37			2256	150	63,313	52
23		363		44			3456	209	58,474	49
24		312		74			4177	202	48,599	68
25		302		59			5169	267	42,454	74
26		304		50			3818	257	32,142	120
27		311		60			3196	326	34,350	87
28		220		38			2908	312	23,227	73
29		238		35			3327	313	16,804	96
30		139		43			2613	286	13,178	62
TOTAL	857	7,935		803			38,319	3,494	1,958,259	926
AVG.	293			27			1,277	116	65,275	31

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	169.4	18.5	3.2	60.0
2	169.7	18.3	3.5	62.0
3	170.7	18.1	3.0	61.0
4	176.0	18.4	3.2	61.0
5	177.7	18.3	2.0	61.0
6	151.4	16.3	2.6	60.0
7	135.6	10.3	2.7	61.0
8	159.6	7.2	3.6	61.0
9	172.0	7.6	3.1	63.0
10	177.3	8.0	2.0	64.0
11	184.1	8.2	3.2	64.0
12	185.9	8.3	3.0	63.0
13	184.4	8.9	3.2	64.0
14	161.0	8.1	3.0	64.0
15	193.3	8.8	3.6	64.0
16	179.2	8.3	2.5	64.0
17	207.1	10.1	3.0	64.0
18	205.6	10.1	3.0	64.0
19	199.9	9.9	3.3	64.0
20	184.8	9.3	3.5	64.0
21	160.1	8.2	3.0	64.0
22	201.8	9.4	2.8	64.0
23	209.3	10.2	4.1	65.0
24	196.4	10.0	3.5	65.0
25	201.8	9.9	3.3	66.0
26	203.1	10.1	4.0	66.0
27	189.0	9.3	3.5	66.0
28	162.7	8.0	4.0	66.0
29	186.4	10.3	3.5	67.0
30	159.7	8.0	5.0	68.0
AVG.	180.5	10.8	3.2	63.7

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	56,963	1,488
SUMMER	7,935	764
TOTAL	64,898	2,252

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
38,335	5,341	2,685,086	947

TABLE 30

TABLE 31

MONTHLY FISH PASSAGE SUMMARY

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 31

THE DALLES PROJECT

JULY 1992

DATE	FISH COUNTS: CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	RIVER CONDITIONS: DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1		276		78			4107	315	19223	66	89.7	4.2	4.6	67.0
2		203		44			2221	299	13749	88	116.2	5.6	4.2	67.0
3		198		76			1992	289	10165	50	89.7	4.7	4.4	68.0
4		217		52			2608	376	12639	43	78.2	4.0	3.2	68.0
5		145		79			1871	324	6888	66	108.7	5.3	4.0	69.0
6		142		65			1326	405	8223	50	110.3	5.4	4.5	68.0
7		155		58			816	409	6870	73	112.9	5.8	4.2	68.0
8		126		30			537	295	7991	60	107.0	5.2	4.8	68.0
9		141		74			1190	344	5982	56	110.9	5.4	4.5	68.0
10		119		63			766	300	5588	49	141.1	7.6	3.8	68.0
11		122		86			949	411	5263	87	135.8	6.5	3.5	68.0
12		120		84			1034	389	5534	58	100.6	4.8	3.2	68.0
13		196		108			1388	468	5314	52	125.0	11.9	5.0	69.0
14		101		83			965	449	3306	29	145.7	6.5	4.0	69.0
15		131		78			1260	668	2214	46	131.2	6.0	3.5	68.0
16		119		66			700	587	2060	24	143.6	7.5	4.7	70.0
17		72		54			679	652	2092	32	158.7	7.2	3.3	69.0
18		135		60			760	770	1388	49	136.3	6.8	3.2	70.0
19		93		85			555	816	1679	54	118.4	6.0	3.6	71.0
20		74		60			383	803	1566	63	131.2	6.1	4.5	70.0
21		99		55			345	834	1026	43	142.1	7.0	4.3	70.0
22		125		78			345	1288	979	41	146.7	7.0	3.7	70.0
23		63		58			179	1016	705	46	105.5	5.7	4.5	70.0
24		85		47			155	859	701	24	131.8	6.4	3.5	69.0
25		63		54			154	933	642	24	107.9	5.9	3.0	70.0
26		88		62			158	1069	698	24	96.2	4.9	4.0	72.0
27		54		44			83	678	750	16	111.4	5.4	4.5	71.0
28		88		60			113	833	294	141	116.7	5.9	4.5	71.0
29		92		45			76	551	418	27	122.8	5.4	4.5	71.0
30		79		62			63	742	367	38	115.1	5.1	4.3	71.0
31		63		65			34	581	206	21	113.1	5.3	4.0	72.0
TOTAL		3,784		2,013			27,812	18,753	134,520	1,540				
AVG		122		65			897	605	4,339	50	119.4	6.0	4.0	69.3

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	56,963	1,488
SUMMER	11,719	2,777
TOTAL	68,682	4,265

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
66,147	24,094	2,819,606	2,487

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 32

THE DALLES PROJECT

AUGUST 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK
1		108		72	0	0	35	887	241	33
2		68		72	0	0	41	1032	289	37
3		95		65	0	0	24	1261	298	27
4			61	49	0	0	22	963	110	22
5			80	59	0	0	14	1687	164	22
6			85	44	0	0	14	1421	187	10
7			55	36	0	0	12	1078	161	9
8			97	32	0	0	8	966	328	23
9			79	42	0	0	9	922	205	21
10			115	38	1	0	10	584	299	16
11			45	42	0	0	7	421	165	8
12			97	43	0	0	5	1135	140	16
13			93	48	0	0	5	820	249	16
14			101	63	0	0	7	945	302	20
15			96	30	0	0	5	739	145	13
16			191	43	0	0	5	1334	63	7
17			138	30	0	0	0	821	287	8
18			129	59	0	0	0	665	124	6
19			180	33	0	0	4	772	76	12
20			231	67	0	0	0	1230	28	12
21			196	54	0	0	0	945	31	3
22			387	61	2	0	0	1992	43	12
23			348	65	0	1	0	2258	40	12
24			731	52	2	1	0	2095	95	7
25			882	75	0	0	0	1886	195	2
26			756	75	0	0	2	1322	57	12
27			953	77	1	0	0	1292	91	6
28			1889	93	0	0	0	1174	130	22
29			1737	111	1	0	2	1580	63	10
30			1550	115	2	0	0	1755	72	29
31			1140	131	0	0	1	1287	29	18
TOTAL		271	12,442	1,876	9	2	232	37,269	4,707	471
AVG.		90	444	120			13	2,421	296	29

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	116.5	5.0	3.5	72.0
2	108.4	5.3	4.5	72.0
3	108.5	4.8	5.5	70.0
4	103.2	4.5	5.0	70.0
5	122.5	5.4	5.0	70.0
6	102.9	4.5	5.5	70.0
7	100.8	4.6	4.0	71.0
8	86.9	4.4	4.0	71.0
9	73.3	3.9	4.0	70.0
10	96.6	4.5	4.0	71.0
11	115.1	4.9	4.5	71.0
12	119.6	5.3	4.1	71.0
13	131.9	6.6	4.0	71.0
14	137.1	5.6	5.5	72.0
15	105.2	4.5	3.3	71.0
16	78.1	3.7	5.5	72.0
17	139.3	5.1	5.5	71.0
18	118.4	4.6	4.0	71.0
19	131.7	5.1	5.0	71.0
20	128.2	5.5	4.5	71.0
21	112.8	4.4	2.8	71.0
22	92.1	3.4	3.5	76.0
23	78.7	1.6	2.8	72.0
24	96.4	0.0	6.0	71.0
25	89.6	0.0	4.0	71.0
26	91.5	0.0	4.0	71.0
27	90.0	0.0	4.5	71.0
28	107.2	0.0	4.5	71.0
29	101.7	0.0	4.5	71.0
30	73.8	0.0	4.5	71.0
31	78.6	0.0	5.5	71.0
AVG.	104.4	3.5	4.4	71.2

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	56,963	1,488
SUMMER	11,990	2,986
FALL	12,442	1,667
TOTAL	81,395	6,141

COHO ADULTS	COHO JACKS	SOCKEYE	STEELHEAD	SHAD	MINI-JCK
9	2	66,379	61,363	2,824,313	2,958

PINK
1

The Dalles had one Pink on the Oregon side on the 20th.

TABLE 32

TABLE 33

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 33

THE DALLES PROJECT
SEPTEMBER 1992

FISH COUNTS / RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1			1338	140	3	0	0	1363		23	78.7	0.0	5.0	71.0
2			1239	195	4	2	0	1379		24	84.2	0.0	5.5	71.0
3			963	133	13	2	1	1687		16	89.7	0.0	4.5	70.0
4			1200	161	9	1	0	2580		23	80.3	0.0	4.0	70.0
5			1822	205	8	6	0	4655		23	98.8	0.0	4.2	69.0
6			3926	353	10	5	0	10090		20	92.6	0.0	4.0	69.0
7			4024	316	24	10	0	12600		17	82.1	0.0	4.0	69.0
8			3167	373	22	7	1	7284		30	95.7	0.0	6.0	69.0
9			2783	319	27	14	0	6111		31	97.9	0.0	5.5	69.0
10			3664	480	45	17	0	7414		25	98.0	0.0	5.0	68.0
11			2928	601	61	26	0	6787		42	90.8	0.0	3.6	68.0
12			2664	545	68	32	0	8073		37	78.7	0.0	5.5	67.0
13			2784	616	110	68	0	11597		61	94.9	0.0	4.0	66.0
14			2487	718	85	50	0	10006		79	95.4	0.0	5.5	66.0
15			1884	600	92	41	0	6069		51	96.4	0.0	3.5	66.0
16			1586	583	86	30	0	5690		48	113.9	0.0	3.5	66.0
17			2341	642	139	55	0	9737		53	114.9	0.0	4.5	66.0
18			1875	697	175	74	0	6328		29	118.5	0.0	4.3	66.0
19			1760	730	149	63	0	4881		62	78.7	0.0	3.3	65.0
20			1795	706	155	89	0	4746		54	87.5	0.0	3.5	66.0
21			1361	696	122	69	0	3991		131	95.6	0.0	6.5	65.0
22			1444	783	102	82	0	3452		63	77.3	0.0	6.0	61.0
23			2,294	890	180	86	0	2873		62	93.3	0.0	5.0	65.0
24			960	686	72	33	0	1853		33	106.9	0.0	5.0	66.0
25			760	555	51	29	0	3265		12	117.9	0.0	3.5	66.0
26			923	658	78	22	0	4727		26	82.7	0.0	5.0	66.0
27			773	958	101	49	0	4053		27	73.8	0.0	4.5	64.0
28			363	425	30	11	0	1563		14	97.3	0.0	5.5	64.0
29			302	413	60	32	0	1391		12	98.2	0.0	6.5	64.0
30			369	325	24	9	2	971		14	105.9	0.0	5.5	64.0
TOTAL			55,779	15,502	2,105	1,014	4	157,216		1,142				
AVG.			1,859	517	70	34		5,241		38	93.9	0.0	4.7	66.7

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	56,963	1,488
SUMMER	11,990	2,986
FALL	68,221	17,169
TOTAL	137,174	21,643

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	PINK
2,114	1,016	66,383	218,579	2,824,313	4,100	3

The Dalles had one Pink on the Oregon side on the 12th and one on the 14th.

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 34

THE DALLES PROJECT
OCTOBER 1992

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
	FISH COUNTS										RIVER CONDITIONS			
1			369	358	45	22	0	1059		20	101.5	0.0	5.5	64.0
2			435	582	52	20	0	1071		12	89.2	0.0	6.0	64.0
3			300	410	47	28	1	1123		13	90.0	0.0	3.8	64.0
4			248	296	30	4	0	974		11	75.9	0.0	6.0	64.0
5			367	474	23	7	0	913		5	87.0	0.0	4.0	63.0
6			246	366	19	5	0	520		18	109.0	0.0	6.0	63.0
7			175	293	6	9	0	478		17	100.6	0.0	5.5	63.0
8			129	258	10	7	0	384		0	100.7	0.0	6.5	63.0
9			238	382	9	4	0	556		10	97.0	0.0	6.5	63.0
10			176	266	23	14	0	440		25	84.5	0.0	5.0	63.0
11			118	262	11	7	0	417		9	81.8	0.0	3.5	62.0
12			137	283	11	7	0	495		12	87.2	0.0	5.0	62.0
13			121	191	8	5	0	346		5	101.1	0.0	5.5	62.0
14			98	185	21	9	0	389		16	98.9	0.0	5.0	62.0
15			90	111	9	4	0	336		5	109.7	0.0	5.5	62.0
16			71	83	9	5	0	242		5	91.8	0.0	4.0	62.0
17			42	41	3	1	0	155		2	83.2	0.0	3.9	61.0
18			55	64	7	3	0	297		3	91.8	0.0	3.5	60.0
19			66	72	6	1	0	343		1	90.6	0.0	3.5	61.0
20			64	107	14	6	0	392		12	87.6	0.0	6.0	61.0
21			72	71	6	4	0	245		1	90.7	0.0	6.0	61.0
22			61	35	8	7	0	408		0	96.2	0.0	5.5	60.0
23			68	40	9	6	0	378		0	90.4	0.0	6.0	60.0
24			89	62	5	4	0	317		1	81.2	0.0	3.5	60.0
25			58	49	17	5	0	226		5	73.1	0.0	3.8	60.0
26			45	34	10	5	0	219		0	86.5	0.0	5.0	60.0
27			49	46	8	4	0	219		1	103.3	0.0	6.5	60.0
28			46	32	10	2	0	167		1	95.4	0.0	4.2	60.0
29			55	14	15	8	0	127		0	99.5	0.0	6.0	59.0
30			40	27	14	8	0	145		0	112.2	0.0	5.0	58.0
31			45	23	7	2	0	219		0	89.4	0.0	4.2	58.0
TOTAL			4,173	5,517	472	223	1	13,600		210				
AVG.			135	178	15	7		439		7	92.8	0.0	5.0	61.5

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	56,963	1,488
SUMMER	11,990	2,986
FALL	72,394	22,686
TOTAL	141,347	27,160

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	PINK
2,586	1,239	66,384	232,179	2,824,313	4,310	3

TABLE 34

TABLE 35

DISCHARGE AND WATER QUALITY DATA

THE DALLES PROJECT - 1992

NOVEMBER				
DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	77.8	0.0	5.9	58.0
2	90.2	0.0	7.0	58.0
3	104.8	0.0	7.0	58.0
4	103.7	0.0	7.0	58.0
5	103.8	0.0	5.5	57.0
6	101.4	0.0	4.0	57.0
7	97.0	0.0	3.5	56.0
8	85.9	0.0	4.5	56.0
9	108.2	0.0	5.0	56.0
10	122.9	0.0	6.0	55.0
11	97.9	0.0	5.0	54.0
12	114.5	0.0	5.5	54.0
13	101.5	0.0	5.5	54.0
14	111.7	0.0	2.8	55.0
15	100.5	0.0	5.5	52.0
16	95.5	0.0	6.5	53.0
17	115.1	0.0	5.5	53.0
18	118.8	0.0	5.5	53.0
19	102.2	0.0	6.0	53.0
20	111.3	0.0	5.2	52.0
21	122.3	0.0	3.5	52.0
22	112.2	0.0	3.2	52.0
23	139.0	0.0	6.0	52.0
24	165.6	0.0	5.5	51.0
25	143.1	0.0	5.0	51.0
26	128.4	0.0	3.6	51.0
27	94.2	0.0	3.4	49.0
28	96.5	0.0	3.5	48.0
29	99.0	0.0	4.5	51.0
30	127.2	0.0	6.0	49.0
AVG.	109.7	0.0	5.1	53.6

DECEMBER				
DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	126.8	0.0	5.5	49.0
2	122.6	0.0	5.5	49.0
3	141.5	0.0	5.0	49.0
4	172.8	0.0	4.3	47.0
5	134.5	0.0	5.2	47.0
6	141.8	0.0	4.3	47.0
7	161.4	0.0	4.8	46.0
8	154.2	0.0	4.4	45.0
9	141.0	0.0		45.0
10	159.8	0.0		45.0
11	152.7	0.0		44.0
12	128.9	0.0		44.0
13	118.6	0.0		44.0
14	130.2	0.0		44.0
15	162.6	0.0		44.0
16	175.9	0.0		43.0
17	159.9	0.0		43.0
18	141.2	0.0		43.0
19	141.6	0.0		43.0
20	123.3	0.0	4.5	43.0
21	129.2	0.0		43.0
22	123.0	0.0		43.0
23	132.5	0.0		43.0
24	112.2	0.0		42.0
25	85.3	0.0		43.0
26	91.9	0.0		43.0
27	94.0	0.0		43.0
28	134.2	0.0		43.0
29	144.4	0.0		43.0
30	150.5	0.0		43.0
31	159.3	0.0		43.0
AVG.	137.0	0.0		44.4

TABLE 36

YEARLY TOTALS OF SALMONIDS COUNTED OVER THE DALLES DAM
1957-1992

YEAR	CHINOOK*	STEELHEAD	SOCKEYE	COHO*	CHUM	PINK	TOTALS
1957	312,678	129,361	90,201	6,793	75	4	539,112
1958	301,960	121,420	111,039	2,395	31	5	536,850
1959	207,461	156,090	86,259	2,709	25	9	452,553
1960	196,962	111,189	59,441	3,000	35	5	370,632
1961	201,335	134,572	16,689	2,139		4	354,739
1962	187,132	163,301	27,127	3,696		5	381,261
1963	180,969	118,957	56,931	3,716	23	3	360,599
1964	183,842	110,033	79,042	5,978		5	378,900
1965	195,049	141,052	44,279	17,468	1	3	397,852
1966	240,671	146,172	147,886	32,279		1	567,009
1967	280,112	121,614	120,589	32,015	1	4	554,335
1968	262,975	147,481	116,897	42,687		1	570,041
1969	314,258	112,529	37,226	17,054		1	481,068
1970	261,457	99,187	77,678	23,219		4	461,545
1971	250,528	151,348	76,103	29,061		3	507,043
1972	268,628	135,303	44,671	16,562			465,164
1973	280,945	100,082	52,303	11,152		1	444,483
1974	217,181	70,875	28,827	14,655			331,538
1975	217,283	57,675	43,198	13,976			332,132
1976	216,163	82,568	27,747	19,392			345,870
1977	224,950	133,882	86,252	10,021			455,105
1978	199,228	60,485	11,845	18,877			290,435
1979	150,647	83,364	32,791	8,726		4	275,532
1980	113,951	93,963	42,088	6,326			256,328
1981	135,176	113,268	35,447	6,941		1	290,833
1982	172,682	117,434	33,331	7,383			330,830
1983	156,190	171,055	84,204	3,459	1		414,909
1984	203,920	219,123	101,177	3,142		1	527,363
1985	370,982	276,025	117,254	4,625		5	768,891
1986	443,013	281,953	48,477	4,842	3	4	778,292
1987	421,190	217,768	87,599	3,310	1	2	729,870
1988	378,080	198,499	55,802	9,226			641,607
1989	282,168	235,639	39,672	12,611			570,090
1990	207,556	129,271	40,230	4,645			381,702
1991	153,023	199,853	63,405	9,601		103	425,985
1992	168,507	232,179	66,384	3,825		3	470,898
Totals	8,558,852	5,174,570	2,290,091	417,506	196	181	16,441,396
10-Year Average	278,463	216,137	70,420	5,929		12	570,961

*Jacks Included

TABLE 36

TABLE 37

TABLE 37

MONTHLY COUNT OF CHINOOK SALMON
THE DALLES DAM 1957 - 1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL*	SPRING 1 JAN-3 JUN	SUMMER 4 JUN-3 AUG	FALL 4 AUG-31 DEC	JACKS
1957			22	42,161	59,410	86,096	35,643	28,828	56,753	3,564	201		312,678	109,723	116,661	86,294	37,374
1958			114	8,268	47,862	59,955	24,381	17,211	141,262	2,788	119		301,960	61,747	80,139	160,074	19,747
1959			8	16,771	32,634	27,799	42,817	20,142	65,229	2,022	39		207,461	50,874	71,362	85,225	39,857
1960				17,073	40,091	52,577	22,549	15,225	46,453	2,720	274		196,962	58,406	75,315	63,241	30,847
1961				43,822	35,059	24,478	24,596	16,866	53,371	3,143			201,335	79,183	50,824	71,328	35,409
1962				33,069	35,629	34,488	21,515	13,461	46,135	2,835			187,132	69,139	57,007	60,986	17,835
1963				19,119	33,207	25,063	20,414	21,865	57,248	4,053			180,969	52,937	47,333	80,699	54,749
1964			340	35,551	24,447	16,801	37,697	17,452	49,811	1,743			183,842	60,691	56,360	66,791	30,900
1965			190	17,870	24,930	17,900	31,072	25,119	74,904	3,064			195,049	43,617	50,527	100,905	67,552
1966			1068	72,267	22,837	25,530	33,712	14,978	65,380	4,899			240,671	96,628	61,062	82,981	36,482
1967				48,744	22,817	24,718	45,346	23,927	107,427	7,133			280,112	71,976	72,582	135,554	98,817
1968			100	52,144	45,057	32,827	33,272	22,361	72,209	4,800	205		262,975	98,742	67,391	96,842	64,644
1969			65	19,025	80,162	33,432	27,750	29,330	118,890	5,604			314,258	100,482	61,978	151,798	96,244
1970				53,370	29,670	22,903	23,318	34,906	93,633	3,657			261,457	83,549	48,115	129,793	85,471
1971				28,227	44,181	22,011	29,655	16,190	103,370	6,894			250,528	73,655	51,847	125,026	75,329
1972				68,955	33,508	17,354	29,756	21,828	91,666	5,561			268,628	103,107	48,660	116,861	81,668
1973				94,334	15,040	19,548	19,181	23,341	101,771	7,730			280,945	111,088	38,774	131,083	72,088
1974				13,415	41,902	7,141	22,709	13,964	103,804	14,246			217,181	56,397	30,273	130,511	79,840
1975				18,526	32,869	12,155	26,447	28,973	90,193	8,120			217,283	52,483	39,062	125,738	74,418
1976				20,266	35,434	17,828	20,129	17,278	90,933	14,295			216,163	56,570	38,733	120,860	74,275
1977				72,726	16,672	22,084	22,059	12,266	69,927	9,216			224,950	90,373	44,378	90,199	55,067
1978				52,425	30,472	19,477	15,978	11,251	57,786	11,839			199,228	84,924	34,396	79,908	32,503
1979				13,993	12,569	14,310	17,687	20,458	61,757	9,516	357		150,647	27,297	32,298	91,052	42,886
1980				12,434	15,441	7,948	12,832	12,881	43,675	8,740			113,951	28,237	21,133	64,581	20,016
1981				24,227	16,335	8,491	10,779	15,802	53,840	5,702			135,176	41,160	19,676	74,340	33,919
1982				10,569	33,296	10,058	9,554	17,466	79,487	12,252			172,682	44,750	19,342	108,590	60,165
1983				13,270	22,893	8,766	8,430	12,501	73,942	16,388			156,190	36,856	17,051	102,283	41,335
1984				9,326	23,784	9,992	12,332	23,495	105,786	19,205			203,920	33,848	22,472	147,600	70,798
1985				36,035	39,173	15,785	10,332	37,806	203,470	27,058	1,323		370,982	76,514	25,385	269,083	145,007
1986			175	48,892	36,928	14,175	10,452	22,684	264,091	45,616			443,013	87,004	24,826	331,183	176,461
1987				48,812	27,586	17,923	12,145	50,680	236,216	27,828			421,190	77,453	30,804	312,933	65,115
1988				51,680	20,756	16,644	13,494	66,509	193,490	15,507			378,080	73,663	29,892	274,525	69,631
1989				24,474	27,477	15,539	13,899	58,674	130,931	10,438	736		282,168	53,014	30,555	198,599	28,671
1990			115	36,062	20,749	13,390	9,099	22,152	96,538	9,451			207,556	57,424	22,615	127,517	32,794
1991				14,513	17,313	10,949	7,638	8,384	84,861	9,365			153,023	32,359	18,467	102,197	36,820
1992				38,141	19,414	9,595	5,797	14,589	71,281	9,690			168,507	58,451	14,976	95,080	27,160
Total			2,197	1,230,556	1,117,604	795,730	764,466	830,843	3,457,520	356,682	3,254		8,558,852	2,394,321	1,572,271	4,592,260	2,111,894
10-Year Average				32,121	25,607	13,276	10,362	31,747	146,061	19,055	206		278,463	58,659	23,704	196,100	69,379

*Jacks included

TABLE 38

MONTHLY COUNT OF SOCKEYE SALMON
THE DALLES DAM; 1957 - 1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1957					125	33,476	54,294	2,081	221	4			90,201
1958					29	28,854	80,324	1,583	248	1			111,039
1959					413	7,176	76,347	2,245	77	1			86,259
1960					2	36,907	22,228	297	7				59,441
1961					66	5,863	10,629	116	15				16,689
1962					55	8,333	18,545	180	14				27,127
1963					199	17,914	38,633	185					56,931
1964					23	9,984	68,205	758	72				79,042
1965					184	11,023	31,622	1,438	12				44,279
1966					65	36,539	109,167	2,106	9				147,886
1967					114	15,713	103,862	892	8				120,589
1968					5	77,878	38,542	462	10				116,897
1969					22	15,165	21,933	102	3	1			37,226
1970					1	18,309	56,903	2,387	75	3			77,678
1971						8,887	66,841	369	6				76,103
1972						9,276	34,924	466	5				44,671
1973					8	19,510	32,674	105	6				52,303
1974					4	3,935	24,790	98					28,827
1975						7,679	35,291	225	2	1			43,198
1976					1	10,988	16,637	121					27,747
1977					5	60,049	26,146	52					86,252
1978					24	7,158	4,559	104					11,845
1979						14,750	17,734	307					32,791
1980						11,096	30,046	927	19				42,088
1981						17,692	17,686	68	1				35,447
1982						11,430	21,742	144	15				33,331
1983					1	34,684	49,302	197	19	1			84,204
1984						62,500	37,926	745	6				101,177
1985				1	17	75,603	41,107	521	4		1		117,254
1986					12	17,224	30,686	550	4	1			48,477
1987					1	48,798	38,443	348	8	1			87,599
1988					5	30,443	25,096	208	50				55,802
1989					1	22,196	17,321	152	2				39,672
1990						17,603	22,406	218	3				40,230
1991					1	14,106	48,824	443	27	4			63,405
1992					16	38,319	27,812	232	4	1			66,384
Total				1	1,399	867,060	1,399,227	21,432	952	19	1		2,290,091
10-Year Average					5	36,148	33,892	361	13	1			70,420

TABLE 38

TABLE 39

MONTHLY COUNT OF COHO SALMON
THE DALLES DAM; 1957-1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL*	JACKS
1957							220	605	5,615	342	11		6,793	
1958								96	2,132	161	6		2,395	
1959								46	2,428	234	1		2,709	
1960								475	2,288	227	10		3,000	
1961							4	5	1,898	232			2,139	
1962							5	258	3,194	239			3,696	
1963							2	361	2,931	422			3,716	
1964								506	4,723	749			5,978	
1965							7	200	13,064	4,197			17,468	
1966							225	3,850	25,476	2,728			32,279	
1967							192	494	27,860	3,469			32,015	20,456
1968							372	3,319	36,568	2,346	82		42,687	13,035
1969							412	970	13,179	2,493			17,054	11,218
1970							96	2,064	19,983	1,076			23,219	11,327
1971							1	1,589	26,066	1,405			29,061	11,174
1972							3	1,090	14,564	905			16,562	10,272
1973								793	9,443	916			11,152	5,256
1974								522	10,715	3,418			14,655	9,054
1975								465	10,356	3,155			13,976	8,534
1976								608	14,609	4,175			19,392	13,083
1977							1	91	8,131	1,798			10,021	6,096
1978								355	13,069	5,453			18,877	13,533
1979								211	7,109	1,367	39		8,726	4,836
1980								287	5,064	975			6,326	2,970
1981								295	6,061	585			6,941	4,405
1982								336	5,792	1,255			7,383	3,047
1983								65	2,343	1,051			3,459	2,256
1984								24	2,521	597			3,142	1,282
1985							4	208	3,537	828	48		4,625	1,555
1986							2	1	3,772	1,067			4,842	1,458
1987							12	91	2,409	798			3,310	1,953
1988								232	7,082	1,912			9,226	2,701
1989								283	9,027	3,173	128		12,611	4,781
1990								60	3,229	1,356			4,645	2,340
1991								30	7,714	1,857			9,601	1,053
1992								11	3,119	695			3,825	1,239
Total							1,558	20,896	337,071	57,656	325		417,506	168,914
10-Year Average							2	101	4,475	1,333	18		5,929	2,062

*Includes Jacks

TABLE 40

MONTHLY COUNT OF STEELHEAD

THE DALLES DAM; 1957 - 1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1957			1,603	951	977	4,782	45,445	33,319	35,396	6,545	343		129,361
1958			122	274	1,898	4,906	20,384	11,442	75,036	6,846	512		121,420
1959			1	541	502	2,227	46,271	60,841	41,026	4,502	179		156,090
1960				289	557	2,591	28,218	32,667	42,447	4,021	399		111,189
1961				305	307	1,396	21,906	17,850	87,344	5,464			134,572
1962				528	252	1,068	36,609	31,507	87,463	5,874			163,301
1963				153	451	1,361	30,485	25,360	48,066	13,081			118,957
1964			50	369	127	493	36,773	31,742	38,197	2,282			110,033
1965			36	502	484	896	60,522	21,132	53,389	4,091			141,052
1966		25	788	933	600	3,816	52,975	26,382	53,721	6,932			146,172
1967				258	183	435	27,914	22,746	56,082	13,996			121,614
1968			23	691	344	973	20,974	58,866	57,666	7,456	488		147,481
1969			54	953	414	1,442	33,952	22,963	44,146	8,605			112,529
1970				337	172	733	15,905	32,752	44,823	4,465			99,187
1971				408	233	821	40,712	31,812	69,602	7,760			151,348
1972				463	159	604	35,569	30,631	63,748	4,129			135,303
1973				723	326	1,981	29,067	25,437	38,017	4,531			100,082
1974				529	1,362	1,859	24,779	21,835	15,059	5,452			70,875
1975				1,018	1,334	1,973	18,046	20,531	11,519	3,254			57,675
1976				768	1,604	3,357	22,021	30,386	21,586	2,846			82,568
1977				1,666	1,332	5,038	42,859	13,022	61,678	8,287			133,882
1978				834	1,378	3,459	13,493	11,457	26,189	3,675			60,485
1979				478	244	1,942	23,054	21,974	20,961	14,079	632		83,364
1980				2,885	790	2,134	15,114	30,755	34,447	7,838			93,963
1981				1,389	1,632	3,768	34,242	36,537	26,837	8,863			113,268
1982				729	1,289	2,710	22,607	31,410	49,050	9,639			117,434
1983				438	324	1,492	37,029	47,521	75,210	9,041			171,055
1984				846	894	3,715	52,825	36,859	107,377	16,607			219,123
1985				2,405	1,511	5,679	41,534	102,866	107,574	13,337	1,119		276,025
1986			1,395	610	712	4,492	78,494	60,458	111,066	24,726			281,953
1987				1,069	366	3,280	55,395	58,850	76,461	22,347			217,768
1988				2,520	969	3,984	34,612	54,986	85,061	16,367			198,499
1989				1,810	849	3,950	35,167	45,694	119,322	25,880	2,967		235,639
1990			1,169	1,515	920	3,078	17,942	17,772	58,805	28,070			129,271
1991				1,826	630	1,755	25,686	37,560	104,833	27,563			199,853
1992				1,104	743	3,494	18,753	37,269	157,216	13,600			232,179
Total		25	5,241	33,117	26,869	91,684	1,197,333	1,235,191	2,206,420	372,051	6,639		5,174,570
10-Year Average				1,487	921	3,763	42,004	53,125	105,198	20,718	409		227,880

TABLE 40

TABLE 41

MONTHLY TOTALS OF SALMONIDS AND SHAD COUNTED OVER JOHN DAY DAM

1992

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL*
CHINOOK*				27,538	16,623	9,452	5,263	7,677	58,140	7,332			132,025
STEELHEAD				1,334	406	2,337	10,732	17,326	143,823	19,236			195,194
SOCKEYE					1	38,618	30,788	303	20	1			69,731
COHO*									2,153	480			2,633
MINI-JACKS**				(1)	(2)	257	770	366	2,202	759			4,351
CHUM													
PINK													
TOTAL				28,871	17,028	50,664	47,553	25,672	206,338	27,808			403,934
SHAD				71	349,611	1,512,811	98,955	1,612					1,963,060

*Jacks Included

**Salmonid fish under 12 inches in length

TABLE 41

TABLE 42

DISCHARGE AND WATER QUALITY DATA

JOHN DAY PROJECT - 1992

JANUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	120.5	0.0	4.2	42.0
2	133.1	0.0	3.6	42.0
3	161.8	0.0	3.5	42.0
4	129.3	0.0	4.0	42.0
5	128.2	0.0	4.5	42.0
6	152.5	0.0	3.0	42.0
7	177.7	0.0	2.5	42.0
8	163.9	0.0	4.5	42.0
9	161.5	0.0	3.5	42.0
10	176.0	0.0	3.5	42.0
11	169.7	0.0	2.5	41.0
12	135.7	0.0	2.5	41.0
13	150.3	0.0	3.9	41.0
14	156.7	0.0	3.9	41.0
15	155.4	0.0	3.5	41.0
16	147.5	0.0	3.9	42.0
17	142.4	0.0	3.2	45.0
18	143.2	0.0	3.5	43.0
19	116.0	0.0	6.5	40.0
20	143.2	0.0	6.8	40.0
21	147.5	0.0	6.8	40.0
22	160.5	0.0	4.0	42.0
23	155.2	0.0	6.8	40.0
24	144.0	0.0	4.0	45.0
25	132.8	0.0	5.0	46.0
26	101.3	0.0	5.0	46.0
27	113.7	0.0	5.0	42.0
28	106.2	0.0	4.0	42.0
29	133.7	0.0	6.0	51.0
30	113.4	0.0	4.0	41.0
31	125.9	0.0	4.0	40.0
AVG.	141.9	0.0	4.2	42.3

FEBRUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	117.4	0.0	3.0	40.0
2	108.5	0.0	4.8	40.0
3	118.1	0.0	4.0	40.0
4	109.8	0.0	4.0	40.0
5	137.5	0.0	3.5	40.0
6	119.6	0.0	6.5	40.0
7	119.9	0.0	4.5	40.0
8	118.7	0.0	6.0	40.0
9	99.8	0.0	5.5	40.0
10	113.8	0.0	6.0	40.0
11	114.2	0.0	3.0	40.5
12	111.8	0.0	6.0	40.0
13	116.5	0.0	4.7	41.0
14	111.7	0.0	4.0	41.0
15	109.0	0.0	4.1	41.0
16	93.7	0.0	3.5	41.0
17	125.9	0.0	3.8	41.0
18	133.1	0.0	3.5	41.0
19	136.1	0.0	3.3	41.0
20	138.9	0.0	5.7	41.0
21	159.4	0.0	4.5	42.0
22	142.2	0.0	4.1	41.0
23	122.5	0.0	4.0	42.0
24	143.3	0.0	3.8	42.0
25	133.9	0.0	3.8	42.0
26	127.9	0.0	4.5	42.0
27	159.1	0.0	4.2	43.0
28	155.0	0.0	4.0	42.0
29	150.6	0.0	4.0	45.0
AVG.	125.8	0.0	4.4	41.0

MARCH

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	139.4	0.0	4.0	45.0
2	155.1	0.0	3.0	41.0
3	182.4	0.0	5.0	43.0
4	167.0	0.0	5.0	46.0
5	182.7	0.0	5.0	46.0
6	147.8	0.0	5.5	42.0
7	162.0	0.0	4.5	42.0
8	174.0	0.0	2.0	42.0
9	181.1	0.0	3.8	48.0
10	173.9	0.0	3.8	43.0
11	187.1	0.0	4.0	44.0
12	153.1	0.0	4.0	42.0
13	165.0	0.0	4.0	42.0
14	158.4	0.0	3.5	42.0
15	144.8	0.0	3.5	42.0
16	154.1	0.0	3.5	42.0
17	145.1	0.0	3.5	43.0
18	167.4	0.0	3.5	43.0
19	185.6	0.0	4.0	46.0
20	166.9	0.0	3.5	43.0
21	111.1	0.0	3.5	43.0
22	109.8	0.0	3.7	47.0
23	126.8	0.0	3.7	47.0
24	111.3	0.0	3.5	47.0
25	126.6	0.0	3.1	47.0
26	117.4	0.0	3.0	47.0
27	143.9	0.0	4.5	47.0
28	119.3	0.0	4.5	47.0
29	81.4	0.0	3.0	48.0
30	106.0	0.0	4.5	56.0
31	119.9	0.0	4.5	56.0
AVG.	147.3	0.0	3.9	45.1

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 43

JOHN DAY PROJECT

APRIL 1992

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	34			0				46	0	0	203.9	0.0	2.2	43.0
2	82			0				88	0	0	199.1	0.0	4.4	44.0
3	395			10				70	0	0	194.4	0.0	4.8	44.0
4	155			1				57	0	0	197.1	0.0	3.5	44.0
5	182			4				47	0	0	202.6	0.0	4.0	43.0
6	621			14				57	0	0	217.8	0.0	3.0	44.0
7	616			12				72	0	0	229.2	0.0	3.8	43.0
8	611			12				87	0	0	223.9	0.0	4.0	44.0
9	288			2				51	0	0	219.6	0.0	4.0	43.0
10	332			6				57	0	1	216.1	0.0	4.3	43.0
11	414			8				38	0	0	225.3	0.0	4.2	43.0
12	715			8				55	0	0	221.6	0.0	3.1	44.0
13	1394			21				39	0	(1)	239.1	0.0	4.2	44.0
14	1287			17				99	0	0	197.0	0.0	3.2	43.0
15	1145			18				21	0	0	237.0	0.0	4.8	44.0
16	762			22				103	6	0	218.3	0.0	4.6	44.0
17	2277			37				30	2	0	227.0	0.0	4.6	44.0
18	1330			7				(25)	0	0	225.9	0.0	4.8	44.0
19	1908			14				26	0	0	210.5	0.0	4.2	47.0
20	1945			17				59	1	(1)	198.1	0.0	3.2	47.0
21	1192			17				14	1	0	206.3	0.0	4.0	48.0
22	461			18				(11)	0	0	214.1	0.0	4.2	47.0
23	1339			22				4	0	0	210.6	0.0	4.0	47.0
24	1613			36				23	0	0	246.3	0.0	4.5	47.0
25	1155			32				54	2	0	270.6	0.0	4.5	47.0
26	1048			19				23	2	0	250.1	0.0	4.7	47.0
27	1036			45				51	5	1	246.0	0.0	2.5	49.0
28	978			23				39	12	0	259.8	0.0	3.0	49.0
29	670			25				31	27	0	267.0	0.0	2.8	50.0
30	1055			31				29	13	(1)	227.6	0.0	3.0	50.0
TOTAL	27,040			498				1,334	71	(1)				
AVG.	901			17				44	2		223.4	0.0	3.9	45.3

TABLE 43

TABLE 44

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 44

JOHN DAY PROJECT

MAY 1992

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	1973			77			0	-32	41	0	206.3	0.0	4.0	54.0
2	1704			62			0	-19	60	0	206.8	0.0	1.8	54.0
3	1559			71			0	1	95	0	193.9	0.0	2.0	58.0
4	1299			85			0	5	100	0	183.4	0.0	3.0	59.0
5	1019			86			0	44	178	0	201.5	0.0	4.0	55.0
6	601			75			0	-7	158	-1	207.3	0.0	4.0	59.0
7	576			101			0	38	366	0	213.3	0.0	3.6	59.0
8	613			59			0	35	237	0	226.0	0.0	2.8	56.0
9	400			33			0	30	511	0	219.5	0.0	4.0	56.0
10	406			41			0	15	1044	0	146.9	0.0	2.7	56.0
11	404			44			0	8	1008	0	220.4	5.1	3.5	55.0
12	264			35			0	2	2571	0	210.3	0.0	2.6	56.0
13	359			52			0	6	2303	0	207.9	0.0	4.0	56.0
14	279			43			0	15	2203	0	206.9	0.0	3.5	57.0
15	395			38			0	10	2137	0	215.7	0.0	3.0	56.0
16	233			25			0	-1	5168	-1	214.0	0.0	3.0	56.0
17	252			22			0	9	8068	0	195.2	0.0	3.0	57.0
18	257			36			0	18	12706	0	192.5	0.0	4.0	57.0
19	185			14			0	25	10043	0	194.1	0.0	3.0	58.0
20	151			14			0	16	4368	0	208.3	0.0	4.1	57.0
21	187			15			0	16	7457	0	219.8	0.0	3.8	56.0
22	283			17			0	10	25672	0	230.8	3.4	3.5	58.0
23	234			33			0	0	17570	0	191.6	0.0	4.5	56.0
24	191			21			0	26	16154	0	165.3	0.0	5.0	57.0
25	194			8			0	25	22477	0	171.5	0.0	5.0	57.0
26	271			18			0	33	15173	0	215.2	0.0	4.6	48.0
27	204			12			0	23	28718	0	215.0	0.0	3.6	58.0
28	176			18			0	24	54475	0	209.1	0.0	5.0	59.0
29	270			7			0	8	36712	0	197.8	0.0	3.0	59.0
30	235			11			0	15	35610	0	181.6	0.0	3.8	59.0
31	264			12			1	8	36228	0	171.6	0.0	4.0	59.5
TOTAL	15,438			1,185			1	406	349,611	(2)				
AVG.	498			38				13	11,278		201.3	0.3	3.6	56.7

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	42,478	1,683

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
1	1,740	349,682	(3)

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 45

JOHN DAY PROJECT

JUNE 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK
1	246			17			8	16	56,200	0
2	264			11			8	23	62,636	0
3	193			7			15	22	77,556	1
4	261			17			11	19	67,146	(2)
5	274			6			25	17	79,690	0
6		250		18			20	26	82,196	0
7		411		8			69	29	52,340	2
8		236		14			57	17	66,050	0
9		260		7			78	15	57,297	0
10		267		13			151	15	61,266	0
11		342		16			249	31	58,286	0
12		288		24			277	36	50,944	0
13		287		17			362	41	44,784	0
14		195		8			425	31	56,016	0
15		245		40			307	32	54,727	0
16		350		21			444	46	47,407	0
17		278		37			397	41	49,248	0
18		214		21			515	72	63,209	2
19		318		20			615	52	39,295	2
20		272		13			866	52	44,696	0
21		217		13			1,172	104	45,492	5
22		228		18			1,494	68	43,201	11
23		241		18			2,534	97	37,822	7
24		343		36			3,832	169	43,136	29
25		352		74			4,305	171	36,671	18
26		423		57			5,130	152	36,603	32
27		381		95			4,430	178	35,882	42
28		324		39			3,395	264	26,682	39
29		326		101			3,930	272	19,921	28
30		290		90			3,497	229	16,412	41
TOTAL	1,238	7,338		876			38,618	2,337	1,512,811	257
AVG.	248	294		29			1,287	78	50,427	9

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	168.9	0.0	3.6	60.0
2	169.6	0.0	4.0	61.0
3	168.6	0.0	3.9	61.0
4	177.9	0.0	4.5	62.0
5	176.4	0.0	4.0	63.0
6	149.1	0.0	5.5	62.0
7	134.0	4.1	4.2	63.0
8	156.2	11.2	4.0	63.0
9	171.8	12.1	4.0	63.0
10	176.7	13.0	5.0	63.0
11	180.7	13.5	3.5	63.0
12	190.8	13.6	2.6	64.0
13	183.7	14.9	3.5	63.0
14	162.8	14.1	3.0	65.0
15	191.0	14.5	4.0	63.0
16	178.3	13.3	3.0	63.0
17	206.6	17.4	3.5	63.0
18	203.6	16.6	3.0	63.0
19	198.7	16.2	5.0	65.0
20	189.8	15.3	3.8	70.0
21	160.1	13.3	3.5	64.0
22	202.8	15.3	3.5	69.0
23	207.6	15.7	4.0	63.0
24	196.0	15.5	5.0	63.0
25	205.4	16.2	4.7	65.0
26	202.3	16.7	4.5	65.0
27	189.3	15.9	4.2	65.0
28	162.1	13.7	5.0	65.0
29	181.5	15.2	3.5	66.0
30	154.5	12.8	5.6	64.0
AVG.	179.9	11.3	4.0	63.7

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	43,716	1,741
SUMMER	7,338	818
TOTAL	51,054	2,559

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
38,619	4,077	1,862,493	254

TABLE 46

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 46

JOHN DAY PROJECT
JULY 1992

DATE	FISH COUNTS: CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	RIVER CONDITIONS: DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1		293		51			3,334	192	10,839	25	95.0	7.1	5.8	64.0
2		236		29			3,549	197	9,814	31	115.7	9.2	5.0	64.0
3		187		41			2,893	238	11,174	34	84.9	7.2	3.5	66.5
4		170		60			2,288	216	9,551	32	78.3	6.0	5.0	65.0
5		195		52			2,358	243	6,475	21	104.5	8.2	3.5	66.5
6		141		64			1,846	234	6,747	13	110.7	8.4	4.3	64.0
7		152		83			1,402	281	7,021	34	110.2	8.6	3.7	65.0
8		134		58			732	190	4,988	16	104.0	8.6	5.5	65.0
9		120		45			711	207	5,495	29	110.3	9.1	5.3	65.0
10		152		51			919	207	5,568	33	140.5	11.2	5.0	65.0
11		65		53			906	231	3,724	16	133.6	10.6	4.1	65.0
12		159		82			940	299	3,157	36	98.9	8.3	5.0	66.0
13		148		53			736	216	2,439	18	124.7	8.8	4.5	66.0
14		146		82			1,323	377	1,761	26	145.9	10.5	4.5	66.0
15		117		57			1,163	215	2,516	43	130.3	9.1	4.8	66.0
16		56		36			603	305	1,175	27	143.1	10.8	6.1	67.0
17		77		34			602	303	1,271	13	157.5	12.1	5.0	69.0
18		68		66			926	276	1,251	18	137.1	11.1	4.0	72.0
19		164		81			971	603	500	43	116.5	10.0	5.5	68.0
20		74		38			393	452	672	14	131.3	9.8	4.6	69.0
21		156		59			582	522	532	30	140.4	11.3	5.1	65.0
22		98		54			309	537	328	27	145.2	11.8	3.5	68.0
23		99		49			294	565	174	28	106.8	9.2	4.2	69.0
24		73		89			207	482	366	50	130.7	10.2	3.5	69.0
25		55		33			165	355	406	22	106.8	8.8	3.6	69.0
26		57		35			128	539	313	22	95.0	8.7	3.5	70.0
27		55		51			162	749	202	14	111.1	8.0	4.7	70.0
28		79		47			109	513	209	22	117.6	8.6	5.0	69.0
29		44		49			112	499	137	7	121.1	8.0	4.6	69.0
30		28		36			57	216	104	15	117.6	7.9	5.0	70.0
31		24		23			68	273	46	11	108.1	7.6	5.0	70.0
TOTAL		3,622		1,641			30,788	10,732	98,955	770				
AVG		117		53			993	346	3,192	25	118.5	9.2	4.6	67.2

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	43,716	1,741
SUMMER	10,960	2,459
TOTAL	54,676	4,200

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
69,407	14,809	1,961,448	1,024

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 47

JOHN DAY PROJECT
AUGUST 1992

FISH COUNTS / RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1		85		47			54	507	125	17	119.2	7.9	3.5	69.0
2		76		59			60	967	81	39	108.0	8.0	4.5	70.0
3		32		39			26	661	72	21	107.0	7.5	4.0	70.0
4		51		41			33	445	172	15	104.5	7.1	4.1	70.0
5		38		23			27	496	62	18	122.7	8.7	4.4	70.0
6			39	27			20	654	85	5	101.8	6.8	4.3	70.0
7			75	52			10	618	98	7	100.5	6.8	3.5	70.0
8			37	25			10	579	42	10	86.8	6.2	4.5	68.0
9			50	24			3	409	58	8	71.5	5.9	3.5	69.5
10			36	17			5	404	75	5	95.1	6.6	5.7	70.0
11			56	36			5	407	81	4	116.3	7.3	4.3	70.0
12			10	15			4	169	67	6	118.9	7.9	5.0	71.0
13			30	37			4	186	57	7	132.9	10.4	5.0	71.0
14			40	72			12	413	79	13	136.7	8.5	3.5	71.0
15			126	62			12	1015	78	7	104.7	7.5	4.5	71.0
16			153	66			5	1117	83	24	77.8	6.3	5.0	72.0
17			40	16			1	443	7	2	137.8	8.0	5.6	71.0
18			90	50			4	559	91	11	122.6	7.3	4.7	72.0
19			68	39			0	381	24	8	132.9	8.0	5.0	70.0
20			98	56			1	311	32	7	128.8	9.1	3.5	70.0
21			97	40			0	268	17	9	114.0	7.5	4.5	70.0
22			73	32			0	212	9	4	94.1	6.0	5.0	70.0
23			103	36			2	407	11	14	77.0	3.1	4.5	69.0
24			111	13			0	360	23	4	92.7	0.0	4.5	70.0
25			211	25			2	294	18	2	89.5	0.0	5.5	70.0
26			431	47			0	442	22	11	88.1	0.0	4.5	70.0
27			219	39			0	300	7	6	89.3	0.0	4.5	70.0
28			647	105			2	980	8	20	106.0	0.0	4.5	70.0
29			1077	90			1	1306	6	34	100.7	0.0	4.6	67.0
30			1327	116			0	1184	3	12	71.4	0.0	4.5	67.0
31			748	57			0	832	19	16	78.0	0.0	5.0	67.0
TOTAL		282	5,992	1,403			303	17,326	1,612	366				
AVG.		56	230	45			10	559	52	12	104.1	5.4	4.5	69.9

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	43,716	1,741
SUMMER	11,242	2,668
FALL	5,992	1,194
TOTAL	60,950	5,603

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
69,710	32,135	1,963,060	1,390

TABLE 47

TABLE 48

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 48

JOHN DAY PROJECT
SEPTEMBER 1992

FISH COUNTS / RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1			1119	83	0	0	1	818		35	75.8	0.0	4.5	67.0
2			1008	126	1	0	0	1138		41	84.4	0.0	5.3	67.0
3			936	95	0	0	1	870		23	88.3	0.0	5.5	68.0
4			1056	146	5	0	6	2440		16	77.7	0.0	5.0	68.0
5			1148	163	12	4	0	2304		17	98.7	0.0	4.0	69.0
6			1647	206	5	1	2	3277		17	90.8	0.0	3.7	70.0
7			2961	219	24	7	0	5190		24	79.3	0.0	4.0	69.0
8			2158	222	25	12	0	7926		48	94.2	0.0	5.0	66.0
9			2377	295	51	19	2	6945		29	95.8	0.0	7.5	67.0
10			2477	339	16	9	0	6334		48	96.2	0.0	6.5	67.0
11			2583	317	25	12	0	5193		46	89.4	0.0	3.5	67.0
12			4814	506	37	29	0	8090		94	76.9	0.0	3.8	65.0
13			2106	557	29	13	1	7269		72	93.8	0.0	3.4	67.0
14			2042	365	23	23	1	6664		79	93.6	0.0	6.0	64.0
15			898	394	18	15	1	4367		48	98.6	0.0	5.5	64.0
16			1956	455	47	23	2	5268		86	113.9	0.0	5.5	64.0
17			1069	738	57	18	1	7408		82	115.5	0.0	6.0	64.0
18			1185	518	66	33	0	6199		99	121.0	0.0	5.5	62.0
19			1316	392	118	66	0	8021		158	81.9	0.0	5.0	63.0
20			1610	505	128	53	0	8371		136	87.7	0.0	5.0	63.0
21			1668	431	149	69	0	6418		165	93.1	0.0	7.0	64.0
22			1319	723	94	60	0	5387		112	79.3	0.0	6.0	64.0
23			965	570	81	34	0	4069		87	90.7	0.0	6.5	64.0
24			957	512	89	32	2	3402		48	105.4	0.0	6.0	62.0
25			1521	955	70	28	0	3624		67	121.6	0.0	4.0	61.0
26			472	406	49	20	0	2663		76	84.4	0.0	5.0	63.0
27			1024	841	61	39	0	4913		92	72.0	0.0	4.5	65.0
28			537	514	59	29	0	4020		109	97.3	0.0	7.0	63.0
29			450	589	76	35	0	3302		119	100.6	0.0	7.0	62.0
30			314	265	33	22	0	1933		129	107.7	0.0	7.0	63.0
TOTAL			45,693	12,447	1,448	705	20	143,823		2,202				
AVG.			1,523	415	48	24		4,794		73	93.5	0.0	5.3	65.1

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	43,716	1,741
SUMMER	11,242	2,668
FALL	51,685	13,641
TOTAL	106,643	18,050

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK
1,448	705	69,730	175,958	1,963,060	3,592

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 49

JOHN DAY PROJECT
OCTOBER 1992

FISH COUNTS / RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1			310	374	26	17	0	1763		58	104.8	0.0	8.0	63.0
2			442	335	26	29	0	1746		69	90.3	0.0	4.2	62.0
3			395	223	24	25	0	1232		94	89.8	0.0	3.0	63.0
4			211	423	29	22	0	1712		48	76.1	0.0	4.8	62.0
5			184	236	21	8	1	1100		45	88.8	0.0	5.5	63.0
6			96	174	12	7	0	574		32	107.2	0.0	6.0	63.0
7			185	222	8	8	0	479		35	100.2	0.0	6.0	61.0
8			105	174	3	6	0	419		46	99.7	0.0	6.0	61.0
9			147	215	9	11	0	463		35	96.2	0.0	4.0	60.0
10			190	294	19	9	0	676		36	85.7	0.0	4.1	63.0
11			120	175	14	19	0	627		31	79.0	0.0	4.0	60.0
12			99	98	8	10	0	567		39	86.6	0.0	4.1	61.0
13			66	126	6	9	0	367		24	101.2	0.0	4.5	60.0
14			67	71	6	8	0	482		16	98.9	0.0	4.8	60.0
15			78	85	2	1	0	544		14	108.9	0.0	4.5	60.0
16			45	74	2	3	0	369		8	92.3	0.0	3.8	60.0
17			52	79	5	3	0	338		23	84.1	0.0	3.8	60.0
18			29	84	5	3	0	419		32	90.7	0.0	3.5	59.5
19			34	79	6	5	0	324		8	90.6	0.0	5.5	60.0
20			42	65	4	6	0	563		15	85.1	0.0	6.0	60.0
21			68	66	5	1	0	630		10	94.1	0.0	5.5	60.0
22			59	76	6	2	0	923		9	98.9	0.0	5.5	60.0
23			29	38	0	0	0	384		1	89.6	0.0	6.0	59.0
24			19	28	2	0	0	453		2	80.4	0.0	4.0	59.0
25			39	37	9	0	0	526		11	72.1	0.0	6.0	58.0
26			30	44	3	1	0	446		5	85.8	0.0	6.0	58.0
27			18	31	1	4	0	239		6	104.5	0.0	5.0	59.0
28			41	30	0	1	0	210		0	93.7	0.0	4.2	57.0
29			18	28	0	0	0	172		4	100.2	0.0	6.0	58.0
30			47	37	1	0	0	242		1	113.0	0.0	6.5	58.0
31			33	13	0	0	0	247		2	89.7	0.0	5.5	57.0
TOTAL			3,298	4,034	262	218	1	19,236		759				
AVG.			106	130	8	7		621		24	92.8	0.0	5.0	60.1

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	43,716	1,741
SUMMER	11,242	2,668
FALL	54,983	17,675
TOTAL	109,941	22,084

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK
1,710	923	69,731	195,194	1,963,060	4,351

TABLE 49

TABLE 50

DISCHARGE AND WATER QUALITY DATA

JOHN DAY PROJECT - 1992

NOVEMBER				
DATE	DISCH KCFS	PIL CF	TURBIDITY SECCHI	DEG F
1	78.1	0.0	7.0	57.0
2	86.6	0.0	6.0	57.0
3	103.6	0.0	5.5	56.0
4	105.4	0.0	5.5	56.0
5	102.0	0.0	5.5	56.0
6	100.8	0.0	4.5	56.0
7	97.2	0.0	4.0	56.0
8	84.9	0.0	4.0	55.0
9	108.2	0.0	5.0	54.0
10	120.8	0.0	5.0	54.0
11	98.4	0.0	5.0	54.0
12	114.4	0.0	5.5	54.0
13	103.5	0.0	4.0	54.0
14	109.3	0.0	4.0	54.0
15	100.6	0.0	4.0	54.0
16	93.9	0.0	4.5	54.0
17	115.1	0.0	5.5	52.0
18	118.6	0.0	5.0	51.0
19	103.6	0.0	4.5	50.0
20	111.6	0.0	4.5	50.0
21	122.6	0.0	6.0	53.0
22	111.9	0.0	5.8	53.0
23	140.2	0.0	4.5	50.0
24	167.9	0.0	4.5	50.0
25	146.8	0.0	4.5	50.0
26	128.0	0.0	5.3	49.0
27	95.3	0.0	6.1	49.0
28	95.4	0.0	6.1	49.0
29	97.5	0.0	6.1	49.0
30	128.5	0.0	6.4	49.0
AVG.	109.7	0.0	5.1	52.8

DECEMBER				
DATE	DISCH KCFS	PIL CF	TURBIDITY SECCHI	DEG F
1	125.8	0.0	7.0	48.0
2	125.2	0.0	6.0	48.0
3	144.4	0.0	5.5	50.0
4	177.9	0.0	6.5	49.0
5	136.8	0.0	5.5	49.0
6	142.8	0.0	4.0	43.0
7	165.1	0.0	6.2	50.0
8	155.2	0.0	4.0	42.0
9	138.2	0.0	8.0	42.0
10	161.6	0.0	8.0	42.0
11	152.2	0.0	5.5	49.0
12	123.8	0.0	5.5	49.0
13	113.9	0.0	5.5	49.0
14	130.8	0.0	6.5	42.0
15	161.5	0.0	6.5	42.0
16	177.7	0.0	6.0	42.0
17	160.8	0.0	7.0	44.0
18	143.8	0.0	4.5	44.0
19	147.1	0.0	5.0	44.0
20	118.2	0.0	3.5	48.0
21	132.8	0.0	6.8	44.0
22	124.8	0.0	6.8	38.0
23	135.6	0.0	7.0	36.0
24	114.0	0.0	5.5	44.0
25	83.5	0.0	5.0	40.0
26	92.6	0.0	6.5	43.0
27	93.1	0.0	5.5	36.0
28	136.2	0.0	6.5	43.0
29	144.6	0.0	6.0	43.0
30	157.5	0.0	6.0	43.0
31	161.8	0.0	6.0	43.0
AVG.	137.3	0.0	5.9	44.2

TABLE 51

YEARLY TOTALS OF SALMONIDS COUNTED OVER JOHN DAY DAM
1968 - 1992

YEAR	CHINOOK	STEELHEAD	SOCKEYE	COHO	TOTAL* SALMONIDS
1968	233,654	121,256	87,847	38,233	480,990
1969	276,051	86,348	39,847	13,589	415,835
1970	222,506	82,440	78,133	19,543	402,622
1971	193,881	115,977	72,232	40,830	422,920
1972	225,631	141,628	51,793	17,533	436,585
1973	249,492	101,440	64,744	13,359	429,035
1974	167,888	43,756	33,121	14,651	259,416
1975	159,079	32,651	50,774	6,305	248,809
1976	175,911	59,808	30,446	5,806	271,971
1977	194,931	102,558	85,701	1,123	384,313
1978	174,852	44,188	13,778	8,355	241,173
1979	118,154	55,877	43,630	5,061	222,722
1980	100,664	78,199	50,675	1,924	231,462
1981	114,359	95,172	46,146	2,562	258,239
1982	144,082	108,603	37,970	4,063	294,718
1983	139,866	154,425	91,917	1,640	387,848
1984	188,373	201,154	107,951	2,080	499,558
1985	337,624	247,093	124,941	1,652	711,310
1986	346,700	238,010	46,327	1,933	632,970
1987	327,752	170,654	75,529	3,355	577,290
1988	277,251	164,650	48,095	6,813	496,809
1989	208,254	193,460	39,374	9,663	450,751
1990	156,313	107,849	42,077	3,023	309,262
1991	118,921	160,257	63,760	8,021	350,959
1992	132,025	195,194	669,731	2,633	999,583
TOTALS	4,984,214	3,102,647	2,096,539	233,750	10,417,150
10-Year Average	223,308	183,275	130,970	4,081	541,634

*Jacks included

TABLE 51

TABLE 52

TABLE 52

MONTHLY COUNT OF CHINOOK SALMON
JOHN DAY DAM; 1968 - 1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL*	SPRING Apr 1- Jun 5	SUMMER Jun 6- Aug 5	FALL Aug 6- Oct 31	JACKS
1968				29,973	46,272	30,702	42,212	16,726	62,709	4,851	209		233,654	77,482	75,494	80,678	67,284
1969			6	4,266	72,966	35,899	31,071	18,523	103,778	9,542			276,051	81,724	64,732	129,595	93,928
1970				35,750	35,248	20,439	21,542	24,784	80,969	3,774			222,506	72,555	43,093	106,858	74,090
1971				13,995	40,620	24,364	25,692	10,403	73,157	5,650			193,881	56,625	50,030	87,226	61,380
1972				28,535	41,882	15,833	27,484	14,208	90,181	7,508			225,631	71,569	44,542	109,520	82,646
1973				67,467	27,091	18,972	15,067	16,995	89,913	13,987			249,492	96,710	34,206	118,576	73,687
1974				5,174	38,058	8,115	18,985	8,112	77,296	12,148			167,888	46,191	25,865	95,832	61,669
1975				7,727	27,989	11,058	21,359	18,250	65,367	7,329			159,079	37,716	32,179	89,184	62,403
1976				10,428	32,985	17,836	18,506	10,114	72,467	13,575			175,911	45,419	36,037	94,455	62,793
1977				55,061	19,422	15,674	13,764	7,853	71,302	11,855			194,931	75,782	29,194	89,955	60,386
1978				34,735	35,206	15,104	16,764	8,149	52,975	11,919			174,852	72,723	30,371	71,758	36,289
1979				8,224	12,568	9,537	13,580	14,128	50,977	8,566	574		118,154	21,981	23,572	72,601	41,364
1980				7,995	18,311	7,125	12,522	9,063	37,023	8,625			100,664	27,202	19,664	53,798	25,877
1981				18,178	18,325	7,292	8,992	8,524	44,626	8,422			114,359	37,677	15,813	60,869	34,547
1982				3,396	30,444	11,031	7,359	10,881	67,271	13,700			144,082	36,530	16,360	91,192	56,966
1983				7,123	25,391	7,990	7,064	8,195	66,078	18,025			139,866	33,480	14,834	91,552	43,440
1984				4,329	26,561	9,706	12,892	15,422	96,399	22,255	809		188,373	32,035	22,795	133,543	69,874
1985				27,539	42,487	15,585	9,663	27,387	178,322	34,192	2,449		337,624	72,389	23,489	241,746	149,281
1986			21	38,075	37,959	13,227	9,703	10,797	194,928	41,990			346,700	77,884	22,051	246,765	133,827
1987				33,985	26,852	13,641	8,948	24,363	196,596	23,367			327,752	62,313	22,244	243,195	53,794
1988				33,323	20,170	14,731	9,648	37,002	147,553	14,824			277,251	55,195	23,569	198,487	51,330
1989				12,510	23,983	12,793	10,124	35,985	101,794	11,065			208,254	37,773	23,868	146,613	25,092
1990				23,689	18,854	11,209	9,199	13,542	71,508	8,312			156,313	43,127	20,532	92,654	22,195
1991				7,419	13,668	8,868	8,390	4,879	64,950	10,747			118,921	21,847	16,872	80,202	28,646
1992				27,538	16,623	9,452	5,263	7,677	58,140	7,332			132,025	45,457	13,910	72,658	22,084
TOTAL			27	546,434	749,935	366,183	385,793	381,962	2,216,279	333,560	4,041		4,984,214	1,339,386	745,316	2,899,512	1,494,872
10-Year Average				21,553	25,255	11,720	9,089	18,525	117,627	19,211	326		223,308	48,150	20,416	154,742	59,956

*Jacks Included

TABLE 53

MONTHLY COUNT OF SOCKEYE SALMON
JOHN DAY DAM - 1968 - 1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1968						42,175	44,942	690	32	7	1		87,847
1969						13,383	26,174	245	37	8			39,847
1970						18,029	58,176	1,909	19				78,133
1971						5,219	66,183	787	38	5			72,232
1972						6,762	43,704	1,257	68	2			51,793
1973					2	21,283	42,588	864	6	1			64,744
1974						2,024	30,687	403	6	1			33,121
1975						6,154	44,454	163	2	1			50,774
1976						8,907	21,278	258	1	2			30,446
1977					6	52,852	32,269	537	34	3			85,701
1978						5,633	8,006	119	20				13,778
1979						13,466	29,603	560	1				43,630
1980						9,596	40,536	530	13				50,675
1981						17,064	28,975	94	13				46,146
1982						8,708	28,974	286	2				37,970
1983						27,372	63,995	506	37	7			91,917
1984						54,975	51,728	1,230	16	2			107,951
1985						78,326	46,184	421	10				124,941
1986						13,472	32,116	738		1			46,327
1987						35,022	39,983	513	11				75,529
1988						25,001	22,855	225	12	2			48,095
1989						18,883	20,330	148	12	1			39,374
1990					1	15,247	26,580	245	4				42,077
1991						10,917	52,130	699	9	5			63,760
1992					1	38,618	30,788	303	20	1			69,731
TOTAL					10	549,088	933,238	13,730	423	49	1		1,496,539
10-Year Average						31,783	38,669	503	13				70,970

TABLE 53

TABLE 54

TABLE 54

MONTHLY COUNT OF COHO SALMON
JOHN DAY DAM; 1968-1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL*
1968							4	1,311	32,882	3,848	188		38,233
1969							25	308	9,879	3,377			13,589
1970							14	1,026	17,272	1,231			19,543
1971								944	36,401	3,485			40,830
1972								1,253	14,965	1,315			17,533
1973								788	11,350	1,221			13,359
1974								730	11,253	2,668			14,651
1975								85	4,266	1,954			6,305
1976								57	3,739	2,010			5,806
1977								8	534	581			1,123
1978								6	2,676	5,673			8,355
1979							1	132	2,853	1,753	322		5,061
1980								27	1,431	466			1,924
1981								90	2,030	442			2,562
1982								145	3,032	886			4,063
1983								99	1,353	188			1,640
1984								4	1,736	331	9		2,080
1985								95	1,140	395	22		1,652
1986									1,527	406			1,933
1987							1	16	3,205	133			3,355
1988							3	241	5,170	1,399			6,813
1989								264	6,832	2,567			9,663
1990								1	1,890	1,132			3,023
1991								5	6,140	1,876			8,021
1992									2,153	480			2,633
TOTAL							48	7,635	185,709	39,817	541		233,750
10-Year Average								73	3,115	891	3		4,081

*Jacks Included

TABLE 55

MONTHLY COUNT OF STEELHEAD
JOHN DAY DAM; 1968-1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1968				3,939	2,659	151	6,094	26,824	68,791	11,405	1,393		121,256
1969			314	3,986	3,691	714	12,004	13,267	40,082	12,290			86,348
1970				1,987	1,279	253	7,373	19,412	46,036	6,100			82,440
1971				1,472	592	263	17,459	19,693	63,868	12,630			115,977
1972				1,523	1,966	356	17,656	20,502	78,138	21,487			141,628
1973				8,019	3,546	785	12,134	15,608	46,566	14,782			101,440
1974				1,713	2,363	1,361	9,713	8,419	12,479	7,708			43,756
1975				760	428	648	6,251	8,583	9,977	6,004			32,651
1976				929	1,248	1,868	9,254	17,964	22,754	5,791			59,808
1977				1,319	418	2,341	18,366	7,088	56,134	16,892			102,558
1978				741	631	1,601	5,573	6,911	22,896	5,835			44,188
1979				602	136	253	8,012	10,717	16,202	18,072	1,883		55,877
1980				4,131	555	577	5,850	18,114	34,700	14,272			78,199
1981				2,061	1,539	2,515	15,999	18,283	34,098	20,677			95,172
1982				3,393	1,698	1,167	10,168	19,693	50,725	21,759			108,603
1983				1,492	434	560	15,088	31,453	83,215	22,183			154,425
1984				3,316	1,787	2,101	21,442	19,743	100,437	46,506	5,822		201,154
1985				6,821	1,723	3,583	19,631	64,456	109,488	37,227	4,164		247,093
1986			3,611	2,040	887	2,362	37,732	31,576	107,002	52,800			238,010
1987				3,926	(747)	942	23,614	34,203	69,585	39,131			170,654
1988				4,290	525	2,188	17,649	25,741	81,859	32,398			164,650
1989				2,940	508	2,445	18,254	22,548	104,521	42,244			193,460
1990				3,339	600	1,902	10,544	9,445	42,888	39,131			107,849
1991				2,547	660	1,256	12,827	18,310	87,277	37,380			160,257
1992				1,334	406	2,337	10,732	17,326	143,823	19,236			195,194
TOTAL			3,925	68,620	29,532	34,529	349,419	505,879	1,533,541	563,940	13,262		3,102,647
10-YR Average				3,205	678	1,968	18,751	27,480	93,010	36,824	999		183,275

TABLE 55

TABLE 56

MISCELLANEOUS SPECIES AT BONNEVILLE, THE DALLES AND JOHN DAY

BONNEVILLE	NORTHERN SQUAWFISH		STURGEON	
	OR	WA	OR	WA
MAR	5	27	0	0
APR	178	186	0	0
MAY	2,459	739	3	0
JUN	11,296	2,452	1	0
JUL	23,203	4,955	6	0
AUG	1,123	1,512	5	1
SEP	335	821	5	0
OCT	626	820	0	0
NOV	0	29	0	0
TOTAL	39,225	11,541	20	1

THE DALLES	NORTHERN SQUAWFISH		STURGEON	
	OR	WA	OR	WA
APR	2,696	253	0	0
MAY	16,717	7,161	3	0
JUN	23,575	10,010	46	9
JUL	4,795	1,109	104	7
AUG	1,555	129	43	4
SEP	532	88	15	0
OCT	139	3	1	3
TOTAL	50,009	18,753	212	23

JOHN DAY	NORTHERN SQUAWFISH		STURGEON	
	OR	WA	OR	WA
APR	858	841	0	0
MAY	1,324	4,410	0	0
JUN	2,224	4,318	0	0
JUL	768	1,366	0	2
AUG	412	322	0	1
SEP	280	278	0	2
OCT	92	152	0	0
TOTAL	5,958	11,687	0	5

Bass and Walleye were not counted this year

TABLE 57

MONTHLY TOTALS OF SALMONIDS AND SHAD COUNTED OVER MCNARY DAM
1992

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL*
CHINOOK*				25,549	22,799	9,511	6,159	5,846	51,961	13,882			135,707
STEELHEAD				1,427	642	1,921	10,989	15,504	127,626	35,917			194,026
SOCKEYE					7	30,339	37,915	448	28				68,737
COHO*								1	1,130	670			1,801
MINI-JACKS**					54	293	1,216	560	1,355	448			3,926
CHUM													
PINK									1	1			2
TOTAL				26,976	23,502	42,064	56,279	22,359	182,101	50,918			404,199
SHAD					155,393	1,285,184	189,594	4,918					1,635,089

*Jacks included

**Salmonid fish under 12 inches in length.

TABLE 57

TABLE 58

DISCHARGE AND WATER QUALITY DATA

MCNARY PROJECT 1992

JANUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	108.1	0.0		43.0
2	134.0	0.0		43.0
3	156.4	0.0		43.0
4	123.8	0.0		43.0
5	120.5	0.0		43.0
6	153.7	0.0		43.0
7	160.5	0.0		43.0
8	165.3	0.0		43.0
9	156.6	0.0		43.0
10	159.0	0.0		43.0
11	134.5	0.0		43.0
12	110.7	0.0	6.0	43.0
13	135.2	0.0	6.5	43.0
14	149.7	0.0	6.5	43.0
15	147.2	0.0	6.5	43.0
16	142.9	0.0	6.0	43.0
17	134.1	0.0	6.0	43.0
18	136.3	0.0	5.1	43.0
19	115.9	0.0	5.1	43.0
20	135.5	0.0	5.9	41.0
21	149.5	0.0	5.8	41.0
22	154.8	0.0	4.9	41.0
23	150.9	0.0	4.3	41.0
24	141.8	0.0	4.5	41.0
25	126.2	0.0	4.4	41.0
26	96.9	0.0	4.8	41.0
27	109.2	0.0	4.6	41.0
28	127.7	0.0	4.6	41.0
29	127.0	0.0	4.8	41.0
30	114.7	0.0	4.8	41.0
31	144.4	0.0	4.6	41.0
AVG.	136.2	0.0	5.3	42.2

FEBRUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	122.0	0.0	5.0	41.0
2	104.5	0.0	4.9	41.0
3	108.9	0.0	4.8	41.0
4	117.3	0.0	4.6	41.0
5	129.7	0.0	5.0	41.0
6	118.2	0.0	5.0	41.0
7	115.1	0.0	5.0	41.0
8	115.6	0.0	5.0	41.0
9	95.4	0.0	5.0	41.0
10	108.9	0.0	5.0	41.0
11	116.3	0.0	6.0	41.0
12	107.2	0.0	6.5	41.0
13	113.4	0.0		41.0
14	106.3	0.0		41.0
15	104.3	0.0		41.0
16	90.2	0.0		41.0
17	128.4	0.0		41.0
18	128.2	0.0		41.0
19	132.8	0.0	6.0	41.0
20	130.4	0.0	6.0	41.0
21	150.7	0.0	6.0	41.0
22	131.9	0.0	6.0	41.0
23	122.6	0.0	6.0	41.0
24	130.3	0.0	6.0	41.0
25	126.5	0.0	6.0	41.0
26	126.8	0.0	5.0	41.0
27	145.4	0.0	4.8	44.0
28	143.2	0.0	5.0	43.0
29	139.0	0.0	4.8	43.0
AVG.	121.0	0.0	5.4	41.2

MARCH

DATE	DISCH KCFS	SPILL KCFS	TURBIDIT SECCHI
1	134.7	0.0	5.0
2	143.8	0.0	4.4
3	158.5	0.0	4.2
4	167.8	0.0	
5	168.4	0.0	
6	131.2	4..8	3.4
7	178.5	0.0	3.3
8	162.8	0.0	3.3
9	159.0	0.0	3.8
10	171.5	0.0	3.4
11	174.8	0.0	3.2
12	154.2	0.0	3.3
13	149.6	0.0	4.0
14	159.7	0.0	4.1
15	143.1	0.0	
16	125.8	0.0	3.3
17	158.2	0.0	
18	164.5	0.0	3.2
19	182.1	0.0	
20	149.6	0.0	
21	116.0	0.0	
22	115.8	0.0	
23	120.4	0.0	
24	105.4	0.0	
25	128.5	0.0	3.0
26	107.9	0.0	3.2
27	135.4	0.0	3.2
28	115.3	0.0	3.2
29	81.8	0.0	3.2
30	107.2	0.0	3.2
31	122.9	0.0	3.5
AVG.	141.8	0.0	3.5

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 59

MCNARY PROJECT

APRIL 1992

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	96			1				77			114.3	0.0	4.9	48.0
2	59			0				28			115.5	0.0	4.6	48.0
3	83			0				27			132.2	0.0	4.0	48.0
4	53			0				57			110.8	0.0	3.4	48.0
5	169			8				97			108.8	0.0	3.7	48.0
6	299			5				59			143.1	0.0	3.3	48.0
7	162			4				108			137.5	0.0	3.0	49.0
8	121			1				58			140.3	0.0		49.0
9	518			1				48			151.0	0.0	4.3	49.0
10	711			12				54			146.1	0.0	4.2	49.0
11	617			8				78			113.1	0.0	3.4	49.0
12	366			6				51			82.6	0.0	3.2	49.0
13	193			6				29			111.8	0.0	3.4	49.0
14	510			4				36			111.5	0.0	3.5	49.0
15	1368			13				61			128.3	0.0	3.4	49.0
16	1300			7				59			118.0	0.0	3.5	49.0
17	1168			12				63			109.2	0.0	3.3	49.0
18	790			9				57			123.6	0.0		51.0
19	1916			32				53			130.0	0.0	4.6	51.0
20	1444			21				16			128.1	0.0	4.6	51.0
21	1622			21				29			146.9	0.0	4.5	52.0
22	2077			22				55			160.3	0.0		52.0
23	1015			18				49			181.3	0.0		53.0
24	841			9				24			170.2	0.0	4.5	53.0
25	815			17				21			173.0	0.0	4.0	53.0
26	1246			16				24			158.9	0.0	4.0	52.0
27	1956			24				23			141.1	0.0		52.0
28	1292			26				28			147.7	0.0		52.0
29	950			24				28			164.8	0.0	3.0	53.0
30	1423			42				30			184.2	0.0	3.4	53.0
TOTAL	25,180			369				1,427						
AVG.	839			12				48			136.1	0.0	3.8	50.2

TABLE 59

TABLE 60

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 60

MCNARY PROJECT

MAY 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK
1	1076			38			0	27	5	0
2	1055			36			0	11	4	0
3	1479			67			0	16	6	0
4	1563			58			0	17	18	0
5	1490			90			0	23	64	0
6	1387			101			0	31	87	0
7	2003			106			0	21	25	0
8	1052			72			0	30	19	0
9	1220			132			0	27	21	0
10	912			98			0	31	60	0
11	760			86			0	28	75	0
12	434			46			0	18	309	0
13	426			43			0	21	391	0
14	498			48			0	14	248	0
15	424			42			0	18	268	0
16	562			56			7	16	393	0
17	555			48			0	21	441	0
18	465			53			0	23	1038	0
19	420			31			0	14	1699	0
20	400			51			0	17	1461	1
21	257			24			0	18	1165	1
22	330			24			0	18	2904	1
23	266			21			0	12	3792	1
24	309			20			0	19	7651	1
25	338			8			0	24	9094	3
26	236			18			0	17	11614	6
27	248			13			0	19	13419	10
28	223			10			0	9	13403	11
29	376			17			0	34	21923	5
30	293			22			0	29	41749	2
31	250			13			0	19	22047	12
TOTAL	21,307			1,492			7	642	155,393	54
AVG.	687			48				21	5013	

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	190.2	0.0	3.4	52.0
2	188.9	0.0	3.4	54.0
3	186.1	0.0	3.6	54.0
4	187.0	0.0	3.9	54.0
5	184.0	0.0	3.9	54.0
6	206.4	27.7	4.1	54.0
7	218.1	31.6	3.8	55.0
8	229.1	37.3	3.6	56.0
9	201.9	8.7	3.5	55.0
10	166.4	0.0	3.7	55.0
11	194.8	10.5	3.6	55.0
12	200.8	13.6	3.6	55.0
13	208.2	21.7	3.6	55.0
14	200.4	12.4		55.0
15	206.7	8.5	3.6	55.0
16	211.3	9.1	3.6	55.0
17	193.5	5.8	4.6	55.0
18	191.9	0.0	4.6	55.0
19	202.7	6.8	4.6	55.0
20	216.2	17.5	4.3	55.0
21	226.9	25.1	4.5	57.0
22	234.4	32.0	4.6	57.0
23	182.7	0.0	3.6	57.0
24	162.5	0.0	3.6	57.0
25	174.5	0.0	3.6	57.0
26	207.9	10.6	3.6	57.0
27	218.9	16.1	3.6	57.0
28	202.6	12.3		60.0
29	199.2	0.0		60.0
30	173.9	0.0		60.0
31	166.3	0.0		60.0
AVG.	197.9	9.9	3.9	55.9

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	46,487	1,861

SOCKEYE	STEELHEAD	SHAD	MINI-JK
7	2,069	155,393	54

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 61

MCNARY PROJECT

JUNE 1992

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT													
DATE	SPRING	SUMMER	FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	207			10			4	23	31849	11	169.4	0.0		60.0
2	280			18			2	16	42855	9	159.3	0.0		60.0
3	228			19			8	17	50892	12	173.5	0.0	3.6	60.0
4	186			11			1	29	54174	7	172.8	0.0	3.6	62.0
5	257			10			6	35	65933	7	162.8	0.0	5.2	62.0
6	326			16			5	45	64995	7	145.9	0.0	5.2	62.0
7	282			8			25	27	65535	2	140.6	0.0	5.2	62.0
8	376			8			35	37	66279	6	145.9	0.0	5.2	62.0
9		414		14			65	33	47192	7	184.1	0.0	4.8	62.0
10		397		16			84	44	60600	6	172.5	0.0	3.5	62.0
11		292		8			111	37	38262	6	184.3	0.0	3.8	64.0
12		241		17			180	32	14851	2	193.8	0.0	3.6	64.0
13		350		18			258	42	24416	2	178.0	0.0	3.5	64.0
14		363		5			224	28	39912	1	157.9	0.0	3.5	64.0
15		226		11			318	39	25619	0	178.7	0.0	3.2	64.0
16		264		7			467	47	23118	3	185.7	0.0	3.2	64.0
17		257		13			385	41	28005	2	199.2	0.0		62.0
18		297		21			405	42	37065	0	194.1	0.0		60.0
19		360		18			473	44	32552	6	193.6	0.0		60.0
20		223		17			574	49	39594	9	193.0	0.0		63.0
21		279		24			645	71	41266	11	160.1	0.0		63.0
22		234		9			862	52	41358	3	195.3	0.0		63.0
23		221		24			1,210	56	62820	10	199.3	0.0		64.0
24		271		22			1,389	70	57551	7	199.1	0.0	3.6	64.0
25		224		36			2,290	72	45696	11	197.7	0.0	3.6	65.0
26		319		41			3,267	126	38643	25	198.4	0.0	3.6	66.0
27		356		45			4,331	163	39682	20	193.9	0.0	3.5	66.0
28		504		38			5195	180	40772	27	162.7	0.0	3.5	66.0
29		389		46			4344	195	32765	38	173.3	0.0	3.5	66.0
30		315		23			3176	229	30933	36	153.6	0.0	3.5	67.0
TOTAL	2,142	6,796		573			30,339	1,921	1,285,184	293				
AVG.	268	309		19			1,011	64	42,839	10	177.3	0.0	3.9	63.1

TOTAL TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	48,629	1,961
SUMMER	6,796	473
TOTAL	55,425	2,434

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
30,346	3,990	1,440,577	347

TABLE 62

MONTHLY FISH PASSAGE SUMMARY
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 62

MCNARY PROJECT
JULY 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	RIVER CONDITIONS DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1		372		33			3538	237	24514	42	111.1	0.0	3.5	67.0
2		329		37			3656	232	16899	43	118.7	0.0	3.6	67.0
3		349		40			3315	265	16664	41	81.6	0.0	3.8	67.0
4		216		56			2615	201	28078	40	81.9	0.0		67.0
5		153		39			3459	186	14267	26	99.3	0.0		67.0
6		161		42			2259	259	13498	45	112.4	0.0		67.0
7		264		55			2107	294	9267	62	110.4	0.0		
8		183		50			1809	253	9038	25	105.0	0.0	4.0	67.0
9		156		51			1332	251	8605	32	120.9	0.0	4.0	67.0
10		169		70			876	273	9648	42	129.0	0.0	4.0	67.0
11		148		27			797	260	6331	45	130.2	0.0	4.0	67.0
12		162		42			960	240	5501	46	104.1	0.0	4.0	67.0
13		101		38			859	235	3521	34	124.6	0.0	4.0	67.0
14		142		68			1303	324	3046	42	143.6	0.0	4.0	67.0
15		106		91			1210	329	2932	64	125.2	0.0	4.8	68.0
16		144		58			1085	261	1820	33	139.7	0.0	4.6	69.0
17		211		80			1223	390	2872	38	142.8	0.0	4.8	68.0
18		132		66			936	324	1332	42	144.0	0.0	4.2	68.0
19		81		43			576	305	2356	28	118.0	0.0	4.4	68.0
20		96		45			617	352	1546	36	131.4	0.0	4.5	68.0
21		121		58			876	409	1246	59	141.2	0.0	4.6	68.0
22		115		63			627	667	781	51	141.6	0.0	4.0	68.0
23		128		65			477	720	726	28	108.7	0.0		68.0
24		138		84			431	706	698	44	115.0	0.0	4.0	68.0
25		76		52			322	450	374	43	108.1	0.0	4.0	68.0
26		75		32			164	421	324	31	92.9	0.0	4.0	68.0
27		59		40			175	380	207	54	106.7	0.0	4.0	68.0
28		66		28			94	392	830	37	112.5	0.0	4.0	68.0
29		47		34			93	464	977	19	114.2	0.0	4.0	68.0
30		46		34			47	398	942	14	116.8	0.0	4.0	68.0
31		48		44			77	511	754	30	111.7	0.0	4.0	69.0
TOTAL		4,594		1,565			37,915	10,989	189,594	1,216				
AVG.		148		50			1,223	354	6,116	39	117.5	0.0	4.1	67.6

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK ADULT
SPRING	48,629	1,961
SUMMER	11,390	2,038
TOTAL	60,019	3,999

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
68,261	14,979	1,630,171	1,563

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 63

MCNARY PROJECT
AUGUST 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1		41		41	0		60	391	929	29	122.1	0.0	4.0	69.0
2		43		44	0		77	590	1072	22	109.4	0.0	4.0	68.0
3		84		67	0		66	578	689	38	94.9	0.0	4.5	69.0
4		78		81	0		43	693	384	32	116.6	0.0	4.5	69.0
5		47		64	0		45	804	196	20	110.7	0.0	4.0	69.0
6		103		74	0		43	999	218	35	101.2	0.0		69.0
7		66		50	0		15	745	142	15	103.8	0.0		69.0
8		53		50	0		14	798	136	15	86.4	0.0		69.0
9			71	31	0		15	757	87	12	70.3	0.0	4.5	69.0
10			47	56	0		12	478	92	7	91.4	0.0		69.0
11			59	15	0		7	396	111	10	109.3	0.0		69.0
12			62	20	0		6	393	68	3	127.9	0.0	4.0	69.0
13			41	24	0		12	289	117	15	130.0	0.0	4.0	70.0
14			46	27	0		8	315	70	35	122.6	0.0	4.2	70.0
15			30	37	0		2	207	87	13	112.3	0.0	4.3	70.0
16			33	46	0		2	245	124	14	84.8	0.0	4.3	70.0
17			101	59	0		4	190	136	17	124.7	0.0	4.2	70.0
18			100	47	0		0	404	74	6	128.5	0.0	4.6	70.0
19			76	59	0		6	430	40	30	128.6	0.0	4.4	71.0
20			66	23	0		0	444	34	14	124.0	0.0	4.9	71.0
21			111	49	0		1	685	26	17	125.4	0.0	4.2	71.0
22			98	48	0		2	607	16	19	88.6	0.0	4.4	71.0
23			128	47	0		1	471	-30	16	75.1	0.0	3.9	71.0
24			73	37	0		0	281	-63	12	95.0	0.0	4.8	70.0
25			145	42	0		1	381	37	10	96.1	0.0	4.5	69.0
26			151	50	1		4	449	30	12	82.7	0.0		69.0
27			320	53	0		0	524	22	23	87.0	0.0		68.0
28			390	63	0		0	434	13	12	112.7	0.0		68.0
29			245	52	0		1	502	28	11	94.2	0.0	4.7	68.0
30			516	79	0		1	515	22	21	72.9	0.0	4.7	68.0
31			931	56	0		0	509	11	25	86.8	0.0		68.0
TOTAL		515	3,840	1,491	1		448	15,504	4,918	560				
AVG.		64	167	48			14	500	159	18	103.7	0.0	4.3	69.4

RIVER CONDITIONS

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	48,629	1,961
SUMMER	11,905	2,509
FALL	3,840	1,020
TOTAL	64,374	5,490

COHO ADULT
1

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
68,709	30,483	1,635,089	2,123

TABLE 64

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 64

MCNARY PROJECT
SEPTEMBER 1992

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	KCFS	KCFS	SECCHI	DEG F
1			1429	84	0	0	1	1186		33	110.6	0.0		69.0
2			1098	84	0	0	0	1185		15	99.4	0.0	4.8	69.0
3			823	96	0	0	2	1037		17	97.9	0.0	4.5	69.0
4			549	125	0	0	5	1154		20	82.6	0.0	4.5	69.0
5			472	105	0	2	1	959		32	92.6	0.0	4.5	68.0
6			696	105	0	0	1	994		30	74.7	0.0	4.5	68.0
7			1267	115	0	0	2	1549		27	65.1	0.0	4.5	68.0
8			1466	108	1	1	1	2459		30	87.1	0.0	4.5	68.0
9			2730	201	1	1	3	4362		33	103.4	0.0	4.5	68.0
10			1722	171	7	0	0	3836		38	105.2	0.0	4.5	68.0
11			1910	104	5	2	0	4247		30	104.2	0.0		67.0
12			2789	279	7	1	0	6631		36	86.2	0.0	4.1	67.0
13			2806	349	24	6	0	10276		102	105.5	0.0		67.0
14			2427	344	32	11	1	5835		90	79.3	0.0		67.0
15			1938	287	23	7	3	4204		91	99.6	0.0		67.0
16			1417	227	10	8	1	3758		78	114.3	0.0	4.2	67.0
17			1182	336	30	19	0	3379		46	116.7	0.0	4.2	67.0
18			2148	408	41	19	0	6117		89	109.0	0.0	4.2	67.0
19			1404	660	28	18	0	7264		52	94.5	0.0	4.2	67.0
20			836	451	14	7	0	4977		29	96.0	0.0	4.2	67.0
21			1476	798	38	18	0	8958		46	63.2	0.0	4.2	67.0
22			1174	461	43	19	0	6401		53	86.4	0.0	4.2	64.0
23			1312	502	32	23	0	4475		33	101.9	0.0	4.0	64.0
24			1370	690	45	17	0	5183		27	112.0	0.0	4.0	64.0
25			839	742	106	38	1	7498		40	112.3	0.0	4.5	64.0
26			642	559	72	31	4	5903		55	83.8	0.0	4.5	64.0
27			773	475	60	36	0	4755		65	69.1	0.0	4.6	64.0
28			728	565	66	33	2	3126		51	98.9	0.0	4.4	64.0
29			783	552	49	18	0	2694		44	98.4	0.0	4.5	64.0
30			1087	685	40	21	0	3224		23	103.9	0.0		63.0
TOTAL			41,293	10,668	774	356	28	127,626		1,355				
AVG.			1,376	356	26	12	1	4,254		45	95.1	0.0	4.4	66.5

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	48,629	1,961
SUMMER	11,905	2,509
FALL	45,133	11,688
TOTAL	105,667	16,158

COHO ADULTS	COHO JACKS	SOCKEYE	STEELHEAD	SHAD	MINI-JCK
775	356	68,737	158,109	1,635,089	3,478

McNary Dam had 1 Pink Salmon on the Oregon side on the 12th.

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 65

MCNARY PROJECT
OCTOBER 1992

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD		MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
	FISH COUNTS										RIVER CONDITIONS			
1			698	755	56	32		3861		48	104.2	0.0		64.0
2			631	620	25	19		3154		45	98.7	0.0		64.0
3			585	547	50	18		4611		39	90.0	0.0	4.2	63.0
4			626	544	75	19		3967		23	71.3	0.0		63.0
5			544	490	36	9		2140		14	89.2	0.0	4.2	63.0
6			343	451	26	24		1307		46	101.9	0.0	4.2	63.0
7			195	261	24	12		972		23	93.7	0.0	4.2	63.0
8			161	292	9	10		958		26	94.3	0.0	4.2	63.0
9			263	492	19	13		1354		31	90.3	0.0	4.5	63.0
10			174	412	16	9		1311		24	95.0	0.0	4.2	63.0
11			244	427	18	15		862		14	77.7	0.0	4.2	63.0
12			192	283	12	4		671		6	88.9	0.0	4.2	62.0
13			191	344	5	8		835		11	100.9	0.0	4.8	62.0
14			141	304	4	3		982		8	100.8	0.0	4.8	62.0
15			147	245	5	15		1150		9	103.2	0.0	4.8	62.0
16			45	100	5	8		582		7	80.4	0.0	4.2	62.0
17			81	128	5	1		678		4	87.4	0.0		60.0
18			68	156	1	2		561		12	78.1	0.0		60.0
19			78	119	6	6		450		4	79.3	0.0		60.0
20			72	116	8	6		432		5	80.3	0.0	4.8	61.0
21			49	120	3	1		368		0	93.3	0.0	4.8	61.0
22			58	91	2	1		443		13	96.1	0.0	4.8	61.0
23			55	105	3	3		591		5	88.2	0.0	4.8	59.0
24			64	82	2	0		470		6	79.2	0.0	4.8	59.0
25			82	78	0	3		458		3	71.5	0.0	4.8	59.0
26			54	51	2	4		555		6	78.8	0.0	4.8	59.0
27			55	47	1	1		490		2	96.0	0.0	4.8	59.0
28			43	49	1	0		627		1	84.4	0.0	3.4	59.0
29			30	36	2	2		298		2	97.6	0.0	3.6	59.0
30			48	33	0	1		424		5	102.6	0.0	3.6	59.0
31			39	48	0	0		355		6	85.2	0.0	3.8	59.0
TOTAL			6,056	7,826	421	249		35,917		448				
AVG.			195	252	14	8		1,159		14	89.6	0.0	4.4	61.3

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	48,629	1,961
SUMMER	11,905	2,509
FALL	51,189	19,514
TOTAL	111,723	23,984

COHO ADULTS	COHO JACKS	SOCKEYE	STEELHEAD	SHAD	MINI-JCK
1,196	605	68,737	194,026	1,635,089	3,926

McNary Dam had 1 Pink Salmon on the Oregon side on the 21st.

TABLE 66

DISCHARGE AND WATER QUALITY DATA

MCNARY PROJECT - 1992

NOVEMBER				
DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	78.1	0.0	3.8	57.0
2	85.0	0.0	3.8	57.0
3	101.1	0.0	4.1	57.0
4	99.6	0.0	4.1	57.0
5	101.5	0.0	4.1	57.0
6	93.5	0.0		54.0
7	94.3	0.0		54.0
8	79.9	0.0		54.0
9	98.0	0.0	4.2	52.0
10	108.4	0.0	4.2	52.0
11	95.8	0.0	4.2	52.0
12	111.7	0.0	4.2	52.0
13	100.9	0.0	4.2	52.0
14	106.3	0.0	4.2	52.0
15	99.5	0.0	4.2	52.0
16	89.9	0.0	4.2	52.0
17	109.1	0.0	4.0	52.0
18	104.6	0.0	4.0	53.0
19	91.5	0.0	4.0	53.0
20	105.4	0.0		53.0
21	125.6	0.0		53.0
22	111.1	0.0	5.0	51.0
23	141.7	0.0	5.0	51.0
24	153.6	0.0	5.0	51.0
25	136.6	0.0	4.0	51.0
26	121.7	0.0	4.0	51.0
27	97.1	0.0	5.0	51.0
28	106.4	0.0	5.0	51.0
29	112.1	0.0	5.0	49.0
30	129.0	0.0	5.0	49.0
AVG.	106.3	0.0	4.3	52.7

DECEMBER				
DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	122.1	0.0	5.9	49.0
2	123.7	0.0	5.9	49.0
3	137.1	0.0	5.6	48.0
4	158.6	0.0	4.0	47.0
5	135.5	0.0	4.4	47.0
6	148.0	0.0	4.4	47.0
7	149.3	0.0	4.3	47.0
8	152.0	0.0	4.3	47.0
9	138.8	0.0	4.3	
10	148.4	0.0		46.0
11	146.2	0.0		46.0
12	125.7	0.0		46.0
13	105.0	0.0		46.0
14	132.0	0.0	5.0	45.0
15	151.3	0.0	5.0	45.0
16	159.2	0.0	5.0	45.0
17	146.7	0.0	5.0	45.0
18	149.5	0.0	5.0	45.0
19	149.7	0.0	5.0	45.0
20	117.1	0.0	5.0	45.0
21		0.0	5.0	45.0
22		0.0	5.0	45.0
23				
24				
25				
26				
27				
28				
29				
30				
31				
AVG.	139.8	0.0	4.9	46.2

TABLE 67

YEARLY TOTALS OF SALMONIDS COUNTED OVER MCNARY DAM
1954-1992

YEAR	CHINOOK*	STEELHEAD	SOCKEYE	COHO*	TOTALS*
1954	126,555	75,059	108,181	950	310,745
1955	108,915	85,575	173,758	643	368,891
1956	114,342	42,554	102,145	683	259,724
1957	292,696	105,728	85,460	2,855	486,739
1958	226,092	87,890	102,397	1,350	417,729
1959	171,490	110,475	83,977	1,970	367,912
1960	176,767	96,895	55,372	1,580	330,614
1961	154,996	103,743	16,388	2,045	277,172
1962	152,756	163,181	29,372	3,195	348,504
1963	154,459	113,646	59,744	3,113	330,962
1964	167,934	100,742	83,931	3,317	355,924
1965	150,907	118,960	42,052	2,700	314,619
1966	223,141	145,130	173,028	8,525	549,824
1967	195,653	77,700	105,635	27,226	406,214
1968	200,488	112,522	101,007	39,518	453,535
1969	213,407	76,681	29,787	53,716	373,591
1970	168,892	69,759	59,636	36,399	334,686
1971	171,448	109,630	52,867	39,358	373,303
1972	168,821	93,820	26,422	45,635	334,698
1973	184,112	64,620	42,731	17,682	309,145
1974	127,858	26,932	26,505	13,746	195,041
1975	133,150	23,663	43,143	3,975	203,931
1976	163,314	54,000	24,632	7,539	249,485
1977	183,581	87,712	80,781	4,622	356,696
1978	144,148	34,740	18,511	20,356	217,755
1979	95,275	50,304	37,792	12,800	196,171
1980	80,773	66,524	44,301	571	192,169
1981	80,619	61,985	26,644	3,736	172,984
1982	102,225	75,099	15,077	3,119	195,520
1983	121,636	125,254	40,903	2,470	290,263
1984	159,071	135,515	56,906	2,841	354,333
1985	288,483	188,204	98,457	6,917	582,061
1986	342,417	193,481	46,443	1,374	583,715
1987	286,638	148,811	72,190	615	508,254
1988	243,608	151,765	50,080	2,010	447,463
1989	176,407	170,467	41,318	3,383	391,575
1990	147,439	95,061	46,145	2,059	290,704
1991	114,841	168,692	69,365	2,272	355,170
1992	135,707	194,026	68,737	1,801	400,271
Totals	6,651,061	4,006,545	2,441,820	388,666	13,488,092
10-Year Average	201,625	157,128	59,054	2,574	420,381

*Jacks Included

TABLE 67

TABLE 68

TABLE 68

MONTHLY COUNT OF CHINOOK SALMON
MCNARY DAM - 1954 - 1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL*	SPRING MAR 15- JUN 8	SUMMER JUN 9- AUG 8	FALL AUG 9- OCT 31
1954			14	919	42,625	28,510	35,993	9,287	8,626	568	13		126,555	52,014	61,065	13,476
1955				86	12,778	26,125	46,021	14,773	7,220	1,648	264		108,915	21,309	71,180	16,426
1956			7	307	10,746	34,360	50,409	11,073	5,636	1,360	444		114,342	12,717	90,335	11,290
1957			6	14,489	67,939	91,473	41,485	25,621	48,685	2,998			292,696	99,511	122,578	70,607
1958				1,864	36,684	61,898	25,140	11,120	82,890	6,496			226,092	54,910	73,654	97,528
1959				3,914	31,923	23,461	51,478	14,929	42,756	3,029			171,490	40,775	74,985	55,730
1960				4,808	44,721	49,506	25,710	13,376	35,329	3,317			176,767	52,490	76,940	47,337
1961				21,669	44,260	19,722	23,192	10,661	31,447	4,045			154,996	68,539	45,257	41,200
1962				10,527	44,053	28,621	21,008	11,751	33,541	3,255			152,756	55,884	52,756	44,116
1963				7,765	42,804	22,454	18,659	13,757	43,731	5,289			154,459	52,336	44,760	57,363
1964				19,856	33,310	10,893	39,334	14,930	45,514	4,097			167,934	54,279	55,062	58,593
1965				6,114	20,559	14,094	28,599	12,856	60,185	8,500			150,907	29,206	45,375	76,326
1966				53,484	32,282	21,161	35,895	13,811	58,275	8,233			223,141	87,195	60,827	75,119
1967				32,790	28,174	13,244	44,612	10,788	54,314	11,731			195,653	62,591	59,975	73,087
1968				13,328	51,443	20,456	37,127	15,713	53,597	8,824			200,488	67,092	60,639	72,757
1969				809	60,241	39,074	30,556	12,200	59,889	10,638			213,407	70,079	63,953	79,375
1970				28,015	34,027	18,661	23,132	13,773	44,635	6,649			168,892	63,982	43,356	61,554
1971				5,642	32,688	24,007	35,152	9,680	55,297	8,982			171,448	42,601	59,129	69,718
1972				25,911	41,609	12,553	35,322	10,154	37,131	6,141			168,821	69,023	50,491	49,307
1973				44,878	31,727	16,836	14,520	10,400	57,716	8,035			184,112	79,047	31,812	73,253
1974				1,918	34,767	7,976	18,181	6,251	45,845	12,920			127,858	40,037	25,812	62,009
1975				4,694	24,752	11,590	20,497	12,485	53,125	6,007			133,150	32,718	31,713	68,719
1976				4,868	30,435	16,714	19,821	9,143	64,863	17,470			163,314	38,505	36,818	87,991
1977				40,692	23,895	16,768	16,256	7,348	64,785	13,837			183,581	66,934	32,277	84,370
1978				27,191	37,613	14,505	18,095	7,799	30,273	7,296	1,376		144,148	68,414	31,589	44,145
1979			6	5,424	13,696	9,763	14,601	8,030	34,702	8,171	882		95,275	21,153	24,161	49,961
1980			3	3,481	18,108	6,705	12,166	7,001	24,409	8,284	616		80,773	23,001	18,862	38,910
1981			3	12,923	16,904	8,288	8,243	5,584	23,323	4,926	425		80,619	32,330	15,141	33,148
1982			3	1,638	23,487	10,357	8,749	5,091	44,276	8,624			102,225	28,352	16,574	57,299
1983				4,481	25,074	9,202	7,882	5,217	54,339	15,441			121,636	31,636	16,199	73,801
1984				1,772	23,806	9,235	12,256	8,845	79,004	23,391	767		159,076	27,474	21,201	110,401
1985			18	18,267	41,962	14,117	9,912	17,222	140,034	46,951			288,483	63,265	22,029	203,189
1986			2	28,739	44,459	14,515	12,315	9,636	168,230	64,521			342,417	76,077	25,798	240,542
1987				26,258	32,171	12,889	11,219	19,123	151,410	33,568			286,638	60,396	25,353	200,889
1988				26,267	22,245	14,605	9,282	30,714	115,878	24,617			243,608	51,178	23,621	168,809
1989				9,625	24,281	12,484	11,112	23,034	80,089	15,782			176,407	35,954	24,708	115,745
1990				19,309	23,861	11,007	11,148	7,306	61,718	13,090			147,439	44,499	22,248	80,692
1991				4,942	15,838	9,289	9,409	4,328	56,251	13,674	1,074	36	114,841	22,631	17,588	74,622
1992				25,549	22,799	9,511	6,159	5,846	51,961	13,882			135,707	50,590	14,414	70,703
Total			62	565,213	1,244,746	796,629	900,647	460,656	2,210,929	466,287	5,861	36	6,651,066	1,950,724	1,690,235	3,010,107
10-Year Average				16,521	27,650	11,685	10,069	13,127	95,891	26,492	184		201,625	46,370	21,316	133,939

*Jacks Included

TABLE 69

MONTHLY COUNT OF SOCKEYE SALMON
MCNARY DAM; 1954 - 1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1954					1	1,107	93,452	11,382	2,214	25			108,181
1955					43	287	163,902	9,402	121	3			173,758
1956					1	639	94,352	6,882	262	7	2		102,145
1957					13	6,318	74,874	4,233	22				85,460
1958						12,542	82,547	5,474	1,819	15			102,397
1959					21	2,031	73,735	7,981	209				83,977
1960						9,374	43,749	2,241	8				55,372
1961						1,088	14,149	1,138	11	2			16,388
1962						1,721	27,134	511	6				29,372
1963					78	8,712	50,415	535	4				59,744
1964						770	81,536	1,617	8				83,931
1965						328	40,790	923	10	1			42,052
1966						6,202	162,267	4,548	11				173,028
1967						1,935	101,044	2,647	9				105,635
1968						28,928	70,413	1,666					101,007
1969						5,787	23,353	647					29,787
1970						7,152	47,339	5,134	11				59,636
1971						317	50,568	1,982					52,867
1972						366	24,452	1,604					26,422
1973						9,011	32,301	999	420				42,731
1974						188	25,816	486	15				26,505
1975						1,517	41,011	615					43,143
1976						4,461	19,319	415	437				24,632
1977					8	36,708	43,077	739	207	42			80,781
1978						3,211	10,376	714	1,583	2,627			18,511
1979						6,317	29,571	1,547	321	36			37,792
1980						3,400	40,469	432					44,301
1981						4,419	22,042	180	1	2			26,644
1982						812	13,489	281	292	203			15,077
1983						5,897	33,851	997	142	16			40,903
1984						18,762	37,409	637	85	11	2		56,906
1985				1		60,067	36,567	522	593	707			98,457
1986						8,362	36,863	819	348	51			46,443
1987					4	28,742	42,464	889	85	6			72,190
1988						23,466	25,984	599	14	17			50,080
1989					1	14,721	26,239	334	21	2			41,318
1990					1	8,922	36,791	427	0	4			46,145
1991					1	6,509	61,780	1,024	38	11	1	1	69,365
1992					7	30,339	37,915	448	28				68,737
Total				1	179	371,435	1,973,405	83,651	9,355	3,788	5	1	2,441,820
10-Year Average						21,102	41,139	716	165	103			63,227

TABLE 69

TABLE 70

MONTHLY COUNT OF COHO SALMON
MCNARY DAM; 1954-1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS*
1954								4	751	180	14	1	950
1955									350	260	33		643
1956								16	462	157	48		683
1957							18	208	2,364	265			2,855
1958								29	1,091	230			1,350
1959								32	1,892	46			1,970
1960								24	1,432	124			1,580
1961								22	1,731	292			2,045
1962							5	106	2,884	200			3,195
1963							5	437	2,259	412			3,113
1964							3	307	2,734	273			3,317
1965							22	105	2,264	309			2,700
1966								811	7,195	519			8,525
1967							11	11	22,492	4,712			27,226
1968								1,010	36,260	2,248			39,518
1969								1,643	45,497	6,576			53,716
1970								3,576	31,161	1,662			36,399
1971								927	33,828	4,603			39,358
1972								2,433	38,747	4,455			45,635
1973							66	1,768	14,452	1,396			17,682
1974								1,160	10,052	2,534			13,746
1975							1	268	3,675	31			3,975
1976								373	5,201	1,965			7,539
1977						2		274	2,698	1,648			4,622
1978						1		138	10,445	7,459	2,313		20,356
1979				1		4	194	652	9,058	2,431	460		12,800
1980								2	180	203	186		571
1981								421	2,840	435	40		3,736
1982							141	235	2,148	595			3,119
1983								229	1,536	705			2,470
1984						6		147	2,506	154	28		2,841
1985					14	37	44	2,040	4,493	289			6,917
1986								1	851	522			1,374
1987							3	24	377	211			615
1988								17	1,210	783			2,010
1989								35	2,043	1,305			3,383
1990								1	1,007	1,051			2,059
1991									1,105	937	211	19	2,272
1992								1	1,130	670			1,801
TOTAL				1	14	50	513	19,487	312,401	52,847	3,333	20	388,666
10-Year Average							5	250	1,626	663	24		2,574

*Jacks Included

TABLE 71

MONTHLY COUNT OF STEELHEAD
MCNARY DAM; 1954-1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1954			376	5,569	2,307	128	2,628	20,939	26,944	11,627	2,937	1,604	75,059
1955	931	35	70	3,279	1,791	162	5,257	36,035	17,463	16,941	2,874	737	85,575
1956	66	753	563	2,365	1,218	276	5,440	14,492	8,245	6,787	2,349		42,554
1957			840	2,084	147	334	18,100	28,926	34,478	20,775	8	36	105,728
1958	62	137	1,069	877	334	1,265	9,967	6,535	50,229	17,415			87,890
1959				1,317	685	748	10,508	32,872	49,542	14,803			110,475
1960				1,579	1,236	908	8,475	22,443	51,749	10,505			96,895
1961				896	580	1,281	7,469	11,428	64,521	17,568			103,743
1962				1,650	762	1,108	11,321	28,288	98,042	22,010			163,181
1963				813	1,751	2,639	8,252	26,282	47,982	25,927			113,646
1964				1,789	805	486	7,602	25,918	53,180	10,962			100,742
1965				1,361	363	231	11,749	31,155	54,450	19,651			118,960
1966				2,279	954	1,476	18,241	26,062	71,180	24,938			145,130
1967				1,434	1,130	152	5,771	14,894	32,310	22,009			77,700
1968				5,451	3,361	247	4,058	22,268	61,167	15,970			112,522
1969				2,304	1,792	711	7,668	13,641	35,836	14,729			76,681
1970				1,347	1,001	340	5,183	15,236	39,150	7,502			69,759
1971				813	374	271	8,931	21,324	62,083	15,834			109,630
1972				1,614	393	130	8,155	20,548	46,393	16,587			93,820
1973				3,178	846	270	6,898	11,121	32,701	9,606			64,620
1974				847	715	681	4,093	5,242	8,648	6,706			26,932
1975				612	209	254	3,623	6,708	9,329	2,928			23,663
1976				936	1,372	1,949	5,772	16,145	22,423	5,403			54,000
1977				1,730	987	2,916	13,132	7,833	43,792	17,322			87,712
1978				1,266	701	1,832	3,444	4,863	15,627	5,708	1,299		34,740
1979			970	681	156	93	4,955	9,970	14,648	15,580	3,251		50,304
1980			1,753	3,355	608	381	2,740	14,431	27,706	12,776	2,774		66,524
1981			861	1,479	809	878	7,212	12,839	19,961	15,652	2,294		61,985
1982			1,530	1,764	825	321	4,279	12,621	36,282	17,477			75,099
1983				1,051	215	137	7,746	25,821	70,369	19,915			125,254
1984				1,858	860	653	13,165	14,944	68,837	33,608	1,590		135,515
1985			1,583	6,483	1,383	2,949	13,818	46,632	87,026	28,330			188,204
1986			1,282	1,184	414	1,193	27,563	32,339	74,769	54,737			193,481
1987				2,082	413	885	16,658	35,661	59,326	33,786			148,811
1988				4,176	1,095	2,117	11,609	25,875	69,259	37,634			151,765
1989				3,269	598	1,921	16,002	20,819	87,722	40,136			170,467
1990				2,754	660	1,489	9,105	10,368	33,452	37,233			95,061
1991				2,245	630	846	9,921	17,752	78,363	46,941	9,388	2,876	168,962
1992				1,427	642	1,921	10,989	15,504	127,626	35,917			194,026
Total	1,059	925	10,897	81,198	35,122	36,579	357,499	766,774	1,892,810	789,935	28,764	5,253	4,006,815
10-Year Avg.				2,653	691	1,411	13,658	24,572	75,675	36,824	1,098		157,155

TABLE 71

SNAKE RIVER TABLES

TABLE 72

MONTHLY TOTALS OF SALMONIDS AND SHAD

COUNTED OVER ICE HARBOR DAM IN 1992

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*				11,462	12,001	5,791	1,189	228	3,716	1,634			36,021
STEELHEAD				1,433	232	742	4,190	8,137	89,281	56,599			160,614
SOCKEYE						7	17	3	5	1			33
COHO													
PINK													
MINI-JACK**					6	88	204	328	263	28			917
TOTAL				12,895	12,239	6,628	5,600	8,696	93,265	58,262			196,668
SHAD					13,098	127,624	30,627	258					171,607

*Jacks included

**Salmonid fish under 12 inches in length

TABLE 72

TABLE 73

DISCHARGE AND WATER QUALITY DATA
ICE HARBOR PROJECT - 1992

JANUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	12.0	0.0	6.0	42.0
2	21.1	0.0	6.5	42.0
3	31.3	0.0	6.5	42.0
4	23.9	0.0	6.5	42.0
5	13.7	0.0	6.5	42.0
6	20.5	0.0	8.0	42.0
7	22.6	0.0	8.0	42.0
8	23.9	0.0	8.0	42.0
9	27.1	0.0	8.0	42.0
10	39.0	0.0	8.0	42.0
11	31.4	0.0	7.0	42.0
12	17.4	0.0	7.0	41.0
13	25.7	0.0	7.0	41.0
14	24.7	0.0	7.0	41.0
15	25.2	0.0	7.0	41.0
16	24.0	0.0	7.0	40.0
17	22.1	0.0	8.0	40.0
18	15.8	0.0	8.0	40.0
19	12.0	0.0	8.0	40.0
20	17.2	0.0	8.0	40.0
21	20.9	0.0	8.0	40.0
22	24.7	0.0	8.0	40.0
23	25.9	0.0	8.0	39.0
24	32.7	0.0	8.0	39.0
25	20.3	0.0	8.0	39.0
26	18.1	0.0	8.0	39.0
27	15.1	0.0	8.0	39.0
28	14.8	0.0	8.0	39.0
29	30.7	0.0	8.0	39.0
30	23.1	0.0	8.0	39.0
31	29.2	0.0	8.0	39.0
AVG.	22.8	0.0	7.5	40.5

FEBRUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	23.1	0.0	8.0	40.0
2	20.6	0.0	8.0	40.0
3	25.0	0.0	8.0	40.0
4	28.5	0.0	8.5	41.0
5	31.7	0.0	8.5	41.0
6	25.7	0.0	8.5	41.0
7	17.9	0.0	8.5	41.0
8	19.6	0.0	8.5	41.0
9	16.8	0.0	8.5	41.0
10	20.8	0.0	8.5	41.0
11	21.6	0.0	8.5	41.0
12	21.1	0.0	8.0	41.0
13	25.6	0.0	8.5	41.0
14	28.0	0.0	8.5	41.0
15	30.5	0.0	7.0	41.0
16	6.0	0.0	7.0	41.0
17	22.4	0.0	5.5	41.0
18	19.7	0.0	5.5	41.0
19	25.7	0.0	5.5	41.0
20	27.3	0.0	6.4	42.0
21	36.8	0.0	6.3	42.0
22	42.3	0.0	6.3	42.0
23	41.0	0.0	6.3	42.0
24	42.2	0.0	7.0	42.0
25	42.5	0.0	7.5	42.0
26	37.5	0.0	7.5	42.0
27	41.0	0.0	7.5	42.0
28	42.7	0.0	4.0	42.0
29	42.9	0.0	2.0	42.0
AVG.	28.5	0.0	7.2	41.2

MARCH

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	42.6	0.0	5.5	42.0
2	42.4	0.0	3.6	42.0
3	43.0	0.0	3.6	42.0
4	42.9	0.0	3.0	42.0
5	42.8	0.0	3.0	42.0
6	42.5	0.0	3.2	43.0
7	42.5	0.0	3.2	43.0
8	39.4	0.0	4.0	43.0
9	33.0	0.0	4.0	43.0
10	38.6	0.0	3.5	44.0
11	39.9	0.0	3.5	44.0
12	36.4	0.0	3.0	44.0
13	34.3	0.0	3.0	44.0
14	39.7	0.0	1.5	45.0
15	37.9	0.0	1.0	45.0
16	38.3	0.0	1.0	45.0
17	40.0	0.0	1.0	46.0
18	42.3	0.0	1.6	46.0
19	43.6	0.0	1.6	46.0
20	43.2	0.0	1.5	47.0
21	43.3	0.0	1.5	47.0
22	43.6	0.0	2.9	47.0
23	32.7	0.0	2.9	47.0
24	11.1	0.0	3.3	47.0
25	11.4	0.0	3.0	47.0
26	10.3	0.0	4.2	47.0
27	8.5	0.0	4.2	47.0
28	6.8	0.0	4.2	47.0
29	7.1	0.0	4.2	47.0
30	8.7	0.0	4.2	48.0
31	8.7	0.0	4.2	48.0
AVG.	32.2	0.0	3.0	45.1

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 74

ICE HARBOR PROJECT

APRIL 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK
1	7			0				47		
2	16			0				51		
3	35			0				87		
4	17			0				90		
5	17			0				92		
6	35			0				68		
7	94			0				75		
8	38			0				56		
9	47			0				37		
10	91			0				58		
11	123			0				56		
12	257			0				61		
13	295			0				32		
14	250			1				44		
15	336			1				37		
16	480			1				50		
17	567			4				56		
18	696			7				32		
19	516			0				77		
20	784			5				34		
21	990			0				45		
22	404			7				31		
23	1,070			10				48		
24	646			7				33		
25	497			4				32		
26	548			6				26		
27	890			6				26		
28	678			4				19		
29	473			5				14		
30	490			7				19		
TOTAL	11,387			75				1,433		
AVG.	380			3				48		

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	13.1	0.0	5.5	48.0
2	18.3	0.0	5.5	48.0
3	24.4	0.0	5.5	50.0
4	31.5	0.0	5.5	50.0
5	41.6	0.0	5.5	51.0
6	33.2	0.0	5.0	52.0
7	18.1	0.0	4.8	52.0
8	31.9	0.0	4.8	52.0
9	36.8	0.0	4.8	50.0
10	38.1	0.0	4.8	52.0
11	34.9	0.0	4.8	52.0
12	29.1	0.0	6.0	52.0
13	34.7	0.0	6.0	52.0
14	35.7	0.0	6.0	52.0
15	49.8	9.1	6.8	52.0
16	41.1	12.5	6.8	52.0
17	39.8	11.3	6.8	52.0
18	44.9	15.0	6.8	52.0
19	45.6	13.9	6.8	52.0
20	45.1	14.2	6.8	53.0
21	55.3	20.2	7.0	53.0
22	50.5	19.2	7.0	53.0
23	59.7	23.2	7.0	53.0
24	49.3	16.7	7.0	53.0
25	48.1	15.8	7.0	53.0
26	48.6	15.9	7.0	53.0
27	43.6	13.5	7.5	53.0
28	45.9	14.6	7.5	54.0
29	51.3	18.0	7.5	54.0
30	53.4	19.0	7.5	54.0
AVG.	39.8	8.4	6.2	52.0

TABLE 74

TABLE 75

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 75

ICE HARBOR PROJECT
MAY 1992

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	436			9				20	0	0	77.7	39.6	7.5	54.0
2	344			3				15	0	0	78.0	40.5	7.5	55.0
3	436			8				15	0	0	72.8	36.8	5.0	55.0
4	605			14				17	0	0	72.4	36.8	5.0	55.0
5	859			25				19	0	0	74.9	38.4	4.8	55.0
6	800			26				10	0	0	72.4	32.8	4.8	55.0
7	576			29				6	0	0	70.6	26.4	3.7	55.0
8	731			30				9	0	0	73.3	23.1	2.9	56.0
9	635			36				16	0	0	74.5	23.6	2.9	56.0
10	436			26				14	1	0	71.7	22.3	2.5	56.0
11	359			20				7	1	0	64.7	19.8	4.0	56.0
12	532			34				12	4	0	55.9	18.1	4.2	56.0
13	378			21				9	2	0	49.9	15.8	4.2	56.0
14	238			12				3	11	0	63.1	17.8	6.1	56.0
15	321			18				7	19	0	64.2	18.7	6.1	58.0
16	285			16				5	26	0	66.8	20.1	6.1	58.0
17	302			19				7	36	0	47.2	14.7	6.1	58.0
18	233			11				4	62	0	44.9	14.9	6.1	58.0
19	274			13				1	81	0	44.2	13.4	6.1	59.0
20	211			15				2	76	0	49.8	16.5	4.5	59.0
21	150			10				1	57	0	59.2	16.7	4.5	59.0
22	219			17				2	141	1	53.2	16.0	5.5	59.0
23	232			7				8	166	0	44.0	12.2	5.5	59.0
24	159			8				0	263	0	44.8	13.5	5.5	59.0
25	176			10				1	479	0	44.6	15.1	6.0	59.0
26	312			14				3	486	0	52.7	15.3	5.5	59.0
27	237			12				7	1,318	2	68.2	23.8	5.5	59.0
28	232			12				2	1,661	2	62.2	23.2	5.5	60.0
29	284			5				5	2,186	1	51.1	17.0	4.7	60.0
30	243			8				4	2,844	0	43.5	13.7	5.9	60.0
31	267			11				1	3,178	0	43.5	13.5	5.9	60.0
TOTAL	11,502			499				232	13,098	6				
AVG.	371			16				7	423		59.9	21.6	5.2	57.4

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	22,889	574

STEELHEAD	SHAD	MINI-JCK
1,665	13,098	6

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 76

ICE HARBOR PROJECT
JUNE 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	169			5			0	5	4031	0	41.1	9.7	5.9	60.0
2	308			8			0	10	4433	0	44.4	6.4	5.9	60.0
3	192			5			0	5	4494	0	55.0	8.0	6.5	61.0
4	259			14			0	4	3550	0	41.9	6.5	6.5	61.0
5	270			8			0	16	4464	2	48.6	6.9	7.2	62.0
6	248			6			0	15	6514	1	50.9	7.7	7.2	62.0
7	253			9			0	9	5043	15	49.4	7.7	7.0	62.0
8	188			2			0	18	7373	15	47.9	7.4	7.0	62.0
9	230			10			0	20	5586	2	44.0	6.8	7.2	62.0
10	277			4			0	24	6398	0	26.0	4.1	5.8	62.0
11	177			9			0	12	6198	1	21.0	4.4	5.8	63.0
12		258		5			0	22	4915	0	23.6	3.1	4.0	63.0
13		252		11			0	10	3866	0	21.4	3.1	4.2	63.0
14		187		1			0	13	6744	2	23.8	3.4	4.2	63.0
15		278		13			1	12	6687	0	24.7	3.1	4.4	63.0
16		222		11			0	25	4829	14	22.1	3.0	4.4	63.0
17		152		10			0	8	1847	21	24.8	3.7	4.0	63.0
18		163		11			0	18	2672	5	26.4	4.0	4.0	63.0
19		143		17			0	34	2926	0	24.6	3.9	5.0	63.0
20		151		5			1	24	3347	0	24.0	3.4	8.0	63.0
21		107		10			0	17	3872	1	22.9	3.8	7.3	63.0
22		76		7			0	36	4745	0	22.1	3.3	8.0	64.0
23		95		10			0	34	3794	0	18.6	3.2	8.0	64.0
24		99		7			0	19	3184	1	18.5	2.6	8.5	64.0
25		195		10			0	34	2513	0	18.3	3.0	8.5	64.0
26		164		7			0	35	1763	2	19.8	2.7	4.0	64.0
27		94		12			1	36	3031	2	18.8	2.5	5.8	65.0
28		79		12			2	49	4318	0	18.9	2.6	5.8	65.0
29		151		8			2	82	1841	4	22.3	3.2	4.8	65.0
30		102		5			0	96	2646	0	20.0	2.8	5.1	65.0
TOTAL	2,571	2,968		252			7	742	127,624	88				
AVG.	234	156		8				25	4,254	3	29.5	4.5	6.0	62.9

RIVER CONDITIONS

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	25,460	654
SUMMER	2,968	172
TOTAL	28,428	826

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
7	2,407	140,722	94

TABLE 76

TABLE 77

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 77

ICE HARBOR PROJECT

JULY 1992

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	KCFS	KCFS	SECCHI	DEG F
1		94		13			0	89	2367	5	18.3	2.7	6.8	65.0
2		91		10			1	91	2358	0	20.9	2.8	6.7	66.0
3		81		4			1	111	1776	0	23.4	3.0	6.7	66.0
4		57		17			0	102	2680	11	35.6	5.5	7.5	66.0
5		84		12			1	150	2062	6	36.6	4.9	8.5	66.0
6		65		14			0	112	2855	4	41.4	5.4	8.5	67.0
7		70		12			0	215	2137	4	40.5	4.8	4.7	67.0
8		61		18			2	182	1743	1	42.7	5.8	4.7	67.0
9		74		9			4	201	2102	2	40.9	5.3	6.8	67.0
10		38		9			1	190	2114	6	37.4	5.0	6.0	67.0
11		47		11			0	123	1582	6	28.0	4.3	6.0	68.0
12		46		3			1	126	1306	16	24.3	3.1	6.0	68.0
13		13		12			0	111	548	5	14.5	2.7	5.4	68.0
14		8		6			0	148	510	6	18.6	3.2	5.0	68.0
15		13		9			1	107	990	6	29.9	4.9	5.8	68.0
16		14		7			0	103	586	2	33.8	5.0	5.4	69.0
17		7		5			1	88	568	8	36.1	5.3	5.0	69.0
18		14		2			0	101	593	7	28.4	4.4	5.4	71.0
19		10		3			0	80	410	5	17.1	3.0	5.4	71.0
20		12		2			0	46	254	7	15.4	2.6	5.4	71.0
21		6		2			0	72	117	14	15.6	2.4	5.4	71.0
22		8		10			1	47	201	6	15.5	2.7	5.4	71.0
23		2		5			1	165	100	6	15.3	2.6	5.4	71.0
24		12		2			0	273	145	12	18.2	2.7	4.0	71.0
25		12		2			0	106	147	8	18.3	3.0	4.1	71.0
26		9		3			1	116	104	13	16.4	2.9	4.0	71.0
27		12		1			0	126	38	10	14.4	2.5	8.0	71.0
28		3		1			0	200	58	7	15.1	2.8	8.0	71.0
29		3		0			0	262	63	11	14.4	2.7	5.5	69.0
30		2		0			0	189	54	7	14.4	2.6	7.6	69.0
31		7		1			1	158	59	3	14.5	2.5	5.3	68.0
TOTAL		984		205			17	4,190	30,627	204				
AVG.		69		7				135	988	7	24.4	3.6	5.9	68.7

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	25,460	654
SUMMER	3,952	377
TOTAL	29,412	1,031

SOCKEYE	STEELHEAD	SHAD	MINI JCK
24	6,597	171,349	298

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 78

ICE HARBOR PROJECT
AUGUST 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	RIVER CONDITIONS DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1		2		3			0	234	38	6	14.4	2.5	7.5	69.0
2		6		0			0	258	25	8	14.4	2.5	7.5	69.0
3		1		1			1	281	33	16	13.8	2.5	8.0	69.0
4		3		1			0	367	21	10	11.8	2.5	8.0	69.0
5		1		0			0	271	15	1	12.0	2.4	8.0	69.0
6		4		0			1	294	19	8	12.9	2.2	7.0	69.0
7		4		1			0	466	23	4	12.5	2.3	7.0	68.0
8		2		0			0	390	12	2	12.4	2.3	7.0	68.0
9		7		0			0	378	6	2	12.1	2.3	7.0	68.0
10		3		1			0	311	7	2	11.1	2.3	8.0	68.0
11		8		0			0	450	21	10	11.3	2.6	8.0	68.0
12			6	0			0	336	7	18	12.6	2.4	8.0	68.0
13			6	0			0	315	5	6	12.2	2.4	8.0	68.0
14			7	0			0	323	5	13	12.9	2.5	10.0	68.0
15			5	0			0	382	5	16	12.2	2.4	10.0	68.0
16			2	0			0	310	6	16	12.0	2.4	10.0	68.0
17			2	0			0	160	3	24	11.1	2.4	10.0	68.0
18			0	0			0	175	1	10	11.8	2.3	10.0	68.0
19			2	0			0	128	2	9	11.6	2.3	10.0	68.0
20			2	0			0	215	1	6	12.6	2.3	10.0	68.0
21			5	0			0	158	0	11	11.8	2.3	6.0	69.0
22			7	0			1	268	0	7	12.6	2.4	6.0	69.0
23			11	0			0	251	0	12	11.0	1.1	10.0	69.0
24			5	1			0	114	0	10	11.4	0.0	10.0	69.0
25			13	0			0	171	2	18	13.5	0.0	10.0	70.0
26			5	0			0	108	0	16	12.5	0.0	10.0	70.0
27			13	0			0	120	1	25	11.6	0.0	10.0	70.0
28			7	1			0	200	0	18	13.5	0.0	10.0	70.0
29			24	0			0	268	0	10	11.7	0.0	7.0	69.0
30			30	2			0	209	0	6	11.9	0.0	7.0	69.0
31			23	1			0	226	0	8	11.6	0.0	7.0	69.0
TOTAL		41	175	12			3	8,137	258	328				
AVG.		4	9					262	8	11	12.3	1.7	8.5	68.7

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	25,460	654
SUMMER	3,993	384
FALL	175	5
TOTAL	29,628	1,043

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
27	14,734	171,607	626

TABLE 78

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 79

ICE HARBOR PROJECT
SEPTEMBER 1992

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	KCFS	KCFS	SECCHI	DEG F
1			43	0			0	284		17	12.1	0.0	7.0	69.0
2			41	0			0	310		6	13.6	0.0	7.0	69.0
3			70	0			1	401		13	12.4	0.0	7.0	69.0
4			90	4			0	566		17	13.0	0.0	6.5	69.0
5			91	1			0	600		7	13.9	0.0	6.5	69.0
6			87	1			0	427		10	13.6	0.0	8.0	69.0
7			101	1			0	312		5	11.7	0.0	8.0	69.0
8			111	2			0	743		17	12.4	0.0	8.0	69.0
9			94	5			0	923		8	16.1	0.0	8.0	69.0
10			122	3			0	945		12	15.9	0.0	5.4	69.0
11			165	2			0	1107		4	22.7	0.0	6.0	68.0
12			193	2			0	3667		5	24.3	0.0	8.0	68.0
13			194	8			0	4474		2	23.0	0.0	4.5	68.0
14			150	6			0	3632		10	21.9	0.0	7.0	68.0
15			142	3			1	4227		0	24.0	0.0	7.0	68.0
16			163	8			0	3939		11	23.8	0.0	5.7	68.0
17			128	7			0	3243		12	21.9	0.0	5.9	67.0
18			64	9			1	3415		12	23.6	0.0	7.2	67.0
19			117	7			0	4472		14	24.4	0.0	7.0	66.0
20			130	18			0	5126		9	19.2	0.0	7.0	66.0
21			107	17			0	5879		10	13.7	0.0	6.0	66.0
22			106	23			0	3846		0	12.6	0.0	7.3	66.0
23			94	20			0	3904		0	11.9	0.0	7.3	66.0
24			102	17			0	6134		4	11.1	0.0	7.0	66.0
25			172	35			1	7053		6	11.4	0.0	7.0	66.0
26			180	19			1	5331		6	17.5	0.0	6.5	66.0
27			120	26			0	4175		12	17.1	0.0	6.5	66.0
28			45	20			0	2784		9	16.9	0.0	6.2	66.0
29			103	45			0	4003		13	17.2	0.0	6.0	65.0
30			55	27			0	3359		12	15.9	0.0	6.0	65.0
TOTAL			3,380	336			5	89,281		263				
AVG.			124	11				2,976		9	17.0	0.0	6.8	67.4

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	25,460	654
SUMMER	3,993	384
FALL	3,555	341
TOTAL	33,008	1,379

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
32	104,015	171,607	889

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 80

ICE HARBOR PROJECT
OCTOBER 1992

DATE	FISH COUNTS: CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	RIVER CONDITIONS: DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1			71	28			0	3202		7	18.5	0.0	5.9	65.0
2			66	18			0	3224		5	17.6	0.0	5.9	65.0
3			71	9			0	3627		0	15.9	0.0	5.9	65.0
4			69	27			0	4518		0	16.6	0.0	6.0	65.0
5			43	15			0	2217		4	19.5	0.0	6.0	63.0
6			66	23			0	2129		0	16.4	0.0	8.0	65.0
7			53	28			0	1962		0	16.9	0.0	8.0	65.0
8			68	23			0	2050		4	15.3	0.0	8.0	65.0
9			61	20			0	3072		0	16.9	0.0	8.0	64.0
10			33	20			0	2267		0	17.0	0.0	8.0	63.0
11			36	24			0	1883		1	16.0	0.0	8.0	63.0
12			40	27			0	1921		0	16.4	0.0	8.0	62.0
13			42	17			0	1920		0	16.5	0.0	8.0	62.0
14			27	21			0	1451		0	16.1	0.0	8.0	61.0
15			19	13			0	2215		0	15.9	0.0	8.0	61.0
16			27	17			0	1090		0	18.4	0.0	8.0	61.0
17			34	26			0	2006		0	15.3	0.0	8.0	61.0
18			31	20			0	1481		0	17.8	0.0	8.0	61.0
19			15	14			0	2493		0	17.1	0.0	7.0	61.0
20			26	22			0	1708		1	16.8	0.0	6.3	61.0
21			22	18			0	1439		0	20.2	0.0	7.6	61.0
22			21	19			0	1839		0	18.3	0.0	6.8	61.0
23			30	9			0	1228		0	13.3	0.0	7.7	58.0
24			11	15			0	708		0	17.4	0.0	8.0	58.0
25			12	16			0	769		2	15.0	0.0	8.0	60.0
26			16	12			1	732		4	14.4	0.0	8.0	59.0
27			19	11			0	706		0	14.5	0.0	4.0	59.0
28			11	10			0	457		0	14.0	0.0	7.6	58.0
29			10	11			0	718		0	16.0	0.0	6.5	58.0
30			14	9			0	728		0	14.0	0.0	6.5	58.0
31			17	11			0	839		0	17.5	0.0	6.5	58.0
TOTAL			1,081	553			1	56,599		28				
AVG.			35	18				1,826			16.5	0.0	7.2	61.5

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	25,460	654
SUMMER	3,993	384
FALL	4,636	894
TOTAL	34,089	1,932

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
33	160,614	171,607	917

TABLE 81

DISCHARGE AND WATER QUALITY DATA

ICE HARBOR PROJECT - 1992

NOVEMBER				
DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	15.0	0.0	6.5	58.0
2	17.0	0.0	6.5	58.0
3	19.6	0.0	6.0	58.0
4	18.4	0.0	6.0	58.0
5	17.4	0.0	6.0	58.0
6	17.9	0.0	6.0	58.0
7	18.3	0.0	6.0	57.0
8	17.8	0.0	6.0	57.0
9	19.8	0.0	7.7	57.0
10	19.1	0.0	7.7	57.0
11	19.0	0.0	5.9	56.0
12	19.5	0.0	6.9	56.0
13	17.7	0.0	6.9	56.0
14	17.3	0.0	6.9	56.0
15	16.8	0.0	6.9	56.0
16	18.3	0.0	6.9	56.0
17	21.2	0.0	6.9	56.0
18	19.5	0.0	6.3	55.0
19	19.9	0.0	6.3	54.0
20	19.0	0.0	6.3	54.0
21	15.3	0.0	6.3	54.0
22	15.3	0.0	6.3	53.0
23	18.5	0.0	6.0	52.0
24	17.9	0.0	6.0	52.0
25	25.9	0.0	6.0	51.0
26	14.6	0.0	6.0	52.0
27	13.0	0.0	6.0	52.0
28	14.2	0.0	6.2	52.0
29	17.0	0.0	6.4	
30	18.9	0.0	4.1	51.0
AVG.	18.0	0.0	6.3	55.2

DECEMBER				
DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	19.2	0.0	5.0	49.0
2	16.4	0.0	5.0	51.0
3	16.6	0.0	6.5	48.0
4	16.7	0.0	7.0	48.0
5	17.1	0.0	7.0	48.0
6	11.8	0.0	8.0	47.0
7	17.6	0.0	8.0	46.0
8	13.2	0.0	8.0	46.0
9	17.8	0.0	8.0	46.0
10	14.6	0.0	8.0	46.0
11	22.1	0.0	8.0	45.0
12	20.0	0.0	8.0	45.0
13	15.4	0.0	8.0	45.0
14	21.5	0.0	8.0	44.0
15	19.3	0.0	8.0	44.0
16	17.0	0.0	8.0	44.0
17	13.2	0.0	8.0	44.0
18	17.0	0.0	6.5	43.0
19	15.5	0.0	6.5	42.0
20	10.5	0.0	6.5	42.0
21			6.5	42.0
22			6.5	42.0
23				
24				
25				
26				
27				
28				
29				
30				
31				
AVG.	16.6	0.0	7.2	45.3

TABLE 82

YEARLY TOTALS OF SALMONIDS COUNTED OVER ICE HARBOR DAM 1962-1992

YEAR	CHINOOK*	STEELHEAD	SOCKEYE	COHO*	TOTALS*
1962	94,301	115,796	38	3,207	213,342
1963	61,190	74,539	1,118	1,933	138,780
1964	60,097	58,860	1,276	2,071	122,304
1965	39,233	62,873	317	320	102,743
1966	75,882	65,798	278	878	142,836
1967	84,930	44,205	717	3,770	133,622
1968	98,681	82,383	1,165	6,227	188,456
1969	100,514	63,889	745	5,316	170,464
1970	77,698	53,870	797	3,636	136,001
1971	70,248	67,029	532	2,969	140,778
1972	82,632	63,593	363	2,522	149,110
1973	81,821	38,311	233	2,443	122,808
1974	32,444	12,528	204	1,334	46,510
1975	31,686	16,218	243	1,559	49,706
1976	36,556	23,885	771	1,991	63,203
1977	56,514	54,820	582	1,561	113,477
1978	61,352	27,142	86	652	89,232
1979	13,929	23,117	30	398	37,474
1980	14,717	50,221	36	58	65,032
1981	22,092	41,290	142	82	63,606
1982	22,646	73,405	174	348	96,573
1983	20,259	88,475	216	465	109,415
1984	17,757	94,030	105	22	111,914
1985	47,981	128,481	24	10	176,496
1986	52,615	144,292	20		196,927
1987	47,477	74,491	13		121,981
1988	48,066	99,714	22		147,802
1989	27,234	151,101	4		178,339
1990	31,841	54,758	1	1	86,601
1991	23,175	123,762	9	1	146,947
1992	36,021	160,614	33		196,668
Totals	1,571,589	2,233,490	10,294	43,774	3,859,147
10-Year Average	35,243	111,972	45	50	147,309

*Jacks Included

TABLE 82

TABLE 83

MONTHLY COUNT OF CHINOOK SALMON
ICE HARBOR DAM; 1962 - 1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL*	SPRING 1 APR-11 JUN	SUMMER 12 JUN-11 AUG	FALL 12 AUG-31 OCT
1962				2,579	28,951	23,250	8,315	3,547	20,578	7,081			94,301	33,613	30,639	30,049
1963				3,434	21,790	14,001	7,591	1,415	9,342	2,918	677	22	61,190	26,778	20,875	13,537
1964		1	2	4,048	19,611	5,409	18,832	2,161	8,159	1,701	156	17	60,097	24,304	24,696	11,097
1965			4	1,677	9,649	5,072	10,209	803	9,318	2,152	349		39,233	12,178	14,701	12,354
1966				23,382	19,294	10,611	7,166	1,933	10,756	2,740			75,882	43,881	16,983	15,018
1967				15,973	18,137	9,020	22,218	820	11,947	6,815			84,930	35,593	30,315	19,022
1968				1,595	41,398	12,119	17,751	3,433	16,588	5,275	493	29	98,681	44,773	29,531	24,377
1969			195	697	43,181	24,918	12,861	2,369	12,027	3,555	708	3	100,514	52,090	30,917	17,507
1970				12,167	33,881	12,338	8,185	1,747	7,702	1,456	219	3	77,698	47,931	19,382	10,385
1971				1,104	25,089	19,265	13,364	873	8,960	1,593			70,248	32,638	26,606	11,004
1972				14,535	34,734	7,544	15,177	1,869	6,089	2,684			82,632	50,350	22,846	9,436
1973				34,277	23,627	10,925	4,254	840	6,657	1,241			81,821	60,639	12,829	8,353
1974				842	16,670	5,315	6,494	483	2,066	574				19,361	10,269	2,814
1975				1,314	17,796	5,817	3,972	506	1,875	406			31,686	21,401	7,727	2,558
1976				3,146	19,269	8,544	3,921	349	1,123	204			36,556	25,056	10,026	1,474
1977				24,003	17,626	9,328	3,606	297	1,370	284			56,514	44,421	10,337	1,756
1978				14,891	29,333	9,999	4,888	892	1,064	269	16		61,352	49,303	10,440	1,609
1979				1,731	6,528	2,234	1,216	379	1,489	333	19		13,929	9,247	2,608	2,074
1980				1,678	7,321	2,285	1,569	301	1,034	504	25		14,717	9,668	3,305	1,744
1981			1	6,744	8,542	2,884	1,751	161	1,530	470	9		22,092	16,167	3,814	2,111
1982			3	656	11,543	4,522	2,347	283	2,601	691			22,646	14,600	4,527	3,519
1983				1,925	9,418	4,132	1,921	316	1,945	602			20,259	12,602	4,922	2,735
1984				823	7,292	5,353	1,943	223	1,762	361			17,757	9,183	6,307	2,267
1985				12,245	18,334	6,885	1,294	546	5,414	3,263			47,981	33,527	5,290	9,164
1986			1	14,764	22,025	8,299	1,672	169	3,664	2,021			52,615	39,087	7,745	5,783
1987				11,141	18,821	6,550	2,437	329	6,089	2,110			47,477	32,083	6,982	8,412
1988				14,274	17,196	8,609	1,904	702	3,621	1,760			48,066	34,394	7,790	5,882
1989				3,307	11,724	4,946	1,143	776	3,917	1,421			27,234	17,029	4,215	5,990
1990				7,578	12,166	5,353	1,337	320	3,315	1,773			31,842	20,730	5,794	5,317
1991				1,639	7,953	5,367	2,101	155	4,053	1,907			23,175	11,288	5,861	6,026
1992				11,462	12,001	5,791	1,189	228	3,716	1,634			36,021	26,114	4,377	5,530
TOTAL		1	206	249,631	590,900	266,685	192,628	29,225	179,771	59,798	2,671	74	1,539,146	910,029	402,656	258,904
10-Year Avg.				7,916	13,693	6,129	1,694	376	3,750	1,852			35,243	23,604	5,928	5,711

*Jacks Included

TABLE 84

MONTHLY COUNT OF STEELHEAD

ICE HARBOR DAM
1962-1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS
1962				8,758	716	261	2,384	7,450	75,924	20,303			115,796
1963				969	895	163	2,157	6,514	35,382	24,070	4,042	347	74,539
1964	105	136	796	2,269	807	153	1,596	9,462	34,435	7,357	1,347	397	58,860
1965	31	110	673	1,976	488	439	3,739	4,497	33,595	13,522	3,803		62,873
1966				2,161	810	413	1,383	2,517	40,185	18,329			65,798
1967				1,266	894	345	972	953	18,914	20,861			44,205
1968				2,558	2,933	357	952	8,107	45,552	17,270	3,692	962	82,383
1969	132	41	807	4,971	2,430	321	3,348	5,715	27,219	14,953	3,874	78	63,889
1970				1,597	1,067	389	2,620	7,611	30,101	8,290	1,891	304	53,870
1971			458	1,938	843	215	3,064	2,996	42,481	15,034			67,029
1972				1,853	553	152	3,062	6,503	34,134	17,336			63,593
1973				1,570	827	254	1,785	2,699	22,021	9,155			38,311
1974				972	359	104	1,482	2,202	3,661	3,748			12,528
1975				564	409	76	1,223	3,878	6,816	3,252			16,218
1976				508	142	165	1,714	5,138	11,141	5,077			23,885
1977				685	220	308	3,654	3,017	30,610	16,326			54,820
1978				908	88	43	1,308	2,907	15,094	6,092	702		27,142
1979			454	538	114	60	1,995	1,778	6,136	9,717	2,325		23,117
1980			1,420	2,796	563	39	1,303	4,333	22,064	15,424	2,279		50,221
1981			797	1,106	433	137	2,305	1,431	16,563	16,669	1,849		41,290
1982			1,471	1,931	918	45	2,564	8,895	30,574	27,007			73,405
1983				1,001	150	36	3,773	9,875	48,519	25,121			88,475
1984				2,218	488	49	4,103	4,554	50,638	31,980			94,030
1985			1,892	7,353	439	306	3,070	14,468	75,378	25,575			128,481
1986			2,561	1,642	187	174	6,600	8,679	63,598	60,851			144,292
1987				2,136	235	262	3,292	4,972	28,491	35,103			74,491
1988				4,865	580	671	3,251	5,955	46,838	37,554			99,714
1989				4,326	355	487	7,399	8,916	80,799	48,819			151,101
1990				2,793	148	252	2,631	2,000	18,728	28,206			54,758
1991				2,297	256	166	3,254	1,275	55,447	61,067			123,762
1992				1,433	232	742	4,190	8,137	89,281	56,599			160,614
Totals	268	287	11,329	71,958	19,579	7,584	86,173	167,434	1,140,319	700,667	25,804	2,088	2,233,490
10-Year Average				3,006	307	315	4,156	6,883	55,772	41,088			111,972

TABLE 84

TABLE 85

MONTHLY TOTALS OF SALMONIDS AND SHAD

COUNTED OVER LOWER MONUMENTAL DAM IN 1992

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*				10,529	10,822	5,001	1,220	188	1,729	656			30,145
STEELHEAD				1,456	182	285	2,890	7,223	68,606	49,787			130,429
SOCKEYE						6	6	3					15
COHO*													
PINK													
MINI-JACK**				20	24		4	23	52	127			250
TOTAL				12,005	11,004	5,292	4,116	7,414	70,335	50,443			160,589
SHAD					910	83,503	38,409	215					123,037

*Jacks included
**Salmonid fish under 12 inches in length

TABLE 86

DISCHARGE AND WATER QUALITY DATA

LOWER MONUMENTAL PROJECT - 1992

JANUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	11.3	0.0		
2	22.2	0.0		
3	30.3	0.0		
4	22.8	0.0		
5	13.3	0.0		
6	20.9	0.0		
7	21.0	0.1		
8	24.8	0.0		
9	27.8	0.0		
10	36.7	0.0		
11	31.4	0.0		
12	17.1	0.0		
13	25.3	0.0		
14	24.1	0.0		
15	25.8	0.0		
16	22.5	0.0		
17	21.7	0.0		
18	15.7	0.0		
19	12.6	0.0		
20	16.1	0.0		
21	21.1	0.0		
22	23.0	0.0		
23	25.1	0.0		
24	30.8	0.0		
25	22.3	0.0		
26	18.8	0.0		
27	14.6	0.0		
28	14.3	0.0		
29	30.9	0.0		
30	24.6	0.0		
31	27.0	0.0		
AVG.	22.4	0.0		

FEBRUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	22.7	0.0		
2	20.6	0.0		
3	24.9	0.0		
4	27.7	0.0		
5	30.1	0.0		
6	24.4	0.0		
7	16.7	0.0		
8	19.0	0.0		
9	15.8	0.0		
10	19.9	0.0		
11	22.0	0.0		
12	21.6	0.0		
13	24.9	0.0		
14	28.9	0.0		
15	29.3	0.0		
16	5.2	0.0		
17	22.2	0.0		
18	19.4	0.0		
19	23.9	0.0		
20	28.3	0.0		
21	37.4	0.0		
22	41.8	0.0		
23	40.7	0.0		
24	39.9	0.0		
25	37.1	0.0		
26	34.4	0.0		
27	41.3	0.0		
28	41.7	0.0		
29	41.2	0.0		
AVG.	27.7	0.0		

MARCH

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	40.8	0.0		
2	39.5	0.0		
3	41.4	0.0		
4	38.2	0.0		
5	41.1	0.0		
6	38.8	0.0		
7	40.5	0.0		
8	38.8	0.0		
9	27.1	0.0		
10	35.8	0.0		
11	39.4	0.0		
12	32.8	0.0		
13	33.5	0.0		
14	37.0	0.0		
15	35.7	0.0		
16	37.2	0.0		
17	43.9	0.0		
18	43.2	0.0		
19	46.7	0.0		
20	40.7	0.0		
21	44.5	0.0		
22	38.4	0.0		
23	35.9	0.0		
24	12.0	0.0		
25	12.0	0.0		
26	8.6	0.0		
27	6.1	0.0		
28	7.1	0.0		
29	6.5	0.0		
30	6.3	0.0	2.0	49.0
31	6.7	0.0	2.0	49.0
AVG.	30.8	0.0		

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 87

LOWER MONUMENTAL PROJ.

APRIL 1992

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	5			0				79		0	13.4	0.0	2.0	49.0
2	12			0				86		0	21.4	0.0	2.0	50.0
3	5			0				72		2	27.7	0.0	2.0	50.0
4	19			0				94		0	33.5	0.0	3.0	50.0
5	26			0				74		0	39.5	0.0	3.0	50.0
6	21			0				71		0	36.1	0.0	3.0	50.0
7	20			0				73		0	22.1	0.0	3.0	50.0
8	17			0				53		1	32.6	0.0	3.0	50.0
9	36			0				69		1	37.5	0.0	3.0	50.0
10	113			0				32		1	37.6	0.0	3.0	50.0
11	73			0				69		0	30.5	0.0	3.0	50.0
12	60			0				22		0	32.1	0.0	3.0	50.0
13	78			0				31		0	38.0	0.0	1.5	50.0
14	326			5				44		1	40.2	0.0	3.3	50.0
15	270			2				53		0	43.7	5.8	3.3	50.0
16	206			0				24		1	40.2	8.3	3.3	52.0
17	524			6				40		0	39.4	7.5	3.3	52.0
18	871			4				54		0	48.0	9.7	3.3	52.0
19	639			8				36		1	46.7	10.0	3.4	52.0
20	627			13				68		0	45.0	9.5	3.4	53.0
21	343			0				48		0	59.7	24.1	3.4	53.0
22	1136			7				43		0	50.9	41.0	3.4	53.0
23	348			6				43		1	57.4	47.7	3.4	53.0
24	1154			2				40		4	50.6	17.7	3.4	53.0
25	540			5				33		0	48.8	10.7	3.4	53.0
26	651			2				25		4	48.7	10.8	3.4	53.0
27	448			5				26		0	45.2	6.0	3.4	53.0
28	558			5				16		2	46.2	6.2	3.4	54.0
29	753			2				22		0	50.9	7.8	3.4	54.0
30	573			5				16		1	54.5	8.0	3.4	54.0
TOTAL	10,452			77				1,456		20				
AVG.	674							49			40.6	7.7	3.1	51.4

TABLE 88

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 88

LOWER MONUMENTAL PROJ.
MAY 1992

FISH COUNTS / RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	476			8				18	0	3	79.3	10.8	3.4	54.0
2	416			8				8	0	1	77.6	15.5	3.4	54.0
3	381			8				6	0	5	73.5	14.7	3.4	54.0
4	213			7				12	0	1	71.9	9.9	3.4	54.0
5	316			8				14	0	0	75.1	10.5	3.4	54.0
6	887			25				12	0	2	74.0	10.5	3.0	54.0
7	987			28				7	0	0	69.6	11.0	2.5	55.0
8	552			27				6	2	0	73.0	10.0	2.5	55.0
9	607			28				9	0	0	74.8	15.6	2.5	55.0
10	680			32				13	0	3	69.4	14.5	2.5	55.0
11	402			29				10	0	2	64.4	13.4	2.5	55.0
12	348			15				5	0	2	56.0	12.3	2.5	55.0
13	315			18				5	0	0	47.7	10.3	3.0	55.0
14	295			16				14	5	0	62.6	10.9	3.0	55.0
15	243			19				3	0	0	63.7	10.2	3.0	55.0
16	253			19				2	0	0	66.4	13.5	3.0	56.0
17	311			17				7	2	0	48.0	10.7	3.0	56.0
18	205			21				1	0	0	42.8	5.8	3.0	57.0
19	185			12				4	0	0	44.7	5.4	3.0	57.0
20	275			8				6	1	0	50.8	7.2	3.0	57.0
21	209			13				3	0	0	59.5	5.9	2.5	55.0
22	98			12				0	0	0	50.8	6.7	3.0	57.0
23	118			13				0	2	2	45.7	9.8	3.0	57.0
24	162			5				3	4	2	44.2	8.4	3.0	57.0
25	228			21				6	6	0	44.5	10.8	3.0	57.0
26	137			9				2	5	1	51.8	10.5	3.0	57.0
27	224			14				1	45	0	65.6	15.4	3.0	57.0
28	212			11				1	80	0	61.4	13.4	3.0	58.0
29	168			7				1	129	0	48.9	13.2	3.0	59.0
30	263			5				2	145	0	44.3	9.6	3.0	59.0
31	189			4				1	484	0	44.1	9.3	3.0	60.0
TOTAL	10,355			467				182	910	24				
AVG.	334			15				6	29		59.6	10.8	3.0	56.0

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	20,807	544

STEELHEAD	SHAD	MINI-JCK
1,638	910	44

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 89

LOWER MONUMENTAL PROJ.

JUNE 1992

FISH COUNTS / RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	245			9			1	1	715		41.2	8.9	3.0	60.0
2	157			5			0	0	42		43.7	9.0	3.0	60.0
3	247			11			0	5	681		56.2	10.4	3.0	60.0
4	135			2			0	1	945		41.8	9.0	3.0	60.0
5	247			15			0	4	827		48.0	10.3	3.0	61.0
6	185			8			0	2	1080		51.0	11.4	3.0	61.0
7	259			6			0	9	1503		48.7	11.0	3.0	61.0
8	247			3			1	4	1169		47.7	11.1	3.0	62.0
9	207			5			1	6	1257		44.1	10.4	3.0	62.0
10	190			8			0	5	1528		25.3	5.5	3.0	62.0
11	222			0			0	3	4755		22.7	5.8	3.0	62.0
12	165			4			0	2	1453		23.1	5.5	3.0	62.0
13	190			6			1	1	1504		22.0	5.2	3.0	62.0
14		190		2			0	1	8257		23.5	5.1	3.0	62.0
15		142		1			0	4	8931		25.8	5.3	3.0	63.0
16		157		5			1	13	2196		22.7	5.6	3.0	63.0
17		210		2			1	12	1702		23.8	6.0	3.0	63.0
18		116		4			0	5	2388		26.5	6.4	3.0	63.0
19		127		5			0	8	2023		25.2	5.5	3.0	63.0
20		117		7			0	16	1047		24.3	5.3	3.0	64.0
21		95		0			0	16	1084		23.2	5.4	3.0	64.0
22		82		7			0	10	1849		23.3	4.9	3.0	64.0
23		79		8			0	5	3610		18.7	5.4	3.0	64.0
24		122		16			0	22	3420		20.2	4.8	3.0	64.0
25		102		9			0	14	6924		17.8	4.7	3.0	64.0
26		178		8			0	18	2966		19.7	4.5	3.0	64.0
27		122		8			0	18	4254		19.8	4.9	3.0	64.0
28		75		12			0	19	10016		19.9	4.9	3.0	64.0
29		95		11			0	17	2832		22.0	5.1	3.0	64.0
30		101		8			0	44	2545		19.9	4.9	3.0	65.0
TOTAL	2,696	2,110		195			6	285	83,503					
AVG.	207	124		7				10	2,783		29.7	6.7	3.0	62.6

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	23,503	626
SUMMER	2,110	113
TOTAL	25,613	739

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
6	1,923	84,413	44

TABLE 90

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 90

LOWER MONUMENTAL PROJ.
JULY 1992

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
	FISH COUNTS										RIVER CONDITIONS			
1		79		6			0	36	2671	0	18.4	5.0	3.0	65.0
2		82		1			0	62	5186	0	23.0	5.0	3.0	65.0
3		94		4			2	69	1759	0	23.1	5.6	3.0	65.0
4		79		4			0	38	3511	0	35.5	7.8	3.0	66.0
5		119		6			0	81	2433	1	36.1	7.3	3.0	67.0
6		107		13			1	82	5313	0	41.6	7.9	3.0	67.0
7		67		8			0	138	4562	0	40.8	7.8	3.0	67.0
8		65		8			0	101	3138	0	42.9	8.4	3.5	67.0
9		44		8			1	110	2400	0	42.1	9.0	3.5	68.0
10		48		6			1	94	1380	0	37.3	6.7	3.5	69.0
11		41		5			0	119	970	0	28.6	6.0	3.5	69.0
12		49		5			0	101	995	0	25.5	5.1	3.5	69.0
13		38		1			1	102	698	1	15.5	5.5	3.5	70.0
14		39		2			0	116	265	0	18.0	5.0	3.5	70.0
15		14		2			0	62	567	0	31.7	7.9	3.0	71.0
16		7		0			0	99	397	0	34.5	7.5	3.0	71.0
17		4		2			0	84	248	0	36.4	8.2	3.0	71.0
18		16		4			0	100	255	0	28.8	6.8	3.0	70.0
19		24		5			0	125	225	0	17.1	6.2	3.0	70.0
20		7		2			0	91	322	0	15.6	8.3	3.0	70.0
21		13		1			0	75	188	1	15.9	7.7	3.0	69.0
22		13		0			0	69	96	0	16.9	6.9	3.0	69.0
23		7		6			0	73	125	0	16.0	5.4	3.0	69.0
24		6		2			0	86	156	0	18.7	5.0	3.0	69.0
25		11		6			0	164	194	0	18.1	5.1	3.0	69.0
26		14		0			0	120	98	0	17.3	5.4	3.0	69.0
27		7		2			0	106	86	0	16.3	5.9	3.0	69.0
28		5		1			0	116	73	1	15.1	5.6	3.0	69.0
29		4		2			0	94	46	0	14.5	5.6	3.0	68.0
30		0		0			0	82	36	0	14.0	5.9	3.0	68.0
31		5		0			0	95	16	0	14.4	5.4	3.0	68.0
TOTAL		1,108		112			6	2,890	38,409	4				
AVG.		36		4				93	1,239		24.8	6.5	3.1	68.5

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	23,503	626
SUMMER	3,218	225
TOTAL	26,721	851

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
12	4,813	122,822	48

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 91

LOWER MONUMENTAL PROJ.
AUGUST 1992

FISH COUNTS / RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1		2		1			0	169	17	1	14.1	5.6	3.0	68.0
2		8		1			1	236	26	2	13.9	5.6	3.0	68.0
3		10		1			0	241	9	0	12.8	5.7	3.0	67.0
4		2		0			0	174	9	0	13.4	5.7	3.0	67.0
5		3		1			0	362	24	1	12.9	5.9	3.0	67.0
6		5		0			0	247	14	0	12.7	5.9	3.0	67.0
7		12		0			0	316	15	0	12.4	5.8	3.0	67.0
8		2		0			0	465	14	1	12.6	5.8	3.0	67.0
9		6		0			1	321	7	0	12.3	5.8	3.0	67.0
10		5		0			1	282	10	1	12.3	5.8	3.0	67.0
11		4		1			0	232	6	3	11.7	5.1	3.0	67.0
12		4		1			0	199	9	1	12.4	5.8	3.0	67.0
13		9		2			0	200	10	1	12.6	5.8	3.0	68.0
14			5	0			0	242	4	1	14.2	5.6	3.5	70.0
15			12	0			0	273	10	0	12.6	5.7	4.0	69.0
16			2	1			0	258	2	1	12.9	2.9	4.0	69.0
17			1	0			0	183	0	1	12.6	0.0	4.5	69.0
18			2	0			0	137	4	2	12.7	0.0	4.5	70.0
19			1	0			0	213	2	5	12.5	0.0	4.5	70.0
20			1	1			0	210	4	1	12.6	0.0	4.5	71.0
21			7	0			0	178	1	0	12.6	1.8	4.5	71.0
22			1	0			0	96	1	0	12.5	0.4	4.5	71.0
23			0	0			0	209	0	0	12.6	0.0	4.5	71.0
24			7	1			0	476	0	0	12.5	0.0	4.5	71.0
25			6	1			0	340	1	1	14.4	0.0	4.5	71.0
26			6	0			0	221	1	0	12.9	0.0	4.5	71.0
27			8	0			0	122	6	0	12.6	0.0	4.5	70.0
28			4	0			0	169	5	0	13.6	0.0	4.5	71.0
29			7	0			0	106	4	0	13.2	0.0	4.5	70.0
30			18	2			0	152	0	0	13.0	0.0	4.0	70.0
31			14	0			0	194	0	0	12.8	0.0	4.0	70.0
TOTAL		72	102	14			3	7,223	215	23				
AVG.		6	6					233	7		12.9	2.9	3.8	69.0

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	23,503	626
SUMMER	3,290	233
FALL	102	6
TOTAL	26,895	865

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
15	12,036	123,037	71

TABLE 91

TABLE 92

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 92

LOWER MONUMENTAL PROJ.

SEPTEMBER 1992

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1			20	1				193		0	12.8	0.0	4.0	70.0
2			17	2				246		0	12.7	0.0	4.0	70.0
3			20	2				254		0	12.9	0.0	4.0	70.0
4			34	1				366		0	12.9	0.0	4.0	70.0
5			43	5				561		0	13.1	0.0	4.0	70.0
6			44	2				443		0	12.7	0.0	4.0	70.0
7			47	6				503		0	12.8	0.0	4.0	70.0
8			36	2				454		0	12.5	0.0	4.0	70.0
9			41	0				313		0	15.1	0.0	4.0	70.0
10			38	0				517		0	15.9	0.0	4.0	70.0
11			33	2				513		0	22.7	0.0	4.0	69.0
12			48	2				719		0	22.1	0.0	4.0	69.0
13			68	6				1625		0	23.0	0.0	4.0	69.0
14			40	3				2282		0	21.2	0.0	4.0	68.0
15			107	4				3107		0	23.9	0.0	4.0	67.0
16			69	1				2882		0	23.1	0.0	4.0	67.0
17			150	18				5611		4	22.8	0.0	3.5	66.0
18			77	16				4511		1	22.8	0.0	3.5	66.0
19			42	17				2875		4	24.0	0.0	3.5	65.0
20			67	9				4174		6	19.1	0.0	3.5	65.0
21			92	7				3953		1	13.1	0.0	3.5	65.0
22			43	16				2672		1	13.1	0.0	3.0	65.0
23			51	11				3331		1	12.0	0.0	3.0	65.0
24			62	11				4368		3	12.1	0.0	3.0	65.0
25			58	7				4044		4	12.2	0.0	3.0	65.0
26			37	8				4455		7	17.2	0.0	3.0	65.0
27			59	8				4973		6	17.5	0.0	3.0	65.0
28			35	6				3629		2	16.1	0.0	3.5	65.0
29			25	8				2886		5	16.9	0.0	3.5	64.0
30			38	7				2146		7	15.3	0.0	3.5	64.0
TOTAL			1,541	188				68,606		52				
AVG.			62	6				2,287		2	16.8	0.0	3.7	67.3

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	23,503	626
SUMMER	3,290	233
FALL	1,643	194
TOTAL	28,436	1,053

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
15	80,642	123,037	123

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 93

LOWER MONUMENTAL PROJ.

OCTOBER 1992

FISH COUNTS / RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1			32	9				2,747		3	17.6	0.0	3.5	64.0
2			27	16				2,562		5	17.7	0.0	3.5	64.0
3			32	18				3,426		10	16.4	0.0	3.5	64.0
4			42	14				2,839		12	16.4	0.0	3.5	64.0
5			28	10				2,976		6	17.5	0.0	3.5	64.0
6			21	6				2,995		2	17.7	0.0	3.5	63.0
7			7	4				1,999		3	16.1	0.0	3.5	63.0
8			15	5				1,877		6	16.5	0.0	4.0	62.0
9			21	7				1,524		6	16.0	0.0	4.0	60.0
10			27	12				2,056		7	15.8	0.0	4.0	60.0
11			19	6				1,847		6	16.2	0.0	4.0	60.0
12			13	4				1,491		2	16.3	0.0	4.0	60.0
13			13	2				1,962		9	16.3	0.0	4.0	60.0
14			5	5				1,258		10	15.6	0.0	4.0	60.0
15			23	6				1,419		6	15.8	0.0	4.0	60.0
16			23	6				2,040		5	18.4	0.0	4.0	59.0
17			9	4				1,502		2	15.6	0.0	4.0	59.0
18			10	13				1,704		5	16.4	0.0	4.0	59.0
19			2	8				1,566		1	17.9	0.0	4.0	59.0
20			11	6				1,351		2	15.7	0.0	4.0	59.0
21			7	4				1,330		1	19.5	0.0	4.0	59.0
22			11	5				911		2	18.0	0.0	4.0	59.0
23			16	1				1,308		2	13.3	0.0	4.0	59.0
24			10	4				784		2	17.1	0.0	4.0	59.0
25			6	0				578		0	14.3	0.0	4.0	59.0
26			2	5				582		4	15.0	0.0	4.0	58.0
27			2	7				741		6	14.0	0.0	4.0	59.0
28			4	3				770		2	14.9	0.0	4.0	59.0
29			4	5				513		0	14.5	0.0	4.0	58.0
30			5	2				418		0	14.0	0.0	4.0	58.0
31			7	5				711		0	17.4	0.0	4.0	58.0
TOTAL			454	202				49,787		127				
AVG.			15	7				1,606		4	16.3	0.0	3.9	60.3

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	23,503	626
SUMMER	3,290	233
FALL	2,097	396
TOTAL	28,890	1,255

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
15	130,429	123,037	250

TABLE 94

TABLE 94

DISCHARGE AND WATER QUALITY DATA

LOWER MONUMENTAL PROJECT - 1992

NOVEMBER					DECEMBER				
	DISCH	SPILL	TURBIDITY			DISCH	SPILL	TURBIDITY	
DATE	KCFS	KCFS	SECCHI	DEG F	DATE	KCFS	KCFS	SECCHI	DEG F
1	15.1	0.0	4.0	58.0	1	16.2	0.0		
2	18.4	0.0	4.0	58.0	2	16.9	0.0		
3	18.7	0.0			3	15.9	0.0		
4	18.3	0.0			4	18.0	0.0		
5	17.7	0.0			5	16.0	0.0		
6	17.8	0.0			6	11.5	0.0		
7	17.9	0.0			7	16.4	0.0		
8	17.9	0.0			8	13.8	0.0		
9	19.6	0.0			9	17.2	0.0		
10	19.2	0.0			10	14.7	0.0		
11	18.3	0.0			11	20.0	0.0		
12	19.5	0.0			12	18.1	0.0		
13	17.2	0.0			13	16.4	0.0		
14	17.1	0.0			14	18.7	0.0		
15	17.3	0.0			15	19.6	0.0		
16	18.2	0.0			16	14.9	0.0		
17	20.0	0.0			17	10.9	0.0		
18	19.0	0.0			18	18.3	0.0		
19	20.9	0.0			19	15.4	0.0		
20	18.0	0.0			20	10.8	0.0		
21	15.8	0.0			21				
22	14.8	0.0			22				
23	19.0	0.0			23				
24	18.6	0.0			24				
25	24.5	0.0			25				
26	15.6	0.0			26				
27	12.6	0.0			27				
28	13.6	0.0			28				
29	16.4	0.0			29				
30	19.5	0.0			30				
					31				
AVG.	17.9	0.0			AVG.	16.0	0.0		

TABLE 95

YEARLY TOTALS OF SALMONIDS COUNTED OVER LOWER MONUMENTAL DAM 1969 - 1992

YEAR	CHINOOK*	STEELHEAD	SOCKEYE	COHO*	TOTALS
1969	86,700	71,436	1,127	6,466	165,729
1970	75,310	62,167	240	2,972	140,689
1971	68,885	70,114	808	2,171	141,978
1972	72,220	66,857	415	733	140,225
1973	80,557	39,530	206	1,333	121,626
1974	31,728	15,139	114	812	47,793
1975	33,013	17,363	146	572	51,094
1976	34,395	21,822	364	361	56,942
1977	49,301	47,749	293	122	97,465
1978	56,835	20,540	96	218	77,689
1979	11,288	17,794	31	194	29,307
1980	10,885	34,322	48	73	45,328
1981	19,991	35,923	136	63	56,113
1982	21,965	62,772	154	89	84,980
1983	19,082	80,562	118	110	99,872
1984	17,866	88,655	63	26	106,610
1985	42,437	109,718	68	24	152,247
1986	50,584	120,479	26	9	171,098
1987	42,434	62,586	16	6	105,042
1988	44,262	84,746	35	3	129,046
1989	25,590	129,618	9	17	155,234
1990	28,215	24,238	0	1	52,454
1991	18,210	98,315	6	5	116,536
1992	30,145	130,429	15		160,589
Total	971,898	1,512,874	4,534	16,380	2,505,686
10-Year Average	31,883	92,935	36	20	124,873

*Jacks Included

TABLE 95

TABLE 96

MONTHLY COUNT OF CHINOOK SALMON
LOWER MONUMENTAL DAM; 1969 - 1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS*
1969			1	67	38,702	25,289	13,832	1,776	5,069	1,619	340	5	86,700
1970	1		1	9,194	32,623	15,818	9,369	1,720	5,178	1,281	122	3	75,310
1971				358	19,340	23,842	14,492	857	8,599	1,397			68,885
1972				6,838	36,448	6,989	15,501	1,835	3,737	872			72,220
1973				27,168	31,973	11,282	4,343	678	4,273	840			80,557
1974				327	15,796	4,904	7,241	602	1,972	886			31,728
1975				704	17,421	6,648	4,884	548	2,428	380			33,013
1976				1,995	19,292	7,731	3,172	175	1,609	421			34,395
1977				19,125	17,093	7,884	3,092	300	1,321	486			49,301
1978				12,324	30,067	8,941	3,853	831	536	283			56,835
1979				1,332	5,637	2,010	922	211	916	260			11,288
1980				1,008	5,198	2,318	1,315	319	405	322			10,885
1981				4,039	9,012	3,349	1,924	97	1,100	470			19,991
1982				372	11,319	5,031	2,773	264	1,631	575			21,965
1983				1,250	10,262	3,841	2,103	220	1,008	398			19,082
1984				513	7,186	6,297	2,549	205	789	327			17,866
1985				7,360	20,572	7,303	1,279	402	2,451	3,070			42,437
1986				10,893	25,454	7,436	1,821	123	2,786	2,071			50,584
1987				8,706	21,166	5,492	2,400	278	2,625	1,767			42,434
1988				11,451	19,823	7,851	1,832	607	1,752	946			44,262
1989				159	14,924	4,858	1,615	476	1,852	706			24,590
1990				6,830	12,127	5,197	1,594	181	1,205	1,081			28,215
1991				925	6,537	5,491	1,936	127	2,177	1,017			18,210
1992				10,529	10,822	5,001	1,220	188	1,729	656			30,145
Total	1		2	143,467	438,794	190,803	105,062	13,020	57,148	22,131	462	8	970,898
10-Year Average				5,862	14,887	5,877	1,835	281	1,837	1,204			31,783

*Jacks included

TABLE 97

MONTHLY COUNT OF STEELHEAD

LOWER MONUMENTAL DAM
1969-1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS
1969		5	1,525	9,235	5,475	248	2,141	6,410	26,647	15,195	4,189	366	71,436
1970	252	1,025	1,519	3,143	2,134	232	1,989	7,947	30,701	11,194	1,615	416	62,167
1971			422	2,404	1,510	131	2,199	2,992	42,438	18,018			70,114
1972				2,182	744	86	2,336	7,184	32,417	21,908			66,857
1973				2,061	658	82	2,060	3,505	21,241	9,923			39,530
1974				1,221	256	17	1,237	2,835	4,929	4,644			15,139
1975				745	444	24	873	4,417	7,437	3,423			17,363
1976				806	256	146	1,092	4,409	10,328	4,785			21,822
1977				849	192	127	3,026	2,991	22,494	18,070			47,749
1978				1,324	128	16	719	2,522	10,477	5,354			20,540
1979				643	118	28	1,314	1,937	4,898	8,856			17,794
1980				2,467	573	70	754	3,725	14,078	12,655			34,322
1981				996	321	75	1,783	1,632	12,416	18,700			35,923
1982				2,026	1,123	35	1,851	7,373	22,426	27,938			62,772
1983				1,021	131	14	3,027	10,101	40,004	26,264			80,562
1984				2,663	482	52	3,150	4,820	42,788	34,700			88,655
1985				6,889	548	189	1,888	10,086	63,734	26,384			109,718
1986				1,914	205	89	5,082	7,751	46,876	58,562			120,479
1987				2,483	264	142	2,531	4,692	20,766	31,708			62,586
1988				4,274	604	411	1,903	5,725	35,290	36,539			84,746
1989				1,067	389	304	6,364	8,093	63,026	50,375			129,618
1990				2,691	197	189	1,804	1,579	14,209	24,238			44,907
1991				2,211	288	70	2,275	1,497	41,894	50,080			98,315
1992				1,456	182	285	2,890	7,223	68,606	49,787			130,429
Total	252	1,030	3,466	56,771	17,222	3,062	54,288	121,446	700,120	569,300	5,804	782	1,533,543
10-Yr. Average				2,667	329	175	3,091	6,157	43,719	38,864			95,002

TABLE 97

TABLE 98

MONTHLY TOTALS OF SALMONIDS AND SHAD

COUNTED OVER LITTLE GOOSE DAM IN 1992

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*				8,000	11,108	4,932	1,217	94	959	331	105		26,746
STEELHEAD				472	189	141	997	2,652	54,585	48,870	9,792		117,698
SOCKEYE						1	9	1	1				12
COHO													
PINK													
MINI-JACK**					3	8	5	64	30	47	5		162
TOTAL				8,472	11,297	5,074	2,223	2,747	55,545	49,201	9,897		144,456
SHAD					239	42,439	29,793	158					72,629

*Jacks included
**Salmonid fish under 12 inches in length

TABLE 98

TABLE 99

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 99

LITTLE GOOSE PROJECT
APRIL 1992

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1	BEGIN COUNTING 15 APRIL										13.6	0.0		
2											21.3	0.0		
3											26.1	0.0		
4											30.5	0.0		
5											38.2	0.0		
6											34.3	0.0		
7											24.7	0.0		
8											32.7	0.0		
9											35.1	0.0		
10											35.7	0.0		
11											27.7	0.0		
12											32.4	0.0		
13											37.9	0.0	4.4	53.0
14											37.6	0.0	4.6	52.0
15	92			1				35			42.9	0.0	4.6	52.0
16	340			1				28			36.8	0.0	4.6	52.0
17	115			0				35			38.9	0.0	4.6	5.0
18	343			7				31			45.9	0.0	4.1	52.0
19	533			8				34			46.8	0.0	4.1	52.0
20	95			4				42			48.3	0.0	4.0	52.0
21	86			4				29			58.8	0.0	4.7	52.0
22	574			4				49			48.4	0.0	4.2	52.0
23	1249			12				22			55.9	0.0	4.0	52.0
24	576			6				20			49.3	0.0	4.0	52.0
25	905			14				35			49.6	0.0	4.0	52.0
26	764			8				29			47.2	0.0	4.0	52.0
27	776			13				19			44.8	0.0	4.0	52.0
28	350			7				19			47.2	0.0	4.7	53.0
29	388			4				23			49.5	0.0	4.0	54.0
30	716			5				22			55.5	0.0	4.0	55.0
TOTAL	7,902			98				472						
AVG.	566							29			39.8	0.0	4.3	49.8

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 100

LITTLE GOOSE PROJECT

MAY 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK
1	468			14				12	0	1
2	432			12				19	0	0
3	541			10				13	0	1
4	312			11				12	0	0
5	367			18				11	0	0
6	204			7				8	0	0
7	473			12				13	0	0
8	1447			22				11	0	0
9	630			29				6	0	0
10	660			23				6	0	0
11	577			20				14	0	0
12	416			30				2	0	0
13	223			26				8	0	0
14	223			18				5	0	0
15	340			16				4	0	0
16	287			12				7	0	0
17	344			18				8	0	0
18	169			17				6	0	0
19	343			18				1	0	0
20	194			16				1	0	0
21	283			6				2	0	0
22	169			22				2	1	0
23	102			13				2	0	0
24	92			12				2	4	0
25	152			13				0	1	0
26	229			13				1	23	1
27	113			5				2	7	0
28	193			5				2	17	0
29	257			12				4	25	0
30	185			8				0	59	0
31	221			4				5	102	0
TOTAL	10,646			462				189	239	3
AVG.	343			15				6	8	

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	78.6	0.0	5.0	553.0
2	79.4	0.0	3.0	52.0
3	74.1	0.0	1.4	52.0
4	72.8	0.0	4.0	52.0
5	74.8	0.0	4.2	54.0
6	74.5	0.0	4.0	55.0
7	70.4	0.0	5.2	55.0
8	73.7	0.0	4.7	54.0
9	74.8	0.0	4.5	54.0
10	70.5	0.0	4.0	54.0
11	65.6	0.0	3.7	55.0
12	56.0	0.0	3.7	55.0
13	47.7	0.0	4.3	56.0
14	63.1	0.0	4.8	56.0
15	65.1	0.0	5.0	56.0
16	67.4	0.0	5.0	56.0
17	49.7	0.0	5.0	57.0
18	43.2	0.0	4.6	57.0
19	45.3	0.0	4.6	56.0
20	50.1	0.0	4.8	56.0
21	59.2	0.0	5.0	56.0
22	51.6	0.0	5.0	56.0
23	46.0	0.0	5.0	57.0
24	44.0	0.0	5.4	58.0
25	45.5	0.0	5.6	60.0
26	53.3	0.0	4.6	58.0
27	69.1	0.0	5.0	60.0
28	62.0	0.0	5.2	59.0
29	50.1	0.0	4.3	59.0
30	45.2	0.0	5.0	59.0
31	43.5	0.0	5.0	59.0
AVG.	60.2	0.0	4.5	72.1

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	18,548	560

STEELHEAD	SHAD	MINI-JK
661	239	3

TABLE 101

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 101

LITTLE GOOSE PROJECT

JUNE 1992

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	200			12			0	4	246	0	41.1	0.0	5.0	62.0
2	246			7			0	1	193	0	43.9	0.0	5.0	62.0
3	196			5			0	0	302	0	55.1	0.0	5.0	62.0
4	192			12			0	4	457	1	42.5	0.0	5.0	62.0
5	182			10			0	1	548	0	48.2	0.0	5.0	62.0
6	185			8			0	1	474	1	51.0	0.0	5.0	62.0
7	188			16			0	4	368	1	49.6	0.0	5.0	62.0
8	190			14			0	6	385	1	47.7	0.0	5.0	62.0
9	264			4			0	0	421	0	43.7	0.0	4.4	63.0
10	209			8			0	5	498	0	25.1	0.0	4.4	63.0
11	203			5			0	2	1226	1	23.8	0.0	5.1	63.0
12	162			7			0	5	1019	0	23.2	0.0	4.2	64.0
13	175			6			0	5	386	0	21.8	0.0	4.0	62.0
14	228			8			0	4	908	0	24.8	0.0	4.5	62.0
15	169			7			0	4	1824	0	24.5	0.0	4.5	62.0
16		122		0			0	5	928	0	23.2	0.0	4.0	62.0
17		175		6			0	5	1322	0	24.4	0.0	4.4	61.0
18		140		5			0	7	2755	0	27.2	0.0	4.8	62.0
19		107		2			0	7	1807	0	24.7	0.0	6.0	62.0
20		144		10			0	4	1625	1	24.0	0.0	6.0	62.0
21		154		12			0	6	1898	2	23.6	0.0	5.0	63.0
22		96		7			0	4	2419	0	22.4	0.0	6.0	64.0
23		48		6			0	5	2204	0	19.7	0.0	6.0	64.0
24		84		8			0	6	2802	0	20.1	0.0	6.0	64.0
25		121		12			0	2	2766	0	18.4	0.0	6.0	64.0
26		104		10			0	16	2459	0	18.8	0.0	5.8	65.0
27		128		7			0	11	2383	0	19.6	0.0	5.3	65.0
28		66		7			0	4	1890	0	19.6	0.0	5.0	65.0
29		126		17			1	2	3620	0	23.0	0.0	5.8	66.0
30		74		16			0	11	2306	0	19.1	0.0	5.8	66.0
TOTAL	2,989	1,689		254			1	141	42,439	8				
AVG.	199	107		8				5	1,415		29.8	0.0	5.1	63.0

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	21,537	689
SUMMER	1,689	125
TOTALS	23,226	814

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
1	802	42,678	11

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 102

LITTLE GOOSE PROJECT
JULY 1992

FISH COUNTS / RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1		137		11			0	11	2447	0	18.9	0.0	6.0	68.0
2		107		0			0	22	2432	0	22.5	0.0	6.0	68.0
3		90		6			0	32	3787	0	24.7	0.0	6.0	68.0
4		35		2			0	13	2788	0	34.1	0.0	6.0	70.0
5		95		4			1	48	2264	0	36.9	0.0	5.4	70.0
6		96		8			0	22	1982	0	41.6	0.0	5.2	70.0
7		66		7			0	42	2405	0	40.6	0.0	5.0	71.0
8		52		6			0	47	2425	0	42.3	0.0	5.0	71.0
9		64		5			0	44	2478	0	40.6	0.0	5.0	71.0
10		26		12			1	36	1211	1	37.7	0.0	5.0	71.0
11		46		6			2	24	1169	0	28.7	0.0	5.0	71.0
12		34		1			1	19	908	0	23.8	0.0	5.0	70.0
13		47		6			0	34	290	0	16.8	0.0	5.0	70.0
14		32		6			1	34	215	0	17.6	0.0	4.0	68.0
15		18		4			0	32	581	0	31.1	0.0	4.0	68.0
16		13		5			0	38	484	0	35.1	0.0	4.5	69.0
17		10		2			1	41	280	0	35.9	0.0	4.4	68.0
18		5		4			0	34	229	0	28.5	0.0	5.0	68.0
19		10		4			0	59	216	0	17.3	0.0	5.0	67.0
20		20		8			0	44	282	0	15.2	0.0	5.0	68.0
21		14		1			0	28	172	0	16.3	0.0	6.0	68.0
22		12		0			0	17	132	0	15.9	0.0	6.0	68.0
23		5		1			1	22	86	1	17.0	0.0	5.6	67.0
24		6		2			0	26	90	0	18.9	0.0	4.8	69.0
25		14		1			1	30	121	0	17.8	0.0	5.0	69.0
26		5		5			0	47	88	0	16.6	0.0	5.6	69.0
27		8		1			0	23	66	0	15.5	0.0	5.5	69.0
28		7		4			0	36	44	0	15.1	0.0	5.8	68.0
29		4		1			0	38	58	1	14.5	0.0	6.0	67.0
30		10		4			0	29	38	1	14.3	0.0	6.0	68.0
31		1		1			0	25	25	1	14.3	0.0	6.0	68.0
TOTAL		1,089		128			9	997	29,793	5				
AVG.		35		4				32	961		24.7	0.0	5.3	68.9

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	21,537	689
SUMMER	2,778	253
TOTAL	24,315	942

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
10	1,799	72,471	16

TABLE 102

TABLE 103

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 103

LITTLE GOOSE PROJECT
AUGUST 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK
1		4		0			0	47	17	0
2		4		1			0	136	12	7
3		8		1			0	98	13	4
4		5		0			0	121	16	2
5		4		0			0	106	6	1
6		11		1			0	106	5	2
7		0		0			0	143	5	1
8		4		0			0	187	10	1
9		10		0			0	122	5	0
10		5		0			0	110	8	1
11		1		0			0	61	2	2
12		0		0			0	54	1	0
13		0		0			0	52	4	6
14		0		0			0	31	4	4
15		1		0			0	62	1	2
16			2	0			0	90	0	5
17			2	0			0	65	0	1
18			0	0			0	30	1	0
19			0	1			0	44	7	2
20			1	1			0	44	6	4
21			0	0			0	70	5	4
22			1	0			0	35	2	4
23			1	0			0	58	5	1
24			1	1			0	84	5	0
25			4	0			1	137	5	2
26			1	0			0	204	4	0
27			0	2			0	121	5	1
28			7	0			0	74	2	2
29			2	0			0	55	0	2
30			0	0			0	55	2	2
31			7	0			0	50	0	1
TOTAL		57	29	8			1	2,652	158	64
AVG.		4	2					86	5	2

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	14.1	0.0	6.0	68.0
2	14.0	0.0	6.0	68.0
3	13.2	0.0	6.0	69.0
4	13.2	0.0	6.0	69.0
5	13.0	0.0	6.0	69.0
6	12.9	0.0	6.0	70.0
7	12.7	0.0	6.0	70.0
8	12.9	0.0	6.0	70.0
9	12.6	0.0	6.0	70.0
10	12.5	0.0	6.0	70.0
11	12.8	0.0	6.0	70.0
12	12.7	0.0	6.0	70.0
13	12.6	0.0	6.0	70.0
14	13.3	0.0	6.0	70.0
15	13.0	0.0	6.0	72.0
16	12.9	0.0	6.0	72.0
17	12.7	0.0	6.0	72.0
18	12.6	0.0	6.0	72.0
19	12.5	0.0	6.0	72.0
20	12.7	0.0	6.0	72.0
21	12.4	0.0	6.0	72.0
22	12.6	0.0	5.8	72.0
23	12.5	0.0	5.6	71.0
24	12.7	0.0	6.0	72.0
25	14.7	0.0	5.5	72.0
26	12.7	0.0	5.5	72.0
27	12.5	0.0	6.0	72.0
28	13.8	0.0	6.0	72.0
29	12.7	0.0	6.0	72.0
30	12.8	0.0	6.0	72.0
31	12.6	0.0	6.0	72.0
AVG.	12.9	0.0	5.9	70.8

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	21,537	689
SUMMER	2,835	256
FALL	29	5
TOTALS	24,401	950

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
11	4,451	72,629	80

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 104

LITTLE GOOSE PROJECT
SEPTEMBER 1992

FISH COUNTS / RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1			7	0			0	70		1	12.6	0.0	6.0	72.0
2			14	0			0	98		0	12.8	0.0	5.0	72.0
3			10	0			0	102		1	12.6	0.0	5.0	72.0
4			18	1			0	114		0	12.6	0.0	5.0	72.0
5			24	1			0	224		1	12.9	0.0	4.4	71.0
6			13	1			0	316		0	12.8	0.0	3.8	71.0
7			13	0			0	268		0	12.9	0.0	4.0	70.0
8			19	0			0	428		0	12.5	0.0	4.0	70.0
9			18	1			0	550		1	13.8	0.0	4.2	70.0
10			32	2			0	486		2	16.2	0.0	4.2	70.0
11			11	1			0	274		0	21.9	0.0	5.0	68.0
12			36	4			0	782		0	22.0	0.0	4.2	68.0
13			34	7			0	888		5	22.0	0.0	4.8	68.0
14			32	6			0	928		0	21.9	0.0	5.0	67.0
15			37	1			0	1072		0	22.6	0.0	4.2	67.0
16			68	2			0	2178		0	23.4	0.0	5.0	66.0
17			47	10			0	3419		0	22.3	0.0	5.0	66.0
18			68	6			0	3606		1	22.7	0.0	6.0	65.0
19			54	8			0	3353		1	23.2	0.0	6.0	66.0
20			41	8			1	4117		1	19.6	0.0	6.0	66.0
21			58	12			0	3292		2	13.7	0.0	5.8	65.0
22			29	8			0	2196		0	12.5	0.0	5.8	65.0
23			22	1			0	2842		0	12.2	0.0	6.0	65.0
24			11	7			0	3398		5	12.6	0.0	6.0	65.0
25			31	10			0	3858		1	12.4	0.0	5.0	62.0
26			17	12			0	3029		0	17.8	0.0	4.4	62.0
27			13	6			0	4160		4	16.9	0.0	4.4	62.0
28			18	7			0	2850		2	15.9	0.0	5.0	62.0
29			24	5			0	3310		1	16.4	0.0	6.0	62.0
30			8	5			0	2377		1	15.4	0.0	6.0	62.0
TOTAL			827	132			1	54,585		30				
AVG.			28	4				1,820			16.6	0.0	5.0	67.0

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	21,537	689
SUMMER	2,835	256
FALL	856	137
TOTALS	25,228	1,082

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
12	59,036	72,629	110

TABLE 104

TABLE 105

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 105

LITTLE GOOSE PROJECT

OCTOBER 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	RIVER CONDITIONS DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1			18	4				2584		2	17.6	0.0	5.8	61.0
2			13	2				2042		2	17.2	0.0	6.0	61.0
3			18	5				2053		2	16.7	0.0	6.0	60.0
4			8	5				2495		6	16.4	0.0	6.0	60.0
5			20	11				3527		1	17.3	0.0	6.0	60.0
6			10	5				2413		2	16.6	0.0	5.0	61.0
7			24	8				2936		2	16.5	0.0	6.0	61.0
8			6	2				2009		1	16.0	0.0	6.0	61.0
9			4	4				2033		2	16.0	0.0	6.0	61.0
10			5	4				1373		0	15.7	0.0	6.0	61.0
11			8	2				1648		2	16.5	0.0	5.0	61.0
12			6	7				2149		5	16.0	0.0	5.0	61.0
13			2	5				1405		0	15.8	0.0	5.8	61.0
14			4	1				1387		0	15.7	0.0	5.8	61.0
15			4	5				1938		1	16.0	0.0	5.0	60.0
16			4	0				1625		5	17.9	0.0	5.5	60.0
17			1	0				785		1	15.2	0.0	5.5	60.0
18			11	1				1886		0	15.7	0.0	5.5	60.0
19			6	0				1057		0	18.2	0.0	6.0	59.0
20			5	2				1693		0	16.4	0.0	6.0	59.0
21			1	2				1393		2	18.1	0.0	6.0	59.0
22			5	6				1762		2	17.0	0.0	6.0	59.0
23			7	4				1129		0	13.5	0.0	6.0	59.0
24			4	0				1386		1	16.7	0.0	6.0	59.0
25			7	0				947		0	14.2	0.0	6.0	59.0
26			4	2				398		2	14.6	0.0	6.0	59.0
27			13	4				907		2	14.4	0.0	6.0	59.0
28			4	5				487		0	14.8	0.0	6.0	58.0
29			5	1				362		2	15.0	0.0	5.6	58.0
30			0	1				491		2	14.7	0.0	5.6	58.0
31			5	1				570		0	17.4	0.0	4.6	58.0
TOTAL			232	99				48,870		47				
AVG.			7	3				1576		2	16.1	0.0	5.7	59.8

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	21,537	689
SUMMER	2,835	256
FALL	1,088	236
TOTALS	25,460	1,181

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
12	107,906	72,629	157

MONTHLY FISH PASSAGE SUMMARY REPORT

TABLE 106

LITTLE GOOSE PROJECT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

NOVEMBER 1992

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1			6	0				647		0	15.0	0.0	4.0	58.0
2			6	2				494		1	17.5	0.0	4.0	58.0
3			5	1				521		1	18.5	0.0	4.0	57.0
4			16	1				666		0	18.2	0.0	4.0	57.0
5			12	0				505		0	17.6	0.0	5.0	56.0
6			2	0				338		0	17.3	0.0	5.0	56.0
7			4	0				215		1	17.5	0.0	5.0	56.0
8			1	1				494		0	17.4	0.0	5.0	57.0
9			1	0				197		0	19.3	0.0	4.0	56.0
10			1	0				462		0	18.7	0.0	4.0	55.0
11			5	2				367		0	17.9	0.0	4.0	55.0
12			1	0				68		1	18.3	3.3	4.0	54.0
13			1	1				257		1	16.8	0.0	4.0	54.0
14			10	4				277		0	16.8	0.0	4.0	54.0
15			5	0				490		0	16.7	0.0	4.0	54.0
16			1	0				344		0	17.8	0.0	4.0	54.0
17			1	0				230		0	19.8	0.0	4.0	52.0
18			0	0				259		0	17.6	0.0	5.0	52.0
19			2	0				463		0	20.8	0.0	4.0	52.0
20			0	1				430		0	17.0	0.0	4.0	51.0
21			2	0				350		0	14.5	0.0	4.0	51.0
22			1	0				338		0	15.2	0.0	5.0	50.0
23			0	1				304		0	17.9	0.0	5.0	50.0
24			4	0				396		0	17.7	0.0	5.0	50.0
25			2	0				167		0	23.4	0.0	5.0	50.0
26			1	0				223		0	15.2	0.0	5.0	50.0
27			1	0				98		0	12.3	0.0	5.0	50.0
28			0	0				72		0	12.9	0.0	5.0	50.0
29			0	0				52		0	15.8	0.0	4.0	48.0
30			0	0				68		0	19.3	0.0	4.0	48.0
TOTAL			91	14				9,792		5				
AVG.			5					400			17.4	0.1	4.3	55.8

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	21,537	689
SUMMER	2,835	256
FALL	1,179	250
TOTALS	25,551	1,195

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
12	117,698	72,629	162

TABLE 107

DISCHARGE AND WATER QUALITY DATA

LITTLE GOOSE PROJECT 1992

DECEMBER

	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	21.7	0.0		
2	26.0	0.0		
3	28.3	0.0		
4	29.3	0.0		
5	28.1	0.0		
6	28.4	0.0		
7	33.9	0.0		
8	32.5	0.0		
9	31.2	0.0		
10	29.8	0.0		
11	22.5	0.0		
12	25.2	0.0		
13	26.0	0.0		
14	22.1	0.0		
15	12.9	0.0		
16	21.1	0.0		
17	23.9	0.0		
18	16.1	0.0		
19	23.2	0.0		
20	25.2	0.0		
21	23.3	0.0		
22	15.4	0.0		
23	22.1	0.0		
24	24.7	0.0		
25	11.8	0.0		
26	19.9	0.0		
27	24.3	0.0		
28	21.5	0.0		
29	11.7	0.0		
30	22.1	0.0		
31	23.3	0.0		
AVG.	23.5	0.0		

TABLE 108

YEARLY TOTALS OF SALMONIDS COUNTED COUNTED OVER LITTLE GOOSE DAM 1970 - 1981, 1992

YEAR	CHINOOK*	STEELHEAD	SOCKEYE	COHO*	TOTALS
1970	72,971	59,640	163	2,480	135,254
1971	61,402	70,013	891	2,701	135,007
1972	64,211	63,638	408	799	129,056
1973	70,605	38,820	192	1,157	110,774
1974	26,787	14,784	124	532	42,227
1975	26,960	15,225	173	697	43,055
1976	32,359	20,894	644	733	54,630
1977	49,176	47,388	574	438	97,576
1978	56,069	24,927	168	307	81,471
1979	12,515	21,049	72	390	34,026
1980	10,605	38,627	88	124	49,444
1981	19,086	38,680	200	120	58,086
1991	13,737	96,830	10	1	110,578
1992	26,746	117,698	12		144,456
Total	543,229	668,213	3,719	10,479	1,225,640
1972-1981 10-Yr Avg	36,837	32,403	264	530	70,035

Jacks included

TABLE 108

TABLE 109

MONTHLY COUNT OF CHINOOK SALMON
LITTLE GOOSE DAM; 1970-1981, 1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS*
1970				6,765	32,616	15,204	11,200	1,529	4,508	965	178	6	72,971
1971				133	16,012	24,096	14,473	707	5,319	606	55	1	61,402
1972				2,226	37,991	5,585	14,747	1,614	1,445	576	27		64,211
1973				17,490	34,570	10,661	4,344	520	2,472	528	19	1	70,605
1974				136	14,224	4,451	6,213	556	749	449	9		26,787
1975				152	14,161	6,487	4,182	540	1,143	295			26,960
1976				612	17,403	9,470	3,575	302	642	355			32,359
1977				16,973	19,936	6,707	4,181	182	842	355			49,176
1978				8,190	29,195	10,676	6,172	717	621	498			56,069
1979				947	4,436	4,396	1,391	254	802	289			12,515
1980				508	5,250	2,560	1,488	191	368	240			10,605
1981				2,798	9,399	3,214	2,217	108	724	626			19,086
**													
1991				469	4,968	5,066	1,949	85	715	394	91		13,737
1992				8,000	11,108	4,932	1,217	94	959	331	105		26,746
Total				65,399	251,269	113,505	77,349	7,399	21,309	6,507	484	8	543,229
**1972-1981 10-Year Average				5,003	18,657	6,421	4,851	498	981	421	18		36,837

1981 is the last year visual counts were made at Little Goose Project until 1991.
*Jacks included

TABLE 110

MONTHLY COUNT OF STEELHEAD

LITTLE GOOSE DAM
1975 - 1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1970			3,346	4,148	1,762	167	1,485	7,487	27,898	11,931	1,136	280	59,640
1971			586	1,968	1,319	85	1,286	3,337	38,988	19,674	2,161	609	70,013
1972	248	251	943	2,565	720	54	1,209	6,637	25,089	24,323	1,258	341	63,638
1973	133	80	1,029	2,051	829	65	1,249	2,856	16,650	12,420	1,129	319	38,810
1974	191	294	543	1,105	278	5	726	2,203	3,970	4,721	583	165	14,784
1975	96	75	70	732	472	16	390	3,433	6,230	3,711			15,225
1976				1,052	345	133	678	3,556	8,988	6,142			20,894
1977				1,340	272	155	1,951	2,738	18,753	22,179			47,388
1978				1,625	216	20	593	2,617	11,547	8,309			24,927
1979				742	222	16	1,614	2,326	5,278	10,851			21,049
1980				3,063	668	43	821	3,858	15,305	14,869			38,627
1981 **				1,360	424	119	1,740	2,024	11,559	21,454			38,680
1991				804	266	99	1,637	559	31,818	53,734	7,913		96,830
1992				472	189	141	997	2,652	54,585	48,870	9,792		117,698
Total	668	700	6,517	23,027	7,982	1,118	16,376	46,283	276,658	263,188	23,972	1,714	668,203
1972-1981 10-Yr Avg			259	1,564	445	63	1,097	3,225	12,337	12,898	297		32,402

** 1981 is the last year visual counts were made at Little Goose Project until 1991.

TABLE 110

TABLE 111

MONTHLY TOTALS OF SALMONIDS AND SHAD

COUNTED OVER LOWER GRANITE DAM IN 1992

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*				6,205	12,170	4,783	1,998	110	576	288	63		26,193
STEELHEAD			1,925	2,789	194	76	725	2,009	47,058	56,284	9,709	690	121,459
SOCKEYE						1	8	6					15
COHO													
PINK													
MINI-JACK**					3	3	6	14	17	15	2		60
TOTAL			1,925	8,994	12,364	4,860	2,731	2,125	47,634	56,572	9,772	690	147,667
SHAD					10	4,904	17,203	181					22,298

*Jacks included
**Salmonid fish under 12 inches in length

TABLE 111

TABLE 112

DISCHARGE AND WATER QUALITY DATA

LOWER GRANITE PROJECT - 1992

JANUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	12.2	0.0		
2	20.6	0.0	5.0	43.0
3	28.0	0.0	5.0	43.0
4	22.1	0.0	5.0	43.0
5	13.6	0.0	5.0	43.0
6	20.8	0.0	5.0	43.0
7	19.4	0.0		
8	25.3	0.0		
9	25.9	0.0		
10	25.0	0.0		
11	23.0	0.0		
12	18.4	0.0		
13	22.4	0.0		
14	23.7	0.0		
15	22.7	0.0		
16	22.0	0.0		
17	21.9	0.0		
18	20.1	0.0		
19	19.3	0.0		
20	18.5	0.0		
21	22.4	0.0		
22	19.9	0.0		
23	19.2	0.0		
24	19.9	0.0		
25	20.3	0.0		
26	18.6	0.0		
27	19.0	0.0		
28	21.9	0.0		
29	27.1	0.0		
30	23.6	0.0		
31	24.0	0.0		
AVG.	21.3	0.0		

FEBRUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	22.6	0.0		
2	19.4	0.0		
3	22.4	0.0		
4	26.6	0.0		
5	29.6	0.0		
6	21.5	0.0		
7	19.2	0.0		
8	18.7	0.0		
9	15.5	0.0		
10	19.2	0.0		
11	20.1	0.0		
12	20.6	0.0		
13	21.9	0.0		
14	26.7	0.0		
15	24.4	0.0		
16	9.3	0.0		
17	20.8	0.0		
18	19.1	0.0		
19	22.1	0.0		
20	26.0	0.0		
21	35.4	0.0		
22	36.3	0.0		
23	34.1	0.0		
24	34.4	0.0		
25	38.2	14.4		
26	38.8	0.0		
27	36.2	11.7		
28	35.7	0.0		
29	33.0	0.0	2.0	43.0
AVG.	25.8	0.9		

MONTHLY FISH PASSAGE SUMMARY REPORT

TABLE 113

LOWER GRANITE PROJECT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

MARCH 1992

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1								34			40.8	0.0	2.0	44.0
2								43			38.8	0.0	2.0	43.0
3								38			42.7	0.0	2.0	44.0
4								14			39.6	0.0	2.5	44.0
5								40			40.9	0.0	2.3	44.0
6								90			39.0	0.0	2.5	45.0
7								202			38.3	0.0	2.5	46.0
8								164			36.1	0.0	2.5	46.0
9								43			37.4	0.0	2.2	46.0
10								120			35.7	0.0	2.5	46.0
11								41			36.2	0.0	2.2	46.0
12											34.2	0.0	2.3	46.0
13											33.7	0.0		
14											33.5	0.0		
15											30.3	0.0		
16											26.9	12.2		
17											34.4	16.6		
18											33.2	0.0		
19											36.4	8.8		
20											29.9	16.5		
21											31.5	0.0		
22											31.3	15.8		
23											34.9	4.6		
24											31.5	15.5		
25											29.3	0.0		
26											23.9	13.7		
27											2.9	0.0		
28											11.1	9.1		
29											3.5	0.0		
30											2.9	0.0		
31								1096			3.0	0.0	3.6	44.0
TOTAL								1,925						
AVG.								160			29.8	3.6	2.4	44.9

A drawdown test of Lower Granite reservoir was conducted during March of 1992.
Operation of the fish ladder resumed on 31 March.

TABLE 113

TABLE 114

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 114

LOWER GRANITE PROJECT

APRIL 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK
1	0							820		
2	0							288		
3	0							220		
4	4							199		
5	5							146		
6	2							126		
7	7							103		
8	18							103		
9	11							42		
10	11							58		
11	24							62		
12	18							48		
13	16							35		
14	18							64		
15	36							32		
16	32							36		
17	190							48		
18	211							40		
19	245							29		
20	274			2				34		
21	296			2				23		
22	136			0				25		
23	172			0				35		
24	1326			1				31		
25	754			4				36		
26	505			1				22		
27	289			2				18		
28	212			2				31		
29	91			2				13		
30	1276			10				22		
TOTAL	6,179			26				2,789		
AVG.	206							93		

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	17.9	0.0	3.6	50.0
2	21.3	0.0	3.6	50.0
3	31.0	0.0	3.5	51.0
4	31.3	0.0	3.8	51.0
5	33.2	0.0	3.8	50.0
6	35.0	0.0	3.8	51.0
7	29.0	0.0	3.8	51.0
8	33.2	0.0	3.8	52.0
9	32.4	0.0	3.8	52.0
10	30.9	0.0	3.8	52.0
11	29.4	0.0	5.0	52.0
12	34.0	0.0	5.0	50.0
13	35.4	0.0	5.0	49.0
14	41.3	0.0	5.0	
15	38.8	0.0	5.0	49.0
16	49.5	0.0	5.0	49.0
17	40.4	0.0	5.0	50.0
18	46.5	0.0	5.0	50.0
19	47.3	0.0	5.0	52.0
20	44.7	0.0	5.0	52.0
21	42.7	0.0	5.0	53.0
22	48.6	0.0	5.0	53.0
23	55.7	0.0	5.0	53.0
24	50.0	0.0	4.5	53.0
25	48.0	0.0	4.0	
26	47.4	0.0	4.5	
27	44.2	0.0	5.0	50.0
28	47.5	0.0	5.0	51.0
29	49.1	0.0	5.0	51.0
30	55.9	0.0	5.0	53.0
AVG.	39.7	0.0	4.5	51.1

TOTALS TO DATE

CHINOOK ADULT	CHINOOK JACK
6,179	26

STEELHEAD
4,714

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 115

LOWER GRANITE PROJECT
MAY 1992

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1	1066			2				24	0	0	77.1	0.0	5.0	55.0
2	721			6				10	0	1	79.7	0.0	5.0	56.0
3	376			6				20	0	0	74.1	0.0	5.0	55.0
4	305			1				6	0	0	73.9	0.0	5.0	53.0
5	344			6				14	0	0	73.8	0.0	5.0	54.0
6	478			7				12	0	0	74.7	0.0	5.0	54.0
7	260			13				11	0	0	68.9	0.0	5.0	54.0
8	625			13				17	0	0	74.1	0.0	5.0	55.0
9	953			19				11	0	0	74.9	0.0	5.0	56.0
10	827			37				6	0	0	69.8	0.0	5.0	55.0
11	209			10				5	0	0	65.8	0.0	5.0	55.0
12	510			13				12	0	0	54.2	0.0	5.0	54.0
13	413			26				2	0	0	47.7	0.0	5.0	53.0
14	282			26				8	0	0	63.1	0.0	5.0	53.0
15	632			26				8	0	0	65.0	0.0	5.0	53.0
16	439			22				5	0	0	66.6	0.0	5.0	54.0
17	446			13				6	0	0	50.2	0.0	5.0	54.0
18	132			5				2	0	0	43.8	0.0	5.0	54.0
19	307			24				1	0	0	45.4	0.0	5.0	54.0
20	211			8				0	0	1	49.3	0.0	5.0	56.0
21	270			19				4	0	1	58.8	0.0	5.0	56.0
22	437			14				1	0	0	51.6	0.0	5.0	57.0
23	239			14				4	2	0	45.1	0.0	5.0	57.0
24	121			8				1	4	0	45.2	0.0	5.0	
25	110			10				1	4	0	45.3	0.0	5.0	58.0
26	167			13				1	0	0	56.1	0.0	5.0	57.0
27	107			5				0	0	0	70.5	0.0	5.0	58.0
28	208			4				2	0	0	56.7	0.0	5.0	59.0
29	176			6				0	0	0	50.7	0.0	5.0	59.0
30	218			8				0	0	0	44.7	0.0	5.0	59.0
31	186			11				0	0	0	42.9	0.0	5.0	59.0
TOTAL	11,775			395				194	10	3				
AVG.	380			13				6			60.0	0.0	5.0	55.5

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	17,954	421

STEELHEAD	SHAD	MINI-JCK
4,908	10	3

TABLE 115

TABLE 116

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 116

LOWER GRANITE PROJECT
JUNE 1992

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1	198			6			0	1	1	0	40.9	0.0	5.0	59.0
2	185			11			0	0	7	0	48.9	0.0	5.0	60.0
3	178			8			0	1	25	0	51.1	0.0	5.0	
4	229			4			0	0	22	0	42.4	0.0	5.0	61.0
5	275			10			0	0	24	0	48.1	0.0	5.0	60.0
6	163			8			0	2	77	0	50.1	0.0	5.0	60.0
7	188			10			0	2	53	0	50.0	0.0	5.0	62.0
8	131			6			1	0	71	0	48.2	0.0	5.0	59.0
9	190			8			0	0	32	0	41.9	0.0	5.0	58.0
10	215			4			0	1	29	0	25.4	0.0	5.0	58.0
11	229			2			0	0	119	0	24.2	0.0	5.0	59.0
12	272			8			0	4	78	0	22.7	0.0	5.0	59.0
13	178			1			0	1	67	2	22.3	0.0	5.0	59.0
14	190			7			0	1	134	0	24.4	0.0	5.0	59.0
15	212			7			0	1	302	0	24.9	0.0	5.0	59.0
16	248			10			0	7	221	0	23.3	0.0	5.0	60.0
17	156			2			0	2	308	0	24.0	0.0	5.0	61.0
18		148		11			0	1	469	0	27.1	0.0	5.0	60.0
19		146		5			0	5	211	0	25.4	0.0	5.0	60.0
20		127		1			0	4	192	0	23.4	0.0	5.0	60.0
21		151		12			0	6	386	0	23.5	0.0	5.0	62.0
22		49		4			0	6	74	1	21.2	0.0	5.0	70.0
23		41		6			0	2	37	0	20.4	0.0	5.0	61.0
24		83		8			0	2	264	0	20.1	0.0	5.0	61.0
25		62		2			0	2	169	0	19.6	0.0	5.0	62.0
26		22		1			0	1	55	0	18.8	0.0	5.0	62.0
27		43		7			0	5	176	0	19.5	0.0	5.0	63.0
28		74		7			0	4	277	0	19.8	0.0	5.0	63.0
29		107		14			0	10	442	0	22.4	0.0	5.0	65.0
30		90		13			0	5	582	0	18.9	0.0	5.0	66.0
TOTAL	3,437	1,143		203			1	76	4,904	3				
AVG.	202	88		7				3	163		29.8	0.0	5.0	61.0

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	21,391	533
SUMMER	1,143	91
TOTAL	22,534	624

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
1	4,984	4,914	6

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 117

LOWER GRANITE PROJECT
JULY 1992

DATE	FISH COUNTS: CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	RIVER CONDITIONS: DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1		163		19			0	16	1151	1	20.5	0.0	5.0	71.0
2		404		22			0	5	989	1	22.4	0.0	5.0	68.0
3		115		6			0	18	910	0	24.1	0.0	5.0	68.0
4		77		8			1	14	1684	0	33.9	0.0	5.0	68.0
5		157		4			0	34	1608	0	38.1	0.0	5.0	68.0
6		114		11			2	42	1459	0	40.5	0.0	5.0	
7		85		5			0	30	1289	0	40.6	0.0	5.0	67.0
8		118		8			0	43	1175	1	42.4	0.0	5.0	65.0
9		61		6			0	37	641	0	41.0	0.0	5.0	64.0
10		60		10			0	31	690	0	37.1	0.0	5.0	
11		52		12			0	25	720	0	28.8	0.0	5.0	63.0
12		41		8			0	31	688	0	22.8	0.0	5.0	62.0
13		55		8			2	35	674	0	16.9	0.0	5.0	62.0
14		54		11			0	30	419	0	18.3	0.0	5.0	63.0
15		44		6			2	23	551	0	30.8	0.0	5.0	63.0
16		40		0			0	22	667	0	34.9	0.0	5.0	63.0
17		34		7			0	14	358	0	35.3	0.0	5.0	63.0
18		18		5			0	16	374	0	28.1	0.0	5.0	63.0
19		6		2			0	17	203	0	17.0	0.0	5.0	64.0
20		2		2			0	5	68	0	14.5	0.0	5.0	62.0
21		1		2			0	7	91	0	16.1	0.0	5.0	62.0
22		5		1			0	16	74	1	16.4	0.0	5.0	59.0
23		13		11			1	23	62	0	17.6	0.0	5.0	59.0
24		14		4			0	34	78	0	18.2	0.0	5.0	60.0
25		20		0			0	23	97	0	17.3	0.0	5.0	61.0
26		6		6			0	16	60	0	16.2	0.0	5.0	61.0
27		10		4			0	19	17	0	15.3	0.0	5.0	66.0
28		12		7			0	32	77	0	15.0	0.0	5.0	66.0
29		11		2			0	32	251	2	14.2	0.0	5.0	66.0
30		7		2			0	23	50	0	13.8	0.0	5.0	66.0
31		0		0			0	12	28	0	14.2	0.0	5.0	66.0
TOTAL		1,799		199			8	725	17,203	6				
AVG.		58		6				23	555		24.6	0.0	5.0	64.1

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	21,391	533
SUMMER	2,942	290
TOTAL	24,333	823

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
9	5,709	22,117	12

TABLE 117

TABLE 118

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 118

LOWER GRANITE PROJECT
AUGUST 1992

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1		2		1			0	11	19	1	14.0	0.0	5.0	66.0
2		1		4			0	11	18	0	14.1	0.0	5.0	68.0
3		5		2			0	53	16	0	13.5	0.0	5.0	68.0
4		7		0			0	48	12	0	13.4	0.0	5.0	68.0
5		8		0			1	64	8	1	12.8	0.0	5.0	69.0
6		11		0			0	127	18	2	12.5	0.0	5.0	69.0
7		7		1			0	144	8	0	12.8	0.0	5.0	71.0
8		18		0			0	145	12	1	13.3	0.0	5.0	70.0
9		6		0			0	145	2	1	12.9	0.0	5.0	70.0
10		4		0			0	101	12	0	12.5	0.0	5.0	70.0
11		0		0			0	48	7	0	13.2	0.0	5.0	70.0
12		0		0			0	37	6	0	13.1	0.0	5.0	69.0
13		1		0			0	22	6	0	12.2	0.0	5.0	71.0
14		0		0			1	18	4	0	13.3	0.0	5.0	70.0
15		0		0			0	22	4	0	12.8	0.0	5.0	71.0
16		2		0			1	40	10	0	12.8	0.0	5.0	71.0
17		0		0			0	23	4	0	12.4	0.0	5.0	71.0
18			4	0			0	11	7	0	12.0	0.0	5.0	72.0
19			1	0			0	20	2	2	12.7	0.0	5.0	71.0
20			0	0			0	14	1	0	13.5	0.0	5.0	72.0
21			0	0			0	40	2	0	12.6	0.0	5.0	72.0
22			1	0			0	48	2	2	12.0	0.0	5.0	72.0
23			1	0			0	59	0	0	13.5	0.0	5.0	72.0
24			0	0			0	42	1	0	13.5	0.0	5.0	71.0
25			6	1			0	98	0	0	15.2	0.0	5.0	71.0
26			0	0			1	109	0	0	12.2	0.0	5.0	71.0
27			5	0			1	113	0	4	12.4	0.0	5.0	71.0
28			4	0			0	169	0	0	13.9	0.0	5.0	69.0
29			4	0			0	132	0	0	12.7	0.0	5.0	67.0
30			1	0			1	59	0	0	12.8	0.0	5.0	68.0
31			2	0			0	36	0	0	12.8	0.0	5.0	67.0
TOTAL		72	29	9			6	2,009	181	14				
AVG		4	2					65	6		13.0	0.0	5.0	69.9

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	21,391	533
SUMMER	3,014	298
FALL	29	1
TOTAL	24,434	832

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
15	7,718	22,298	26

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 119

LOWER GRANITE PROJECT
SEPTEMBER '1992

FISH COUNTS / RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1			0	0				41		1	12.2	0.0	5.0	67.0
2			7	1				72		1	13.0	0.0	5.0	67.0
3			8	0				73		0	12.9	0.0	5.0	67.0
4			11	0				148		1	12.4	0.0	5.0	66.0
5			10	1				120		0	12.5	0.0	5.0	66.0
6			29	1				188		1	12.6	0.0	5.0	66.0
7			16	1				211		0	14.2	0.0	5.0	67.0
8			13	0				266		0	12.1	0.0	5.0	66.0
9			18	0				342		1	14.9	0.0	5.0	67.0
10			24	0				358		0	15.5	0.0	5.0	67.0
11			12	0				342		0	22.8	0.0	5.0	67.0
12			17	0				553		0	21.4	0.0	5.0	65.0
13			16	1				524		0	21.7	0.0	5.0	65.0
14			23	0				605		0	22.2	0.0	5.0	64.0
15			17	2				607		0	22.4	0.0	5.0	64.0
16			19	0				581		0	22.7	0.0	5.0	60.0
17			41	2				2006		2	22.5	0.0	5.0	65.0
18			43	4				2692		0	22.5	0.0	5.0	62.0
19			28	4				2384		0	22.7	0.0	5.0	64.0
20			34	7				4594		0	20.0	0.0	5.0	64.0
21			7	4				1950		0	13.3	0.0	5.0	63.0
22			8	1				2370		2	13.1	0.0	5.0	64.0
23			8	1				2012		0	13.0	0.0	5.0	64.0
24			19	1				3508		0	13.2	0.0	5.0	63.0
25			12	1				4206		0	13.1	0.0	5.0	60.0
26			18	4				3629		0	18.2	0.0	5.0	60.0
27			34	6				4208		5	15.7	0.0	5.0	61.0
28			22	1				3000		1	15.7	0.0	5.0	61.0
29			11	0				3127		0	16.1	0.0	4.0	62.0
30			7	1				2341		2	14.9	0.0	4.0	62.0
TOTAL			532	44				47,058		17				
AVG.			19	1				1,569			16.7	0.0	4.9	64.2

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	21,391	533
SUMMER	3,014	298
FALL	561	45
TOTAL	24,966	876

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
15	54,776	22,298	43

TABLE 119

TABLE 120

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 120

LOWER GRANITE PROJECT
OCTOBER 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	RIVER CONDITIONS DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1			18	4				2879		0	18.1	0.0	4.2	62.0
2			12	6				2572		1	17.6	0.0	4.2	63.0
3			10	4				3797		1	16.9	0.0	5.0	62.0
4			12	1				2590		1	16.2	0.0	5.0	61.0
5			5	2				1279		1	16.9	0.0	5.0	61.0
6			5	5				2603		1	16.8	0.0	5.0	61.0
7			12	5				3104		1	16.5	0.0	5.0	61.0
8			8	1				2510		0	16.2	0.0	5.0	61.0
9			13	6				4346		0	16.3	0.0	5.0	61.0
10			4	0				1678		0	15.8	0.0	5.0	60.0
11			4	0				1703		0	15.8	0.0	5.0	61.0
12			8	1				1339		0	16.1	0.0	5.0	61.0
13			16	4				2664		2	15.5	0.0	5.0	60.0
14			6	2				2179		0	15.6	0.0	5.0	60.0
15			2	0				1459		0	15.9	0.0	5.0	59.0
16			10	0				1639		0	18.0	0.0	4.6	59.0
17			5	1				796		1	16.7	0.0	4.6	59.0
18			4	0				1747		1	17.3	0.0	4.6	59.0
19			10	1				962		2	17.5	0.0	4.7	59.0
20			6	1				1897		0	16.6	0.0	4.9	59.0
21			5	0				1375		1	17.2	0.0	4.8	59.0
22			5	1				1146		0	19.0	0.0	4.8	
23			6	0				2017		0	14.5	0.0	4.8	58.0
24			8	2				1613		0	16.0	0.0	4.8	
25			7	2				1286		0	15.8	0.0	4.8	
26			4	1				1048		0	15.5	0.0	4.8	58.0
27			4	0				859		0	15.5	0.0	4.8	58.0
28			10	0				1115		1	16.7	0.0	4.8	58.0
29			4	0				670		0	15.9	0.0	4.8	58.0
30			7	1				794		1	16.1	0.0	4.8	58.0
31			6	1				618		0	18.9	0.0	4.8	56.0
TOTAL			236	52				56,284		15				
AVG.			8	2				1,816			16.6	0.0	4.8	59.7

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	21,391	533
SUMMER	3,014	298
FALL	797	97
TOTAL	25,202	928

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
15	111,060	22,298	58

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 121

LOWER GRANITE PROJECT

NOVEMBER 1992

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1			6	0				388		0	17.5	0.0	4.8	55.0
2			4	0				575		0	17.7	0.0	4.5	56.0
3			1	0				539		1	17.9	0.0	4.5	56.0
4			7	1				622		0	17.9	0.0	4.8	54.0
5			4	0				286		0	18.1	0.0	4.0	54.0
6			10	0				574		0	17.3	0.0	4.5	54.0
7			6	0				494		0	17.3	0.0	4.6	54.0
8			2	0				440		0	17.4	0.0	4.6	54.0
9			0	1				289		0	18.5	0.0	4.6	54.0
10			-1	0				312		0	18.3	0.0	4.6	53.0
11			2	2				470		0	18.2	0.0	4.8	42.0
12			2	0				245		0	17.4	0.0	4.8	52.0
13			1	0				372		0	17.1	0.0	4.8	52.0
14			1	0				264		0	16.9	0.0	4.8	50.0
15			0	0				166		0	17.1	0.0	4.8	50.0
16			0	0				52		0	18.3	0.0	4.8	51.0
17			6	0				169		0	19.6	0.0	4.8	51.0
18			0	1				283		0	17.3	0.0	4.8	51.0
19			0	0				289		0	19.8	0.0	4.8	51.0
20			0	0				557		0	16.0	0.0	4.8	48.0
21			1	0				370		0	14.7	0.0	4.8	48.0
22			1	0				427		1	16.3	0.0	4.8	48.0
23			0	0				192		0	18.0	0.0	4.8	48.0
24			0	0				187		0	17.0	0.0	4.8	47.0
25			1	0				226		0	22.4	0.0	4.7	48.0
26			4	0				248		0	16.0	0.0	4.7	48.0
27			0	0				286		0	11.9	0.0	4,6	48.0
28			0	0				136		0	14.2	0.0	4.8	45.0
29			0	0				154		0	16.7	0.0	4.8	45.0
30			0	0				97		0	18.3	0.0	4.8	46.0
TOTAL			58	5				9,709		2				
AVG.								324			17.4	0.0	4.7	50.4

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	21,391	533
SUMMER	3,014	298
FALL	855	102
TOTAL	25,260	933

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
15	120,769	22,298	60

TABLE 121

TABLE 122

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 122

LOWER GRANITE PROJECT
DECEMBER 1992

DATE	FISH COUNTS: CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	RIVER CONDITIONS: DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1			0	0				88			15.8	0.0	4.8	46.0
2			0	0				55			15.6	0.0	4.8	46.0
3			0	0				30			16.9	0.0	4.8	46.0
4			0	0				142			18.0	0.0	4.8	46.0
5			0	0				60			15.1	0.0	4.8	43.0
6			0	0				29			11.9	0.0	5.0	42.0
7			0	0				47			14.1	0.0	5.0	42.0
8			0	0				23			15.3	0.0	5.0	42.0
9			0	0				38			15.7	0.0	5.0	41.0
10			0	0				8			16.5	0.0	5.0	41.0
11			0	0				59			18.2	0.0	5.0	41.0
12			0	0				46			17.0	0.0	5.0	41.0
13			0	0				28			18.2	0.0	5.0	41.0
14			0	0				13			17.9	0.0	5.0	40.0
15			0	0				24			16.6	0.0	5.0	40.0
16											16.1	0.0	5.0	40.0
17											13.9	0.0	5.0	40.0
18											18.5	0.0		
19											15.8	0.0		
20											13.0	0.0		
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														
31														
TOTAL								690						
AVG.								46			16.2	0.0	4.9	42.2

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	21,391	533
SUMMER	3,014	298
FALL	855	102
TOTAL	25,260	933

SOCKEYE	STEELHEAD	SHAD	MINI-JCK
15	121,459	22,298	60

TABLE 123

YEARLY TOTALS OF SALMONIDS COUNTED COUNTED OVER LOWER GRANITE DAM 1975 - 1992

YEAR	CHINOOK*	STEELHEAD	SOCKEYE	COHO*	TOTALS
1975	28,460	17,311	209	921	46,901
1976	31,667	23,017	531	900	56,115
1977	49,123	53,037	458	268	102,886
1978	54,246	30,068	123	152	84,589
1979	12,548	25,046	25	158	37,777
1980	10,986	40,454	96	43	51,579
1981	19,198	40,234	218	17	59,667
1982	19,476	72,840	211	59	92,586
1983	16,200	86,234	122	51	102,607
1984	16,517	98,923	49		115,489
1985	36,567	118,463	35	2	155,067
1986	43,023	134,519	15	1	177,558
1987	37,677	70,151	29		107,857
1988	37,882	87,040	23		124,945
1989	19,557	132,579	2		152,138
1990	23,345	56,859			80,204
1991	13,618	100,381	8		114,007
1992	26,193	121,459	15		147,667
Total	496,283	1,308,615	2,169	2,572	1,809,639
10-Year Average	27,058	100,661	30	5	127,754

*Jacks Included

TABLE 123

TABLE 124

TABLE 124

MONTHLY COUNT OF CHINOOK SALMON
LOWER GRANITE; 1975-1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS*
1975				1	11,693	8,722	4,854	1,183	1,462	474	71		28,460
1976				149	14,358	10,438	5,074	428	605	535	80		31,667
1977				12,824	22,892	6,718	4,622	203	961	776	125	2	49,123
1978				3,329	29,983	11,464	6,976	1,234	698	519	42	1	54,246
1979				234	4,461	4,455	1,794	256	1,003	302	43		12,548
1980				328	5,227	2,558	1,916	241	345	343	28		10,986
1981				1,380	10,730	2,713	2,561	92	1,008	677	37		19,198
1982				42	9,121	4,650	3,217	329	1,399	650	62	6	19,476
1983				113	7,676	3,551	3,167	234	828	552	79		16,200
1984				134	4,915	5,602	4,274	303	719	522	48		16,517
1985				1,429	20,384	10,466	1,971	281	1,285	697	53	1	36,567
1986				3,623	26,434	7,472	2,796	137	1,250	1,136	172	3	43,023
1987			1	4,836	22,217	5,578	3,532	216	664	508	116	9	37,677
1988				4,722	20,615	8,771	2,654	212	429	371	104	4	37,882
1989				577	10,597	5,771	1,511	225	478	338	60		19,557
1990				2,808	12,925	4,902	2,094	64	248	264	40		23,345
1991				250	4,698	5,177	2,397	72	524	465	35		13,618
1992				6,205	12,170	4,783	1,998	110	576	288	63		26,193
Total			1	42,984	251,096	113,791	57,408	5,820	14,482	9,417	1,258	26	496,283
10-Year Average				2,470	14,263	6,207	2,639	185	700	514	77	4	27,058

*Jacks included

TABLE 125

MONTHLY COUNT OF STEELHEAD

LOWER GRANITE DAM
1975 - 1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1975				1,724	1,065	104	102	3,337	6,396	3,584	703	296	17,311
1976	173	21	181	1,120	575	120	527	3,816	8,720	6,837	860	67	23,017
1977		9	142	1,235	229	59	1,538	2,652	16,296	27,492	2,950	435	53,037
1978	354	716	2,276	2,009	252	9	478	2,721	10,829	9,528	788	108	30,068
1979	12	44	802	962	192	16	1,197	2,602	5,143	11,323	2,487	266	25,046
1980			1,149	3,403	1,172	36	517	3,378	13,291	15,455	2,053		40,454
1981			1,052	1,610	604	98	1,422	1,609	9,391	20,714	3,096	638	40,234
1982			1,778	2,202	1,472	66	817	9,118	20,219	32,850	3,945	373	72,840
1983			3,336	1,416	244	7	1,676	8,899	32,063	34,028	4,425	140	86,234
1984			2,647	3,914	961	40	1,886	3,458	34,709	46,445	4,841	22	98,923
1985			2,474	9,686	856	146	706	5,027	63,074	33,137	3,230	127	118,463
1986			8,179	2,358	163	62	3,031	2,323	39,780	71,426	6,671	526	134,519
1987			2,962	2,951	251	51	783	2,342	16,644	34,235	8,809	1,123	70,151
1988			2,108	4,562	623	173	768	1,806	27,071	43,066	6,307	556	87,040
1989			2,172	4,789	429	99	2,026	4,199	49,256	55,766	13,308	535	132,579
1990			2,728	3,329	174	27	444	364	8,250	26,117	13,872	1,554	56,859
1991			2,422	3,530	285	43	1,009	454	24,610	58,803	7,892	1,333	100,381
1992			1,925	2,789	194	76	725	2,009	47,058	56,284	9,709	690	121,459
Total	539	790	38,333	53,589	9,741	1,232	19,652	60,114	432,800	587,090	95,946	8,789	1,308,615
10-Yr Average			3,095	3,932	418	72	1,305	3,088	34,252	45,931	7,906	661	100,661

TABLE 125

UPPER COLUMBIA RIVER TABLES

TABLE 126

MONTHLY TOTALS OF SALMONIDS AND SHAD

COUNTED OVER PRIEST RAPIDS DAM IN 1992

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*				6,004	12,908	3,725	6,051	2,876	4,282	1,760	146		37,752
STEELHEAD				60	152	313	2,328	3,261	6,265	1,227	127		13,733
SOCKEYE					114	14,058	65,093	1,578	14				80,857
COHO										1			1
PINK													
MINI-JACK**													
TOTAL			0	6,064	13,174	18,096	73,472	7,715	10,561	2,988	273	0	132,343
SHAD					2,126	64,702	54,158	561					121,547

*Jacks included
**Salmonid fish under 12 inches in length

TABLE 126

TABLE 127

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 127

PRIEST RAPIDS PROJECT

APRIL 1992

	FISH COUNTS									RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO				DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	SHAD	KCFS	KCFS	SECCHI	DEG F
1	BEGIN COUNTING 17 APRIL									107.0	0.0		
2										91.5	0.0		
3										80.8	0.0		
4										88.9	0.0		
5										98.0	0.0		
6										121.9	0.0		
7										107.2	0.0		
8										117.8	0.0		
9										97.7	0.0		
10										73.7	0.0		
11										73.1	0.0		
12										74.2	0.0		
13										73.7	0.0		
14										73.6	0.0		
15										73.9	0.0		
16										72.2	0.0	9.1	48.0
17	152			0				6		73.6	0.0	9.1	48.0
18	657			1				12		80.4	0.0	7.1	49.0
19	256			4				6		74.8	0.0	9.9	48.0
20	129			0				5		85.0	0.0	8.3	49.0
21	188			0				3		96.8	0.0	8.6	48.0
22	205			0				1		139.7	16.0	10.3	48.0
23	306			1				3		111.1	13.6	9.2	49.0
24	472			0				6		124.4	0.0	7.2	49.0
25	1186			5				0		109.4	0.0	7.5	50.0
26	404			0				3		102.6	0.0	8.4	50.0
27	362			4				2		94.4	0.0	8.9	50.0
28	265			0				2		121.5	0.0	9.3	51.0
29	409			2				6		125.6	0.0	9.0	51.0
30	993			3				5		112.7	14.7	9.0	51.0
TOTAL	5,984			20				60					
AVG.	427			3				8		95.9	1.5	8.7	49.3

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 128

PRIEST RAPIDS PROJECT

MAY 1992

	FISH COUNTS									RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO				DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	SHAD	KCFS	KCFS	SECCHI	DEG F
1	1017			7			0	1	0	125.2	21.9	10.4	50.0
2	491			5			0	4	0	107.1	20.3	11.0	50.0
3	1101			4			0	3	0	101.4	20.3	10.8	52.0
4	458			5			0	7	0	129.4	22.5	10.9	51.0
5	632			7			0	4	0	129.0	23.3	9.0	52.0
6	776			6			0	10	0	145.1	30.2	8.7	52.0
7	1347			11			0	4	0	145.7	26.4	9.2	52.0
8	915			24			0	6	0	143.5	27.4	8.4	53.0
9	776			10			0	4	0	105.5	20.6	8.5	53.0
10	994			8			0	5	0	109.3	15.6	8.3	52.0
11	207			16			0	0	0	131.9	27.7	8.0	52.0
12	91			4			0	1	0	157.6	34.2	8.0	52.0
13	368			23			0	7	0	154.5	35.7	8.3	52.0
14	561			10			0	1	0	136.7	34.8	8.4	53.0
15	351			18			4	12	0	144.6	35.5	8.4	54.0
16	453			20			2	7	2	156.0	37.1	8.6	54.0
17	323			22			0	5	11	148.1	34.6	7.8	54.0
18	152			13			6	6	5	162.4	37.0	8.2	54.0
19	129			19			5	5	4	171.8	39.9	8.0	52.0
20	162			16			2	3	11	175.3	40.5	7.4	54.0
21	119			24			1	5	9	186.0	44.6	8.0	54.0
22	121			14			10	6	15	170.5	37.9	7.7	54.0
23	283			22			6	2	44	130.1	26.4	8.0	55.0
24	143			6			12	2	95	127.2	24.2	8.0	55.0
25	67			9			10	7	112	121.7	26.7	8.0	54.0
26	81			8			24	1	142	154.9	36.0	7.0	56.0
27	51			7			6	2	190	162.8	38.2	8.9	57.0
28	34			3			5	6	183	157.8	37.5	8.1	57.0
29	77			9			8	7	262	138.8	28.1	8.1	57.0
30	159			6			9	12	417	124.9	22.5	9.8	57.0
31	104			9			4	7	624	108.3	23.1	10.2	59.0
TOTAL	12,543			365			114	152	2,126				
AVG.	405			12				5		140.7	30.0	8.6	53.6

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	18,527	385

SOCKEYE	STEELHEAD	SHAD
114	212	2,126

TABLE 128

TABLE 129

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 129

PRIEST RAPIDS PROJECT

JUNE 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD
1	43			8			5	1	582
2	61			8			5	7	456
3	44			4			2	6	460
4	99			5			8	7	781
5	59			2			12	5	807
6	74			5			2	1	981
7	89			4			14	0	630
8	55			2			12	8	675
9	66			0			16	2	648
10	56			7			21	7	746
11	108			6			26	7	736
12	144			5			33	8	596
13	164			6			44	4	280
14		188		4			66	11	384
15		45		5			67	5	416
16		49		6			83	8	409
17		62		6			113	9	474
18		96		4			160	2	721
19		220		6			254	23	2344
20		206		8			424	7	3236
21		196		5			838	8	4383
22		36		1			293	7	4301
23		65		1			569	20	5094
24		175		7			747	27	5546
25		227		6			763	18	6059
26		133		12			809	8	4849
27		170		2			1272	24	4234
28		190		14			1686	26	5808
29		219		5			2359	16	4748
30		222		10			3355	31	3318
TOTAL	1,062	2,499		164			14,058	313	64,702
AVG.	82	147		5			469	10	2,157

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	136.2	28.2	8.1	59.0
2	134.3	27.5	9.1	59.0
3	115.6	22.6	7.0	59.0
4	118.5	12.2	8.2	58.0
5	109.3	0.0	8.8	58.0
6	85.8	0.0	9.3	60.0
7	87.8	0.0	9.7	60.0
8	117.5	1.4	10.3	60.0
9	141.5	5.1	8.8	60.0
10	169.7	33.0	8.9	60.0
11	170.6	33.1	8.7	60.0
12	174.5	34.0	8.3	60.0
13	149.8	12.2	5.9	60.0
14	146.2	7.7	8.3	59.0
15	144.7	9.0	8.3	59.0
16	183.0	42.5	6.8	59.0
17	187.1	47.4	7.8	60.0
18	187.3	46.3	7.8	60.0
19	158.9	20.2	8.6	60.0
20	145.2	5.1	9.4	60.0
21	153.0	12.4	8.5	61.0
22	172.4	31.2	8.0	62.0
23	182.0	41.6	9.1	63.0
24	182.4	42.7	8.4	63.0
25	183.8	41.8	9.0	63.0
26	186.5	44.9	10.1	64.0
27	181.4	40.4	9.7	63.0
28	148.4	8.7	9.7	64.0
29	145.1	4.8	7.8	64.0
30	130.6	2.1	8.5	64.0
AVG.	151.0	21.9	8.6	60.7

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	19,589	447
SUMMER	2,499	102
TOTAL	22,088	549

SOCKEYE	STEELHEAD	SHAD
14,172	525	66,828

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 130

PRIEST RAPIDS PROJECT
JULY 1992

DATE	FISH COUNTS: CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	RIVER CONDITIONS: DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1		283		15			4481	28	3443	113.2	0.0	9.0	64.0
2		319		36			5376	73	3083	85.4	0.0	10.6	64.0
3		240		28			5213	69	3291	46.8	0.0	10.0	64.0
4		258		42			4287	45	5063	51.2	0.0	9.0	66.0
5		454		76			5346	108	4753	44.6	0.0	10.5	66.0
6		194		18			3454	66	3742	69.3	0.0	8.6	66.0
7		305		29			4857	112	4003	77.3	0.0	8.6	64.0
8		132		26			2627	57	2970	94.1	0.0	8.7	64.0
9		119		36			2957	78	2537	95.8	0.0	8.3	64.0
10		127		28			3245	74	2025	101.3	0.0	9.0	65.0
11		280		6			4441	86	3131	79.3	0.0	12.6	65.0
12		55		12			1607	48	2128	74.9	0.0	13.2	66.0
13		165		14			2414	73	2727	112.1	0.0	11.9	66.0
14		117		33			1318	60	2916	120.6	0.0	11.1	66.0
15		90		8			912	34	2545	126.1	5.2	12.2	65.0
16		125		18			1231	62	901	97.0	10.3	12.2	66.0
17		127		16			836	49	797	125.6	12.0	10.3	66.0
18		213		22			1214	68	800	114.7	10.4	13.2	66.0
19		150		18			1442	91	528	104.3	9.8	13.1	66.0
20		142		20			1012	77	491	118.8	10.8	10.5	66.0
21		132		14			1114	56	547	132.7	12.6	10.7	66.0
22		96		16			834	81	288	116.3	10.4	9.5	65.0
23		77		15			769	60	222	108.7	8.6	10.5	66.0
24		170		16			891	54	218	96.8	7.8	13.3	65.0
25		50		33			571	40	231	90.5	4.0	14.2	66.0
26		146		39			438	78	128	63.9	0.0	7.7	67.0
27		83		32			690	92	178	99.7	4.7	10.2	67.0
28		163		43			519	146	153	111.7	9.3	10.0	67.0
29		120		58			385	122	145	103.9	9.7	10.0	67.0
30		153		54			318	137	88	101.2	8.7	8.0	67.0
31		112		33			294	104	86	104.7	8.9	8.0	67.0
TOTAL		5,197		854			65,093	2,328	54,158				
AVG.		168		28			2,100	75	1,747	96.2	4.6	10.5	65.6

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	19,589	447
SUMMER	7,696	956
TOTAL	27,285	1,403

SOCKEYE	STEELHEAD	SHAD
79,265	2,853	120,986

TABLE 130

TABLE 131

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 131

PRIEST RAPIDS PROJECT
AUGUST 1992

DATE	FISH COUNTS: CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	RIVER CONDITIONS: DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1		66		16			262	87	110	99.4	4.5	9.2	68.0
2		84		13			301	124	117	69.2	0.0	8.4	68.0
3		47		14			117	51	117	102.6	4.6	7.8	67.0
4		75		24			126	108	173	111.9	9.2	7.8	68.0
5		56		50			111	84	75	92.6	7.7	8.6	68.0
6		72		20			112	118	89	93.0	8.1	8.2	68.0
7		73		36			81	76	50	85.6	7.2	9.1	68.0
8		57		37			83	94	48	67.4	3.2	9.2	68.0
9		93		46			60	73	12	63.7	0.0	9.2	68.0
10		36		29			71	83	8	98.4	1.1	9.3	68.0
11		33		44			30	95	9	120.9	4.6	9.3	68.0
12		60		42			35	151	8	125.3	1.2	8.2	69.0
13		75		46			15	191	-7	97.4	0.0	11.0	69.0
14			40	52			23	172	-16	116.3	0.0	10.0	69.0
15			62	40			25	183	1	108.3	0.0	10.0	69.0
16			53	23			19	126	0	99.7	0.0	10.0	69.0
17			9	18			16	52	-2	108.2	0.0	10.0	69.0
18			22	35			11	101	5	126.9	3.9	9.7	68.0
19			43	32			17	139	-17	126.9	0.0	11.2	69.0
20			37	50			8	94	-4	110.5	0.0	11.0	68.0
21			48	44			6	71	-12	88.9	0.0	11.1	68.0
22			72	73			10	110	-21	60.0	0.0	10.8	67.0
23			29	56			2	64	-31	59.2	0.0	10.0	67.0
24			44	32			5	53	-32	88.7	0.0	10.2	68.0
25			42	37			1	86	-27	89.2	0.0	10.9	66.0
26			52	36			15	97	-42	79.1	0.0	11.0	67.0
27			75	51			11	122	-42	87.9	0.0	10.4	68.0
28			70	43			2	112	19	100.7	0.0	10.0	67.0
29			57	48			0	94	-7	64.1	0.0	7.1	66.0
30			37	45			1	119	-9	69.6	0.0	8.3	66.0
31			74	51			2	131	-11	85.4	0.0	6.3	66.0
TOTAL		827	866	1,183			1,578	3,261	561				
AVG.		64	48	38			51	105	18	93.5	1.8	9.5	67.8

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	19,589	447
SUMMER	8,523	1,373
FALL	866	766
TOTAL	28,978	2,586

SOCKEYE	STEELHEAD	SHAD
80,843	6,114	121,547

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 132

PRIEST RAPIDS PROJECT

SEPTEMBER '1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD
1			52	42			2	64	
2			87	58			0	146	
3			96	49			2	125	
4			202	64			2	127	
5			225	59			1	167	
6			211	57			0	207	
7			106	41			1	180	
8			141	39			0	183	
9			46	36			2	131	
10			71	41			0	166	
11			33	39			0	186	
12			103	90			2	299	
13			59	31			1	298	
14			95	36			0	279	
15			54	49			0	293	
16			83	33			0	300	
17			31	30			1	215	
18			41	51			0	294	
19			36	41			0	282	
20			167	53			0	446	
21			50	56			0	158	
22			72	71			0	268	
23			111	56			0	300	
24			98	73			0	222	
25			53	71			0	176	
26			75	61			0	159	
27			78	70			0	174	
28			37	62			0	87	
29			61	67			0	163	
30			83	99			0	170	
TOTAL			2,657	1,625			14	6,265	
AVG.			89	54				209	

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	99.2	0.0	8.0	66.0
2	86.7	0.0	6.2	67.0
3	85.1	0.0	6.7	66.0
4	77.1	0.0	5.8	65.0
5	62.3	0.0	7.2	65.0
6	50.0	0.0	7.8	64.0
7	65.0	0.0	10.1	65.0
8	80.6	0.0	6.9	66.0
9	95.8	0.0	9.5	65.0
10	85.5	0.0	9.4	66.0
11	64.3	0.0	12.1	68.0
12	72.2	0.0	10.2	65.0
13	64.6	0.0	10.0	63.0
14	85.2	0.0	8.7	63.0
15	96.4	0.0	11.9	63.0
16	92.1	0.0	7.0	64.0
17	73.9	0.0	13.6	63.0
18	71.5	0.0	12.0	65.0
19	72.5	0.0	11.0	65.0
20	56.3	0.0	7.0	64.0
21	64.8	0.0	11.0	65.0
22	86.8	0.0	12.5	63.0
23	106.5	0.0	10.7	63.0
24	98.6	0.0	11.9	63.0
25	95.5	0.0	11.5	63.0
26	54.7	0.0	12.2	65.0
27	58.7	0.0	9.0	65.0
28	90.9	0.0	12.0	63.0
29	86.4	0.0	15.2	63.0
30	87.1	0.0	12.6	63.0
AVG.	78.9	0.0	10.0	64.5

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	19,589	447
SUMMER	8,523	1,373
FALL	3,523	2,391
TOTAL	31,635	4,211

SOCKEYE	STEELHEAD	SHAD
80,857	12,379	121,547

TABLE 132

TABLE 133

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 133

PRIEST RAPIDS PROJECT
OCTOBER 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	RIVER CONDITIONS DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1			106	77	0			101		81.3	0.0	8.7	64.0
2			87	54	0			120		87.3	0.0	10.8	64.0
3			35	67	0			113		63.9	0.0	10.4	64.0
4			42	39	0			89		51.6	0.0	14.2	63.0
5			42	49	0			69		87.5	0.0	14.3	63.0
6			34	36	0			58		75.3	0.0	13.8	63.0
7			31	45	0			46		80.4	0.0	13.4	63.0
8			35	63	0			59		67.1	0.0	13.3	63.0
9			23	31	0			48		79.7	0.0	13.8	62.0
10			16	34	0			30		80.6	0.0	9.9	62.0
11			20	46	0			44		59.3	0.0	9.2	61.0
12			9	30	0			27		82.1	0.0	9.2	61.0
13			7	42	1			53		87.0	0.0	8.1	62.0
14			56	40	0			69		88.7	0.0	7.5	60.0
15			25	28	0			28		71.9	0.0	7.5	60.0
16			20	18	0			16		77.1	0.0	7.5	60.0
17			15	13	0			31		71.7	0.0	7.2	59.0
18			16	18	0			19		51.9	0.0	8.6	59.0
19			18	31	0			20		62.7	0.0	8.8	59.0
20			34	17	0			22		70.7	0.0	11.1	60.0
21			15	14	0			19		77.6	0.0	10.8	60.0
22			8	22	0			24		81.0	0.0	11.0	60.0
23			3	18	0			12		70.9	0.0	10.0	59.0
24			5	15	0			11		58.1	0.0	10.0	59.0
25			13	32	0			20		60.0	0.0	11.0	59.0
26			18	15	0			11		77.6	0.0	10.0	59.0
27			5	25	0			8		75.2	0.0	10.0	59.0
28			12	14	0			16		76.1	0.0	12.0	57.0
29			9	10	0			9		93.6	0.0	10.9	58.0
30			10	13	0			16		78.8	0.0	9.9	58.0
31			16	19	0			19		59.9	0.0	12.6	58.0
TOTALS			785	975	1			1,227					
AVG.			25	31				40		73.8	0.0	10.5	60.6

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	19,589	447
SUMMER	8,523	1,373
FALL	4,308	3,366
TOTAL	32,420	5,186

COHO ADULT
1

SOCKEYE	STEELHEAD	SHAD
80,857	13,606	121,547

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 134

PRIEST RAPIDS PROJECT

NOVEMBER 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD
1			10	14				17	
2			7	12				15	
3			4	12				10	
4			4	1				4	
5			1	7				1	
6			10	12				4	
7			2	6				9	
8			(1)	2				5	
9			1	4				4	
10			2	2				10	
11			0	7				12	
12			2	13				19	
13			1	2				9	
14			0	5				2	
15			3	1				6	
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
TOTALS			46	100				127	
AVG.			3	7				8	

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	54.6	0.0	11.3	58.0
2	83.8	0.0	6.8	57.0
3	89.8	0.0	10.0	56.0
4	83.0	0.0	12.0	57.0
5	79.7	0.0	10.8	56.0
6	82.2	0.0	12.5	56.0
7	69.0	0.0	10.5	57.0
8	62.4	0.0	12.0	56.0
9	79.1	0.0	12.7	55.0
10	87.3	0.0	11.3	53.0
11	87.9	0.0	13.7	54.0
12	92.5	0.0	14.9	54.0
13	87.7	0.0	14.8	54.0
14	89.6	0.0	14.8	54.0
15	82.0	0.0	14.8	54.0
16	76.5	0.0	14.8	54.0
17	93.7	0.1	14.8	54.0
AVG.	81.2	0.0	12.5	55.2

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	19,589	447
SUMMER	8,523	1,373
FALL	4,354	3,466
TOTAL	32,466	5,286

COHO ADULT	SOCKEYE	STEELHEAD	SHAD
1	80,857	13,733	121,547

TABLE 134

TABLE 135

MONTHLY COUNT OF STEELHEAD
PRIEST RAPIDS DAM; 1960-1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1960				159	651	25	318	2,255	3,190	1,229			7,827
1961				52	208	43	381	1,480	4,650	1,753			8,567
1962				133	530	74	329	2,027	4,925	1,306			9,324
1963				183	564	109	336	2,922	3,344	1,816			9,274
1964				85	196	44	261	1,986	2,649	770			5,991
1965				129	298	91	649	2,498	3,868	1,508			9,041
1966				189	252	296	1,194	2,775	5,549	2,751			13,006
1967				213	381	62	411	1,686	2,109	2,492			7,354
1968				530	1,112	24	185	1,954	4,950	1,769			10,524
1969				120	670	105	566	1,598	2,544	1,047			6,650
1970				85	195	27	197	1,129	3,053	872			5,558
1971				46	440	61	185	2,043	6,241	2,086			11,102
1972				163	552	42	318	1,992	2,190	1,172			6,429
1973				132	160	56	788	1,738	3,254	871			6,999
1974				45	129	229	504	845	945	392			3,089
1975				3	37	99	214	670	1,187	252			2,462
1976				3	133	246	531	1,873	5,462	1,000			9,248
1977				178	200	209	1,029	1,963	4,519	1,706			9,804
1978				72	134	214	532	1,143	1,869	581			4,545
1979				13	127	30	585	3,082	3,174	1,398			8,409
1980				232	203	17	179	1,815	4,721	1,263	94		8,524
1981				75	144	105	445	2,414	4,127	1,545	133	24	9,012
1982	5	32	70	136	86	46	331	3,126	5,345	1,805	163	15	11,160
1983	5	9	52	40	11	12	599	8,660	18,272	3,534	602	13	31,809
1984	28	4	92	142	145	224	2,534	8,840	11,907	2,030	256	11	26,213
1985	2	11	74	351	326	856	5,319	11,063	14,693	1,659	235		34,589
1986				82	100	262	3,637	10,584	5,647	1,856	233		22,401
1987				42	71	124	1,954	5,741	4,311	1,495	273		14,011
1988				48	108	239	1,234	3,119	4,016	1,176	268		10,208
1989				36	50	133	1,361	3,499	4,581	872	198		10,730
1990				24	52	130	1,282	2,616	3,060	551	115		7,830
1991				31	73	66	1,406	4,041	6,301	1,768	253		13,939
1992				60	152	313	2,328	3,261	6,265	1,227	127		13,733
TOTAL	40	56	288	3,832	8,490	4,613	32,122	106,438	162,918	47,552	2,950	63	369,362
10-Year Avg.				86	109	236	2,165	6,142	7,905	1,617	256		18,546

TABLE 136

MONTHLY TOTALS OF SALMONIDS AND SHAD

COUNTED OVER ROCK ISLAND DAM IN 1992

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*				2,317	12,257	2,822	6,058	2,782	2,083	1,422	180		29,921
STEELHEAD				86	193	315	1,603	2,821	5,714	1,599	145		12,476
SOCKEYE				1	4	4,712	61,423	2,191	25	3			68,359
COHO						3	9	1	9	27			49
PINK													
MINI-JACK**				16	34	182	559	157	255	94	15		1,312
TOTAL			0	2,404	12,454	7,852	69,093	7,795	7,831	3,051	325	0	110,805
SHAD													

*Jacks included
**Salmonid fish under 12 inches in length

TABLE 136

TABLE 137

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 137

ROCK ISLAND PROJECT

APRIL 1992

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1	BEGIN COUNTING 16 APR										98.8	0.0		
2											88.2	0.0		
3											82.1	0.0		
4											87.1	0.0		
5											93.5	0.0		
6											115.1	0.0		
7											112.4	0.0		
8											104.8	0.0		
9											92.4	0.0		
10											68.6	0.0		
11											64.4	0.0		
12											51.8	0.0		
13											78.5	0.0		
14											64.4	0.0	9.8	44.5
15											69.3	0.0	9.8	44.5
16	0			0			0	5		0	77.7	0.0	9.8	44.5
17	13			0			0	4		1	91.3	0.0	9.2	44.5
18	34			0			0	7		2	84.0	0.0	9.2	44.5
19	82			0			0	6		5	45.5	0.0	9.4	44.5
20	62			0			0	8		0	98.0	0.0	9.0	47.0
21	175			0			0	8		1	104.6	0.0	9.0	47.0
22	45			0			0	4		1	129.0	0.0	9.0	47.0
23	138			0			0	8		5	110.7	0.0	9.6	46.0
24	164			0			0	4		0	105.7	0.0	9.8	46.0
25	297			0			0	13		1	85.9	0.0	10.0	47.0
26	269			0			0	2		-1	76.1	0.0	9.0	47.1
27	244			0			0	6		1	124.8	0.0	9.0	47.1
28	456			2			0	4		1	123.6	0.0	9.4	47.3
29	179			0			0	7		2	114.4	0.0	9.4	47.3
30	157			0			1	0		-3	105.2	4.4	9.6	48.7
TOTAL	2,315			2			1	86		16				
AVG.	154							6		1	91.6	0.1	9.4	46.1

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 138

ROCK ISLAND PROJECT

MAY 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK
1	390			0			0	1		3
2	413			0			0	5		0
3	508			1			0	2		1
4	459			3			0	7		3
5	481			0			0	3		0
6	267			0			1	5		6
7	720			4			0	8		1
8	343			2			0	3		9
9	1647			10			0	12		2
10	1320			5			1	4		0
11	358			3			0	4		0
12	457			4			0	8		2
13	670			6			0	5		0
14	502			6			0	6		0
15	389			6			0	5		0
16	513			11			0	6		2
17	351			18			0	7		2
18	325			7			0	8		0
19	329			11			0	3		0
20	246			13			1	5		0
21	83			7			0	4		1
22	126			12			1	9		0
23	220			6			0	11		0
24	161			6			0	6		0
25	111			11			0	9		1
26	87			12			0	3		0
27	162			14			0	16		0
28	113			8			0	10		1
29	94			4			0	6		0
30	113			2			0	5		0
31	97			10			0	7		0
TOTAL	12,055			202			4	193		34
AVG.	389			7				6		1

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	124.4	11.4	9.2	48.5
2	98.5	12.6	8.4	49.1
3	92.7	12.1	8.4	49.1
4	123.4	8.9	8.4	50.2
5	130.5	12.7	8.6	50.0
6	133.1	14.7	5.0	50.9
7	136.0	16.3	5.0	50.9
8	118.1	17.2	5.0	50.4
9	92.2	15.4	7.6	50.2
10	96.7	10.8	7.6	50.2
11	140.1	9.7	8.0	50.1
12	148.1	14.7	8.0	50.1
13	141.2	24.3	8.0	51.0
14	132.1	26.2	6.2	50.9
15	127.4	21.1	7.4	50.9
16	132.3	20.4	7.8	50.9
17	139.4	20.9	7.6	51.8
18	159.7	22.8	7.6	51.8
19	162.7	29.5	8.0	52.9
20	164.8	33.3	7.8	53.4
21	169.2	34.0	8.0	52.9
22	156.7	34.8	8.0	53.2
23	123.7	31.8	8.0	53.4
24	114.3	23.9	8.0	53.8
25	115.9	19.6	8.0	54.3
26	151.0	26.8	8.0	54.8
27	156.0	32.0	8.0	55.4
28	145.8	21.6	8.4	55.9
29	126.8	22.6	8.4	55.7
30	113.6	13.1	8.6	55.7
31	104.6	0.0	8.4	55.7
AVG.	131.3	19.8	7.7	52.1

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK	SOCKEYE	STEELHEAD	MINI-JCK
SPRING	14,370	204	5	279	50

TABLE 138

TABLE 139

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 139

ROCK ISLAND PROJECT

JUNE 1992

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	115			5	0		0	6		0	135.8	0.0	8.4	56.6
2	87			2	0		0	11		1	129.6	0.0	7.0	56.1
3	70			1	0		0	3		1	111.1	0.0	7.0	56.1
4	50			1	0		0	7		4	112.7	0.0	7.8	56.2
5	88			9	0		1	6		5	96.9	0.0	8.0	57.4
6	73			2	0		0	11		4	85.2	0.0	8.0	57.4
7	81			6	0		0	12		0	83.7	0.0	8.8	57.7
8	39			2	2		1	3		5	125.0	0.0	9.0	58.5
9	9			7	0		1	9		1	136.0	1.6	8.6	59.0
10	28			0	0		0	4		5	164.4	4.0	8.6	58.2
11	51			4	0		3	10		1	163.5	3.7	8.4	57.9
12	67			1	0		5	11		1	166.0	3.9	7.8	57.9
13	31			2	1		7	2		1	145.2	3.9	8.2	57.4
14	43			1	0		9	7		0	130.3	3.9	8.8	57.4
15	40			2	0		16	5		1	147.2	3.6	8.8	57.6
16	71			3	0		24	6		1	175.5	5.9	8.8	58.3
17	67			2	0		22	9		3	181.7	4.0	9.0	59.2
18		54		2	0		28	11		6	182.5	4.0	9.0	59.4
19		64		7	0		55	10		3	145.7	3.9	10.0	59.4
20		102		1	0		52	2		7	139.8	4.0	10.2	59.5
21		129		5	0		110	16		8	148.9	3.9	11.0	59.5
22		77		1	0		99	13		2	164.3	4.0	11.0	59.5
23		50		0	0		65	6		0	175.8	4.0	11.0	59.5
24		200		3	0		406	17		5	177.3	4.0	10.8	61.0
25		245		1	0		495	19		22	174.9	3.9	11.4	60.0
26		139		5	0		449	17		30	176.1	3.9	11.4	60.0
27		124		3	0		475	25		21	172.4	4.0	11.0	60.0
28		238		8	0		838	14		23	139.4	4.0	11.0	60.0
29		118		1	0		591	16		15	135.9	4.0	16.0	61.0
30		171		14	0		960	27		6	109.4	3.9	11.0	61.0
TOTAL	1,010	1,711		101	3		4,712	315		182				
AVG.	59			3			157	11		6	144.4	2.9	9.5	58.6

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	COHO ADULT	SOCKEYE	STEELHEAD	MINI-JCK
SPRING	15,380	254	3	4717	594	232
SUMMER	1,711	51				
TOTALS	17,091	305				

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 140

ROCK ISLAND PROJECT
JULY 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	RIVER CONDITIONS DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1		190		7	0		1527	31		26	104.4	3.9	8.0	61.0
2		202		5	0		1924	20		25	74.4	4.0	10.8	61.0
3		238		11	0		3236	30		56	50.5	3.9	12.0	62.0
4		696		47	0		5630	33		37	36.9	3.3	13.0	62.0
5		268		13	0		3845	32		19	40.1	3.7	13.0	62.5
6		241		63	0		3109	75		29	66.2	3.0	13.0	63.0
7		219		38	0		3951	61		38	72.1	2.8	12.0	62.5
8		236		32	0		3770	57		27	82.9	4.9	7.0	62.5
9		217		40	0		3647	52		27	91.0	3.1	9.8	62.5
10		200		29	0		3063	60		30	97.2	4.0	11.0	62.5
11		165		74	0		2506	51		22	65.5	4.3	11.2	62.5
12		131		23	0		3030	54		23	69.1	4.8	11.8	62.5
13		146		22	0		3666	48		20	112.3	4.7	11.6	62.5
14		88		19	0		2633	94		9	112.4	5.5	11.0	63.0
15		94		31	0		1578	57		21	113.1	5.5	11.0	63.0
16		118		31	0		1432	44		21	106.4	5.5	12.0	63.0
17		101		34	0		1247	29		13	115.4	5.5	12.0	62.5
18		102		51	0		1159	52		9	99.5	5.4	12.0	63.0
19		104		59	0		1000	47		17	99.1	5.4	12.6	64.0
20		159		48	0		1504	55		8	109.1	4.4	13.0	64.0
21		129		44	0		1174	65		4	122.9	5.5	13.0	64.0
22		139		38	0		1283	85		11	100.1	5.4	14.0	64.0
23		136		16	0		639	40		6	104.3	4.2	12.8	64.0
24		21		11	0		174	13		0	91.0	3.0	12.4	64.0
25		125		35	0		881	52		2	79.1	2.6	14.0	64.0
26		70		53	0		781	48		8	58.8	2.7	14.0	64.0
27		108		43	0		1045	83		10	100.8	4.5	9.4	64.0
28		78		56	0		654	68		23	102.8	5.5	12.0	65.0
29		69		46	0		555	57		8	88.3	4.6	12.0	65.0
30		73		39	0		349	53		6	92.9	5.4	12.8	66.0
31		84		53	9		431	57		4	99.2	4.0	12.6	66.0
TOTAL		4,947		1,111	9		61,423	1,603		559				
AVG.		160		36			1,981	52		18	89.0	4.3	11.8	63.3

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	COHO ADULT	SOCKEYE	STEELHEAD	MINI-JCK
SPRING	15,380	254	12	66,140	2,197	791
SUMMER	6,658	1162				
TOTALS	22,038	1,416				

TABLE 140

TABLE 141

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 141

ROCK ISLAND PROJECT
AUGUST 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	RIVER CONDITIONS DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1		182		89	0		505	84		7	86.3	5.5	12.6	66.0
2		126		62	0		284	78		12	64.3	5.3	13.0	66.0
3		90		62	0		233	76		2	102.1	4.9	13.2	66.0
4		93		57	0		174	134		7	95.1	4.4	12.4	66.0
5		39		24	0		140	90		2	88.0	3.0	12.2	66.0
6		61		42	0		124	71		5	87.8	3.9	12.2	66.0
7		45		25	0		87	65		5	75.9	3.6	12.0	65.0
8		56		66	0		102	67		2	61.6	3.9	12.4	65.0
9		39		44	0		40	51		2	61.0	4.1	12.4	65.0
10		58		62	0		59	100		7	104.2	0.0	13.8	65.0
11		50		57	0		63	114		8	110.9	0.0	13.8	65.0
12		41		55	0		52	113		7	99.2	0.0	13.0	65.0
13		39		53	0		38	73		8	95.7	0.0	13.0	65.0
14		36		41	0		42	99		10	111.0	0.0	13.0	66.0
15		39		38	0		49	83		3	92.6	0.0	13.0	66.0
16		30		32	0		30	115		6	89.2	0.0	13.0	66.0
17		24		34	0		27	112		6	111.0	0.0	14.0	66.5
18			42	41	0		26	146		2	119.5	0.0	15.0	67.0
19			33	32	0		22	160		4	105.0	0.0	15.0	67.0
20			18	27	0		13	114		2	95.2	0.0	14.6	66.0
21			20	29	0		14	70		3	82.8	0.0	14.4	67.0
22			20	28	1		9	72		2	61.4	0.0	14.4	65.9
23			21	45	0		14	66		2	53.6	0.0	15.4	65.0
24			30	41	0		13	95		5	76.7	0.0	16.0	66.0
25			27	46	0		5	117		6	79.5	0.0	16.0	66.5
26			19	64	0		6	104		5	85.8	0.0	15.8	66.5
27			15	28	0		7	59		6	92.0	0.0	15.2	67.0
28			24	48	0		5	65		2	82.9	0.0	15.6	66.5
29			27	42	0		3	90		6	58.6	0.0	15.0	66.5
30			29	36	0		1	76		7	59.0	0.0	15.0	66.0
31			23	36	0		4	62		6	90.9	0.0	14.6	66.0
TOTAL		1,048	348	1,386	1		2,191	2,821		157				
AVG.		62	25	45			71	91		5	86.4	1.2	13.9	65.9

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	15,380	254
SUMMER	7,706	2,005
FALL	348	543
TOTALS	23,434	2,802

COHO ADULT	SOCKEYE	STEELHEAD	MINI-JCK
13	68,331	5,018	948

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 142

ROCK ISLAND PROJECT
SEPTEMBER 1992

FISH COUNTS / RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1			36	38	0		3	109		5	87.7	0.0	14.0	66.0
2			35	42	0		4	100		6	69.2	0.0	14.0	66.0
3			41	31	0		0	112		3	80.9	0.0	14.0	66.0
4			35	20	0		1	97		7	73.1	0.0	14.4	66.0
5			65	28	0		2	148		9	55.0	0.0	14.0	66.0
6			50	23	0		0	137		7	44.8	0.0	14.0	66.0
7			95	31	0		1	124		4	62.7	0.0	14.0	65.0
8			80	45	0		2	151		5	85.6	0.0	14.4	65.0
9			52	27	0		1	166		8	82.1	0.0	14.0	64.0
10			29	42	0		0	159		9	68.7	0.0	14.4	64.0
11			29	29	0		1	158		2	67.8	0.0	14.2	64.0
12			28	36	1		1	164		5	62.0	0.0	14.4	64.0
13			40	47	0		2	218		8	49.5	0.0	14.4	64.0
14			23	41	0		0	207		9	96.2	0.0	14.2	64.0
15			36	28	0		0	167		4	83.8	0.0	14.0	64.0
16			18	24	0		4	217		8	74.5	0.0	15.0	64.0
17			9	16	0		0	177		8	72.5	0.0	15.0	64.0
18			28	19	0		0	275		10	70.3	0.0	14.4	64.0
19			24	30	1		2	241		6	49.4	0.0	15.0	64.0
20			26	21	0		0	189		14	36.9	0.0	15.2	63.5
21			28	54	0		0	339		9	93.2	0.0	16.0	63.5
22			36	39	1		0	308		16	96.9	0.0	14.2	63.5
23			29	36	2		1	239		13	94.9	0.0	15.0	64.0
24			29	49	1		0	357		17	86.3	0.0	15.0	64.0
25			26	31	0		0	261		9	69.7	0.0	15.0	64.0
26			33	43	2		0	217		10	58.9	0.0	17.0	64.0
27			22	25	0		0	135		15	56.0	0.0	16.0	64.0
28			29	40	0		0	137		5	85.6	0.0	16.0	63.5
29			33	42	0		0	221		7	82.1	0.0	16.0	63.5
30			24	38	1		0	184		17	83.3	0.0	16.0	63.5
TOTAL			1,068	1,015	9		25	5,714		255				
AVG.											72.6	0.0	14.8	64.4

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	15,380	254
SUMMER	7,706	2,005
FALL	1,416	1,558
TOTALS	24,502	3,817

COHO ADULT	SOCKEYE	STEELHEAD	MINI-JCK
22	68,356	10,732	1,203

TABLE 142

TABLE 143

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 143

ROCK ISLAND PROJECT
OCTOBER 1992

FISH COUNTS / RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1			28	38	0		1	141		16	73.8	0.0	15.6	63.5
2			21	49	1		0	155		9	85.8	0.0	15.8	63.5
3			31	33	4		1	118		4	60.0	0.0	16.0	63.5
4			33	40	2		0	124		5	49.6	0.0	16.0	63.0
5			25	47	1		0	104		9	85.8	0.0	15.4	63.5
6			23	31	0		1	116		2	69.2	0.0	15.0	63.0
7			21	26	0		0	86		0	70.3	0.0	16.0	63.0
8			21	35	4		0	71		3	58.3	0.0	15.0	63.0
9			19	35	2		0	67		1	64.6	0.0	15.0	63.0
10			21	42	4		0	68		3	60.4	0.0	15.0	63.0
11			14	28	1		0	34		2	43.7	0.0	15.0	62.5
12			7	30	0		0	29		4	78.8	0.0	15.4	62.0
13			25	43	2		0	54		3	70.0	0.0	13.0	62.0
14			25	30	0		0	45		6	77.5	0.0	12.8	62.0
15			29	43	0		0	35		4	89.8	0.0	12.8	60.0
16			7	33	1		0	51		1	76.3	0.0	12.6	60.0
17			17	28	1		0	32		1	43.5	0.0	12.6	60.0
18			22	27	0		0	16		3	41.9	0.0	13.0	59.5
19			10	15	0		0	25		0	64.4	0.0	12.4	60.0
20			17	21	0		0	25		0	67.0	0.0	14.2	60.0
21			11	26	0		0	35		2	73.2	0.0	14.0	60.0
22			7	28	2		0	21		1	65.2	0.0	14.2	60.0
23			12	23	0		0	23		4	67.7	0.0	14.0	59.5
24			20	14	0		0	20		1	50.9	0.0	16.0	59.5
25			16	10	0		0	12		-1	46.0	0.0	17.0	59.0
26			5	11	0		0	11		1	74.2	0.0	14.0	59.0
27			7	19	0		0	11		4	74.5	0.0	15.0	59.0
28			21	14	1		0	18		0	83.7	0.0	15.0	58.5
29			22	10	0		0	23		2	79.3	0.0	14.0	58.0
30			17	12	0		0	14		1	61.6	0.0	14.0	58.0
31			16	11	1		0	15		3	56.4	0.0	14.6	58.0
TOTAL			570	852	27		3	1,599		94			14.6	
AVG.			18	27	1			52		3				
											66.6	0.0	14.5	60.9

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	COHO ADULT	SOCKEYE	STEELHEAD	MINI-JCK
SPRING	15,380	254	49	68,359	12,331	1,297
SUMMER	7,706	2,005				
FALL	1,986	2,410				
TOTALS	25,072	4,669				

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 144

ROCK ISLAND PROJECT
NOVEMBER 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK
1			9	8				12		2
2			6	6				7		2
3			10	7				10		1
4			10	13				16		2
5			12	3				6		0
6			8	7				14		2
7			5	4				11		1
8			7	9				8		0
9			8	3				9		0
10			6	6				15		3
11			7	3				18		1
12			7	1				6		0
13			5	2				8		2
14			2	6				5		-1
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
TOTAL			102	78				145		15
AVG.										

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	53.6	0.0	14.6	58.0
2	86.0	0.0	14.2	58.0
3	80.8	0.0	13.6	57.0
4	79.2	0.0	14.0	57.0
5	73.6	0.0	13.0	56.5
6	71.3	0.0	12.0	56.0
7	50.5	0.0	14.0	56.0
8	49.4	0.0	14.6	56.0
9	89.4	0.0	14.0	55.5
10	103.4	0.0	12.0	55.0
11	97.8	0.0	14.0	55.0
12	80.1	0.0	14.0	55.0
13	79.3	0.0	11.0	54.0
14	59.0	0.0	11.4	54.0
15	58.6	0.0	11.4	54.0
16	92.9	0.0	11.4	54.0
17	76.0	0.0		
18	83.0	0.0		
19	93.0	0.0		
20	100.8	0.0		
21	102.5	0.0		
22	86.9	0.0		
23	118.6	0.0		
24	123.3	0.0		
25	113.4	0.0		
26	61.5	0.0		
27	77.9	0.0		
28	72.0	0.0		
29	94.1	0.0		
30	103.5	0.0		

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK	COHO ADULT	SOCKEYE	STEELHEAD	MINI-JCK
SPRING	15,380	254	49	68,359	12,476	1,312
SUMMER	7,706	2,005				
FALL	2,088	2,488				
TOTALS	25,174	4,747				

TABLE 144

TABLE 145

TABLE 145

MONTHLY COUNT OF STEELHEAD

ROCK ISLAND DAM

1981 - 1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1981						30	282	1,886	2,338	2,493	347		7,376
1982				118	113	8	157	2,246	4,260	2,785	192		9,879
1983				53	36	18	579	5,811	16,942	5,619	608		29,666
1984				88	220	180	1,962	7,925	10,507	3,687	527		25,096
1985				106	393	729	4,886	6,588	16,089	2,889	319		31,999
1986				145	168	192	3,383	10,036	5,883	2,731	347		22,885
1987				100	94	112	1,242	4,900	4,095	1,842	347		12,732
1988				193	156	173	737	2,813	3,446	1,523	200		9,241
1989				135	73	66	847	2,685	3,999	1,355	191		9,351
1990				55	46	99	953	2,385	2,577	736	93		6,944
1991				30	51	45	916	3,322	4,194	2,165	204		10,927
1992				86	193	315	1,603	2,821	5,714	1,599	145		12,476
Total				1,109	1,543	1,967	17,547	53,418	80,044	29,424	3,520		188,572
10-Year Average				99	143	193	1,711	4,929	7,345	2,415	298		17,132

TABLE 146

MONTHLY TOTALS OF SALMONIDS AND SHAD

COUNTED OVER ROCKY REACH DAM IN 1992

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*				294	2,126	566	1,752	1,442	1,069	854	280		8,383
STEELHEAD				50	138	203	1,026	1,861	3,051	1,093	94		7,516
SOCKEYE					3	2,253	37,498	2,011	33	5	1		41,804
COHO									5	52	17		74
PINK													
MINI-JACK**						66	237	64	108	46	1		522
TOTAL			0	344	2,267	3,022	40,276	5,314	4,158	2,004	392	0	57,777
SHAD													

*Jacks included
**Salmonid fish under 12 inches in length

TABLE 146

TABLE 147

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 147

ROCKY REACH PROJECT

APRIL 1992

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1	BEGIN COUNTING 16 APRIL										95.6	0.0		
2											83.4	0.0		
3											77.3	0.0		
4											81.1	0.0		
5											89.5	0.0		
6											109.5	0.0		
7											108.2	0.0		
8											100.7	0.0		
9											88.0	0.0		
10											66.6	0.0		
11											61.1	0.0		
12											49.4	0.0		
13											75.9	0.0		
14											61.1	0.0	11.5	47.0
15											67.7	0.0	11.5	47.0
16	0			0				5			76.0	0.0	11.5	47.0
17	1			0				4			87.4	0.0	11.5	48.0
18	1			0				4			73.9	0.0	11.4	47.0
19	1			0				4			40.2	0.0	11.0	46.4
20	12			0				4			94.5	0.0	11.0	46.6
21	4			0				4			100.5	0.0	11.0	47.3
22	5			0				1			123.0	0.0	11.0	46.6
23	17			0				1			107.6	5.2	10.4	47.4
24	13			0				6			101.3	12.1	10.0	44.4
25	25			0				2			83.2	10.5	9.0	47.6
26	8			0				5			72.6	9.5	10.6	47.6
27	2			0				2			122.4	7.8	10.9	49.6
28	101			0				6			116.7	9.0	9.8	48.2
29	13			0				0			106.8	11.8	9.0	48.2
30	90			1				2			100.3	11.4	9.0	48.5
TOTAL	293			1				50						
AVG.								6			87.4	2.6	10.6	47.3

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 148

ROCKY REACH PROJECT

MAY 1992

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	13			0			0	2			115.3	10.6	10.0	48.4
2	67			0			0	5			91.9	10.8	10.0	48.6
3	25			0			0	1			88.2	10.7	10.0	48.9
4	23			0			0	2			118.2	9.5	10.0	48.7
5	185			0			0	8			124.3	10.0	10.0	49.2
6	110			0			0	5			124.3	12.8	8.0	50.0
7	74			0			0	2			126.5	15.0	8.0	49.5
8	50			0			0	1			108.7	13.1	8.8	49.3
9	169			1			0	5			83.8	12.1	8.0	50.0
10	163			0			0	4			91.3	10.0	7.8	50.0
11	79			0			0	4			134.3	8.8	7.6	50.2
12	194			1			0	8			146.0	10.9	7.0	50.4
13	54			1			0	5			139.8	14.1	7.0	50.5
14	88			1			0	5			131.2	14.5	7.0	50.0
15	90			1			2	2			128.0	13.4	7.8	50.0
16	68			0			0	0			131.1	12.4	7.8	50.0
17	107			1			0	6			135.9	12.6	7.0	50.1
18	37			1			1	5			156.1	12.5	6.8	50.1
19	48			0			0	4			162.2	14.0	7.6	50.2
20	62			0			0	2			160.9	14.5	7.8	50.2
21	91			4			0	4			164.4	14.7	7.8	50.3
22	31			1			0	5			151.8	17.0	8.0	50.7
23	60			0			0	8			119.2	11.4	9.0	52.5
24	47			1			0	6			112.2	0.0	9.2	50.7
25	28			2			0	5			113.5	0.0	9.4	53.4
26	12			2			0	4			144.8	0.0	9.0	52.5
27	22			1			0	7			149.9	0.0	9.0	52.5
28	7			1			0	7			140.5	0.7	9.0	54.9
29	49			4			0	6			122.3	0.0	9.0	54.9
30	40			0			0	6			109.4	0.0	9.0	55.2
31	10			0			0	4			99.4	0.0	9.0	55.4
TOTAL	2,103			23			3	138						
AVG.	68							4			126.6	9.2	8.4	50.9

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	2,396	24

SOCKEYE	STEELHEAD
3	188

TABLE 148

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 149

ROCKY REACH PROJECT

JUNE 1992

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	19			0			0	1		0	130.2	0.0	8.5	55.8
2	36			1			0	7		0	124.7	0.0	8.5	56.2
3	44			0			1	4		0	105.9	0.0	8.6	56.5
4	12			1			0	1		0	108.6	0.0	8.4	56.5
5	16			1			0	2		0	93.4	0.0	9.0	56.0
6	19			0			0	5		0	81.6	0.0	9.2	56.8
7	13			1			1	7		0	79.8	0.0	9.0	56.8
8	5			0			0	6		0	123.3	0.0	8.8	59.0
9	18			0			0	0		1	133.1	0.0	9.0	56.5
10	12			2			0	4		0	162.2	0.0	8.6	59.0
11	11			1			2	8		0	160.6	0.0	9.0	55.4
12	1			0			0	14		1	162.3	0.0	9.0	56.0
13	8			1			1	12		0	140.3	0.0	11.0	57.2
14	8			0			2	4		0	125.2	0.0	11.5	57.2
15	19			0			4	10		0	146.1	0.0	12.0	56.6
16	4			0			8	5		0	174.5	6.3	11.6	57.9
17	17			0			11	2		0	176.8	0.9	11.6	57.9
18	10			0			8	7		0	181.7	1.4	9.6	58.0
19	14			0			30	7		2	141.9	0.0	12.0	58.4
20		20		0			24	6		2	138.1	0.0	14.5	59.0
21		17		1			31	5		2	146.0	0.0	14.0	58.8
22		10		0			35	6		2	162.6	0.0	14.0	60.1
23		12		0			44	2		1	174.2	0.0	14.0	59.6
24		25		0			56	12		2	175.8	0.0	14.0	59.6
25		25		0			80	8		7	174.9	0.0	13.0	60.8
26		30		0			101	5		2	175.9	0.0	14.0	60.8
27		37		1			247	16		10	171.1	0.0	14.0	60.8
28		13		4			397	13		14	137.3	0.0	14.0	60.8
29		30		4			424	14		7	134.4	0.0	15.0	60.8
30		41		2			746	10		13	106.8	0.0	15.0	60.8
TOTAL	286	260		20			2,253	203		66				
AVG.	15	24		1			75	7		2	141.6	0.3	11.3	58.2

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	2,682	32
SUMMER	260	12
TOTALS	2,942	44

SOCKEYE	STEELHEAD	MINI-JCK
2,256	391	66

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 150

ROCKY REACH PROJECT

JULY 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1		23		0			368	8		7	102.8	0.0	14.0	61.2
2		28		2			628	14		11	73.2	0.0	13.0	61.5
3		54		10			1356	18		1	50.2	0.0	13.5	62.4
4		42		10			1783	14		2	36.6	0.0	11.5	62.9
5		62		8			2258	20		13	39.3	0.0	13.0	62.2
6		28		8			1426	24		13	66.2	0.0	13.0	62.0
7		36		7			1924	26		8	73.5	0.0	13.0	62.2
8		25		10			1711	38		13	83.6	0.0	14.0	62.7
9		64		17			2189	50		4	92.2	0.0	14.0	62.8
10		46		18			2056	42		4	97.2	0.0	13.5	62.4
11		78		2			2867	42		18	66.0	0.0	13.0	62.0
12		35		6			1883	36		11	68.9	0.0	14.0	61.9
13		19		10			985	23		10	113.6	0.0	12.5	61.7
14		42		19			2204	37		13	112.8	0.0	13.0	61.7
15		60		11			1986	44		6	112.6	0.0	13.0	61.7
16		22		16			1536	29		8	108.7	0.0	13.5	61.9
17		23		24			911	42		10	117.2	0.0	13.0	62.6
18		50		28			946	29		12	101.3	0.0	14.5	62.1
19		48		32			828	28		18	99.8	0.0	14.5	63.1
20		78		38			876	25		1	110.6	0.0	15.0	63.3
21		34		13			722	41		7	124.1	0.0	15.5	63.5
22		50		24			1085	42		5	99.5	0.0	15.5	63.7
23		20		19			748	50		10	105.9	0.0	16.0	63.3
24		44		11			612	37		2	92.7	0.0	16.0	63.3
25		37		19			662	36		6	77.9	0.0	16.0	66.5
26		52		35			610	36		6	59.6	0.0	16.0	66.5
27		23		22			307	14		5	101.2	0.1	16.0	66.5
28		37		19			630	42		1	104.9	0.1	15.5	67.1
29		30		30			600	47		4	90.3	0.0	15.5	65.6
30		34		19			469	48		4	94.8	0.0	16.5	65.0
31		25		16			332	44		4	102.2	0.0	16.0	65.7
TOTALS		1,249		503			37,498	1,026		237				
AVG.		40		16			1210	33			89.6	0.0	14.3	63.3

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	2,682	32
SUMMER	1,509	515
TOTAL	4,191	547

SOCKEYE	STEELHEAD	MINI-JCK
39,754	1,417	303

RIVER CONDITIONS

TABLE 150

TABLE 151

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 151

ROCKY REACH PROJECT
AUGUST 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	RIVER CONDITIONS DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1		50		17			239	35		1	86.5	0.0	16.0	65.3
2		100		56			385	49		4	65.5	0.0	16.0	65.1
3		62		32			242	58		4	104.5	0.0	16.0	65.3
4		11		14			200	44		7	96.1	0.0	15.5	63.5
5		36		14			119	47		8	90.6	0.0	16.0	65.5
6		24		13			121	52		0	89.2	0.0	17.0	68.0
7		10		16			62	31		4	77.7	0.0	17.5	66.4
8		30		23			150	79		2	62.4	0.0	17.5	68.0
9		24		22			56	35		5	61.7	0.0	17.5	68.0
10		18		13			53	32		0	107.3	0.2	17.5	68.0
11		19		34			53	40		1	111.6	1.1	17.5	68.0
12		34		22			31	58		0	100.4	0.0	17.0	68.0
13		18		23			43	68		2	97.5	0.0	17.0	68.0
14		25		25			30	85		1	112.5	0.0	18.0	63.6
15		10		20			25	54		2	93.9	0.0	18.0	68.0
16		20		28			30	66		1	90.0	0.0	18.0	68.0
17		25		16			17	65		2	113.8	1.7	18.8	68.0
18		5		13			19	64		2	119.7	1.3	18.0	68.0
19		29		35			32	121		1	106.4	0.0	68.0	68.0
20			10	14			12	101		2	95.8	0.0	18.0	68.0
21			23	23			8	71		1	83.6	0.0	18.0	68.0
22			31	25			28	108		0	62.7	0.0	18.0	68.0
23			22	14			8	68		0	53.8	0.0	19.0	67.9
24			8	26			7	46		0	78.2	0.0	18.5	67.8
25			6	10			6	29		1	80.8	0.0	19.0	67.1
26			20	22			7	61		0	87.9	0.0	19.0	67.1
27			29	19			11	64		4	94.1	0.0	19.1	67.4
28			19	14			6	66		2	84.3	0.0	19.1	67.4
29			25	24			2	68		5	60.6	0.0	19.0	67.1
30			29	23			4	64		0	60.3	0.0	19.0	68.0
31			7	13			5	32		2	93.8	0.0	19.0	68.0
TOTAL		550	229	663			2,011	1,861		64				
AVG.		29	19	21			65	60			87.8	0.1	19.4	67.2

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	2,682	32
SUMMER	2,059	951
FALL	229	227
TOTALS	4,970	1,210

SOCKEYE	STEELHEAD	MINI-JCK
41,765	3,278	367

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 152

ROCKY REACH PROJECT
SEPTEMBER 1992

FISH COUNTS / RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1			28	19	0		6	55		1	89.4	0.0	19.0	68.0
2			26	17	0		6	61		5	71.3	0.0	19.0	68.0
3			31	25	0		4	71		4	82.1	0.0	19.0	68.0
4			7	12	0		1	56		2	75.7	0.0	19.0	68.0
5			18	26	0		0	65		1	56.1	0.0	19.0	68.0
6			44	38	0		0	70		2	46.0	0.0	19.0	68.0
7			12	7	0		0	77		0	62.2	0.0	19.0	68.0
8			14	13	0		0	74		4	88.2	0.0	19.0	68.0
9			82	22	0		1	86		6	81.9	0.0	18.5	68.0
10			23	20	0		2	90		1	70.3	0.0	18.5	68.0
11			17	18	0		2	84		7	70.3	0.0	18.5	68.0
12			42	24	0		2	150		4	62.3	0.0	18.5	68.0
13			34	17	0		1	100		4	51.1	0.0	18.5	68.0
14			5	11	0		2	61		4	100.0	0.0	18.5	68.0
15			11	19	0		1	139		5	85.1	0.0	18.5	68.0
16			13	16	0		0	92		5	76.6	0.0	18.5	68.0
17			7	14	0		1	79		2	74.5	0.0	18.5	68.0
18			17	7	0		0	127		5	72.4	0.0	18.5	67.1
19			16	4	0		2	124		2	50.6	0.0	18.5	67.1
20			34	17	0		0	116		2	39.2	0.0	18.5	67.1
21			6	14	0		1	82		7	94.9	0.0	18.5	68.0
22			22	11	0		0	185		5	100.5	0.0	18.5	68.0
23			12	20	1		1	181		2	96.8	1.4	19.5	68.0
24			11	8	0		0	182		4	89.0	0.0	19.5	68.0
25			12	14	1		0	196		2	70.4	0.0	19.5	68.0
26			13	16	0		0	124		5	59.8	0.0	19.5	68.0
27			16	19	0		0	114		5	55.7	0.0	19.5	68.0
28			4	8	1		0	66		4	86.8	0.0	21.0	68.0
29			4	8	1		0	65		4	82.8	0.0	19.0	68.0
30			7	17	1		0	79		4	85.2	0.0	19.0	68.0
TOTAL			588	481	5		33	3,051		108				
AVG.			20	16			1	102			74.2	0.0	18.9	67.9

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	2,682	32
SUMMER	2,059	951
FALL	817	708
TOTALS	5,558	1,691

COHO ADULTS	SOCKEYE	STEELHEAD	MINI-JCK
5	41,798	6,329	475

TABLE 152

TABLE 153

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 153

ROCKY REACH PROJECT
OCTOBER 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	RIVER CONDITIONS DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1			17	26	1		0	114		6	75.3	0.0	21.0	67.1
2			14	29	0		0	101		1	87.2	0.0	21.0	67.1
3			28	20	2		0	100		6	60.9	0.0	21.0	67.1
4			22	5	1		2	107		4	50.4	0.0	19.0	67.1
5			5	13	2		0	38		5	87.5	0.0	19.5	67.1
6			11	18	2		0	65		5	70.3	0.0	19.0	67.1
7			10	14	2		2	48		1	72.0	0.0	19.5	67.1
8			10	8	5		0	42		1	60.3	0.0	19.0	66.2
9			4	8	5		0	52		2	66.3	0.0	18.5	66.2
10			16	5	2		0	54		2	61.5	0.0	19.0	66.2
11			28	16	2		0	31		2	44.5	0.0	18.0	66.2
12			16	12	0		0	30		0	80.7	0.0	18.0	67.1
13			6	11	5		0	44		0	71.7	0.0	18.0	64.4
14			13	10	1		0	25		1	79.6	0.0	16.0	62.6
15			12	17	4		0	22		0	91.8	0.0	16.0	62.6
16			11	18	1		0	14		1	78.5	0.0	16.0	62.6
17			16	22	2		0	23		2	44.1	0.0	16.5	61.7
18			30	20	4		0	20		0	43.4	0.0	16.5	60.8
19			34	16	0		0	13		0	66.3	0.0	16.5	60.8
20			10	10	0		0	19		0	69.6	0.0	16.5	60.8
21			13	2	1		0	13		0	74.7	0.0	18.0	60.8
22			11	7	0		0	35		1	68.0	0.0	18.0	60.8
23			11	10	1		1	14		0	70.0	0.0	18.0	60.8
24			20	14	4		0	16		2	52.4	0.0	18.0	60.8
25			24	12	1		0	11		2	47.6	0.0	18.0	60.8
26			25	16	1		0	12		0	77.1	0.0	18.0	60.8
27			12	8	1		0	8		0	77.1	0.0	18.0	60.8
28			17	5	1		0	2		1	86.5	0.0	18.0	60.8
29			5	5	0		0	10		0	81.2	0.0	17.0	59.9
30			8	4	0		0	5		1	63.7	0.0	17.0	59.9
31			10	4	1		0	5		0	57.6	0.0	17.0	59.9
TOTAL			469	385	52		5	1,093		46				
AVG.			15	12	2			35		1				
											68.3	0.0	18.0	63.4

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	2,682	32
SUMMER	2,059	951
FALL	1,286	1093
TOTALS	6,027	2,076

COHO ADULTS	SOCKEYE	STEELHEAD	MINI-JCK
57	41,803	7,422	521

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 154

ROCKY REACH PROJECT
NOVEMBER 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK	RIVER CONDITIONS DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1			20	4	4		0	7		0	54.2	0.0	17.0	59.9
2			6	0	0		0	5		0	89.0	0.0	18.0	59.9
3			7	1	1		0	6		0	82.9	0.0	17.0	59.9
4			7	5	2		1	10		0	80.7	0.0	17.0	59.9
5			11	2	1		0	7		0	74.5	0.0	17.0	59.9
6			23	11	1		0	7		0	73.3	0.0	17.0	59.9
7			29	13	7		0	10		0	51.4	0.0	17.0	59.9
8			28	16	0		0	10		0	49.4	0.0	17.0	59.0
9			22	6	0		0	1		0	90.5	0.0	17.0	59.0
10			19	4	0		0	5		1	104.6	0.0	20.2	59.0
11			14	6	0		0	7		0	99.1	0.0	20.6	58.1
12			5	1	0		0	5		0	81.6	0.0	20.0	59.9
13			2	2	0		0	6		0	79.7	0.0	19.0	55.8
14			6	1	1		0	4		0	58.7	0.0	19.0	57.2
15			4	5	0		0	4		0	58.4	0.0	19.0	57.2
16											94.1	0.0	19.0	57.0
17											76.8	0.0	19.0	57.0
18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														
TOTAL			203	77	17		1	94		1				
AVG.			14	5				6			76.4	0.0	18.1	59.0

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	2,682	32
SUMMER	2,059	951
FALL	1,489	1,170
TOTALS	6,230	2,153

COHO ADULT	SOCKEYE	STEELHEAD	MINI-JCK
74	41,804	7,516	522

TABLE 154

TABLE 155

MONTHLY COUNT OF STEELHEAD

ROCKY REACH DAM

1981 - 1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1981						14	173	1,309	1,827	1,691	300		5,314
1982				137	116	5	73	1,192	2,863	1,735	120		6,241
1983				31	18	2	334	3,525	11,329	4,048	411		19,698
1984				41	174	127	1,032	5,564	7,263	2,589	438		17,228
1985				63	273	523	3,547	4,152	11,133	2,646	381		22,718
1986				61	178	160	2,003	6,072	4,225	2,222	236		15,157
1987				67	75	80	567	2,574	2,361	1,210	244		7,178
1988				99	108	108	493	1,498	2,439	820	112		5,677
1989				62	41	30	458	1,442	2,721	1,134	151		6,039
1990				24	31	33	534	1,809	1,889	646	67		5,033
1991				19	26	63	584	2,346	2,996	1,473	138		7,645
1992				50	138	203	1,026	1,861	3,051	1,093	94		7,516
Total				654	1,178	1,348	10,824	33,344	54,097	21,307	2,692		125,444
10-Year Average				52	106	133	1,058	3,084	4,941	1,788	227		11,389

TABLE 156

MONTHLY TOTALS OF SALMONIDS AND SHAD

COUNTED OVER WELLS DAM IN 1992

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*					1,330	281	1,066	957	972	414	44		5,064
STEELHEAD					138	203	1,026	1,861	3,051	1,093	94		7,466
SOCKEYE					3	2,253	37,498	2,011	33	5	1		41,804
COHO									5	52	17		74
PINK													
MINI-JACK**													
TOTAL					1,471	2,737	39,590	4,829	4,061	1,564	156	0	54,408
SHAD													

*Jacks included
**Salmonid fish under 12 inches in length

TABLE 156

TABLE 157

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 157

WELLS PROJECT

MAY 1992

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	14			0			0	2		116.6	8.0	10.0	49.0
2	38			0			0	2		90.5	6.9	12.0	49.0
3	25			0			0	1		89.2	6.8	8.0	50.0
4	47			0			0	2		119.6	8.4	8.0	50.0
5	6			0			0	0		123.2	8.6	9.0	50.0
6	18			0			0	1		126.0	8.5	9.0	49.0
7	38			0			0	0		120.8	7.7	9.0	50.0
8	144			1			0	4		104.8	7.7	9.0	50.0
9	93			0			0	0		81.9	6.4	8.0	50.0
10	96			0			0	4		90.1	6.8	8.0	51.0
11	38			0			0	1		133.9	8.8	8.0	50.0
12	44			0			0	1		144.6	8.8	7.0	50.0
13	49			0			0	0		137.4	8.4	7.0	50.0
14	44			0			0	1		127.2	8.6	12.0	50.0
15	47			0			0	2		127.9	8.7	11.0	50.0
16	71			0			0	3		130.4	8.6	10.0	51.0
17	117			6			0	2		135.2	8.7	11.0	52.0
18	43			0			0	1		157.0	9.4	11.0	52.0
19	18			0			0	2		163.6	10.1	11.0	53.0
20	51			0			0	2		161.0	10.4	9.0	53.0
21	20			1			0	1		162.3	10.2	9.0	53.0
22	86			1			0	8		152.7	9.8	9.0	53.0
23	57			1			0	7		120.6	8.7	11.0	53.0
24	14			1			0	2		109.8	8.0	11.0	54.0
25	23			1			0	4		115.1	8.0	10.0	55.0
26	22			1			0	4		147.8	9.9	10.0	55.0
27	12			1			0	4		147.4	10.0	10.0	55.0
28	12			0			0	7		137.5	8.9	10.0	55.0
29	16			2			0	3		122.3	8.1	11.0	55.0
30	6			0			0	10		110.1	7.7	11.0	56.0
31	3			2			1	5		97.6	6.6	11.0	55.0
TOTAL	1,312			18			1	86					
AVG.	42									125.9	8.5	9.7	51.9

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	1,312	18

STEELHEAD
86

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 158

WELLS PROJECT
JUNE 1992

FISH COUNTS / RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	12			1			1	4		131.8	8.6	11.0	56.0
2	2			0			0	3		124.4	9.2	10.0	56.0
3	6			1			0	6		105.2	8.0	11.0	56.0
4	5			4			0	2		107.8	7.4	11.0	57.0
5	2			0			0	6		94.5	6.5	9.0	57.0
6	13			2			0	2		80.7	5.6	10.0	58.0
7	16			0			0	2		80.5	5.8	12.0	57.0
8	5			0			0	4		127.3	8.2	11.0	57.0
9	1			0			0	4		134.5	10.4	10.0	57.0
10	3			0			1	1		164.6	10.4	10.0	57.0
11	5			0			0	1		163.9	10.1	13.0	57.0
12	10			0			1	2		159.8	9.9	13.0	55.0
13	20			1			0	6		140.3	9.8	13.0	54.0
14	7			0			0	5		123.8	10.0	13.0	58.0
15	4			0			2	8		147.3	10.0	13.0	58.0
16	8			0			0	6		177.2	5.8	13.0	58.0
17	1			0			1	8		174.9	3.4	13.0	59.0
18	2			1			7	2		176.9	3.3	12.0	59.0
19	16			0			8	1		137.5	3.3	14.0	60.0
20	10			1			11	4		136.7	3.3	16.0	60.0
21	4			1			14	15		146.1	3.3	15.0	60.0
22	8			0			20	5		161.5	3.3	15.0	60.0
23	10			0			31	0		170.1	3.3	15.0	60.0
24	3			0			39	1		174.0	10.0	12.0	60.0
25	7			1			32	7		171.8	9.7	14.0	60.0
26	8			0			57	17		174.2	9.8	13.0	60.0
27	15			0			49	13		167.1	9.8	13.0	61.0
28	27			0			91	3		133.3	9.8	13.0	61.0
29		30		2			218	11		129.8	10.0	15.0	61.0
30		4		2			305	19		102.9	7.8	14.0	62.0
TOTAL	230	34		17			888	168					
AVG.		17								140.7	7.5	12.6	58.4

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	1,542	31
SUMMER	34	4
TOTAL	1,576	35

SOCKEYE	STEELHEAD
889	254

TABLE 158

TABLE 159

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 159

WELLS PROJECT
JULY 1992

FISH COUNTS / RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1		9		0			317	4		97.7	7.5	16.0	62.0
2		27		5			659	9		70.8	5.4	10.0	62.0
3		41		1			640	15		49.1	3.4	10.0	63.0
4		77		2			991	13		33.0	2.6	10.0	63.0
5		61		2			1798	18		37.5	3.1	10.0	63.0
6		37		7			1918	20		64.6	5.0	15.0	63.0
7		40		3			2093	14		71.0	4.7	15.0	61.0
8		6		5			1375	12		81.5	6.2	15.0	62.0
9		18		2			1592	14		89.9	6.7	14.0	62.0
10		22		3			1597	35		93.5	6.4	12.0	62.0
11		30		2			1665	36		63.8	5.4	11.0	62.0
12		56		7			1621	31		67.5	5.3	12.0	61.0
13		24		9			2436	50		113.7	7.8	13.0	62.0
14		24		7			1407	35		109.7	7.6	13.0	62.0
15		3		1			1226	39		107.1	7.4	13.0	62.0
16		20		8			1680	41		108.8	7.7	16.0	62.0
17		25		11			1913	53		115.2	7.9	13.0	63.0
18		18		12			1610	41		99.4	6.9	14.0	63.0
19		23		6			1306	28		98.5	6.8	12.0	63.0
20		27		5			822	23		110.7	8.0	13.0	64.0
21		22		10			774	26		122.3	8.5	11.0	64.0
22		22		11			793	28		95.6	6.4	12.0	64.0
23		26		5			532	23		103.4	5.8	12.0	63.0
24		9		11			779	31		90.8	3.9	7.0	64.0
25		39		13			1101	28		75.1	3.4	12.0	65.0
26		33		9			935	44		60.3	2.8	12.0	65.0
27		18		8			832	26		98.3	1.5	12.0	65.0
28		18		16			793	40		101.0	0.0	11.0	65.0
29		11		24			515	32		90.5	0.0	11.0	65.0
30		15		21			620	30		91.0	0.0	13.0	64.0
31		18		21			729	53		99.7	0.0	14.0	64.0
TOTAL		819		247			37,069	892					
AVG.		26		8			1196	29		87.5	5.0	12.4	63.1

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	1,542	31
SUMMER	853	251
TOTAL	2,395	282

SOCKEYE	STEELHEAD
37,958	1,146

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 160

WELLS PROJECT
AUGUST 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD
1		17		8			453	42	
2		17		6			413	43	
3		26		13			372	30	
4		23		9			432	26	
5		12		6			232	18	
6		12		5			268	15	
7		6		5			179	30	
8		18		6			138	36	
9		9		8			128	43	
10		25		9			163	36	
11		15		2			139	29	
12		8		6			90	32	
13		12		2			83	33	
14		30		20			94	69	
15		20		14			81	53	
16		25		13			86	78	
17		15		30			61	58	
18		59		54			56	33	
19		19		25			55	62	
20		8		16			46	56	
21		13		22			41	80	
22		20		13			17	91	
23		10		14			23	82	
24		15		11			53	54	
25		6		11			46	33	
26		18		9			26	27	
27		12		17			5	55	
28		20		26			12	62	
29			9	23			15	33	
30			15	13			8	55	
31			5	22			16	54	
TOTAL		490	29	438			3,831	1,448	
AVG.		18	10	14			124	47	

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	80.6	0.0	14.0	65.0
2	63.5	0.0	12.0	65.0
3	100.7	0.0	12.0	65.0
4	92.6	0.0	13.0	66.0
5	83.9	0.0	11.0	66.0
6	85.8	0.0	12.0	65.0
7	77.9	0.0	12.0	65.0
8	58.8	0.0	12.0	65.0
9	59.6	0.0	13.0	65.0
10	104.7	0.0	12.0	65.0
11	107.2	0.0	13.0	65.0
12	94.0	0.0	13.0	65.0
13	94.3	0.0	14.0	65.0
14	105.1	0.0	18.0	66.0
15	91.3	0.0	15.0	66.0
16	85.7	0.0	12.0	67.0
17	109.0	0.0	14.0	67.0
18	113.1	0.0	14.0	67.0
19	101.6	0.0	12.0	67.0
20	89.2	0.0	14.0	67.0
21	79.9	0.0	14.0	67.0
22	61.5	0.0	14.0	67.0
23	52.5	0.0	12.0	67.0
24	75.5	0.0	12.0	66.0
25	79.5	0.0	13.0	66.0
26	86.4	0.0	13.0	66.0
27	90.8	0.0	14.0	66.0
28	81.9	0.0	13.0	66.0
29	59.3	0.0	12.0	66.0
30	59.9	0.0	14.0	66.0
31	89.3	0.0	14.0	67.0
AVG.	84.4	0.0	13.1	65.9

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	1,542	31
SUMMER	1,343	631
FALL	29	58
TOTAL	2,914	720

SOCKEYE	STEELHEAD
41,789	2,594

TABLE 161

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 161

WELLS PROJECT
SEPTEMBER 1992

FISH COUNTS / RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1			9	17			8	35		81.9	0.0	13.0	67.0
2			12	16			14	42		70.4	0.0	13.0	67.0
3			21	18			9	65		77.9	0.0	14.0	67.0
4			22	24			18	88		72.0	0.0	12.0	67.0
5			6	2			7	46		54.5	0.0	13.0	67.0
6			6	12			14	57		45.6	0.0	12.0	67.0
7			19	15			9	73		62.8	0.0	12.0	67.0
8			9	18			11	60		84.3	0.0	12.0	66.0
9			20	14			5	77		76.5	0.0	14.0	66.0
10			11	14			1	63		66.8	0.0	14.0	66.0
11			18	24			7	103		69.0	0.0	13.0	66.0
12			34	17			3	129		62.4	0.0	14.0	66.0
13			31	15			3	92		49.2	0.0	14.0	66.0
14			15	18			5	89		92.6	0.0	13.0	65.0
15			24	12			7	66		81.9	0.0	13.0	65.0
16			26	34			2	98		73.4	0.0	13.0	65.0
17			27	23			0	121		70.5	0.0	12.0	65.0
18			15	42			0	111		68.9	0.0	12.0	65.0
19			21	17			3	107		47.9	0.0	13.0	65.0
20			29	17			4	115		38.7	0.0	13.0	65.0
21			17	6			2	59		90.3	0.0	12.0	65.0
22			15	6			1	111		95.4	0.0	14.0	66.0
23			14	8			2	157		89.1	0.0	11.0	66.0
24			12	24			1	175		84.1	0.0	11.0	66.0
25			14	21			2	218		66.8	0.0	14.0	65.0
26			6	12			1	192		58.9	0.0	14.0	65.0
27			9	10			2	123		54.3	0.0	14.0	65.0
28			6	14			2	73		83.6	0.0	14.0	64.0
29			13	11			0	104		81.8	0.0	15.0	65.0
30			6	4			0	97		82.1	0.0	14.0	65.0
TOTAL			487	485			143	2,946					
AVG.			16	16			5	98		71.1	0.0	13.1	65.7

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	1,542	31
SUMMER	1,343	631
FALL	516	543
TOTAL	3,401	1,205

SOCKEYE	STEELHEAD
41,932	5,540

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 162

WELLS PROJECT
OCTOBER 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD
1			7	7	0		0	76	
2			1	10	2		2	130	
3			5	9	0		0	80	
4			4	12	1		1	96	
5			16	10	2		2	72	
6			8	10	1		0	63	
7			15	6	1		0	82	
8			10	6	5		2	72	
9			16	5	0		0	65	
10			10	9	0		0	44	
11			4	0	1		2	45	
12			1	4	5		4	40	
13			8	7	1		2	36	
14			2	8	0		0	28	
15			8	4	0		1	43	
16			9	6	1		0	29	
17			5	7	1		1	36	
18			18	14	1		0	30	
19			12	8	0		0	22	
20			1	2	1		0	12	
21			7	4	2		0	20	
22			5	2	1		0	19	
23			7	8	1		0	36	
24			2	2	0		0	27	
25			5	2	0		0	28	
26			7	2	0		0	30	
27			5	6	0		1	13	
28			18	7	0		0	27	
29			7	12	0		0	25	
30			1	1	0		1	11	
31			0	0	0		0	9	
TOTAL			224	190	27		19	1,346	
AVG.			7	6	1			43	

RIVER CONDITIONS

DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
73.9	0.0	15.0	65.0
82.6	0.0	13.0	65.0
59.1	0.0	13.0	65.0
47.8	0.0	13.0	65.0
82.1	0.0	13.0	64.0
67.5	0.0	13.0	64.0
67.4	0.0	12.0	64.0
57.5	0.0	13.0	64.0
62.9	0.0	13.0	63.0
56.7	0.0	13.0	63.0
43.7	0.2	13.0	63.0
76.2	0.0	12.0	63.0
66.7	0.0	12.0	63.0
75.8	0.0	13.0	62.0
88.4	0.0	13.0	61.0
74.0	0.0	12.0	61.0
42.6	0.0	13.0	61.0
39.5	0.0	13.0	61.0
63.8	0.0	11.0	61.0
66.8	0.0	11.0	60.0
71.1	0.0	13.0	61.0
63.9	0.0	13.0	61.0
66.4	0.0	13.0	61.0
49.4	0.0	15.0	61.0
43.3	0.0	15.0	61.0
71.9	1.2	12.0	61.0
76.3	0.0	12.0	60.0
81.3	0.0	13.0	60.0
77.0	0.0	12.0	60.0
60.7	0.0	12.0	59.0
54.5	0.0	15.0	59.0
64.9	0.0	12.9	62.0

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	1,542	31
SUMMER	1,343	631
FALL	740	733
TOTAL	3,625	1,395

COHO ADULT
27

SOCKEYE	STEELHEAD
41,951	6,886

TABLE 163

MONTHLY FISH PASSAGE SUMMARY REPORT
U.S. ARMY ENGINEER DISTRICT, PORTLAND

TABLE 163

WELLS PROJECT
NOVEMBER 1992

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD
1			1	0	0			6	
2			2	2	0			16	
3			7	2	0			5	
4			2	1	0			11	
5			1	0	0			11	
6			1	2	0			15	
7			3	0	1			18	
8			2	0	0			19	
9			4	4	0			11	
10			0	0	0			7	
11			4	0	0			15	
12			0	2	0			13	
13			1	1	0			11	
14			2	0	0			17	
15			0	0	0			12	
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
TOTAL			30	14	1			187	
AVG.								12	

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	52.2	0.0	14.0	58.0
2	84.5	0.0	14.0	58.0
3	78.8	0.0	13.0	58.0
4	77.7	0.0	12.0	58.0
5	70.3	0.0	12.0	58.0
6	69.5	0.0	14.0	58.0
7	48.8	0.0	12.0	57.0
8	46.7	0.0	13.0	57.0
9	87.9	0.0	13.0	57.0
10	98.5	0.0	14.0	56.0
11	96.4	0.0	14.0	56.0
12	77.3	0.0	13.0	56.0
13	75.6	0.0	14.0	56.0
14	55.1	0.0	14.0	56.0
15	55.9	0.0	14.0	56.0
16	91.0	0.0	14.0	56.0
17	73.5	0.0	14.0	56.0
AVG.	72.9	0.0	13.4	56.9

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	1,542	31
SUMMER	1,343	631
FALL	770	747
TOTAL	3,655	1,409

COHO ADULT
28

SOCKEYE	STEELHEAD
41,951	7,073

TABLE 164

MONTHLY COUNT OF STEELHEAD
WELLS DAM; 1976-1992

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1976					44	37	56	530	1,964	1,856	156		4,643
1977					37	22	38	1,034	818	2,849	526		5,324
1978					177	32	12	399	432	528			1,580
1979					72	2	22	1,212	938	1,040	355		3,641
1980					202	24	15	382	1,032	1,358	413		3,426
1981					139	23	107	212	1,702	1,401	513		4,097
1982					149	7	67	814	2,428	3,733	730		7,928
1983					26	2	145	1,891	10,728	5,294	1,327		19,413
1984					153	32	766	5,024	6,545	3,298	778		16,596
1985					220	401	2,675	3,387	9,822	2,821	541		19,867
1986					65	102	1,515	4,994	3,833	2,391	403		13,303
1987					13	29	413	1,897	1,668	1,236	237		5,493
1988					85	103	357	1,273	1,797	785	0		4,400
1989					43	11	351	1,168	2,223	804	0		4,600
1990					20	16	283	1,093	1,630	702	104		3,848
1991					14	8	361	2,054	3,078	1,923	313		7,751
1992					86	168	892	1,448	2,946	1,346	187		7,073
TOTAL					1,545	1,019	8,075	28,812	53,584	33,365	6,583		132,983
10-Year Avg.					73	87	776	2,423	4,427	2,060	389		10,234

TABLE 164

PROJECT SITE MAPS

Columbia and Snake River Projects

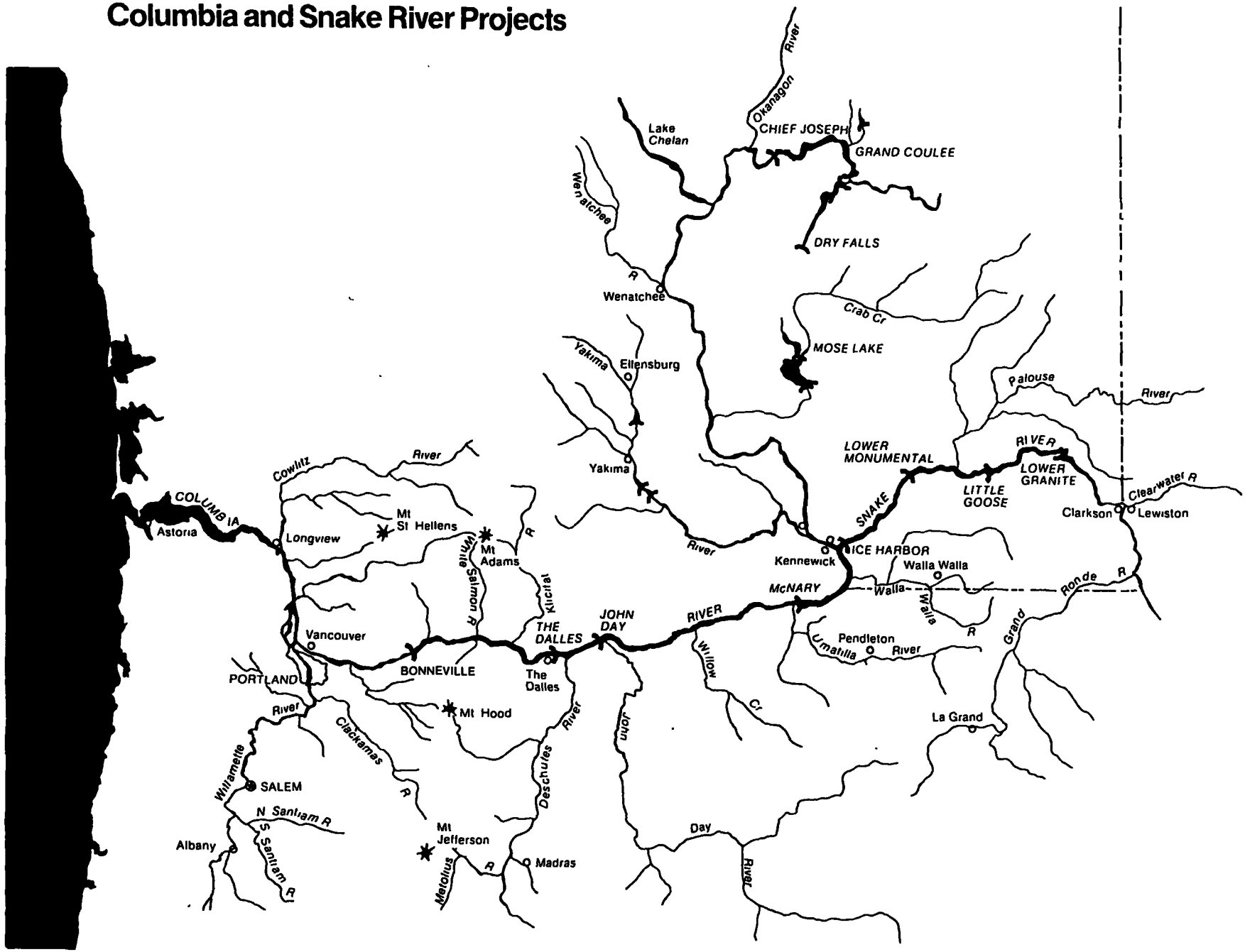
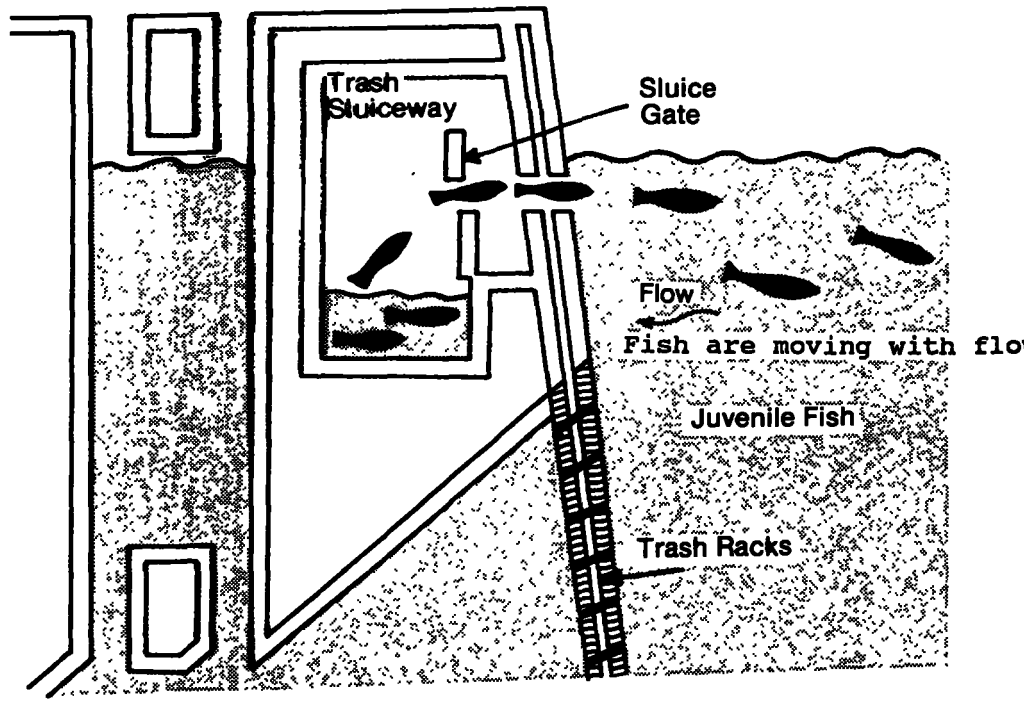


Plate 1

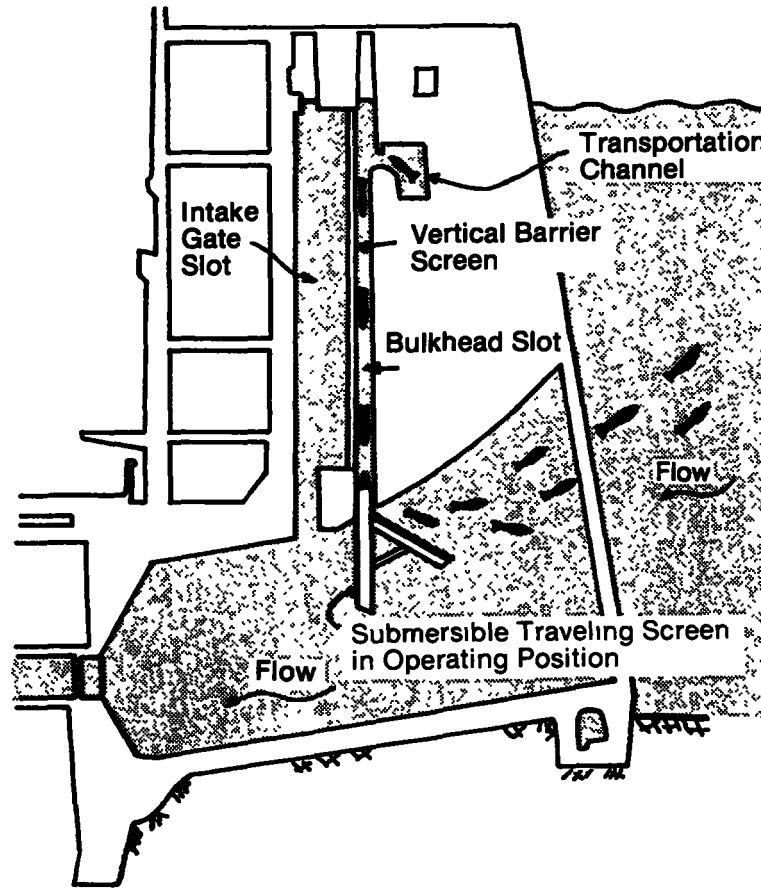
Juvenile By-pass Systems

The Dalles
Ice Harbor



Ice and Trash Sluiceway

Bonneville
John Day
McNary
Little Goose
Lower Granite



Submersible Traveling Screen

Not to Scale

Plate 2

Bonneville Lock and Dam

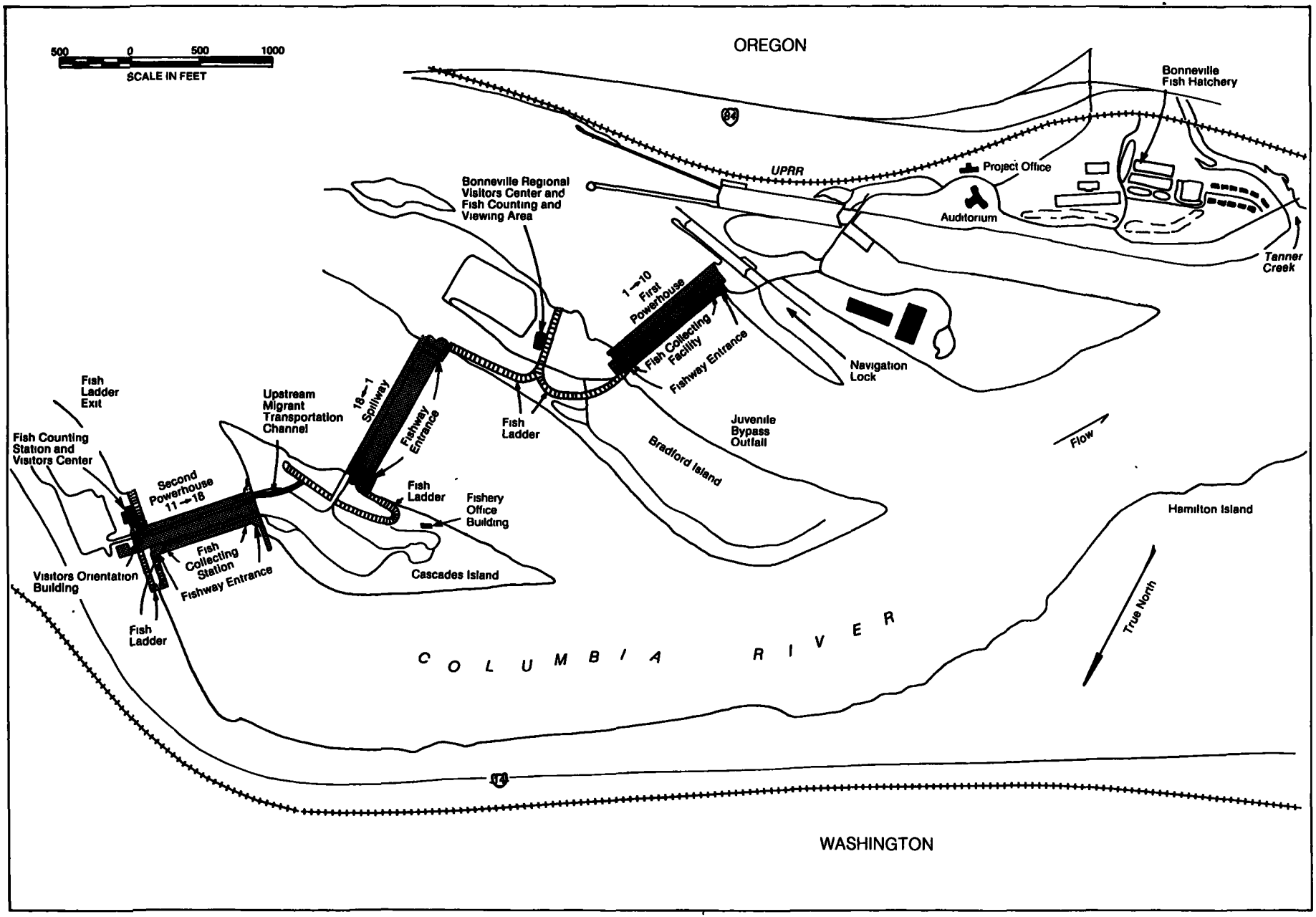


PLATE 3

The Dalles Lock and Dam

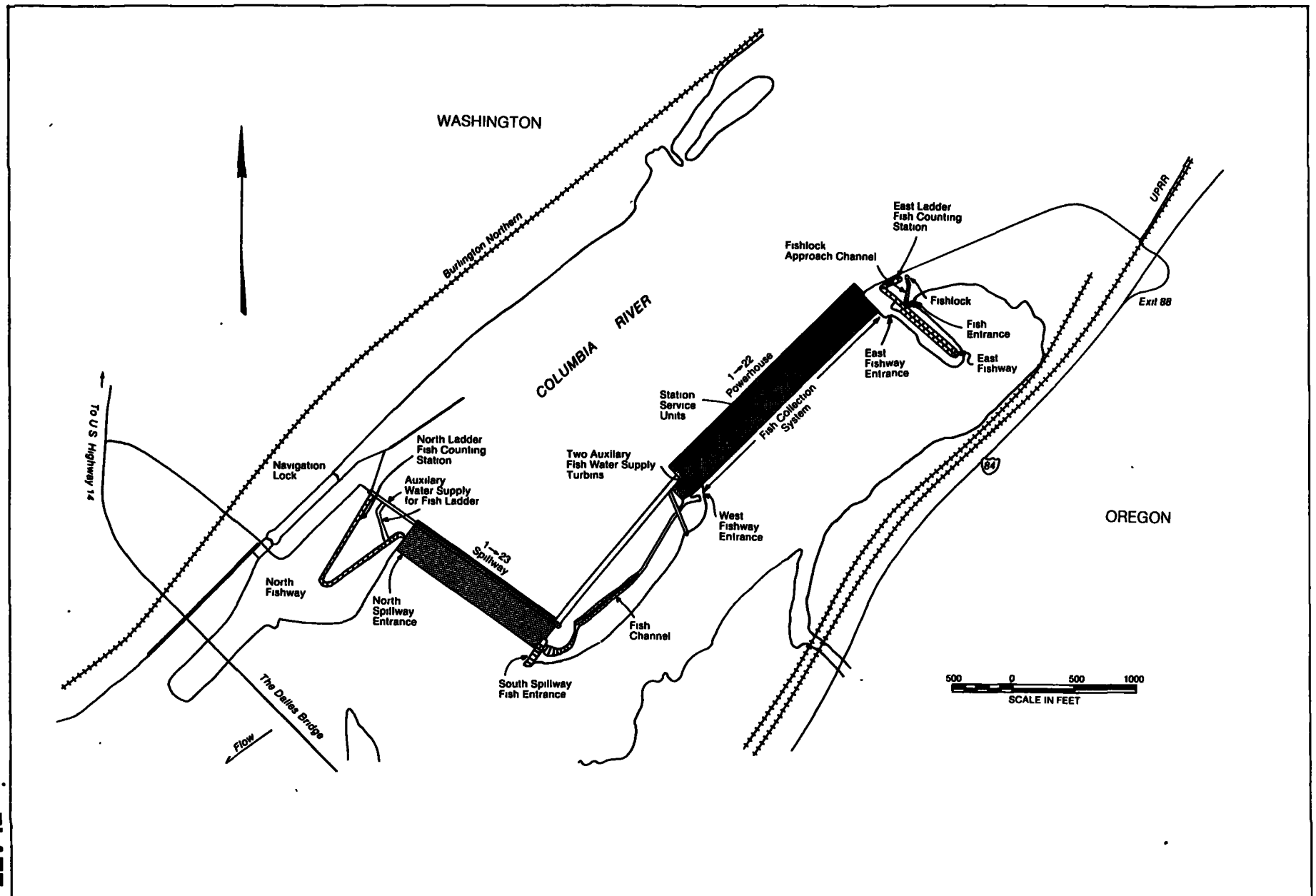


PLATE 4

John Day Lock and Dam

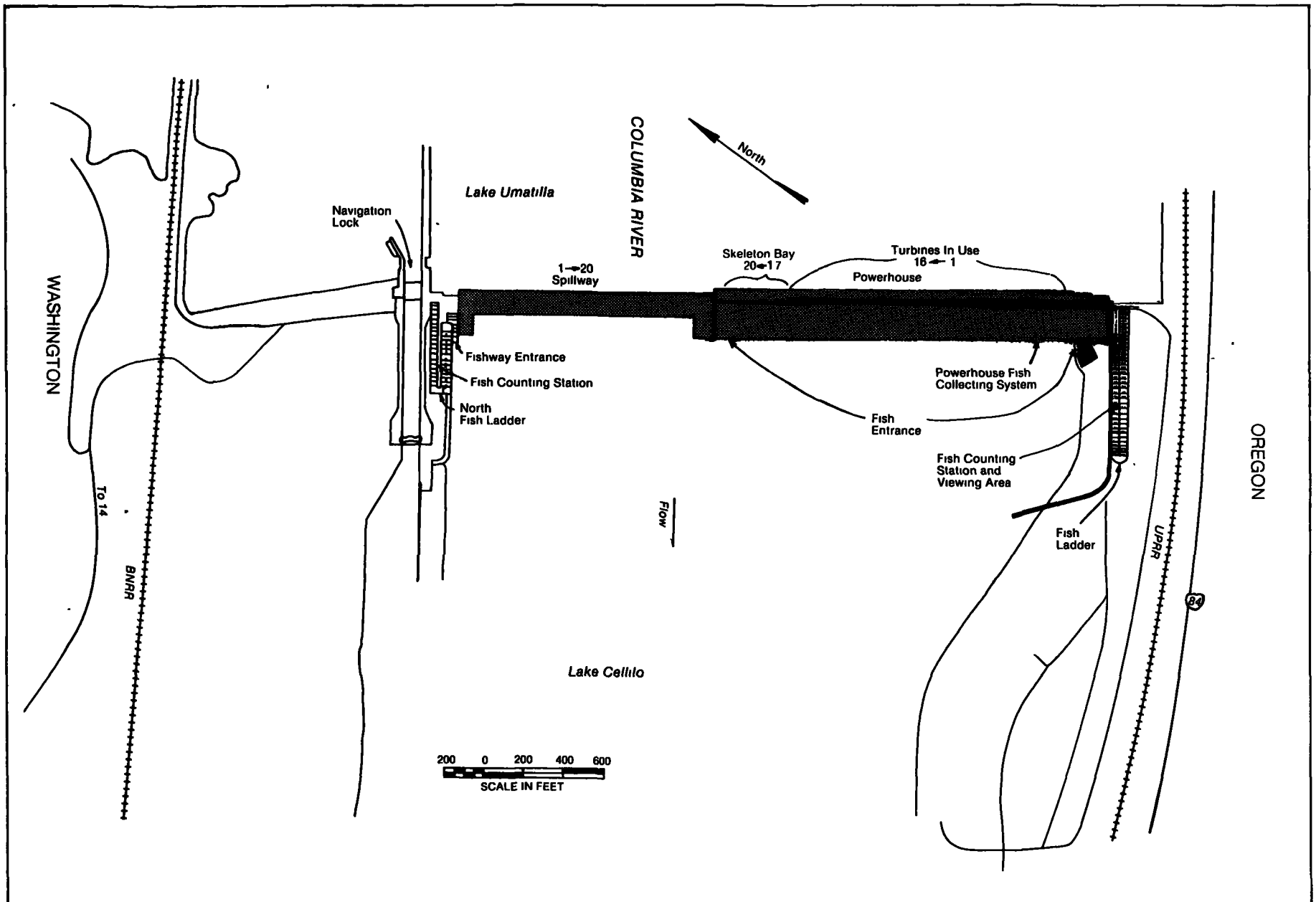


PLATE 5

McNary Lock and Dam

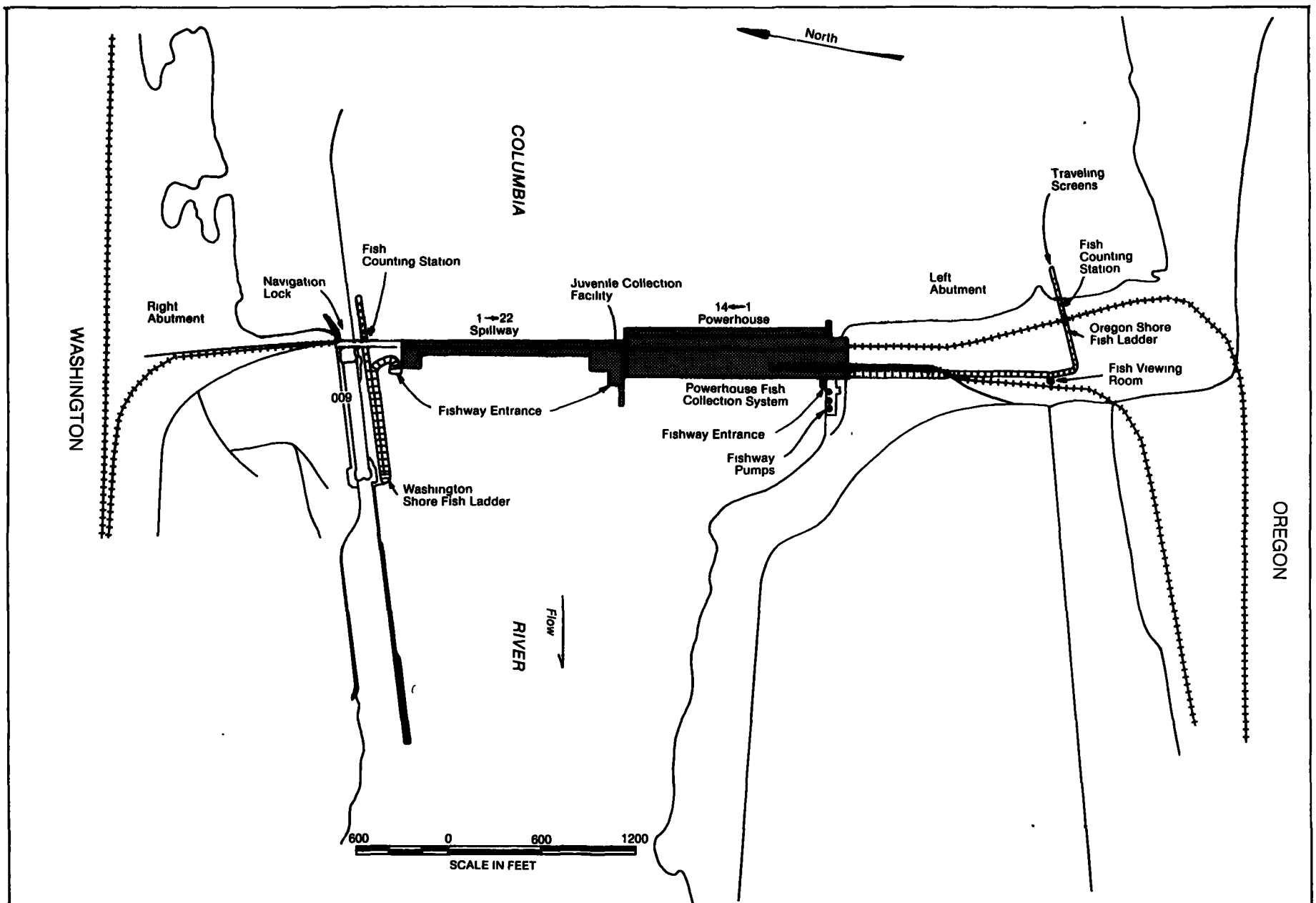


PLATE 6

Ice Harbor Lock and Dam

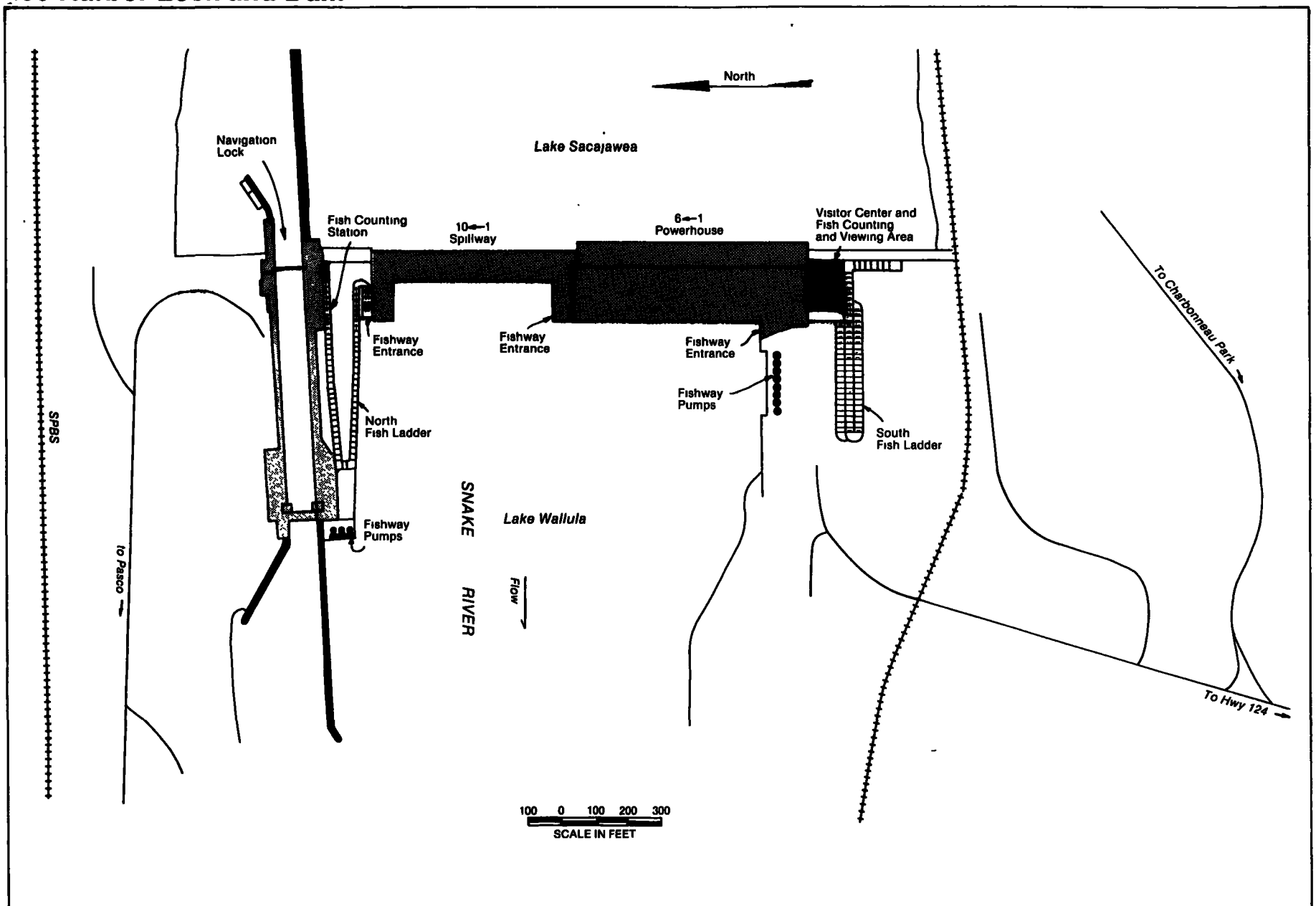


PLATE 7

Lower Monumental Lock and Dam

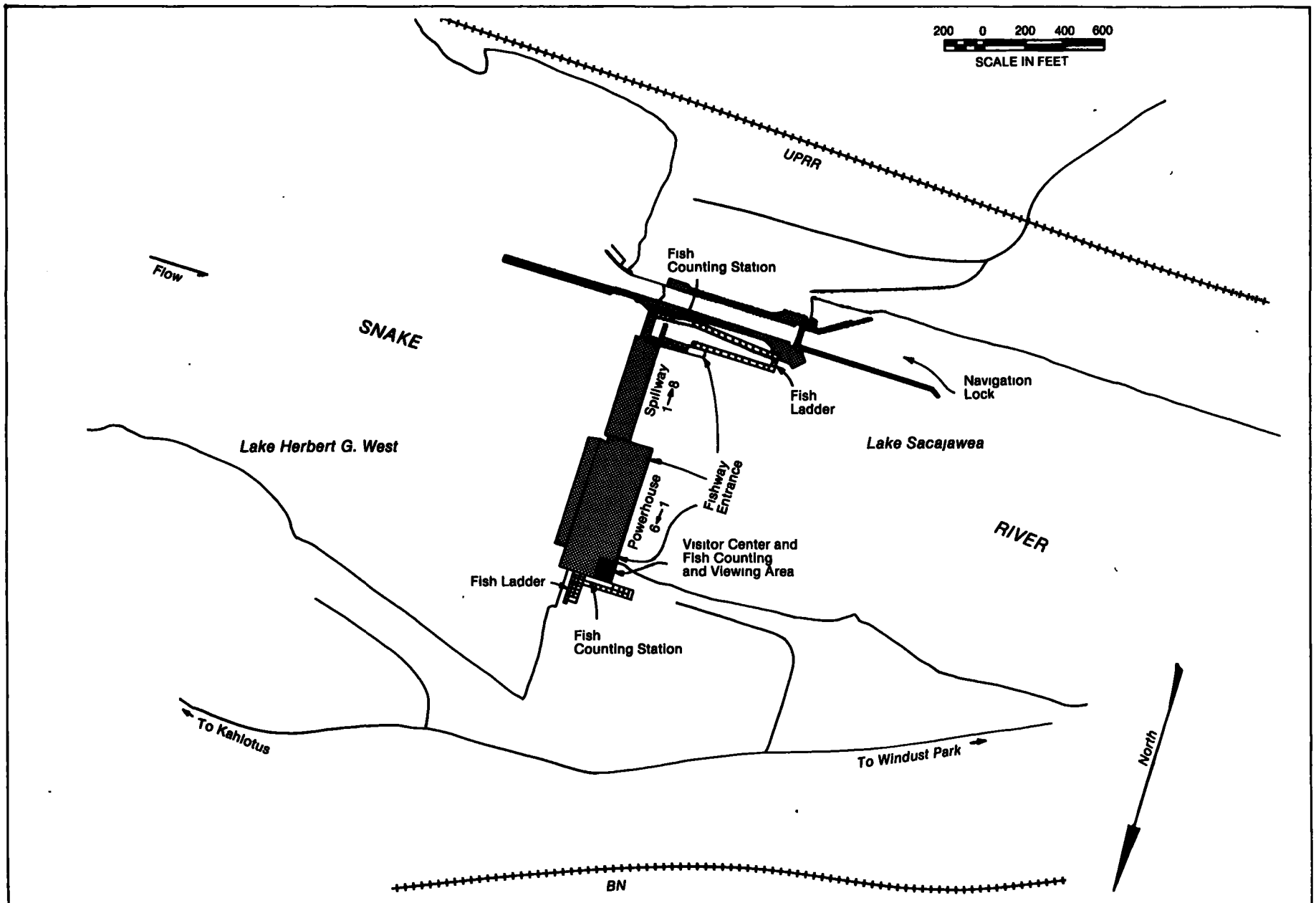


PLATE 8

Little Goose Lock and Dam

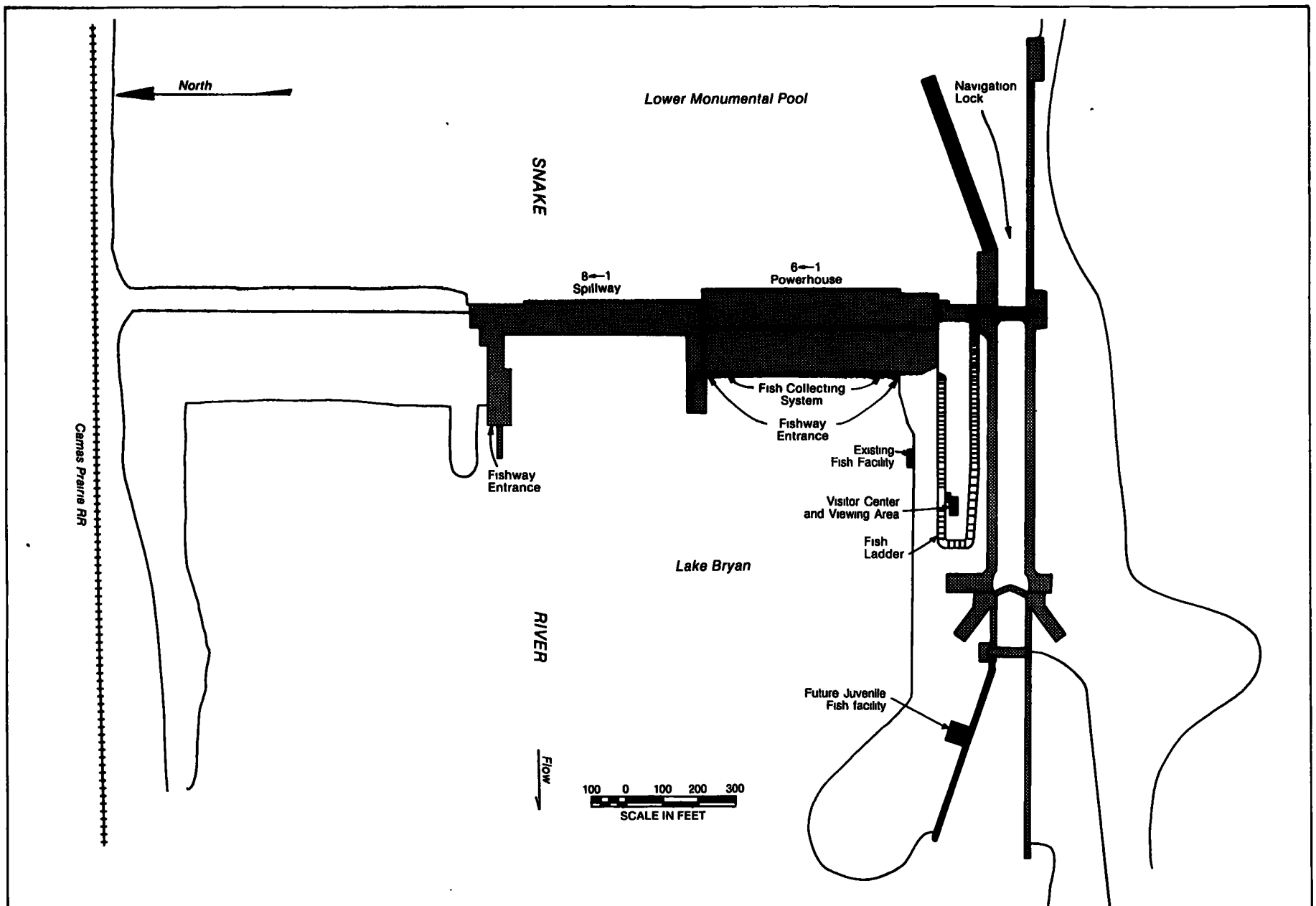
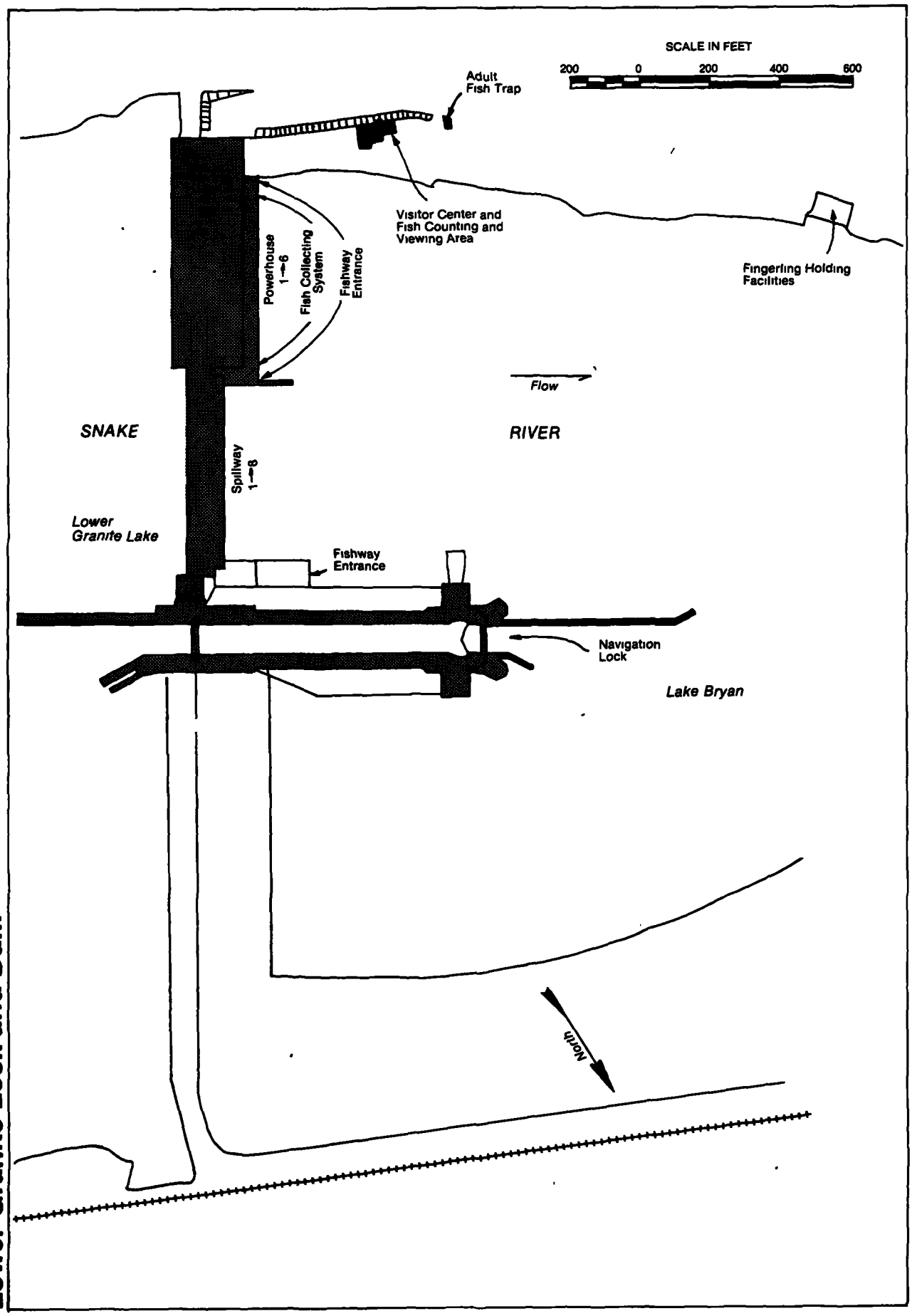


PLATE 9



Lower Granite Lock and Dam

PLATE 10