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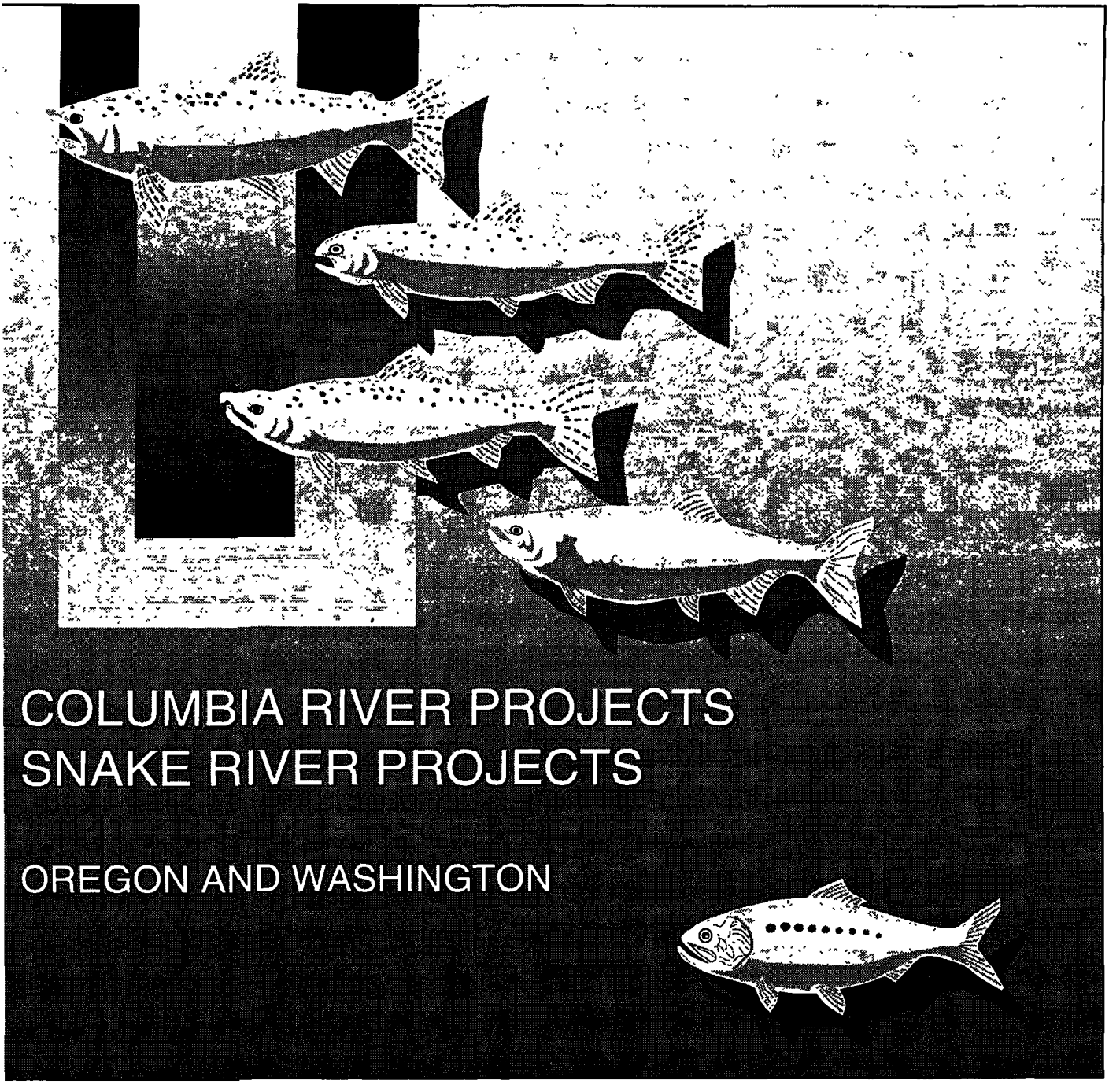
Annual Fish Passage Report 1997



COLUMBIA RIVER PROJECTS
SNAKE RIVER PROJECTS

OREGON AND WASHINGTON

1997

ANNUAL FISH PASSAGE REPORT

COLUMBIA AND SNAKE RIVERS

for

SALMON, STEELHEAD AND SHAD

BONNEVILLE DAM
THE DALLES DAM
JOHN DAY DAM
McNARY 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

TABLE OF CONTENTS

Columbia River

BONNEVILLE DAM

Fish Counting Schedule 1
Adult Fish Facilities Operating Schedule 1-2
Fishway Activities 2-5

THE DALLES AND JOHN DAY DAMS

Fish Counting Schedules 6
Adult Fish Facilities Operating Schedules 6-7
Fishway Activities 7-12

McNARY DAM

Fish Counting Schedule 13
Fish Ladder Operating Schedule 13
Fishway Activities 13

TABLE OF CONTENTS
(Continued)

Snake River

ICE HARBOR DAM

Fish Counting Schedule 14
Fish Ladder Operating Schedule 14
Fishway Activities 14

LOWER MONUMENTAL DAM

Fish Counting Schedule 15
Fish Ladder Operating Schedule 15
Fishway Activities 15

LITTLE GOOSE DAM

Fish Counting Schedule 16
Fish Ladder Operating Schedule 16
Fishway Activities 16

LOWER GRANITE

Fish Counting Schedule 17
Fish Ladder Operating Schedule 17
Fishway Activities 17-18

TABLE OF CONTENTS

(*continued*)

MID - COLUMBIA RIVER

PRIEST RAPIDS DAM

Fishway Activities 19

ROCK ISLAND AND ROCKY REACH DAMS

Fish Counting Schedule 20
Fish Ladder Operating Schedule 20
Fishway Activities 20

WELLS DAM

Fish Counting Schedule 21
Fish Ladder Operating Schedule 21
Fishway Activities 21-22

COLUMBIA RIVER TABLES

GENERAL

Table No.

1 Fish Escapement At Main Stem Dams Columbia and Snake Rivers: 1992—1997

2 Fish Escapement At Mid Columbia River Dams: 1992—1997

3 Steelhead Over Columbia and Snake River Dams: by Run-Year

4 Steelhead Over Mid Columbia River Dams: by Run-Year

5 Monthly Count of Wild Steelhead: 1997

6 Daily Lamprey Counts at Bonneville, The Dalles, and John Day Dams: 1997

7 Lamprey Counts at McNary Dam and Snake River Projects: 1997

Corps of Engineers Projects

BONNEVILLE DAM

8 Monthly Totals of Salmonids and Shad: 1997

9-19 Monthly Discharge, Water Quality Data, and Fish Count January through December: 1997

20 Yearly Totals of Salmonids: 1938—1997

21 Monthly Count of Chinook Salmon: 1938—1997

22 Monthly Count of Sockeye Salmon: 1938—1997

23 Monthly Count of Coho Salmon: 1938—1997

24 Monthly Count of Steelhead: 1938—1997

25-29 Monthly Count of Wild Steelhead: 1997

30 Monthly Count of Shad: 1938—1997

COLUMBIA RIVER TABLES
(continued)

Table No.

31-42 Night Counts at Bonneville Dam: January Through December 1997

THE DALLES DAM

43 Monthly Totals of Salmonids and Shad

44-52 Monthly Discharge, Water Quality, and Fish Counts January through December: 1997

53 Yearly totals of Salmonids: 1957—1997

54 Monthly Count of Chinook Salmon: 1957—1997

55 Monthly Count of Sockeye Salmon: 1957—1997

56 Monthly Count of Coho Salmon: 1957—1997

57 Monthly Count of Steelhead: 1957—1997

58-61 Monthly Count of Wild Steelhead: 1997

JOHN DAY DAM

62 Monthly Totals of Salmonids and Shad: 1997

63-71 Monthly Discharge, Water Quality Data, and Fish Counts January through December: 1997

72 Yearly Totals of Salmonids: 1968-1997

73 Monthly Count of Chinook Salmon: 1968-1997

74 Monthly Count of Sockeye Salmon: 1968-1997

75 Monthly Count of Coho Salmon: 1968-1997

76 Monthly Count of Steelhead: 1968-1997

COLUMBIA RIVER TABLES
(continued)

Table No.

77-80 Monthly Count of Wild Steelhead: 1997

McNARY DAM

81 Monthly Totals of Salmonids and Shad: 1997

82-90 Monthly Discharge, Water Quality Data, and Fish Counts January through December: 1997

91 Yearly Totals of Salmonids Counted: 1954—1997

92 Monthly Count of Chinook Salmon: 1954—1997

93 Monthly Count of Sockeye Salmon: 1954—1997

94 Monthly Count of Coho Salmon: 1954—1997

95 Monthly Count of Steelhead: 1954—1997

96-99 Monthly Count of Wild Steelhead: 1997

SNAKE RIVER TABLES

ICE HARBOR DAM

100 Monthly Totals of Salmonids and Shad: 1997

101-111 Monthly Discharge, Water Quality Data, and Fish Counts January through December: 1997

112-120 Night Counts @ Ice Harbor, April through December: 1997

121 Yearly Totals of Salmonids: 1962—997

122 Monthly Count of Chinook Salmon: 1962—1997

SNAKE RIVER TABLES
(continued)

Table No.

123 Monthly Count of Steelhead: 1962-1997

124-127 Monthly Count of Wild Steelhead: 1997

LOWER MONUMENTAL DAM

128 Monthly Totals of Salmonids and Shad: 1997

129-137 Monthly Discharge, Water Quality Data, and Fish Counts January through December: 1997

138 Yearly Totals of Salmonids Counted: 1969—1997

139 Monthly Count of Chinook Salmon: 169—1997

140 Monthly Count of Steelhead: 1969—1997

141-144 Monthly Count of Wild Steelhead: 1997

LITTLE GOOSE DAM

145 Monthly Totals of Salmonids and Shad: 1997

146-154 Monthly Discharge, Water Quality Data, and Fish Counts January through December: 1997

155 Yearly Totals of Salmonids: 1975—1997

156 Monthly Count of Chinook: 1975—1997

157 Monthly Count of Steelhead: 1975—1997

158-160 Monthly Count of Wild Steelhead: 1997

SNAKE RIVER TABLES
(continued)

Table No.

LOWER GRANITE DAM

161	Monthly Totals of Salmonids and Shad: 1997
162-172	Monthly Discharge, Water Quality Data, and Fish Counts January through December: 1997
173-181	Night Counts at Lower Granite: April through December, 1997
182	Yearly Totals of Salmonids: 1975—1997
183	Monthly Count of Chinook: 1975—1997
184	Monthly Count of Steelhead: 1975—1997
185-188	Monthly Count of Wild Steelhead: 1997

MID-COLUMBIA RIVER TABLES

PRIEST RAPIDS DAM

189	Monthly Totals of Salmonids and Shad: 1997
190-197	Monthly Discharge, Water Quality Data, and Fish Counts April through November: 1997
198	Yearly Totals of Salmonids Counted: 1982—1997
199	Monthly Count of Steelhead: 1960—1997

ROCK ISLAND DAM

200	Monthly Totals of Salmonids and Shad: 1997

MID COLUMBIA RIVER TABLES
(continued)

Table No.

201-208 Monthly Discharge, Water Quality Data, and Fish Counts April through November: 1997

209 Monthly Count of Steelhead: 1960—1997

ROCKY REACH DAM

210 Monthly Totals of Salmonids and Shad: 1997

211-218 Monthly Discharge, Water Quality Data, and Fish Counts April through November: 1997

219 Monthly Count of Steelhead: 1960—1997

WELLS DAM

220 Monthly Totals of Salmonids and Shad: 1997

221-227 Monthly Discharge, Water Quality Data, and Fish Counts May through November: 1997

228 Monthly Count of Steelhead: 1976—1997

LIST OF PLATES

Plate No

1. *Columbia and Snake River Projects*
2. *General Site Map, Fish Passage Facilities Bonneville Dam*
3. *General Site Map, Fish Passage Facilities The Dalles Dam*
4. *General Site Map, Fish Passage Facilities John Day Dam*
5. *General Site Map, Fish Passage Facilities McNary Dam*
6. *General Site Map, Fish Passage Facilities Ice Harbor Dam*
7. *General Site Map, Fish Passage Facilities Lower Monumental Dam*
8. *General Site Map, Fish Passage Facilities Little Goose Dam*
9. *General Site Map, Fish Passage Facilities Lower Granite Dam*

BONNEVILLE DAM

Fish Counting Schedule

	Time*	
Date	Direct Observation	Video Recording
1 Jan - 31 Mar	None	2400 -2400 (24 hrs)
1 Apr - 31 Oct	0500 - 2100 (16 hrs)	2400-0500/2100-2400 (8 hrs)
1 Nov - 31 Dec	None	2400-2400 (24 hrs)
	-	

* Times are Pacific Standard Time.

Counting was not possible during times ladders were out of service.

Adult Fish Facilities Operating Schedule

Bradford Island Fish Ladder:

21 Jan - 8 Feb Out of service for annual maintenance.

Bradford Is. A-branch:

21 Jan - 8 Feb Out of service for annual maintenance.
30 May To orifice flow for 11.5 hours to search for missing person.

Bradford Is. B-branch:

21 Jan - 8 Feb. Out of service for annual maintenance.
30 May To orifice flow for 11.5 hours to search for missing person.

Second Powerhouse Fish Ladder:

17 Dec 96 - 13 Jan Annual maintenance.
28 Nov - 31 Dec Annual maintenance.

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

16 Dec 96 - 23 Jan	F1	Annual maintenance (542 h)
17 Dec 96 - 13 Jan	F2	Annual maintenance (301 h)
27 Jan - 13 Mar	F2	Stator coil open (1086 h)
24 Feb - 28 Feb	F1	Forebay dredging (106 h)

2 Apr - 3 Apr	F1	Regulator failure (13)
20 Apr - 21 Apr	F1 & F2	Upriver oil spill (8 h)
22 Jun - 28 Jun	F2	Replace shear pin (138 h)
21 Jul - 7 Aug	F1 & F2	Dive in the PH2 adult fishway (418 h)
11 Aug - 28 Aug	F1 & F2	Dive in the PH2 adult fishway (5 h)
27 Aug	F1 & F2	Dive in the PH2 adult fishway (21 h)
22 Sep	F2	Repair governor oil leak (12 h)
29 Sep - 3 Oct	F2	PH2 adult fishway repair (105 h)
24 Oct - 25 Oct	F2	Inspection
29 Oct - 31 Dec	F2	Unstack unit for generator repair.
17 Nov	F1	Pull trash racks (8 h)
29 Nov - 31 Dec	F1	Annual maintenance.

In addition to the times shown above, there were many additional outages of short duration (1 - 3 hours) to facilitate raking trash from turbine unit intake trash racks.

Cascades Island Fish Ladder:

16 Dec 96 - 23 Jan	Annual maintenance.

Downstream Migrant Facilities Operating Schedule.

First Powerhouse:

21 Jan - 21 Feb	Out of service for annual maintenance.
17 Dec - 31 Dec	Annual maintenance and screen brush drive repair.

Second Powerhouse:

4 Feb - 26 Feb	Out of service for annual maintenance.

Fishway Activities.

The Corps of Engineers Waterways Experiment Station (WES) hydroacoustically monitored juvenile fish passage through turbine units 3 and 5, and the second powerhouse ice and trash chute. They also performed mobile hydroacoustical surveys in the lower Columbia including the Bonneville boat restricted zone. Data gathered from this study will be used in developing a prototype surface collector at the first powerhouse and a prototype corner collector at the second powerhouse.

The Columbia River InterTribal 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 on the official dam fish count. This year they trapped between 9 April and 2 October and took 906 spring chinook, 414 summer chinook, 434 fall chinook and 648 sockeye.

The Columbia River InterTribal Fish Commission received lamprey from the National Marine Fisheries Service that were surplus to NMFS' needs for their radio tracking study. CRITFC marked and released 323 lamprey upstream of the dam.

The Confederated Tribes of the Umatilla Indian Reservation conducted a lamprey counting program to verify the accuracy of counting based on video recording. This involved spot-check counting alongside WDFW counters in each of the fish counting stations.

The Oregon Department of Fish and Wildlife worked cooperatively with the CRITFC in the activity described above. They trapped steelhead to determine the hatchery-to-wild ratio and age composition as called for in the Columbia River Fish Management Plan. All fish trapped were returned to the fish ladder. After CRITFC work ended, the ODFW continued through October 16. This work has continued annually since 1984. The total number of steelhead processed was 2,263.

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

The Idaho Cooperative Fish and Wildlife Research Unit, in cooperation with the National Marine Fisheries Service, completed a second season of an adult fish tracking study this year. The study is expected to continue for several years. Automatic radio receivers/recorders were located at key locations, i.e., fishway entrances, selected locations in the fish ladders and exits, etc. Fish were trapped at the collection facility at the second powerhouse, released downstream, then tracked as they passed Bonneville and additional projects upstream. Through the season they trapped, tagged and transported 680 spring chinook, 335 summer chinook, 976 steelhead, 577 sockeye and 197 lamprey.

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 17 March through 30 October. In addition to their primary work of monitoring passage of juvenile fish past the dam, they also operated the facilities to support a study of survival in passing The Dalles Dam. Fish were collected, PIT-tagged, and transported to The Dalles Dam for release. Then they were monitored as they passed through the detectors in both of Bonneville's juvenile bypass facilities.

The National Marine Fisheries Service operated a flat plate PIT tag detector atop the sampling tank at the first powerhouse smolt monitoring facility for the second year. The device is used to provide 100% monitoring for PIT-tagged fish. They also operated a newly installed detector at the second powerhouse this year.

The Pacific States Marine Fisheries Commission used a PIT tag detector again this year. The device automatically detected and recorded tags carried by fish after they had been processed by the NMFS samplers at the first powerhouse. PSMFC maintains a PIT tag information system to monitor salmonids in the Columbia River Basin.

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

- The Oregon Department of Fish & Wildlife (ODFW) sampled squawfish populations in many areas in the Columbia River including areas within Bonneville's boat restricted zone. Squawfish were collected by electrofishing from boats. The work is done to evaluate effectiveness of population control measures.

- The Pacific States Marine Fisheries Commission (PSMFC) contracted hook and line angling at dams by the Confederated Tribes of the Warm Springs reservation (CTWS) and the Confederated Tribes and Bands of the Yakima Indian Nation (YIN). The Columbia River InterTribal Fish Commission (CRITFC) provided technical supervision of squawfish removal by angling from dams. At Bonneville, angling was done primarily by personnel from CTWS.

- CRITFC supervised additional volunteer angling by chapters of the Northwest Steelheaders' Association.

- The Washington Department of Fish & Wildlife implemented the sport reward fishery. One of several angler registration sites on the river was located between the second powerhouse and the boat launch downstream on Hamilton Island.

The Oregon Cooperative Fishery Research Unit and the U. S. Geological Service Biological Resources Division radio-tracked juvenile salmonids in many areas of the Columbia River including Bonneville's boat restricted zone. The results from this work will be used to provide base-line data of juvenile fish behavior in the forebays to compare with behavior after the first powerhouse prototype surface collector and second powerhouse prototype corner collector is installed.

The Oregon Cooperative Fishery Research Unit conducted studies at Bonneville to evaluate parts of the juvenile fish transportation program. Their objectives were to (1) determine the post-release migration behavior of juvenile spring chinook that have been transported by barge and compare their behavior to run-of-the-river fish, and (2) to determine the overall condition of hatchery spring chinook following barging. The work involved collecting fish from barges when they arrived in the Bonneville navigation lock and collecting run-of-the-river fish from the first powerhouse juvenile bypass system to radio-tag them so they could be tracked after release from the barges.

The Washington Department of Fish & Wildlife 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 Fish & 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. WDFW also conducted the additional special counting by video recording that is described above in the fish counting schedule.

THE DALLES AND JOHN DAY DAMS

Fish Counting Schedule

1 Jan - 31 Mar	No fish counting.
1 Apr - 31 Oct	Counting daily 0500 to 2100 PST.
1 Nov - 31 Dec	No fish counting.

Adult Fish Facilities Operating Schedule - The Dalles

East Fishway

1 Jan - 21 Jan	Fishway out of service for annual maintenance.
22 Jan - 12 Feb	Fishway in service with one fish unit operation.
13 Feb - 13 Mar	Fishway out of service due to fish unit mechanical problems and fish unit rewind.
14 Mar - 21 Mar	Fishway in service with one fish unit operation.
22 Mar - 2 Dec	Fishway in service with two fish unit operation.
3 Dec - 31 Dec	Fishway out of service for annual maintenance.

North Fishway

1 Jan - 20 Jan	Fishway in service.
21 Jan - 9 Feb	Fishway out of service for annual maintenance.
10 Feb - 31 Dec	Fishway in service.

Adult Fish Facilities Operating Schedule – John Day

South Fishway

1 Jan - 7 Jan	Fishway in service.
8 Jan - 1 Mar	Fishway out of service for annual maintenance.
2 Mar - 31 Dec	Fishway in service.

North Fishway

2 Jan - 2 Dec	Fishway in service.
3 Dec - 31 Dec	Fishway out of service for annual maintenance.

Juvenile Bypass Facility

1 Jan - 31 Mar	Bypass out of service for annual maintenance and construction of the Smolt Monitoring Facility.

1 Apr - 30 Nov	Bypass in service.
1 Oct - 31 Dec	Bypass intermittently out of service for Smolt Monitoring Facility testing.
15 Dec - 31 Dec	Submersed Traveling Screens removed for annual maintenance.

ANNUAL FISHWAY MAINTENANCE

FISHWAY DEWATERING PROCEDURES

Immediately after installing exit bulkheads and clearances are accepted, fisheries personnel enter the fishway near the exit when water levels allow. Fish are guided downstream with the receding water level. Fish that are reluctant to move downstream are captured and transported to the forebay or tailwater, depending on species, age class and degree of stress levels. After the walk through to tailwater elevation, a second walk through is done to account for possible missed fish. Lamprey are captured throughout the process, where possible, to prevent them from entering the diffuser chambers through the floor gratings. Where possible, adult steelhead and lamprey were released to the forebay and juveniles were released to the tailwater. Where a water source is available, flushing water is supplied to the ladder through the dewatering process to prevent stranding fish.

The Dalles Dam

North Fish ladder (Jan. 21, '97) Eight adult steelhead, 5 salmonid smolt and 18 lamprey were captured and transported to release sites.

East Fish ladder (Dec. 2, '97) One steelhead and three sturgeon were guided to tailwater. Approximately 50 carp, 30 juvenile salmonids and one adult steelhead were captured and transported to release sites. One adult sturgeon, approximately 7' length, found in the lower section, was transported via cargo net and crane was and released to the closest point in the tailrace.

John Day Dam

South Fish ladder (Jan. 8, '97) Approximately 800 steelhead were guided to tailwater elevation. Approximately 1,000 lamprey and 60 adult steelhead were captured and transported to the forebay for release. Due to low water visibility and bulkhead leakage, many walk throughs were conducted and 7 adult steelhead were captured the following day. On the third day, 13 adult steelhead were found dead in the lower end of the fish ladder. Dewatering procedures were closely scrutinized to determine corrective action to prevent this loss in future dewaterings.

South Fishway Entrance (Jan. 15, '97) Approximately 890 adult steelhead and 20 lamprey were captured and released to tailwater. Due to the lack of tailwater restrictions, the original procedures of dewatering this area were not used. Therefore handling was required for removal.

TURBINE DEWATERING PROCEDURES

Turbine dewaterings usually involve low fish numbers. But the higher complexity involves greater possibility for fish impact due to stranding. A sturgeon loss incident involving a turbine dewatering at The Dalles Dam caused fisheries to closely scrutinize the procedures used for turbine dewaterings. This scrutiny has lead to procedures to best benefit the welfare of entrapped fish. However there remains fisheries judgment calls to address turbine dewaterings that are not specifically defined in these procedures. The procedure scenarios are as follows:

TURBINE OUTAGES

The Dalles Dam

Turbine unit 15 – (Jan. 16) No fish found in scroll case or draft tube.

Turbine unit 11 – (Feb. 26) No fish found in scroll case or draft tube.

Turbine unit 22 – (June 17) Approximately 300 shad were found in the scroll case. Seven sturgeon, 2 lamprey, 2 catfish and 2 squawfish were found in the draft tube and were released to tailwater.

Turbine unit 20 – (July 29) No fish were found in the scroll case. One catfish, 1 lamprey and 114 sturgeon were found in the draft tube and released to tailwater.

Turbine unit 17 – (Oct. 6) Approximately 300 sturgeon were found in the scroll case. Approximately 50 of these died atop the drain grating. All mortalities were sturgeon under 12" in length. Upon finding this number of fish, the original removal method was not used. The scroll case was then entered through the gatewell and a salvage tank was used. The fish were released into the forebay in front of units that were not in service. Fisheries chose not to spin the unit with the high numbers of adult sturgeon that would exit through the turbine blades. The entrapment of this number of fish was due to not following correct procedures by spinning the unit. The scenario was closely scrutinized and procedures were reconstructed for other turbine dewatering scenarios.

John Day Dam

Turbine unit 9 – (Feb. 24) Two dead steelhead, 3 live steelhead, 7 carp, 1 walleye, and 3 juvenile salmonids were found in the scroll case. The cause of the steelhead mortality is unknown. There was no stranding during the dewatering. The abnormally high numbers of fish was due to problems installing the headgates. The draft tube was dewatered the following day. Twenty juvenile salmonids and 1 adult steelhead were removed and released in tailwater.

Turbine unit 13 – (Aug. 11) Approximately 3 juvenile salmonids were found in the scroll case. One sturgeon and approximately 20 catfish were found in the draft tube and released to tailwater.

Turbine unit 12 – (Sept. 11) No fish were found in the scroll case. One adult steelhead, 1 sturgeon and 12 catfish were found in the draft tube and released to tailwater.

NAVIGATION LOCK DEWATERING PROCEDURES

Navigation lock dewaterings for annual maintenance requires labor intensive fish recovery efforts. With conventional methods, it is impossible to remove all fish from the remaining pools due to excessive water depth.

Two main areas are addressed concerning the removal of fish. First are the water supply conduits that feed the ports in the floor of the navlock. Two of these conduits run the entire length of the navlock and require crane access from the forebay deck area. Seine nets are used to concentrate fish to one end of the conduit where a salvage tank is used for transport. A seine net is used to cover the port leading to the unwatering sump pump. Second are the laterals and other remaining pools in the floor of the navlock. Attempts are made to concentrate fish to one end by use of seine. A transport tank is used for removal. Areas that are too deep are left and monitored to assure the areas do not become dry.

NAVIGATION LOCK OUTAGES

The Dalles Dam Navigation lock – (Mar. 6) Approximately 20 juvenile salmonids, 1 carp and 1 crappie were removed from the conduits and released in tailwater. One adult steelhead was found in the laterals and released in the forebay.

John Day Dam Navigation lock – (Mar. 3) No fish were found in the conduits or laterals.

FISHWAY INSPECTION DATA SUMMARY

The Dalles Dam

From 1/1/97 to 12/31/97

		# of Inspections	# in criteria	% in criteria
North Ladder	Forebay-Ladder Diff	620	620	100.0%
	US-DS Diff.	620	620	100.0%
	DS Gage	620	579	93.4%
North Spillway Entrance	CWS-TW Diff.	620	497	80.2%
	N-1 Weir Depth	620	263	42.4%
	N-2 Weir Depth	620	311	50.2%
East Ladder	158 Weir Depth	620	248	40.0%
	U.S.-D.S. Gage Diff.	620	530	85.5%
	DS Gage	620	361	58.2%
PUD Intake	Forebay-Intake Diff	620	615	99.2%
Junction Pool	JP-2 Weir Depth	620	259	41.8%
	JP-4 Weir Depth	620	225	36.3%
	JP-6 Weir Depth	620	312	50.3%
East PH Entrance	CWS-TW Diff	620	450	72.6%
	E-1 Weir Depth	620	15	2.4%
	E-2 Weir Depth	620	424	68 4%
	E-3 Weir Depth	620	415	66.9%
West PH Entrance	CWS-TW Diff	620	491	79.2%
	W-1 Weir Depth	620	422	68.1%
	W-2 Weir Depth	620	442	71 3%
	W-3 Weir Depth	620	10	1.6%
South Spillway Entrance	CWS-TW Diff	620	363	58.5%
	S-1 Weir Depth	620	399	64.4%
	S-2 Weir Depth	620	401	64.7%
Bay 2	WS-TW Diff	620	496	80.0%
Bay 9	WS-TW Diff	620	460	74.2%
Bay 21	WS-TW Diff	620	371	59.8%

John Day Dam

From 1/1/97 to 12/31/97

		# of Inspections	# in criteria	% in criteria
South Ladder	Forebay-Ladder Diff	623	499	80.1%
SE-1 entrance	Channel-TW Diff	623	442	70.9%
SE-1	SE-1 Weir Depth	623	487	78.2%
S. Count House	U.S.-D.S. Gage Diff.	623	623	100.0%
	D.S. Gage	623	495	79.5%
ccbay-1	CWS-TW Diff	623	477	76.6%
ccbay-19	CWS-TW Diff	623	480	77.0%
NE-1	NE-1 Weir Depth	623	447	71.7%
NE-2	NE-2 Weir Depth	623	450	72.2%
FSC board	f.t. #1 rpm	623	623	100.0%
	f.t. #2 rpm	623	623	100.0%
	f.t.#3 rpm	623	623	100.0%
	NE-1	623	566	90.9%
	NE-2	623	563	90.4%
	SE-1	623	543	87.2%
North Ladder	Forebay-Ladder Diff	623	434	69.7%
North Entrance	CWS-TW Diff.	623	383	61.5%
	Chan/LED-TW/LED Diff	623	395	63 4%
EW-1	EW-1 Weir Depth	623	524	84.1%
EW-2	EW-2 Weir Depth	623	479	76.9%
N. Count House	U.S. -D.S. Gage Diff	623	617	99.0%
	D.S. Gage	623	517	83.0%
JBS	Forebay-Conduit Diff.	623	351	56.3%

INSPECTION RESULTS DISCUSSION

Overall, John Day Dam maintained criteria more effectively than The Dalles Dam. There were several areas with conditions that revealed low percentage results of criteria operation. The following discussion includes the reasons for the poor results.

The Dalles Dam

North Spillway N-1 and N-2 Weir Depth – There was a cable hoist failure on entrance weir N-1 midway through the season. Entrance weir N2, which is normally closed per the Fish Passage Plan, was operated in its place during repair. Due to the extent of the failure, N1 was out of service for the remainder of the season. Bulkheads were installed in N1 to close the entrance.

DS Staff Gauge or Weir Crest Depth – The actual data results are incorrect in this case. The data analysis program did not take into account the change from 1.0' to 1.3' for the duration of the shad passage season. Therefore, the actual out of criteria occurrences were considerably lower.

158 Weir – Due to a low weir crest depth over 158 and 159 weirs, 158 weir was adjusted to remain lower than the criteria levels called for in the Fish Passage Plan. This action was coordinated through the Operations and Maintenance committee. The problem is suspected to be

due to poor seals on 158 and 159 weirs. All of the horizontal seals will be replace during the '97/'98 winter maintenance season.

Junction Pool JP-2, JP-4, JP-6 Weir Depths – Due to poor brake and automation systems these weirs cannot maintain reliable criteria conditions. The planned solution is to install programmable logic controllers (PLCs) to improve the reliability of maintaining this system.

East Entrance West Entrance and South Entrance Weir Depths - Entrance weirs E-1 and W-3 are closed per the Fish Passage Plan. Therefore the percentages revealed here are incorrect. E-2, E-3, W-1, W-2 weirs have a similar problem as the junction pool weirs, but to a lesser degree. They cannot reliably maintain criteria depths. Also similar to the junction pool weirs, the corrective action includes the installation of PLCs.

John Day Dam

North Entrance Differential And Weir Depths – Due to an insufficient auxiliary water supply from the pumps, consistent criteria cannot be maintained. For this reason, the present PLC system is set on a fine line between sacrificing differential or weir depth. The weirs were set for a 6' minimum depth 2 years ago because of a pump failure procedure described in the Fish Passage Plan. We are presently waiting for large scale improvements for this area.

JBS Forebay / Conduit Differential – Due to an LED/ PLC failure and long lead time for procuring the needed parts the tainter gate was maintained in manual mode for half of the season. Therefore it was commonly found out of criteria. However, due to close monitoring with several inspections per day, the degree and length of the condition was controlled.

McNARY DAM

Fish Counting Schedule

1 Jan - 31 Mar	No counting.
1 Apr - 31 Oct	Visual counting daily 0400-2000 hours Pacific Standard Time (PST).
1 Nov - 31 Dec	No counting.

Fish Ladder Operating Schedule

North Ladder

1 Jan - 30 Nov	In service.
1 Dec - 15 Mar	Out of service for annual maintenance.
16 Mar - 31 Dec	In service.

South Ladder

1 Jan - 26 Jan	In service.
27 Jan - 6 Feb	Out of service for annual maintenance.
7 Feb - 31 Dec	In service.

Fishway Activities

Juvenile fish collection and transportation began 1 June and ended 14 December. The juvenile bypass system was operated for juvenile fish passage and adult fallbacks from 17 March - 30 May and 15 - 23 December.

The North Wasco/Klickitat County PUD's hydroelectric project on the Washington shore adult fishway auxiliary water supply system was completed in October.

New extended-length submersible bar screens (ESBSs) were installed in turbine units 7 through 14 in March.

A current velocity meter was installed in the upper end of the adult collection channel on 20 October.

An evaluation (radio-tracking) of spring/summer chinook and steelhead passage was conducted in 1997 at the four lower Columbia River projects, including McNary Dam.

ICE HARBOR DAM

Fish Counting Schedule

1 Jan - 31 Mar	No counting.
1 Apr - 31 Oct	Visual counting daily 0400-2000 hours PST. Video counting daily 2000-0400 hours PST.
1 Nov - 15 Dec	Video counting 24 hours per day.
16 Dec - 31 Dec	No counting.

Fish Ladder Operating Schedule

North Ladder:

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

South Ladder

1 Jan - 7 Jan	In service.
8 Jan - 26 Feb	Out of service for annual maintenance.
27 Feb - 31 Dec	In service.

Fishway Activities

Juvenile fish sampling began on 8 April and ended on 11 July. The juvenile bypass system was operated for juvenile fish passage and adult fallbacks from 24 March - 15 December. Construction of spillway deflectors began on 1 September 96 and was finished on 10 November 97.

An evaluation (radio-tracking) of spring/summer chinook and steelhead passage was conducted in 1997 at the four lower Columbia River projects, and some of the radio-tagged fish were monitored as they passed Ice Harbor Dam.

LOWER MONUMENTAL DAM

Fish Counting Schedule

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

Fish Ladder Operating Schedule

North Ladder

1 Jan - 5 Jan	In service.
6 Jan - 19 Feb	Out of service for annual maintenance.
20 Feb - 31 Dec	In service.

South Ladder

1 Jan - 20 Jan	In service.
21 Jan - 18 Mar	Out of service for annual maintenance.
19 Mar - 30 Mar	In service.
31 Mar - 8 April	Out of service due to leakage from the new fish viewing window.

Fishway Activities

Juvenile fish collection and transportation began 1 April and ended 31 October. The juvenile bypass system was operated for juvenile fish passage and adult fallbacks from 24 - 31 March and 1 November - 15 December.

Fish counting backboards were fabricated for both the north and south shore ladders in February.

New fish viewing windows were installed for the north and south shore ladders on 30 January and 14 March, respectively.

LITTLE GOOSE DAM

Fish Counting Schedule

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

Fish Ladder Operating Schedule

Project Ladder:

1 Jan - 12 Jan	In service.
13 Jan - 12 Feb	Out of service for annual maintenance.
13 Feb - 31 Dec	In service.

Fishway Activities

Juvenile fish collection and transportation began 1 April and ended 31 October. The juvenile bypass system was operated for juvenile fish passage and adult fallbacks from 20 - 31 March and 1 November - 17 December.

The installation of a permanent fallout fence in front of the north powerhouse entrances was completed on 29 January.

A new staff gauge was installed in the adult collection channel near the south shore entrance in February.

During the winter maintenance period (13 January - 12 February), a shelf was installed in the floor of the adult fish counting slot to prevent fish from passing unobserved below the counting window.

A velocity meter was installed in the adult collection channel near the south shore entrance and the junction pool on 5 November.

New extended-length submersible bar screens and flow vanes were installed in all turbine units in March.

LOWER GRANITE DAM

Fish Counting Schedule

1 Jan - 28 Feb	No counting.
1 Mar - 31 Mar	Video counting daily 0800-1600 PST.
1 Apr - 31 Oct	Visual counting daily 0400-2000 hours PST.
1 Apr - 14 Jun	Video counting daily 2000-0400 hours PST.
15 Jun - 31 Aug	Video counting 24 hours per day.
1 Sep - 31 Oct	Video counting daily 2000-0400 hours PST.
1 Nov - 15 Dec	Video counting 24 hours per day.
16 Dec - 31 Dec	No counting.

Fish Ladder Operating Schedule

Project Ladder

1 Jan - 6 Jan	In service.
7 Jan - 9 Feb	Out of service for annual maintenance.
10 Feb - 31 Dec	In service.

Fishway Activities

Juvenile fish collection and transportation began 26 March and ended 31 October. The juvenile bypass system was operated for juvenile fish passage and adult fallbacks from 17 - 25 March and 1 November - 16 December.

New lights and fish counting backboards were installed at the adult counting station in February.

In February a shelf was installed in the floor of the adult fish counting slot to prevent fish from passing unobserved below the counting window.

A permanent fallout fence was installed in the adult collection channel in February.

In February a new fishway control system transducer was installed at diffuser 14.

The south shore entrance staff gauge was moved from the bend upstream of the junction pool to a location in the junction pool in February.

The prototype surface collector for juvenile salmonids was tested from 14 April through 1 June and from 1 July through 1 August.

NMFS operated the adult fish trap from 14 April through 2 December as part of the juvenile fish transportation program evaluation.

An evaluation (radio-tracking) of spring/summer chinook and steelhead passage was conducted in 1997 at the four lower Columbia River projects, and some of the radio-tagged fish were monitored as they passed Lower Granite Dam.

PRIEST RAPIDS DAM

Fishway Activities

Public Utility District No. 2 of Grant County conducted standard 16 hour counts using two 8-hour shifts from 15 April through 15 November 1997. Counts were made at both ladders by direct observation each day of the week.

Fish Ladder Operating and Maintenance Schedule for Wanapum Dam

Left Bank

1 Jan - 6 Mar	Out of service.
7 Mar - 30 Nov	In service.
1 Dec - 31 Dec	Out of service.

Right Bank

In service throughout the entire year.

Note

Further information was not available. For those who need more details, please call Grant County Public Utility District at (509) 754-3541 and ask for the fish counting program.

ROCK ISLAND AND ROCKY REACH DAMS

Fish Counting Schedule

Daily counting occurs between mid-April and 15 November every year. Since 1992 at Rock Island Dam and 1996 at Rocky Reach Dam, counting occurs over 24 hours and is videotaped.

Fish Ladder Operating and Maintenance Schedule

Ladder maintenance varies from year to year, but occurs between the window of 1 December and 15 March.

Fishway Activities

The 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 videotape at both projects.

WELLS DAM

Fish Counting Schedule

1 Jan - 30 Apr	No counting.
1 May - 25 Oct	Counting daily 0500-2100 hours PDT.
26 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 - 2 Mar	In-service.
3 Mar - 26 Mar	Out of service for annual maintenance.
27 Mar - 9 Dec	In service.
1 Dec - 31 Dec	Out of service for annual maintenance.

Right Bank Ladder:

1 Jan - 12 Mar	In Service.
13 Mar - 28 Mar	Out of service.
29 Mar - 26 Nov	In service.
27 Nov - 31 Dec	Out of service for annual maintenance.

Fishway Activities

Douglas County Public Utility District operated the two ladders at Wells Dam as per agreement between the fisheries agencies and tribes. Fish counting at Wells is accomplished by viewing a video record of passage from the previous day. Reporting of fish passage is for the historical viewing period of 0500 to 2100 hours. The amount of additional passage during the 'unreported hours' (2100 to 0500) was 6.2% for spring chinook, 4.8% for summer chinook, 13.1% for fall chinook, 10.2% for sockeye, and 11.4% for steelhead.

WDFW operates adult brood stock traps at both ladders at Wells. In 1997, trapping three days a week for spring chinook in both ladders started on 1 May and went through 28 June. Trapping for summer chinook and sockeye brood stock continued in the east ladder three days a week in July and August. Trapping for summer steelhead brood stock was done in the west ladder several days a week in August through October.

TABLE 1

FISH ESCAPEMENT AT MAIN STEM DAMS
COLUMBIA AND SNAKE RIVERS 1993-1997

SPECIES	BONNEVILLE	THE DALLES	JOHN DAY	MCNARY	ICE HARBOR	LOWER MONUMENTAL	LITTLE GOOSE	LOWER GRANITE
1993								
CHINOOK	277,657	184,953	141,705	143,412	34,991	34,195	32,384	30,446
Spring*	112,172	69,356	56,144	59,556	24,935	24,506	23,683	21,218
Summer*	23,616	20,063	18,364	20,374	6,919	7,349	7,222	8,019
Fall*	141,869	95,534	67,197	63,482	3,137	2,340	1,479	1,209
Jacks	18,320	12,298	9,621	10,315	673	561	590	352
STEELHEAD	188,386	124,829	95,642	9,318	73,107	70,992	59,740	66,699
SOCKEYE	80,178	62,252	61,218	66,485	17	18	16	12
COHO*	11,732	4,360	2,995	481				
Adults	10,642	3,944	2,679	360				
Jacks	1,090	416	316	121				
SHAD	2,166,674	2,394,394	647,097	701,404	48,801	15,896	3,938	927
1994								
CHINOOK	243,450	161,758	126,645	128,868	7,581	7,219	5,457	5,077
Spring*	20,566	11,798	9,745	8,987	3,472	3,630	3,328	3,167
Summer*	19,531	15,997	12,935	14,313	1,003	1,035	873	864
Fall*	203,353	133,963	103,965	105,568	3,106	2,554	1,256	1,046
Jacks	35,253	25,470	18,867	20,979	1,170	1,001	476	371
STEELHEAD	161,978	112,254	93,075	94,427	51,704	49,917	45,815	47,550
SOCKEYE	12,678	9,356	11,170	10,603	0	7	44	5
COHO*	22,794	4,376	2,842	1,735				
Adults	20,291	3,786	2,455	1,347				
Jacks	2,503	590	387	388				
SHAD	1,557,555	1,801,545	935,958	668,528	33,443	18,952	10,066	3,402
1995								
CHINOOK	240,050	141,793	107,277	113,354	7,990	7,883	5,061	3,702
Spring*	12,563	7,553	5,776	5,930	1,873	2,159	1,757	1,478
Summer*	17,073	13,558	11,476	13,219	915	1,108	1,007	849
Fall*	210,419	120,682	90,025	94,205	5,202	4,616	2,297	1,375
Jacks	50,631	32,813	24,192	28,662	2,997	2,791	1,411	838
STEELHEAD	202,448	145,844	123,246	114,910	92,026	90,157	77,744	80,853
SOCKEYE	8,774	7,166	8,667	8,320	5	4	17	3
COHO*	12,034	3,269	2,117	1,021	4	1	9	
Adults	10,395	2,786	1,913	914	4	1	8	
Jacks	1,639	483	204	107			1	
SHAD	1,716,179	1,959,564	1,033,730	481,081	22,226	9,673	1,478	373
1996								
CHINOOK	296,635	167,911	130,602	114,947	16,419	15,606	13,538	11,129
Spring*	56,180	27,127	21,599	17,832	7,671	7,785	7,141	5,846
Summer*	17,994	14,488	13,148	15,102	4,086	4,055	4,059	3,551
Fall*	222,461	126,296	95,855	82,013	4,662	3,766	2,338	1,732
Jacks	23,750	13,867	12,071	13,331	3,318	3,583	3,286	3,007
STEELHEAD	205,213	162,456	156,002	124,177	9,995	96,609	82,203	86,072
SOCKEYE	30,252	25,055	25,698	28,585	1		1	3
COHO*	18,747	4,583	4,279	1,853		6		
Adults	15,737	3,622	3,289	1,281		2		
Jacks	3,010	961	990	572		4		
SHAD	1,924,657	2,648,560	959,262	352,755	12,954	5,670	715	265
1997								
CHINOOK	387,088	223,803	185,240	162,946	55,269	51,556	49,664	46,727
Spring*	114,963	69,740	62,580	58,236	41,473	38,625	37,982	33,936
Summer*	29,865	21,456	21,769	22,351	9,318	9,253	9,437	10,836
Fall*	242,260	132,605	100,891	82,359	4,478	3,678	2,245	1,955
Jacks	26,415	16,249	15,674	16,988	1,923	1,643	799	712
STEELHEAD	258,385	164,756	157,038	129,817	94,802	85,602	74,219	85,917
SOCKEYE	47,008	32,430	35,830	38,043	16	16	10	11
COHO*	27,267	4,729	4,229	2,580	101	30	59	92
Adults	24,061	4,067	3,518	2,261	100	28	53	84
Jacks	3,206	662	711	319	1	2	6	8
SHAD	2,171,561	2,571,260	1,007,896	340,090	5,434	6,879	533	111

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	15 APR - 15 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	16 JUN - 15 Aug	18 JUN - 17 AUG
FALL	1 AUG - 15 Nov	4 AUG - 31 OCT	6 AUG - 31 OCT	9 AUG - 31 OCT	12 AUG - 15 Dec	14 AUG - 31 Oct	16 AUG - 31 Oct	18 AUG - 15 Dec

*Includes Jack Counts.

TABLE 2

FISH ESCAPEMENT AT MID COLUMBIA RIVER DAMS; 1993 -1997

SPECIES	PRIEST RAPIDS	ROCK ISLAND	ROCKY REACH	WELLS
1993				
CHINOOK	58,528	37,198	11,295	7,421
Spring*	33,144	19,943	4,128	2,626
Summer*	17,340	13,403	4,843	3,574
Fall*	8,044	3,852	2,324	1,221
Jacks	1,766	1,080	504	355
STEELHEAD	5,493	4,831	2,815	2,400
SOCKEYE	82,924	65,630	28,319	27,849
COHO*	1	6 *	4 *	7
Adults	1			
Jacks				
SHAD	15,443			
1994				
CHINOOK	32,892	24,364	12,064	8,266
Spring*	3,127	2,038	360	258
Summer*	15,500	13,179	6,176	4,991
Fall*	14,265	9,147	5,528	3,017
Jacks	3,097	3,198	1,437	948
STEELHEAD	6,706	5,620	2,818	2,183
SOCKEYE	12,385	11,368	1,680	1,666
COHO*	0	18 *	6 *	3
Adults		18	6	3
Jacks				
SHAD	19,643			
1995				
CHINOOK	30,542	21,571	9,614	4,345
Spring*	1,208	934	248	107
Summer*	12,608	11,319	4,704	3,056
Fall*	16,726	9,318	4,662	1,182
Jacks	3,994	4,680	1,226	505
STEELHEAD	4,357	4,175	1,758	945
SOCKEYE	9,186	9,462	4,988	4,892
COHO*	11 *	6		
Adults	11			
Jacks				
SHAD	20,583			
1996				
CHINOOK	26,836	18,079	9,797	3,694
Spring*	2,183	2,150	569	387
Summer*	11,328	10,272	5,230	2,390
Fall*	13,325	5,657	3,998	917
Jacks	1,283	2,211	808	427
STEELHEAD	8,376	7,305	5,774	4,127
SOCKEYE	29,453	29,500	21,741	17,701
COHO*	6 *			
Adults	5			
Jacks	1			
SHAD	10,267			
1997				
CHINOOK	33,036	22,747	11,352	4,461
Spring*	6,788	6,205	1,866	971
Summer*	13,616	11,574	6,308	2,723
Fall*	12,632	4,968	3,178	767
Jacks	1,948	1,496	1,470	338
STEELHEAD	8,948	7,726	6,722	4,107
SOCKEYE	45,412	41,504	30,485	25,754
COHO*	26	5 *		8
Adults	25	5		3
Jacks	1			5
SHAD	10,314			

ASSUMED DATES FOR CHINOOK RUNS

SPRING	16 APR - 13 JUN	13 APR - 17 Jun	16 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 and 1993 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. Some numbers for 1993-1996 at Priest Rapids were updated.

STEELHEAD OVER COLUMBIA AND SNAKE RIVER DAMS 1953-1997
BY RUN-YEAR (1 JUNE - 31 MAY)

Information Below Concerns the Following Two Tables

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 trout 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.

An error that had appeared in previous issues of the Annual Fish Passage Report was discovered. The value of 135,820 for the run-year of 1992-93 at Lower Monumental project is actually 136, 820. This value was corrected for the following table.

Footnotes for the Following Two Tables

*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 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 average shown is actually for the six years, 1991-92 through 1996-97.

STEELHEAD OVER COLUMBIA AND SNAKE RIVER DAMS 1953 - 1997

BY RUN-YEAR (1 JUNE - 31 MAY)

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		87,137
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	158,790	168,156	122,874	97,454	96,421	99,052
1992-93	233,430	197,715	197,739	166,654	136,820	118,949	128,265
1993-94	123,449	94,080	90,359	68,568	65,883	58,747	59,768
1994-95	111,378	92,362	92,568	49,450	48,231	46,258	47,302
1995-96	146,152	123,319	114,813	91,938	89,953	77,417	79,126
1996-97	162,447	156,924	124,820	101,384	96,785	82,573	86,898
Total	5,721,094	3,573,593	4,269,558	2,552,535	1,842,424	887,888	1,593,423
10-Year Average	175,830	145,983	135,494	98,111	85,674	80,061	84,711

STEELHEAD OVER MID COLUMBIA RIVER DAMS 1959 - 1997

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	6,924	5,023	3,842
1991-92	14,047	11,125	7,788	7,823
1992-93	13,593	12,382	7,429	7,029
1993-94	5,441	4,689	2,738	2,359
1994-95	6,709	5,633	2,825	2,181
1995-96	4,357	4,168	1,777	951
1996-97	8,375	7,295	5,780	4,154
Total	393,506	210,542	138,665	142,670
10-Year Average	9,529	8,345	5,217	4,284

*Partial year

TABLE 5

WILD STEELHEAD AT MAIN STEM DAMS
COLUMBIA AND SNAKE RIVERS 1997

	BONNEVILLE	THE DALLES	JOHN DAY	MCNARY	ICE HARBOR	LOWER MONUMENTAL	LITTLE GOOSE	LOWER GRANITE
MARCH	41							170
APRIL	342	110	692	390	388	200	249	406
MAY	170	27	274	75	103	11	43	82
JUNE	541	102	121	52	16	16	5	2
JULY	12,745	3,944	1,712	1,264	456	254	164	143
AUGUST	15,000	5,498	3,501	3,378	1,348	979	871	941
SEPTEMBER	3,627	8,677	9,481	6,809	3,526	2,352	1,695	2,500
OCTOBER	1,068	2,041	5,732	4,739	3,542	2,950	3,195	3,889
NOVEMBER	46							825
DECEMBER								33

CORPS OF ENGINEERS PROJECTS 1996	TOTAL WILD STEELHEAD
BONNEVILLE	33,580
THE DALLES	20,399
JOHN DAY	21,513
MC NARY	16,707
ICE HARBOR	9,379
LWR MONUMENTAL	6,762
LITTLE GOOSE	6,222
LOWER GRANITE	8,991

TABLE 6

DAILY LAMPREY COUNTS AT
BONNEVILLE, THE DALLES, AND JOHN DAY DAMS: 1997

		Bonneville			The Dalles			John Day		
Month	Day	OR	WA	Total	OR	WA	Total	OR	WA	Total
April	1	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0	0
	7	0	0	0	0	0	0	0	0	0
	8	0	0	0	0	0	0	0	0	0
	9	0	0	0	0	0	0	0	0	0
	10	0	0	0	0	0	0	0	0	0
	11	0	0	0	0	0	0	0	0	0
	12	0	0	0	0	0	0	0	0	0
	13	0	0	0	0	0	0	0	0	0
	14	0	0	0	0	0	0	0	0	0
	15	0	0	0	0	0	0	0	0	0
	16	0	0	0	0	0	0	0	0	0
	17	0	0	0	0	0	0	0	0	0
	18	0	0	0	0	0	0	0	0	0
	19	0	0	0	0	0	0	0	0	0
	20	0	0	0	0	0	0	0	0	0
	21	0	0	0	0	0	0	0	0	0
	22	0	0	0	0	0	0	0	0	0
	23	0	0	0	0	0	0	0	0	0
	24	0	0	0	0	0	0	0	0	0
	25	0	0	0	0	0	0	0	0	0
	26	0	1	1	0	0	0	0	0	0
	27	0	2	2	0	0	0	0	0	0
	28	0	2	2	0	0	0	0	0	0
	29	0	-1	-1	0	0	0	0	0	0
	30	0	0	0	0	0	0	0	0	0
	Totals	0	4	4	0	0	0	0	0	0
May	1	0	1	1	0	0	0	0	0	0
	2	0	-1	-1	0	0	0	0	0	0
	3	0	1	1	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0
	5	0	1	1	0	0	0	0	0	0
	6	0	0	0	0	0	0	2	0	2
	7	0	1	1	0	0	0	2	0	2
	8	0	2	2	0	0	0	2	0	2
	9	0	5	5	0	0	0	4	0	4
	10	0	8	8	0	0	0	0	0	0
	11	0	-7	-7	0	0	0	5	0	5
	12	0	6	6	0	0	0	7	0	7
	13	0	26	26	0	0	0	10	0	10
	14	0	22	22	0	0	0	19	0	19
	15	0	169	169	0	0	0	37	0	37
	16	0	95	95	0	0	0	25	0	25
	17	0	84	84	0	0	0	8	0	8
	18	4	19	23	0	0	0	12	0	12
	19	2	256	258	0	0	0	10	0	10
	20	10	182	192	0	0	0	8	0	8
	21	2	162	164	0	0	0	0	0	0
	22	4	82	86	0	0	0	1	0	1
	23	0	19	19	0	0	0	1	0	1
	24	4	20	24	0	0	0	6	0	6
	25	1	14	15	0	0	0	-5	0	-5
	26	-4	76	72	0	0	0	-1	0	-1
	27	5	59	64	0	0	0	0	1	1
	28	1	66	67	0	0	0	25	0	25
	29	2	56	58	0	0	0	7	0	7
	30	2	116	118	0	0	0	28	0	28
	31	0	118	118	4	0	4	2	0	2
	Totals	33	1,658	1,691	4	0	4	215	1	216

DAILY LAMPREY COUNTS AT
BONNEVILLE, THE DALLES, AND JOHN DAY DAMS: 1997

		Bonneville			The Dalles			John Day		
Month	Day	OR	WA	Total	OR	WA	Total	OR	WA	Total
August	1	66	383	449	72	94	166	76	127	203
	2	146	424	570	77	73	150	71	142	213
	3	269	515	784	65	85	150	62	82	144
	4	185	631	816	88	60	148	54	155	209
	5	240	220	460	107	89	196	76	89	165
	6	126	94	220	116	30	146	76	140	216
	7	124	118	242	131	97	228	64	184	248
	8	145	185	330	76	26	102	113	122	235
	9	83	180	263	60	47	107	53	172	225
	10	133	163	296	84	18	102	120	88	208
	11	316	203	519	56	31	87	46	152	198
	12	236	146	382	102	24	126	58	146	204
	13	176	203	379	78	35	113	44	95	139
	14	88	226	314	56	23	79	67	128	195
	15	118	88	206	95	24	119	78	94	172
	16	60	64	124	43	28	71	78	182	260
	17	104	82	186	76	12	88	65	112	177
	18	100	91	191	82	32	114	26	71	97
	19	60	290	350	82	17	99	89	59	148
	20	89	218	307	32	37	69	24	46	70
	21	50	62	112	82	12	94	42	313	355
	22	104	241	345	29	30	59	38	119	157
	23	79	286	365	78	32	110	52	52	104
	24	98	250	348	54	31	85	37	65	102
	25	35	342	377	78	20	98	29	82	111
	26	48	85	133	72	40	112	36	202	238
	27	42	56	98	80	29	109	36	59	95
	28	26	72	98	46	24	70	20	252	272
	29	23	185	208	43	28	71	35	83	118
	30	10	151	161	37	20	57	18	102	120
	31	16	134	150	26	23	49	24	96	120
	Totals	3,395	6,388	9,783	2,203	1,171	3,374	1,707	3,811	5,518
September	1	22	148	170	35	23	58	4	116	120
	2	29	1,152	1,181	104	18	122	12	110	122
	3	31	766	797	59	5	64	37	60	97
	4	35	1,013	1,048	68	5	73	35	40	75
	5	41	96	137	43	8	51	31	31	62
	6	20	88	108	62	13	75	32	82	114
	7	19	50	69	109	10	119	16	37	53
	8	23	121	144	162	18	180	25	91	116
	9	36	473	509	86	11	97	59	23	82
	10	32	202	234	79	1	80	31	89	120
	11	72	715	787	95	13	108	48	36	84
	12	25	220	245	77	24	101	60	94	154
	13	23	394	417	110	12	122	60	52	112
	14	30	634	664	65	17	82	41	72	113
	15	20	545	565	218	11	229	30	24	54
	16	17	-22	-5	86	20	106	38	60	98
	17	18	124	142	66	7	73	82	89	171
	18	24	131	155	115	6	121	32	36	68
	19	16	-7	9	84	5	89	1	100	101
	20	34	82	116	42	8	50	38	59	97
	21	30	11	41	37	6	43	22	82	104
	22	23	82	105	74	7	81	23	35	58
	23	19	131	150	70	7	77	23	106	129
	24	28	173	201	43	8	51	109	37	146
	25	18	76	94	41	5	46	24	67	91
	26	34	77	111	37	2	39	35	7	42
	27	22	44	66	26	5	31	46	-1	45
	28	18	61	79	14	4	18	25	7	32
	29	2	38	40	49	2	51	19	67	86
	30	26	238	264	31	1	32	47	14	61
	Totals	787	7,856	8,643	2,187	282	2,469	1,085	1,722	2,807

DAILY LAMPREY COUNTS AT
BONNEVILLE, THE DALLES, AND JOHN DAY DAMS: 1997

		Bonneville			The Dalles			John Day		
Month	Day	OR	WA	Total	OR	WA	Total	OR	WA	Total
October	1	4	217	221	29	2	31	48	44	92
	2	12	34	46	10	2	12	29	32	61
	3	16	29	45	6	2	8	25	65	90
	4	7	104	111	13	0	13	17	17	34
	5	7	47	54	16	4	20	26	28	54
	6	12	106	118	12	0	12	19	25	44
	7	23	17	40	16	1	17	14	7	21
	8	2	-11	-9	14	0	14	-12	14	2
	9	2	-2	0	8	0	8	18	12	30
	10	1	23	24	7	0	7	12	8	20
	11	6	1	7	25	1	26	10	-5	5
	12	2	14	16	7	2	9	4	30	34
	13	2	18	20	7	2	9	29	14	43
	14	4	18	22	6	0	6	5	-4	1
	15	0	11	11	8	0	8	5	8	13
	16	-1	10	9	5	0	5	-2	6	4
	17	0	-12	-12	4	0	4	2	6	8
	18	-1	-2	-3	2	0	2	1	2	3
	19	0	6	6	1	0	1	-1	10	9
	20	0	1	1	1	0	1	2	6	8
	21	0	4	4	1	0	1	11	10	21
	22	0	6	6	0	0	0	10	4	14
	23	1	8	9	0	0	0	6	10	16
	24	1	11	12	2	0	2	7	-1	6
	25	1	2	3	0	0	0	7	8	15
	26	0	7	7	0	0	0	-4	0	-4
	27	0	7	7	2	0	2	5	4	9
	28	0	4	4	0	0	0	1	4	5
	29	0	7	7	0	0	0	-1	1	0
	30	0	-58	-58	0	0	0	4	17	21
	31	2	40	42	1	0	1	1	16	17
	Totals	103	667	770	203	16	219	298	398	696

	Bonneville			The Dalles			John Day		
	OR	WA	TOTAL	OR	WA	TOTAL	OR	WA	TOTAL
Yearly Totals	5,091	17,739	22,830	11,423	3,412	14,835	5,842	9,002	14,844

TABLE 7

LAMPREY COUNTS: MCNARY DAM AND SNAKE RIVER PROJECTS
1997

	MCNARY DAM			ICE HARBOR DAM DAY TIME			ICE HARBOR NIGHTTIME			LOWER MONUMENTAL DAM			LITTLE GOOSE	LOWER GRANITE DAYTIME	LOWER GRANITE NIGHTTIME
	TOTAL LAMPREY	S. F.	N. F.	TOTAL LAMPREY	S. F.	N F.	TOTAL LAMPREY	S. F.	N. F.	TOTAL LAMPREY	S. F.	N. F.	TOTAL LAMPREY	TOTAL LAMPREY	TOTAL LAMPREY
March	0	Not counting		0	Not counting		0	Not counting		0	Not counting		No cntg	0	No nt cntg
April	0	0	0	0	0	0	0	0	0	0	0	0	0	1	-1
[1]May	0	0	0	3	3	0	4	4	0	0	0	0	0	0	1
[1]June	35	29	6	5	5	0	14	12	2	4	0	4	2	0	2
July	897	393	504	189	89	100	151	99	52	61	2	59	49	12	66
August	2343	1,733	610	419	225	194	377	207	170	125	19	106	162	106	818
September	882	676	206	154	147	7	113	106	7	27	0	27	35	30	217
[2]October	56	48	8	16	16	0	9	8	1	1	0	1	-3	2	20
[3]November	0	Not counting		0	0	0	0	0	0	0	Not counting		No cntg	0	-1
[3]December	0	Not counting		0	0	0	0	0	0	0	Not counting		No cntg	0	0
Total	4213	2879	1334	786	485	301	668	436	232	218	21	197	245	151	1,122

[1]At Ice Harbor, short in south fish ladder video camera for May 26, June 18 night counts

[2]At Ice Harbor, no count on the south ladder for October 5

[3]At Ice Harbor, video counting only from November 1-December 16

Columbia and Snake River Projects

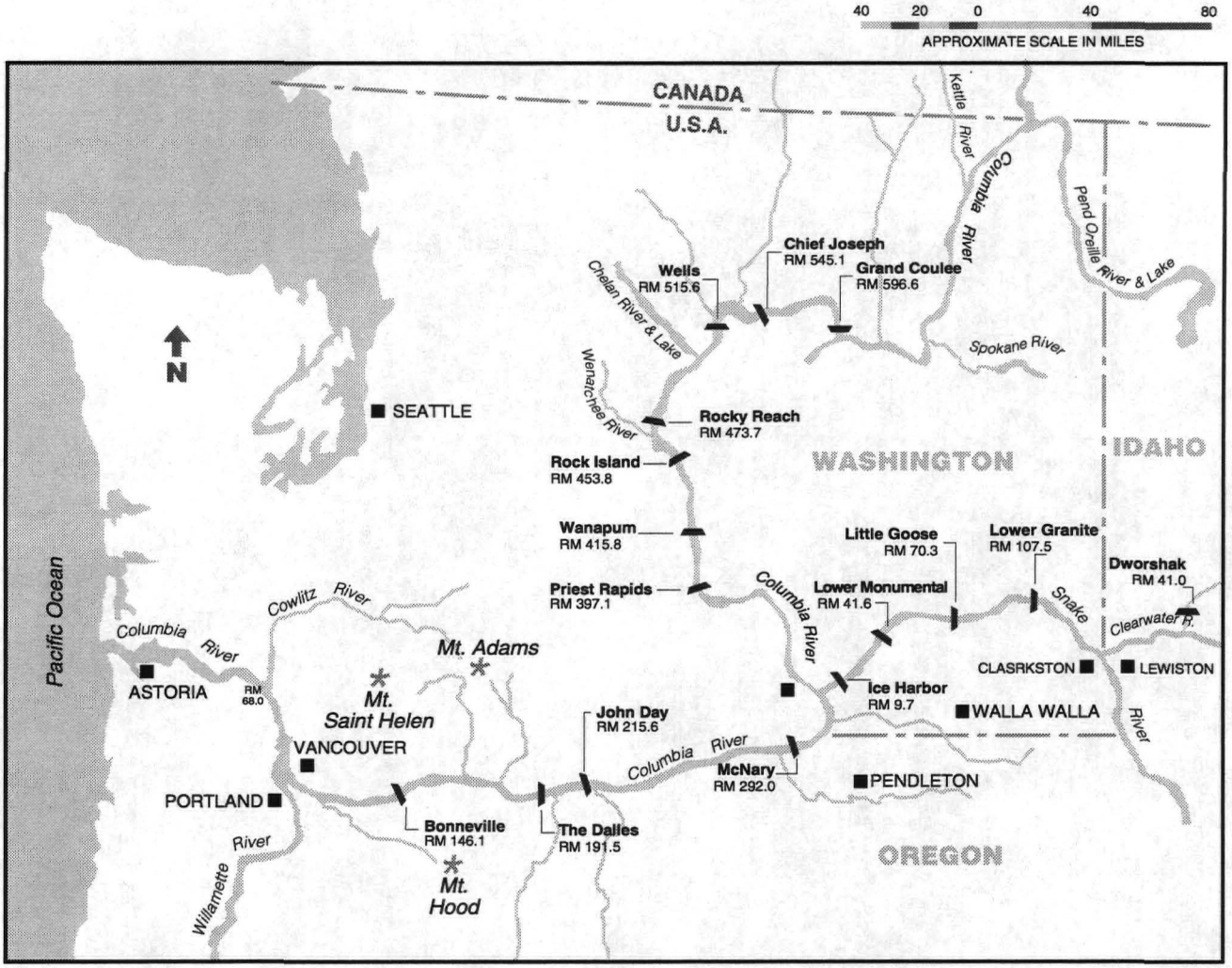


Plate 1

COLUMBIA RIVER TABLES

Bonneville Lock and Dam

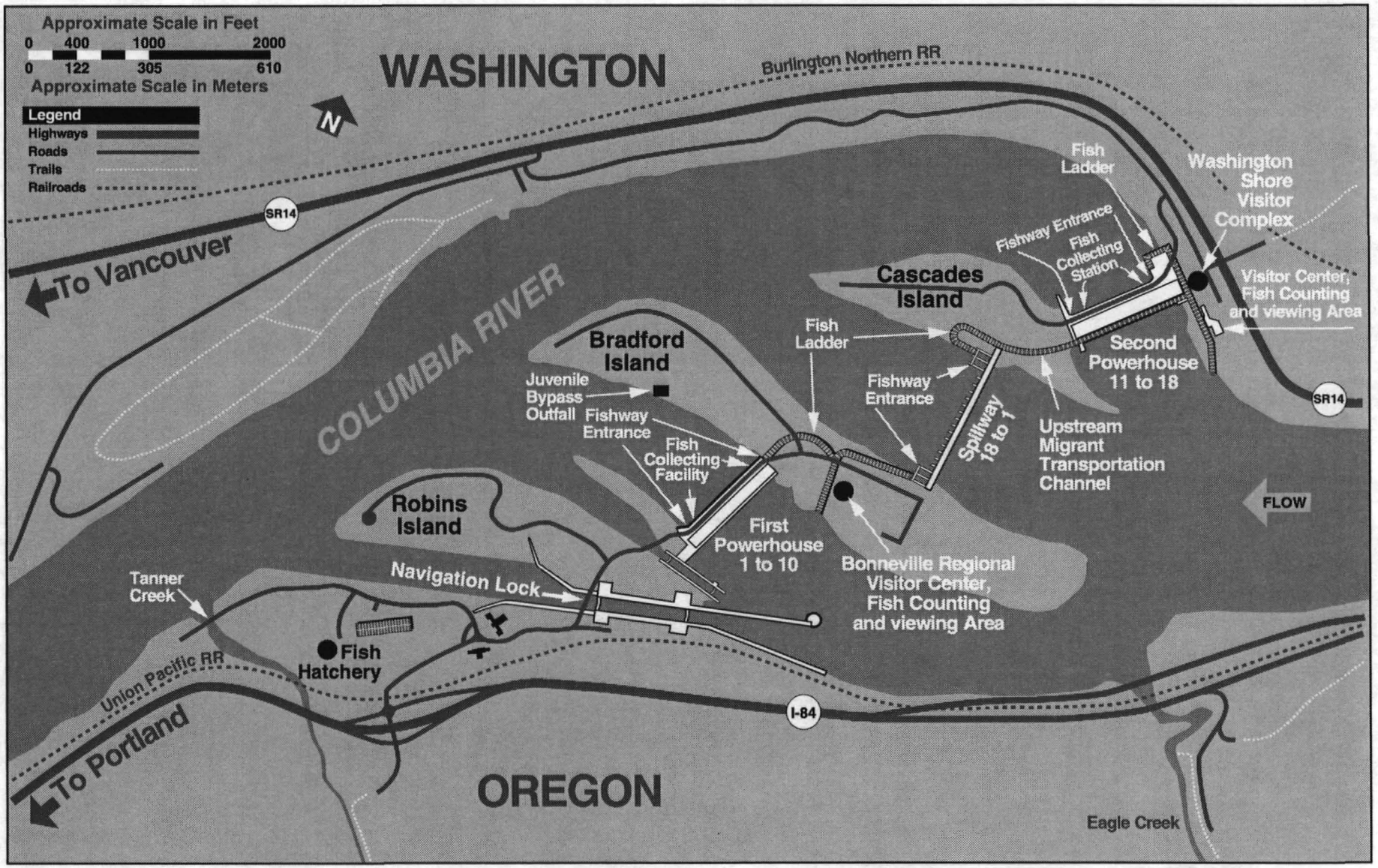


Plate 2

TABLE 8

MONTHLY TOTALS OF SALMONID AND SHAD COUNTED OVER BONNEVILLE DAM
1997

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*			289	66,847	47,827	19,329	10,536	79,442	153,410	9,083	325		387,088
STEELHEAD			921	1,930	2,434	7,530	56,185	122,892	48,001	17,794	698		258,385
SOCKEYE					9	23,127	23,490	381	1				47,008
COHO*							19	1,375	18,962	6,729	182		27,267
MINI-JACKS**						2,135	3,347	1,383	2,227	366			9,458
CHUM										27	20		47
PINK								9	25	30	0		64
TOTAL			1,210	68,777	50,270	52,121	93,577	205,482	222,626	34,029	1,225		729,317
SHAD					97,507	1,760,507	312,779	768					2,171,561

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

TABLE 8

TABLE 9

DISCHARGE AND WATER QUALITY DATA

BONNEVILLE PROJECT - 1997

JANUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	355.2	131.2	1.8	39.0
2	390.0	159.8	0.5	39.0
3	368.0	127.6	0.4	39.0
4	356.1	128.7	0.5	39.0
5	332.1	95.7	0.5	39.0
6	315.8	122.0	0.5	39.0
7	303.5	104.5	0.5	39.0
8	290.6	96.9		
9	286.3	120.9	0.5	39.0
10	298.2	127.5	0.6	39.0
11	301.6	87.1	0.5	40.0
12	295.4	86.9	0.5	39.0
13	299.7	65.9	0.5	40.0
14	311.1	76.9	0.5	40.0
15	296.5	83.9	0.5	39.0
16	296.5	67.2		
17	285.2	82.3		
18	270.3	79.4		
19	258.3	88.5		
20	257.8	69.2		
21	267.0	80.3	0.9	38.0
22	248.8	49.9	0.9	38.0
23	222.8	37.4	1.4	38.0
24	233.1	40.9		
25	252.0	29.3	1.4	38.0
26	268.6	75.1	1.5	38.0
27	274.2	41.2	1.3	37.0
28	261.6	49.2	1.2	37.0
29	247.5	37.6	2.0	37.0
30	281.2	96.2		
31	376.8	137.3		
AVG.	293.6	86.3	0.9	38.6

FEBRUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	366.2	123.3		
2	326.3	90.2	0.6	38.0
3	283.3	62.2	0.4	38.0
4	302.8	80.5	0.4	38.0
5	311.8	86.0	0.5	38.0
6	304.9	86.1	0.4	38.0
7	292.2	65.2	0.5	38.0
8	264.0	25.5	0.5	39.0
9	289.4	43.9	0.5	38.0
10	289.9	66.4	0.8	38.0
11	245.5	29.9	0.7	38.0
12	276.8	20.6	0.7	38.0
13	258.9	21.1	0.8	39.0
14	274.4	22.7	0.6	
15	278.6	33.7	0.6	39.0
16	282.6	48.0	1.0	39.0
17	287.3	32.7	1.0	40.0
18	257.6	78.7	1.0	40.0
19	265.8	97.7	0.6	39.0
20	290.0	53.6	1.0	40.0
21	309.2	50.9	1.6	40.0
22	342.0	98.7	1.2	40.0
23	343.0	92.1	1.5	40.0
24	291.6	72.3		
25	282.6	56.8	1.7	41.0
26	283.1	53.1	1.5	41.0
27	287.1	67.7	1.6	41.0
28	272.3	41.6	1.0	41.0
AVG.	291.4	60.8	0.9	39.2

TABLE 10

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT

MARCH 1997

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	MINI-JK	KCFS	KCFS	SECCHI	DEG F
1												261.9	24.3	1.0	41.0
2												276.8	14.5	1.0	41.0
3												251.4	7.2	1.4	41.0
4												219.4	0.0	1.3	41.0
5												258.3	10.2	1.5	41.0
6												264.1	6.0	2.0	41.0
7												243.5	0.0	1.5	41.0
8												247.5	0.0	2.2	41.0
9												214.5	0.0	2.1	41.0
10												237.2	0.0	2.0	41.0
11												256.3	0.0	2.0	41.0
12												253.6	0.0	2.8	41.0
13												268.1	0.0	2.6	42.0
14												278.5	111.2	2.6	42.0
15	4							21	1			267.4	111.2	2.5	43.0
16	1							85	0			246.8	111.3	2.9	43.0
17	12							41	0			281.7	113.8	2.5	43.0
18	2							24	1			296.5	115.4	2.0	44.0
19	11							64	1			324.5	115.4	2.2	44.0
20	10							48	6			325.3	116.2	2.2	44.0
21	6							39	1			325.3	113.0	2.2	44.0
22	16							42	8			338.7	115.1	2.3	45.0
23	14							77	4			348.6	126.9	1.5	45.0
24	13							100	2			341.0	134.1	2.0	45.0
25	20							49	0			304.4	106.3	2.0	45.0
26	43							83	7			345.4	133.2	2.1	46.0
27	50							84	2			346.4	131.7	2.0	46.0
28	19							39	3			417.4	192.6	1.5	46.0
29	30							37	3			411.2	189.8	1.5	48.0
30	18							38	1			398.6	176.0	1.5	48.0
31	20							50	1			339.3	129.3	1.2	48.0
TOTAL	289							921	41						
AVG	17							54	2			296.4	77.6	1.9	43.3

TABLE 10

TABLE 11

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT

APRIL 1997

FISH COUNTS / **RIVER CONDITIONS**

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	87			0				75	13			336.8	119.6	1.2	49.0
2	79			0				85	22			360.5	139.3	1.8	48.0
3	174			0				70	8			313.6	93.8	1.8	47.0
4	331			0				69	17			319.1	107.0	1.7	46.0
5	398			0				60	5			311.4	86.1	2.0	46.0
6	409			0				62	20			277.6	43.8	2.2	46.0
7	1,095			0				101	24			263.4	37.3	2.0	46.0
8	2,221			0				115	32			278.1	46.5	1.5	47.0
9	1,835			0				73	21			274.0	50.5	1.6	48.0
10	2,217			0				87	15			275.3	49.7	2.5	48.0
11	2,303			0				60	10			281.8	50.7	2.0	48.0
12	2,227			0				60	9			278.7	43.8	1.8	48.0
13	4,677			0				75	14			216.5	0.0	2.1	48.0
14	4,936			15				71	22			240.5	15.4	2.8	48.0
15	6,011			18				90	9			250.6	23.7	2.9	48.0
16	3,800			6				86	16			275.4	47.2	2.4	48.0
17	3,280			9				66	19			286.8	56.3	2.4	50.0
18	3,606			7				39	9			298.6	69.3	2.8	50.0
19	2,781			3				56	4			322.3	101.5	2.2	49.0
20	3,791			12				55	8			317.7	101.7	2.0	49.0
21	1,724			5				54	-2			346.1	120.9	2.1	50.0
22	2,764			4				43	3			421.9	204.0	2.0	50.0
23	2,719			9				67	14			450.9	237.3	1.6	51.0
24	1,451			13				42	-4			468.0	253.2	1.6	52.0
25	1,045			1				47	0			457.0	240.3	1.5	52.0
26	1,090			4				42	6			429.3	221.0	1.5	52.0
27	2,330			16				59	6			406.8	207.9	1.7	52.0
28	2,430			6				37	6			414.3	208.9	1.8	53.0
29	2,535			15				45	12			448.0	237.6	1.8	52.0
30	2,345			13				39	4			462.9	249.7	1.4	53.0
TOTAL	66,691			156				1,930	342						
AVG	2,223			5				64	11			336.1	115.5	2.0	49.1

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	STEELHEAD	WILD STEELHEAD
SPRING	66,980	156	2,851	383

TABLE 12

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT

MAY 1997

FISH COUNTS / **RIVER CONDITIONS**

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	1596			10			0	46	3	0		464.2	251.7	1.5	52.0
2	1268			20			0	36	2	0		471.7	254.2	1.5	52.0
3	1100			9			0	37	3	0		436.0	225.4	1.1	52.0
4	1756			14			0	35	3	0		410.7	209.6	1.4	52.0
5	2737			16			0	53	2	0		397.3	194.0	1.4	52.0
6	3251			21			0	57	2	0		397.6	181.4	1.3	52.0
7	3145			29			0	54	2	0		415.9	194.4	1.5	53.0
8	2781			48			0	70	5	0		406.7	190.8	1.6	53.0
9	3199			49			0	93	2	1		406.4	190.2	1.6	53.0
10	3330			76			0	95	9	0		406.0	182.9	1.6	53.0
11	3386			54			1	99	15	1		383.5	170.5	1.8	54.0
12	2883			48			2	81	2	17		439.1	235.6	1.8	54.0
13	1798			37			0	102	6	28		508.4	292.4	1.9	55.0
14	1273			37			0	70	3	73		491.0	280.5	1.6	56.0
15	1770			74			0	111	19	317		463.4	248.9	1.5	56.0
16	1397			41			0	107	7	1,901		447.2	229.1	2.4	56.0
17	1163			33			0	88	15	2,862		474.0	259.7	2.0	56.0
18	637			15			0	85	3	1,687		503.2	279.0	1.8	57.0
19	908			24			0	104	4	1,863		514.9	288.4	1.4	58.0
20	762			13			0	90	4	4,177		514.0	308.4	0.7	58.0
21	528			20			0	97	2	4,210		515.0	301.2	1.2	58.0
22	560			13			0	72	7	5,159		501.8	284.6	1.3	58.0
23	504			11			0	74	2	1,564		492.2	284.7	1.4	57.0
24	413			15			0	53	0	636		496.2	307.2	1.4	57.0
25	281			6			0	74	0	440		464.7	263.3	1.2	57.0
26	381			15			0	75	0	1,468		450.0	244.0	1.4	56.0
27	721			17			0	98	9	3,881		453.0	234.8	1.0	56.0
28	744			12			0	77	9	12,252		455.7	242.5	1.2	57.0
29	978			8			1	94	7	15,377		457.2	254.5	1.2	57.0
30	887			11			4	96	6	8,103		447.6	230.9	1.5	58.0
31	883			11			1	111	17	31,490		461.0	247.2	1.9	58.0
TOTAL	47,020			807			9	2,434	170	97,507					
AVG	1,517			26				79	5	6,094		456.3	243.9	1.5	55.3

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	114,000	963

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD
9	5,285	553	97,507

TABLE 13

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT

JUNE 1997

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1		870		10			7	132	7	19,020	0	474.1	257.2	1.7	58.0
2		903		7			3	101	6	25,766	1	496.8	285.0	1.9	58.0
3		710		3			9	162	1	38,393	5	533.9	324.9	1.8	58.0
4		555		7			6	105	3	37,820	4	540.2	334.0	1.8	58.0
5		576		7			6	120	0	44,840	3	516.5	323.2	1.8	59.0
6		752		4			10	130	4	64,718	7	501.0	311.6	1.8	59.0
7		682		8			23	120	10	64,593	8	505.3	315.7	1.5	59.0
8		715		2			35	126	18	37,977	4	502.6	319.3	1.5	59.0
9		739		3			47	99	5	33,804	15	503.5	320.0	1.5	59.0
10		813		9			46	92	5	61,978	15	502.7	307.0	1.5	60.0
11		900		10			91	120	16	52,467	43	498.6	337.3	1.5	60.0
12		622		6			169	131	12	54,349	44	526.0	336.3	1.8	60.0
13		529		10			210	147	12	47,936	37	552.3	344.9	1.5	60.0
14		342		6			188	121	0	41,507	44	555.8	352.6	1.7	60.0
15		544		6			415	188	10	85,635	46	551.7	363.7	1.7	60.0
16		604		6			494	201	12	113,118	54	556.7	350.6	1.5	60.0
17		934		12			794	207	14	104,287	49	543.0	343.6	2.1	61.0
18		855		15			1,028	252	19	96,066	62	531.0	334.0	1.3	61.0
19		711		18			1,110	285	19	65,342	85	525.3	308.8	2.2	61.0
20		605		22			1,119	249	24	51,918	102	500.9	294.2	1.5	61.0
21		573		22			1,189	330	20	90,807	103	476.6	276.2	1.8	61.0
22		610		18			1,418	398	30	61,013	116	466.4	276.0	2.0	61.0
23		499		28			1,552	426	23	82,322	63	447.1	249.7	1.8	60.0
24		504		18			1,280	318	15	45,676	131	439.8	220.6	2.0	60.0
25		479		17			1,465	393	22	75,064	131	419.0	197.3	2.0	61.0
26		426		28			1,480	398	21	73,938	171	377.6	158.1	2.2	61.0
27		435		23			1,732	448	54	43,680	206	391.0	184.6	2.2	61.0
28		488		15			1,921	547	49	54,005	171	375.4	169.2	1.8	61.0
29		469		26			2,475	564	60	34,280	196	366.8	148.6	2.5	61.0
30		498		21			2,805	620	50	58,188	219	322.6	104.5	2.5	62.0
TOTAL		18,942		387			23,127	7,530	541	1,760,507	2,135				
AVG		631		13			771	251	18	58,684	71	483.3	281.6	1.8	60.0

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	114,000	963
SUMMER	18,942	387
TOTAL	132,942	1,350

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
23,136	12,815	1,094	1,858,014	2,135

TABLE 14

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT

JULY 1997

FISH COUNTS / **RIVER CONDITIONS**

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1		576		81	0		2116	599	60	25,927	142	287.0	85.6	2.5	62.0
2		516		29	0		1962	611	63	26,583	173	300.6	86.5	2.8	62.0
3		409		44	0		1876	595	60	40,514	139	314.0	88.8	2.8	62.0
4		458		54	0		2072	608	77	28,190	245	303.4	88.9	2.5	63.0
5		530		42	0		2044	743	87	31,704	209	285.4	88.2	2.5	63.0
6		562		43	0		1332	668	94	27,290	169	299.7	87.3	2.5	64.0
7		423		56	0		1176	738	115	14,445	157	299.3	89.5	2.8	64.0
8		368		40	0		1279	889	169	26,938	157	266.5	86.3	2.8	65.0
9		351		41	0		1016	951	173	16,529	142	254.1	85.8	2.7	65.0
10		320		53	0		756	943	183	17,072	155	272.8	86.1	2.7	66.0
11		300		40	1		635	899	189	11,353	121	288.6	87.5	2.2	66.0
12		271		47	0		410	730	141	11,280	106	298.9	87.2	2.0	66.0
13		298		47	0		483	796	164	8,632	115	256.5	87.1	2.8	66.0
14		268		33	0		567	1,013	236	6,221	102	269.1	87.0	3.0	66.0
15		213		69	0		547	874	148	4,217	103	284.5	92.6	4.6	67.0
16		185		48	0		493	973	211	2,768	87	300.1	87.0	4.0	67.0
17		229		52	4		551	1,188	259	4,049	111	302.9	86.8	3.5	67.0
18		211		52	1		567	1,320	297	1,797	79	302.5	87.1	2.5	67.0
19		211		61	0		502	1,256	285	1,837	106	313.3	86.2	2.8	67.0
20		212		69	0		553	1,726	395	1,956	97	277.4	87.3	2.8	68.0
21		169		45	0		329	1,740	465	1,118	64	286.3	87.3	3.2	68.0
22		177		54	1		378	1,984	539	627	71	279.2	86.9	3.8	68.0
23		137		59	0		341	2,116	522	512	59	286.8	87.3	3.2	68.0
24		126		44	0		349	2,262	565	481	41	276.0	86.6	3.2	68.0
25		197		50	1		324	3,153	854	234	50	268.8	103.7	3.9	69.0
26		201		59	2		235	2,911	773	127	40	257.6	120.6	3.8	69.0
27		197		46	4		166	3,310	775	86	63	226.7	119.6	4.0	69.0
28		165		56	4		133	3,488	942	116	60	271.8	117.9	3.2	69.0
29		287		45	1		136	5,284	1,268	53	62	249.7	118.0	2.8	70.0
30		249		44	0		86	6,438	1,475	58	71	221.6	118.1	3.5	70.0
31		181		36	0		76	5,379	1,161	65	51	197.0	116.4	4.7	70.0
TOTAL		8,997		1,539	19		23,490	56,185	12,745	312,779	3,347				
AVG		290		50			758	1,812	411	10,090	108	277.4	93.9	3.1	66.5

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	114,000	963
SUMMER	27,939	1,926
TOTAL	141,939	2,889

COHO ADULT
19

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
46,626	69,000	13,839	2,170,793	5,482

TABLE 14

TABLE 15

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT

AUGUST 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1			216	42	0	0	80	6,130	1,171	75	58
2			248	42	0	0	54	5,689	1,044	70	77
3			497	42	0	0	58	8,054	1,309	261	68
4			583	62	0	0	37	7,273	1,112	48	66
5			391	60	3	0	33	7,025	1,002	60	79
6			354	35	4	0	24	4,873	625	21	50
7			574	42	0	0	28	5,392	673	5	58
8			487	41	1	0	7	5,560	732	17	54
9			426	43	0	0	6	4,813	553	11	30
10			436	25	5	1	3	4,252	475	26	52
11			464	35	5	0	9	4,413	530	24	47
12			452	35	2	0	10	4,319	401	18	36
13			407	42	4	0	10	3,700	432	4	34
14			315	31	6	0	2	2,688	257	1	32
15			691	46	0	0	2	2,669	263	2	34
16			618	57	0	0	4	1,675	171	4	28
17			965	60	1	0	3	1,834	258	4	36
18			1,656	57	1	0	1	1,626	182	14	30
19			1,933	78	13	0	0	2,325	321	23	67
20			1,575	102	18	0	2	3,935	449	11	44
21			756	83	15	0	0	4,714	445	4	64
22			671	55	24	1	3	4,069	370	8	37
23			989	46	13	1	0	3,612	308	5	27
24			2,335	67	25	2	4	2,921	271	37	16
25			2,917	118	91	7	2	3,106	304	6	42
26			2,898	113	123	7	0	3,191	311	5	33
27			3,481	135	88	14	-1	2,998	244	0	37
28			6,489	133	101	16	0	3,029	222	0	24
29			10,392	202	123	14	0	2,393	183	2	33
30			15,060	274	210	17	0	2,276	174	1	26
31			17,462	501	384	35	0	2,338	208	1	64
TOTAL			76,738	2,704	1,260	115	381	122,892	15,000	768	1,383
AVG			2,475	87	40.6		12	3,964	484	25	45

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	208.4	116.7	5.3	70.0
2	196.1	106.1	4.6	70.0
3	175.6	97.6	4.5	70.0
4	179.1	89.4	3.0	60.0
5	197.2	102.5	5.0	70.0
6	242.3	147.2	4.8	71.0
7	224.0	131.0	3.5	71.0
8	217.5	121.3	3.7	71.0
9	231.6	135.0	4.0	71.0
10	208.6	112.6	5.2	72.0
11	184.7	90.6	6.4	72.0
12	192.4	97.4	5.0	72.0
13	207.5	111.0	5.0	72.0
14	212.7	115.9	5.3	72.0
15	204.0	106.8	5.3	72.0
16	210.4	114.5	5.5	72.0
17	195.2	99.5	5.0	72.0
18	190.9	94.8	4.5	72.0
19	201.8	109.1	6.0	72.0
20	215.1	117.9	6.0	72.0
21	214.8	117.3	5.5	72.0
22	223.7	126.0	5.0	71.0
23	204.5	106.9	5.0	72.0
24	186.7	89.5	5.5	72.0
25	200.7	91.7	4.6	72.0
26	200.1	92.3	4.1	72.0
27	191.5	92.2	4.5	72.0
28	180.6	93.8	4.9	72.0
29	183.8	93.6	4.5	71.0
30	209.5	94.3	4.3	71.0
31	196.8	94.3	4.0	71.0
AVG	202.8	106.7	4.8	71.1

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	114,000	963
SUMMER	27,939	1,926
FALL	76,738	2,704
TOTAL	218,677	5,593

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1,279	115	47,007	191,892	28,839	2,171,561	6,865

PINK
9

TABLE 16

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT

SEPTEMBER 1997

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1			14,480	387	864	77	1	3,832	265		44	155.1	0.0	4.3	71.0
2			11,851	493	1100	79	0	3,932	285		47	139.3	0.0	6.0	71.0
3			11,252	460	1191	54	0	3,240	210		55	152.4	0.0	5.0	71.0
4			7,960	413	1022	47	0	2,314	137		75	139.4	0.0	5.0	71.0
5			5,291	391	664	29	0	1,633	106		26	151.1	0.0	4.5	71.0
6			4,801	439	464	31	0	1,120	88		37	148.6	0.0	5.5	70.0
7			5,168	513	398	42	0	906	66		64	136.7	0.0	7.0	70.0
8			6,104	429	458	32	0	766	66		87	118.1	0.0	4.0	70.0
9			4,603	536	408	31	0	919	62		51	110.5	0.0	6.0	70.0
10			5,564	607	372	30	0	1,075	69		100	138.6	0.0	5.4	70.0
11			8,609	650	407	30	0	977	57		88	132.7	0.0	6.0	70.0
12			6,288	586	344	92	0	874	84		115	149.9	0.0	5.0	70.0
13			6,718	587	410	39	0	835	61		91	140.5	0.0	6.0	69.0
14			7,786	708	513	35	0	884	84		64	128.8	0.0	6.2	69.0
15			7,088	678	1140	81	0	1,290	129		100	125.0	0.0	5.5	69.0
16			4,692	854	1194	137	0	1,603	152		172	134.0	0.0	5.0	68.0
17			2,899	748	1656	165	0	1,841	134		125	155.8	0.0	5.0	68.0
18			3,335	753	1107	169	0	1,812	144		84	167.2	0.0	5.0	68.0
19			1,790	609	582	119	0	1,359	118		112	170.0	0.0	4.0	68.0
20			867	392	295	55	0	956	86		74	180.7	0.0	4.0	68.0
21			1,265	439	258	85	0	1,104	91		61	179.5	0.0	4.9	68.0
22			1,162	556	258	81	0	1,287	105		48	176.7	0.0	5.5	68.0
23			1,665	636	256	84	0	1,744	168		111	160.1	0.0	6.5	68.0
24			858	513	223	111	0	1,692	151		44	200.7	0.0	6.5	68.0
25			1,492	538	195	83	0	2,349	191		66	191.5	0.0	5.2	68.0
26			1,258	500	207	106	0	2,262	189		60	173.0	0.0	5.0	68.0
27			847	502	197	63	0	1,859	96		73	172.0	0.0	4.5	67.0
28			540	448	150	48	0	1,387	87		67	170.2	0.0	6.5	66.0
29			499	408	188	59	0	1,179	74		48	141.3	0.0	6.5	66.0
30			488	417	269	78	0	970	72		38	139.3	0.0	6.1	66.0
TOTAL			137,220	16,190	16,790	2,172	1	48,001	3,627		2,227				
AVG			4,574	540	560	72		1,600	121		74	152.6	0.0	5.4	68.8

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	114,000	963
SUMMER	27,939	1,926
FALL	213,958	18,894
TOTAL	355,897	21,783

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	PINK
18,069	2,287	47,008	239,893	32,466	2,171,561	9,092	34

TABLE 17

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT

OCTOBER 1997

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1			331	357	163	67		923	49		23	172.9	0.0	3.2	66.0
2			420	360	165	42		824	44		39	161.2	0.0	5.8	66.0
3			167	204	155	37		554	35		31	187.4	0.0	5.0	66.0
4			302	291	394	58		766	68		25	144.1	0.0	5.4	65.0
5			144	238	346	64		836	50		32	159.6	0.0	5.4	65.0
6			204	304	268	60		761	51		31	188.1	0.0	6.0	65.0
7			240	274	335	43		507	34		18	169.0	0.0	5.2	65.0
8			144	143	137	33		332	31		9	204.6	13.6	5.4	65.0
9			129	172	220	40		308	33		13	207.3	2.7	4.9	62.0
10			109	155	294	42		432	29		6	165.9	0.0	5.5	62.0
11			137	157	143	11		609	53		16	187.3	0.0	5.5	64.0
12			117	116	82	16		846	55		17	225.0	11.6	4.2	62.0
13			108	186	228	29		1319	78		3	208.6	8.0	5.5	62.0
14			279	241	251	29		1054	47		10	188.5	0.8	6.0	62.0
15			162	159	173	13		731	30		7	215.0	8.5	4.5	61.0
16			134	141	143	12		590	37		3	203.1	4.9	6.0	61.0
17			129	92	189	18		535	47		4	208.2	7.9	5.0	61.0
18			184	117	246	22		599	20		10	189.8	0.0	5.0	61.0
19			92	101	231	15		545	34		5	154.9	0.0	5.0	60.0
20			125	99	255	24		648	15		2	155.1	0.0	6.2	60.0
21			104	108	246	39		511	24		12	139.3	0.0	6.5	60.0
22			92	66	226	28		385	13		6	136.2	0.0	6.0	58.0
23			54	53	206	32		457	39		6	147.6	0.0	6.0	59.0
24			67	76	168	18		550	27		1	167.0	0.0	6.0	59.0
25			84	57	135	19		356	9		1	121.7	0.0	6.1	58.0
26			70	76	85	14		317	18		6	117.1	0.0	6.0	58.0
27			100	54	79	12		369	30		2	140.8	0.0	7.0	58.0
28			98	42	71	13		285	19		19	155.7	0.0	7.0	58.0
29			86	41	78	11		361	22		7	140.4	0.0	6.0	58.0
30			66	49	69	4		281	13		1	138.9	0.0	5.8	58.0
31			52	24	76	7		203	14		1	163.2	13.7	1.8	58.0
TOTAL			4,530	4,553	5,857	872		17,794	1,068		366				
AVG			146	147	189	28		574	34		12	169.8	2.3	5.4	61.4

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	114,000	963
SUMMER	27,939	1,926
FALL	218,488	23,447
TOTAL	360,427	26,336

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
23,926	3,159	47,008	257,687	33,534	2,171,561	9,458

PINK	CHUM
64	27

TABLE 18

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT

NOVEMBER 1997

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	CHUM	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1			29	3	4	0		75	0	0	0	162.2	0.0	4.5	57.0
2			35	8	30	8		102	4	0	0	131.1	0.0	4.5	57.0
3			39	3	10	4		75	2	0	0	156.6	0.0	4.3	57.0
4			29	13	22	12		56	6	0	0	152.1	0.0	5.8	57.0
5			22	11	4	4		72	3	0	0	159.4	0.0	5.8	57.0
6			21	6	5	2		24	2	0	0	175.4	0.0	5.6	57.0
7			11	4	4	0		59	1	0	0	179.9	0.0	4.5	57.0
8			19	2	9	2		53	-1	0	0	133.2	0.0	5.0	57.0
9			8	8	9	4		45	5	0	0	150.1	0.0	4.2	56.0
10			11	8	6	4		24	4	0	0	144.8	0.0	5.6	56.0
11			11	8	8	1		39	7	0	0	155.3	0.0	4.2	55.0
12			2	1	5	3		15	4	0	0	150.7	0.0	5.0	54.0
13			4	2	6	0		18	0	0	0	153.8	0.0	5.0	54.0
14			1	2	6	0		20	3	0	0	166.6	0.0	5.0	53.0
15			4	0	7	3		21	6	0	0	132.6	0.0	5.0	53.0
16												147.3	0.0	5.2	52.0
17												166.6	5.3	6.3	54.0
18												162.4	0.0	6.8	52.0
19												149.5	0.0	5.2	52.0
20												132.2	0.0	5.9	52.0
21												161.3	0.0	5.5	52.0
22												157.5	0.0	6.8	52.0
23												168.6	0.0	5.6	51.0
24												171.8	0.0	5.5	50.0
25												160.9	2.3	5.5	51.0
26												177.6	0.0	5.0	51.0
27												144.8	0.0	5.0	50.0
28												143.9	0.0	6.0	50.0
29												137.5	0.0	6.2	50.0
30												131.3	0.0	6.5	50.0
TOTAL			246	79	135	47		698	46						
AVG			16	5	9	3		47	3			153.9	0.3	5.4	53.5

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	114,000	963
SUMMER	27,939	1,926
FALL	218,734	23,526
TOTAL	360,673	26,415

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
24,061	3,206	47,008	258,385	33,580	2,171,561	9,458

PINK	CHUM
64	47

TABLE 18

TABLE 19

DISCHARGE AND WATER QUALITY DATA

BONNEVILLE PROJECT - 1997

DECEMBER

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	163.0	0.0	6.3	50.0
2	157.1	0.0	6.5	50.0
3	191.6	0.0		
4	182.4	0.0		
5	177.6	0.0		
6	154.3	0.0		
7	177.6	0.0	6.0	48.0
8	166.9	0.0	5.2	48.0
9	172.0	0.0	7.2	48.0
10	191.4	0.0	7.0	48.0
11	186.8	0.0	5.5	46.0
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
AVG.	174.6	0.0	6.2	48.3

TABLE 20

YEARLY TOTALS OF SALMONIDS COUNTED OVER BONNEVILLE DAM

1938 - 1997

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
1993	277,657	188,386	80,178	11,732	17	15	557,985
1994	243,450	161,978	12,678	22,794	26	5	440,931
1995	240,050	202,448	8,774	12,034	30	36	463,372
1996	296,635	205,213	30,252	18,747	22	1	550,870
1997	387,088	258,385	47,008	27,267	47	64	719,859
Total	21,360,778	10,295,177	5,045,021	1,836,929	38,919	2,226	38,579,050
10-Year Average	322,693	235,583	51,154	27,850	29	79	637,381

*Jacks included

TABLE 21

TABLE 21

MONTHLY COUNT OF CHINOOK SALMON

BONNEVILLE DAM - 1938 - 1997

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	25,158	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	32,837	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
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

TABLE 21

(Continued)

MONTHLY COUNT OF CHINOOK SALMON

BONNEVILLE DAM - 1938 - 1997

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
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
1993			226	77,174	34,772	15,968	7,648	37,893	97,693	6,036	247		277,657	112,172	23,616	141,869
1994			505	13,499	6,562	9,418	10,113	47,587	145,801	9,669	296		243,450	20,566	19,531	203,353
1995			206	6,934	5,423	8,252	8,821	46,060	148,607	15,349	398		240,050	12,563	17,073	210,414
1996			74	20,733	35,373	10,643	7,351	58,264	153,710	10,199	288		296,635	56,180	17,994	222,461
1997			289	66,847	47,827	19,329	10,536	79,442	153,410	9,083	325		387,088	114,963	29,865	242,260
TOTAL	40	45	54,788	3,020,856	2,212,314	1,694,754	1,316,964	2,264,076	9,937,824	450,636	20,848	355	20,973,500	5,288,043	3,011,718	12,673,739
10-Year Average			797	46,850	22,524	13,305	10,798	57,094	153,362	10,478	329		315,538	70,172	24,104	221,263

*Jacks included

TABLE 21

TABLE 22

MONTHLY COUNT OF SOCKEYE SALMON

BONNEVILLE DAM; 1938 - 1997

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	23,536	39,193	1,615	46				65,741
1942					13	12,624	41,301	1,477	49				55,464
1943					9	4,525	33,613	1,697	1				39,845
1944			1		16	3,099	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 - 1997

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
1993					7	49,667	30,377	127					80,178
1994					2	9,514	3,152	10					12,678
1995					1	5,742	2,975	56					8,774
1996					3	22,496	7,712	41					30,252
1997					9	23,127	23,490	381	1				47,008
TOTAL			76	541	7,937	2,007,904	2,982,649	43,122	2,622	137	32	1	5,045,021
10-Year Average					7	28,234	22,723	189					51,154

TABLE 23

MONTHLY COUNT OF COHO SALMON

BONNEVILLE DAM: 1938 -1997

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 -1997

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
1993							15	448	8,191	2,786	292		11,732	1,090
1994							5	1,608	12,521	8,239	421		22,794	2,503
1995							115	962	6,833	3,827	297		12,034	1,639
1996							65	421	10,325	7,656	280		18,747	3,010
1997							19	1,375	18,962	6,729	182		27,267	3,206
TOTAL	21	12	6	1		176	5,330	161,813	1,402,179	230,548	36,777	66	1,836,929	519,276
10 Year Average							39	1,229	18,206	7,229	1,147		27,850	5,804

*Jacks included

TABLE 24

MONTHLY COUNT OF STEELHEAD
BONNEVILLE DAM: 1938 -1997

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	1,564	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	1,169	21,868	24,508	35,907	6,129	1,119	226	100,518	51,585	48,933
1945	1,003	1,078	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 -1997

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
1993			771	1,744	2,691	9,923	34,148	64,062	69,129	5,531	387		188,386	99,941	88,445
1994			422	1,976	3,132	7,225	26,719	58,780	54,856	8,079	789		161,978	82,822	79,156
1995			333	840	1,197	6,187	28,665	110,953	47,313	6,427	533		202,448	123,723	78,725
1996			915	1,776	2,407	6,642	39,914	99,861	47,566	5,816	316		205,213	136,677	68,536
1997			921	1,930	2,434	7,530	56,185	122,892	48,001	17,794	698		258,385	177,054	81,331
TOTA	1,565	2,486	56,367	176,531	151,346	367,645	3,122,250	3,494,039	2,681,445	208,970	30,242	2,291	10,295,177	6,719,396	3,578,833
10-Year Average			740	2,082	3,016	8,925	46,568	98,554	67,815	7,287	596		235,583	140,212	95,371

TABLE 25

WILD STEELHEAD COUNTED AT BONNEVILLE DAM 1997

BONNEVILLE DAM		Bradford Island	Washington
March	Wild Steelhead	Ladder	Ladder
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15	1	1	0
16	0	0	0
17	0	0	0
18	1	-1	2
19	1	1	0
20	6	1	5
21	1	0	1
22	8	6	2
23	4	0	4
24	2	1	1
25	0	0	0
26	7	7	0
27	2	2	0
28	3	3	0
29	3	1	2
30	1	0	1
31	1	1	0
TOTAL	41	23	18

BONNEVILLE DAM		Bradford Island	Washington
April	Wild Steelhead	Ladder	Ladder
1	13	8	5
2	22	16	6
3	8	7	1
4	17	16	1
5	5	4	1
6	20	14	6
7	24	13	11
8	32	19	13
9	21	10	11
10	15	11	4
11	10	10	0
12	9	4	5
13	14	10	4
14	22	18	4
15	9	8	1
16	16	11	5
17	19	12	7
18	9	4	5
19	4	2	2
20	8	10	-2
21	-2	2	-4
22	3	1	2
23	14	10	4
24	-4	-5	1
25	0	0	0
26	6	6	0
27	6	4	2
28	6	6	0
29	12	10	2
30	4	4	0
TOTAL	342	245	97

TABLE 26

WILD STEELHEAD COUNTED AT BONNEVILLE DAM 1997

BONNEVILLE DAM		Bradford Island Ladder	Washington Ladder
May	Wild Steelhead		
1	3	2	1
2	2	1	1
3	3	2	1
4	3	2	1
5	2	1	1
6	2	1	1
7	2	1	1
8	5	4	1
9	2	1	1
10	9	8	1
11	15	10	5
12	2	0	2
13	6	4	2
14	3	1	2
15	19	2	17
16	7	7	0
17	15	10	5
18	3	2	1
19	4	0	4
20	4	4	0
21	2	1	1
22	7	1	6
23	2	1	1
24	0	2	-2
25	0	0	0
26	0	0	0
27	9	1	8
28	9	5	4
29	7	1	6
30	6	2	4
31	17	10	7
TOTAL	170	87	83
AVE	5	3	3

TOTAL	WILD STEELHEAD
TO DATE	553

BONNEVILLE DAM		Bradford Island Ladder	Washington Ladder
June	Wild Steelhead		
1	7	1	6
2	6	2	4
3	1	0	1
4	3	1	2
5	0	0	0
6	4	0	4
7	10	6	4
8	18	5	13
9	5	1	4
10	5	0	5
11	16	5	11
12	12	6	6
13	12	5	7
14	0	0	0
15	10	4	6
16	12	5	7
17	14	7	7
18	19	8	11
19	19	11	8
20	24	10	14
21	20	8	12
22	30	12	18
23	23	11	12
24	15	8	7
25	22	18	4
26	21	16	5
27	54	19	35
28	49	17	32
29	60	25	35
30	50	30	20
TOTAL	541	241	300
AVE	18	8	10

TOTAL	WILD STEELHEAD
TO DATE	1,094

TABLE 27

WILD STEELHEAD COUNTED AT BONNEVILLE DAM 1997

BONNEVILLE DAM		Bradford Island Ladder	Washington Ladder
July	Wild Steelhead		
1	60	26	34
2	63	35	28
3	60	29	31
4	77	36	41
5	87	40	47
6	94	38	56
7	115	48	67
8	169	66	103
9	173	58	115
10	183	61	122
11	189	58	131
12	141	67	74
13	164	72	92
14	236	73	163
15	148	50	98
16	211	96	115
17	259	89	170
18	297	76	221
19	285	148	137
20	395	120	275
21	465	190	275
22	539	298	241
23	522	307	215
24	565	294	271
25	854	498	356
26	773	497	276
27	775	426	349
28	942	412	530
29	1,268	565	703
30	1,475	637	838
31	1,161	823	338
TOTAL	12,745	6,233	6,512
AVE	411	201	210

TOTAL	WILD STEELHEAD
TO DATE	13,839

BONNEVILLE DAM		Bradford Island Ladder	Washington Ladder
August	Wild Steelhead		
1	1,171	662	509
2	1,044	632	412
3	1,309	745	564
4	1,112	686	426
5	1,002	594	408
6	625	290	335
7	673	258	415
8	732	307	425
9	553	258	295
10	475	185	290
11	530	254	276
12	401	160	241
13	432	163	269
14	257	85	172
15	263	88	175
16	171	67	104
17	258	142	116
18	182	84	98
19	321	148	173
20	449	240	209
21	445	245	200
22	370	178	192
23	308	146	162
24	271	145	126
25	304	112	192
26	311	101	210
27	244	140	104
28	222	113	109
29	183	110	73
30	174	73	101
31	208	92	116
TOTAL	15,000	7,503	7,497
AVE	484	242	242

TOTAL	WILD STEELHEAD
TO DATE	28,839

TABLE 28

WILD STEELHEAD COUNTED AT BONNEVILLE DAM 1997

BONNEVILLE DAM		Bradford Island	Washington
September	Wild Steelhead	Ladder	Ladder
1	265	149	116
2	285	196	89
3	210	96	114
4	137	60	77
5	106	77	29
6	88	60	28
7	66	52	14
8	66	42	24
9	62	37	25
10	69	50	19
11	57	34	23
12	84	36	48
13	61	48	13
14	84	56	28
15	129	77	52
16	152	80	72
17	134	66	68
18	144	62	82
19	118	50	68
20	86	38	48
21	91	37	54
22	105	49	56
23	168	64	104
24	151	41	110
25	191	73	118
26	189	67	122
27	96	53	43
28	87	40	47
29	74	40	34
30	72	29	43
TOTAL	3,627	1,859	1,768
AVE	121	62	59

TOTAL	WILD STEELHEAD
TO DATE	32,466

BONNEVILLE DAM		Bradford Island	Washington
October	Wild Steelhead	Ladder	Ladder
1	49	17	32
2	44	14	30
3	35	19	16
4	68	43	25
5	50	32	18
6	51	23	28
7	34	16	18
8	31	13	18
9	33	17	16
10	29	13	16
11	53	22	31
12	55	23	32
13	78	23	55
14	47	12	35
15	30	14	16
16	37	11	26
17	47	17	30
18	20	7	13
19	34	16	18
20	15	8	7
21	24	13	11
22	13	8	5
23	39	14	25
24	27	13	14
25	9	7	2
26	18	12	6
27	30	13	17
28	19	6	13
29	22	11	11
30	13	7	6
31	14	1	13
TOTAL	1,068	465	603
AVE	34	15	19

TOTAL	WILD STEELHEAD
TO DATE	33,534

WILD STEELHEAD COUNTED AT BONNEVILLE DAM 1997

BONNEVILLE DAM		Bradford Island Ladder	Washington Ladder
November	Wild Steelhead		
1	0	0	0
2	4	4	0
3	2	2	0
4	6	3	3
5	3	1	2
6	2	0	2
7	1	1	0
8	-1	0	-1
9	5	1	4
10	4	2	2
11	7	5	2
12	4	3	1
13	0	0	0
14	3	1	2
15	6	3	3
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
TOTAL	46	26	20
AVE	3	2	1

TOTAL	WILD STEELHEAD
TO DATE	33,580

TABLE 30

MONTHLY COUNT OF SHAD at BONNEVILLE DAM 1938-1997

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 30

(Continued)

MONTHLY COUNT OF SHAD at
BONNEVILLE DAM 1938-1997

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	722,443	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
1993			11	10	111,459	1,883,831	167,900	3,463					2,166,674
1994				53	136,547	1,223,421	195,894	1,640					1,557,555
1995				1	231,973	1,289,390	193,091	1,724					1,716,179
1996					24,653	1,676,695	221,795	1,514					1,924,657
1997					97,507	1,760,507	312,779	768					2,171,561
TOTAL			14	385	3,205,482	26,212,297	6,638,261	111,757	4,136	593	36		36,172,961
10 Year Average					246,652	1,585,054	165,438	2,027					1,999,207

Shad are no longer counted past August.

TABLE 31

U.S. ARMY ENGINEER DISTRICT, PORTLAND

Video counting @ Bonneville

Jan 97

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	WILD STEELHEAD	STEELHEAD
1								0	13
2								1	5
3								0	3
4								0	3
5								0	4
6								0	4
7								0	3
8								1	11
9								0	8
10								0	13
11								0	16
12								0	1
13								0	7
14								0	5
15								0	2
16								0	1
17								0	0
18								2	4
19								0	2
20								1	9
21								1	12
22								1	8
23								0	15
24								1	25
25								4	15
26								3	23
27								0	7
28								0	8
29								5	26
30								5	24
31								13	65
TOTAL								38	342
AVG								1	9

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	WILD STEELHEAD	STEELHEAD
SPRING	0	0	38	342

TABLE 32

U.S. ARMY ENGINEER DISTRICT, PORTLAND

Video counting @ Bonneville

Feb 1997

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	WILD STEELHEAD	STEELHEAD
1								0	8
2								0	2
3								0	2
4								0	-1
5								0	3
6								0	1
7								0	1
8								0	2
9								0	-2
10								0	2
11								0	0
12								0	0
13								0	-1
14								0	14
15								0	13
16								1	21
17								1	20
18								2	21
19								0	37
20								-1	9
21								2	57
22								0	28
23								0	34
24								1	38
25								0	35
26								0	19
27								1	40
28								1	23
29								0	0
TOTAL								8	426
AVG									24

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	WILD STEELHEAD	STEELHEAD
SPRING	0	0	46	768

Video counts were made 24 hours per day.

TABLE 32

TABLE 33

U.S. ARMY ENGINEER DISTRICT, PORTLAND

Video Counts @ Bonneville

Mar 97

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	WILD STEELHEAD	STEELHEAD
1	0			0				1	7
2	0			0				0	25
3	0			0				0	22
4	0			0				0	47
5	0			0				1	32
6	1			0				1	53
7	0			0				7	119
8	1			0				3	72
9	0			0				2	87
10	1			0				4	51
11	2			0				5	48
12	0			0				1	60
13	0			0				2	28
14	0			0				1	23
15	1			0				-1	-1
16	2			0				0	-5
17	8			0				2	11
18	5			0				3	34
19	1			0				0	36
20	2			0				1	23
21	4			0				0	21
22	6			0				1	30
23	16			0				0	33
24	10			0				0	51
25	12			0				1	31
26	8			0				1	23
27	5			0				1	21
28	10			0				0	22
29	3			1				0	11
30	2			0				-1	11
31	6			0				0	9
TOTAL	176			1				36	1,045
AVG	3							1	34

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	WILD STEELHEAD	STEELHEAD
SPRING	176	1	36	1,045

Video counts were 24 hours per day the 1 through 15 March and 2000 hours until 0400 hours PST after the 15th.

TABLE 34

U.S. ARMY ENGINEER DISTRICT, PORTLAND

Video Counts @ Bonneville

Apr 1997

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	WILD STEELHEAD	STEELHEAD
1	1			0				1	7
2	0			0				-4	-10
3	-2			0				2	2
4	0			0				0	-1
5	-1			0				-2	-2
6	0			0				0	-1
7	1			0				0	4
8	7			0				-1	-5
9	5			1				0	0
10	8			0				0	-4
11	11			0				1	0
12	3			0				-1	-3
13	23			0				0	9
14	48			0				0	5
15	7			0				1	5
16	-11			0				1	3
17	4			0				0	3
18	8			0				2	5
19	2			0				0	3
20	16			0				0	-2
21	20			0				-1	2
22	-4			0				0	0
23	-5			0				0	5
24	-2			0				0	-2
25	-2			0				0	2
26	-1			0				-2	-1
27	1			0				0	2
28	-1			0				-1	8
29	8			0				0	-1
30	4			0				0	0
TOTAL	729			1				(4)	20
AVG	5								

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	WILD STEELHEAD	STEELHEAD
SPRING	905	2	32	1,065

Video counting took place between 2000 and 0400 hours PST.

TABLE 35

U.S. ARMY ENGINEER DISTRICT, PORTLAND

Video Counts @ Bonneville

May 1997

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	WILD STEELHEAD	STEELHEAD
1	4			0				0	1
2	0			1				0	2
3	6			0				0	-1
4	8			-1				0	-2
5	5			0				0	0
6	51			1				0	2
7	8			0				0	4
8	4			0				1	-1
9	16			0				0	-3
10	23			0				0	1
11	17			0				0	4
12	14			0				0	0
13	6			0				0	1
14	6			0				0	1
15	32			0				0	4
16	11			0				1	5
17	13			0				1	3
18	11			0				0	3
19	9			0				0	0
20	4			0				0	1
21	7			1				0	3
22	3			0				0	-7
23	5			0				0	3
24	3			0				0	-1
25	4			0				0	2
26	12			0				0	5
27	5			0				0	3
28	14			0				1	5
29	9			7				0	2
30	0			0				0	3
31	0			2				1	8
TOTAL	2,085			9				5	51
AVG	10								2

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	WILD STEELHEAD	STEELHEAD
SPRING	2,990	11	37	1,116

Video counting took place between 2000 and 0400 hours PST.

TABLE 36

U.S. ARMY ENGINEER DISTRICT, PORTLAND

Video Counts @ Bonneville

June 1997

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	WILD STEELHEAD	STEELHEAD
1		60		0			0	0	0
2		66		0			0	0	6
3		27		0			0	0	5
4		26		0			0	0	1
5		29		0			-1	1	3
6		62		0			3	0	1
7		27		0			-1	0	3
8		35		0			3	0	3
9		27		0			0	0	1
10		55		0			2	0	7
11		29		0			2	-1	4
12		34		0			7	1	0
13		21		0			0	0	3
14		14		0			3	0	5
15		32		1			7	0	5
16		25		0			8	0	0
17		25		0			18	0	2
18		28		0			3	0	6
19		50		0			21	-2	4
20		22		1			18	0	1
21		17		0			30	-1	-1
22		21		0			14	0	2
23		12		0			14	3	4
24		12		0			32	-2	5
25		25		0			15	0	11
26		24		0			54	1	20
27		29		0			41	0	5
28		22		1			45	0	10
29		27		1			63	-1	22
30		9		0			31	-1	28
TOTAL		892		4			432	(2)	166
AVG		30					14		23

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	2,990	11
SUMMER	892	4
TOTAL	3,882	15

SOCKEYE	WILD STEELHEAD	STEELHEAD
432	35	1,282

Video counting took place between 2000 and 0400 hours PST.

TABLE 37

U.S. ARMY ENGINEER DISTRICT, PORTLAND

Video Counts @ Bonneville

July 1997

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	WILD STEELHEAD	STEELHEAD
1		36		0	0		31	-1	20
2		21		0	0		43	2	18
3		18		1	0		52	0	21
4		16		0	0		49	0	9
5		7		0	0		52	0	27
6		15		0	0		20	1	8
7		23		0	0		36	2	39
8		14		1	0		29	0	35
9		25		0	0		23	2	28
10		6		0	0		22	4	26
11		6		1	0		24	1	24
12		12		0	0		17	0	9
13		9		0	0		12	2	10
14		10		0	0		15	1	20
15		1		0	0		17	1	30
16		18		0	0		38	1	34
17		3		3	0		50	0	20
18		7		0	0		31	-2	13
19		8		1	0		44	1	13
20		14		0	0		40	12	45
21		8		0	0		29	1	21
22		12		0	0		37	3	33
23		7		1	0		39	18	76
24		7		0	3		40	3	50
25		15		0	0		58	3	117
26		12		0	0		21	4	72
27		13		0	0		3	0	58
28		15		0	0		9	1	61
29		15		2	0		2	12	116
30		14		4	0		8	1	130
31		6		0	0		11	12	104
TOTAL		393		14	3		902	85	1,287
AVG		13		0			29	3	42

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	2990	11
SUMMER	1,285	18
TOTAL	4,275	29

COHO ADULT
3

SOCKEYE	WILD STEELHEAD	STEELHEAD
1,334	120	2,569

Video counting took place between 2000 and 0400 hours PST.

TABLE 38

U.S. ARMY ENGINEER DISTRICT, PORTLAND

Video Counts @ Bonneville

August 1997

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	WILD STEELHEAD	STEELHEAD	CHUM
1			12	0	0	0		4	71	
2			27	0	0	0		13	287	
3			29	2	0	0		11	139	
4			16	2	0	0		3	80	
5			6	0	0	0		11	192	
6			18	0	0	0		3	187	
7			38	0	0	0		6	202	
8			22	1	0	0		11	260	
9			36	4	2	0		5	123	
10			40	4	0	0		2	100	
11			62	13	1	0		0	73	
12			39	1	0	0		2	89	
13			39	2	1	0		0	97	
14			24	1	0	0		18	127	
15			32	3	0	0		14	97	
16			26	3	0	0		10	81	
17			61	3	0	0		1	48	
18			87	3	1	0		3	127	
19			113	1	0	0		7	309	
20			51	5	0	0		4	251	
21			45	2	1	0		5	432	
22			35	1	0	1		6	180	
23			51	1	0	0		5	121	
24			116	5	3	0		5	143	
25			199	1	7	-1		8	221	
26			156	4	10	3		15	250	
27			155	9	4	1		3	243	
28			218	4	3	1		8	184	
29			274	15	5	0		1	88	
30			231	9	13	0		2	97	
31			315	9	10	0		4	91	
TOTAL			2,573	108	61	5		190	4,990	
AVG			83	3	2			6	161	

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	2990	11
SUMMER	1,285	18
FALL	2,573	108
TOTAL	6,848	137

COHO ADULT	COHO JACK	SOCKEYE	WILD STEELHEAD	STEELHEAD
64	5	1,334	310	7,559

Video counting took place between 2000 and 0400 hours PST.

TABLE 39

U.S. ARMY ENGINEER DISTRICT, PORTLAND

Video Counts @ Bonneville

September 1997

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	PINK	WILD STEELHEAD	STEELHEAD	CHUM
1			293	3	-10	1		11	152	
2			264	8	14	-3		10	257	
3			274	16	22	-2		6	269	
4			306	8	31	6		31	179	
5			161	10	15	5		10	92	
6			82	6	7	1		-3	49	
7			124	1	-4	0		1	14	
8			292	26	1	1		9	175	
9			270	15	4	1		7	94	
10			430	36	27	9		7	135	
11			492	19	11	1		7	153	
12			271	39	13	0		4	114	
13			141	15	-3	0		1	58	
14			151	12	1	0		6	58	
15			145	22	2	0		15	156	
16			103	14	42	1		19	221	
17			55	3	17	3		7	245	
18			142	26	15	0		10	188	
19			71	14	7	0		28	247	
20			61	6	3	0		7	169	
21			37	4	1	0		9	160	
22			87	35	35	0		6	154	
23			93	36	15	0		49	387	
24			60	26	30	0		22	249	
25			86	29	14	0		21	326	
26			77	11	15	0		44	504	
27			47	2	24	0		18	287	
28			44	3	33	0		20	249	
29			31	5	16	0		0	117	
30			36	3	28	0		8	112	
TOTAL			4,726	453	426	24		390	5,570	
AVG			158	15	14			13	186	

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	2990	11
SUMMER	1,285	18
FALL	7,299	561
TOTAL	11,574	590

COHO ADULT	COHO JACK	SOCKEYE	WILD STEELHEAD	STEELHEAD
490	29	1,334	700	13,129

Video counting took place between 2000 and 0400 hours PST.

TABLE 40

U.S. ARMY ENGINEER DISTRICT, PORTLAND

Video Counts @ Bonneville

October 1997

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	PINK	WILD STEELHEAD	STEELHEAD	CHUM
1			8	3	1	0	0	3	24	
2			40	9	3	0	0	9	14	
3			18	-1	4	0	0	2	18	
4			13	1	0	0	0	2	-1	
5			33	5	2	0	0	3	21	
6			13	3	1	0	1	3	16	
7			7	3	1	0	0	3	18	
8			9	4	0	0	0	2	9	
9			2	4	0	0	0	2	11	
10			9	7	1	0	0	3	43	
11			5	-1	0	0	0	3	23	
12			3	3	0	0	0	6	36	
13			9	3	4	0	0	6	37	
14			18	5	1	0	0	6	40	
15			12	0	0	0	1	5	44	
16			13	0	1	0	0	2	26	
17			9	0	0	0	0	5	36	
18			11	1	0	0	0	4	19	
19			16	2	0	0	0	2	19	
20			23	2	0	0	0	5	29	
21			7	2	0	0	0	2	7	
22			1	-1	0	0	0	2	2	
23			17	-1	0	0	0	1	28	
24			4	1	4	0	0	3	25	
25			1	0	0	0	0	0	10	
26			9	2	0	0	0	0	22	
27			4	0	0	0	0	2	5	
28			16	0	1	0	0	2	15	
29			10	0	0	0	0	3	6	
30			4	0	-1	0	0	1	4	
			5	0	2	1	0	1	28	
TOTAL			349	56	25	1	2	93	634	
AVG			11	2	1			3	20	

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	2990	11
SUMMER	1,285	18
FALL	7,648	617
TOTAL	11,923	646

COHO ADULT	COHO JACK	SOCKEYE	WILD STEELHEAD	STEELHEAD
515	30	1,336	793	13,763

Video counting took place between 2000 and 0400 hours PST.

TABLE 41

U.S. ARMY ENGINEER DISTRICT, PORTLAND

Video Counts @ Bonneville

November 1997

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	WILD STEELHEAD	STEELHEAD	CHUM
1			16	1	16	0		2	73	0
2			34	0	14	0		5	99	2
3			20	0	19	0		4	89	2
4			14	0	9	0		2	95	0
5			21	0	2	0		1	82	0
6			11	0	4	1		2	63	0
7			11	0	0	0		2	89	0
8			11	0	8	0		2	49	1
9			13	0	4	0		1	39	0
10			2	0	6	0		1	47	0
11			6	0	3	0		0	36	0
12			1	0	2	0		0	45	2
13			3	0	6	0		2	64	0
14			2	0	1	0		0	45	0
15			6	0	3	0		0	42	1
16			2	0	0	0		0	30	0
17			1	0	0	0		0	31	0
18			1	0	1	0		0	65	1
19			2	0	0	0		0	76	0
20			3	0	1	0		0	72	1
21			1	0	0	0		0	39	0
22			1	0	0	0		1	74	0
23			4	0	2	0		2	45	0
24			3	0	3	0		1	31	1
25			1	-1	2	0		1	14	0
26			1	0	0	0		2	21	0
27			0	0	0	0		0	9	0
28			0	0	0	0		1	25	0
29			0	0	0	0		0	17	1
30			0	0	0	0		0	30	0
TOTAL			191	0	106	1		32	1,536	12
AVG			6		4			1	51	

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	WILD STEELHEAD	STEELHEAD	CHUM
SPRING	2990	11	621	31	1,336	825	15,299	12
SUMMER	1,285	18						
FALL	7,839	617						
TOTAL	12,114	646						

Video counting took place between 2000 and 0400 hours PST 1 through 15 Nov and 24 hours per day 16 through 30 Nov.

TABLE 42

U.S. ARMY ENGINEER DISTRICT, PORTLAND

Video Counts @ Bonneville

December 1997

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	WILD STEELHEAD	STEELHEAD	CHUM
1			-1					3	8	0
2			0					0	0	0
3			0					0	8	0
4			0					0	9	1
5			0					0	4	0
6			0					0	4	0
7			0					0	4	0
8			2					1	7	1
9			0					0	3	0
10			0					0	1	0
11			1					0	2	0
12			0					0	-1	0
13			0					0	3	0
14			0					1	1	0
15			0					0	0	0
16			1					-1	3	0
17			1					1	5	0
18			0					-2	-3	0
19			-1					0	4	0
20			0					0	1	0
21			-3					2	1	0
22			-1					1	0	0
23			0					0	5	0
24			0					0	5	0
25			0					3	5	0
26			0					1	4	0
27			0					2	4	0
28			0					3	8	0
29			0					0	-4	0
30			0					-1	-3	0
31			0					-1	-4	0
TOTAL			-1					0	0	2
AVG									3	

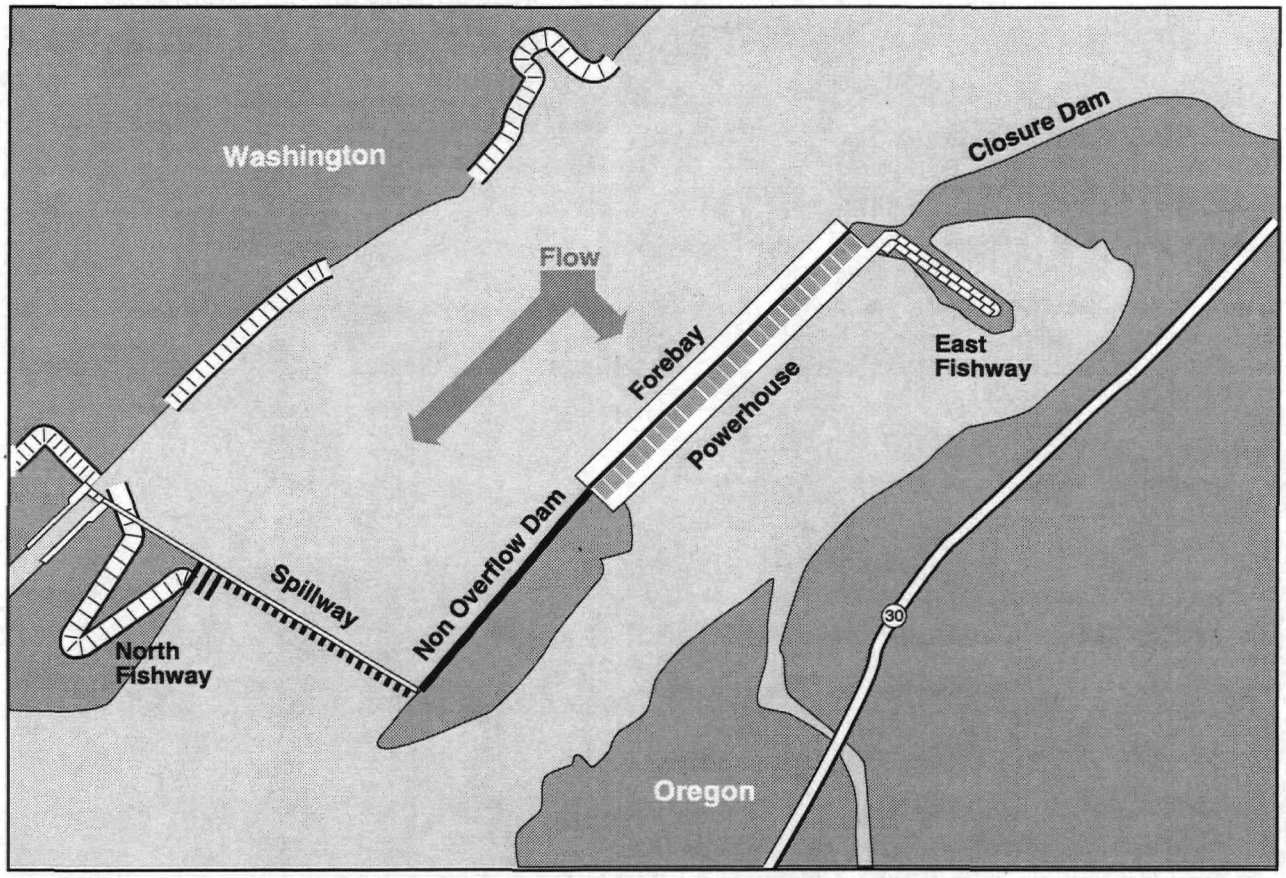
TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	2,990	11
SUMMER	1,285	18
FALL	7,838	617
TOTAL	12,113	646

COHO ADULT	COHO ADULT	SOCKEYE	WILD STEELHEAD	STEELHEAD	CHUM
621	31	1,336	825	15,299	14

Video counts were made 24 hours per day.

TABLE 42

The Dalles Lock and Dam



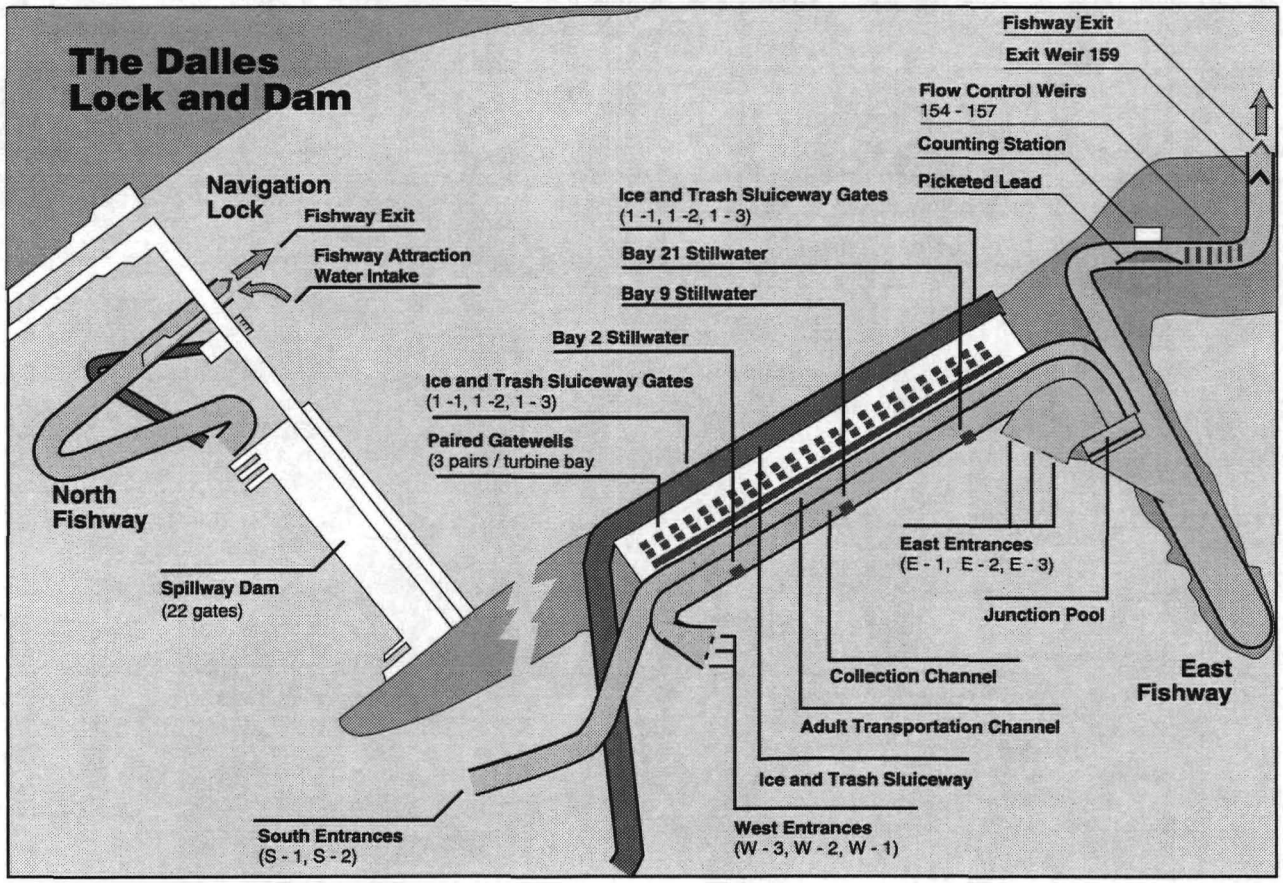


TABLE 43

MONTHLY TOTALS OF SALMONIDS AND SHAD COUNTED OVER THE DALLES DAM

1997

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*				25,639	42,467	14,718	8,011	23,666	100,652	8,648			223,801
STEELHEAD				658	483	2,187	18,916	34,055	84,006	24,451			164,756
SOCKEYE					4	11,707	20,292	395	29	3			32,430
COHO*								35	3,649	1,045			4,729
CHUM													0
PINK													0
MINI-JACKS**				4	15	447	2,052	777	2,127	894			6,316
TOTAL				26,301	42,969	29,059	49,271	58,928	190,463	35,041			432,032
SHAD					59,494	1,998,141	513,260	365					2,571,260

*Jacks included

**Salmonid fish under 12 inches in length.

TABLE 44

DISCHARGE AND WATER QUALITY DATA

THE DALLES PROJECT - 1997

JANUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	301.3	124.5		
2	316.3	90.5		
3	320.6	53.8		
4	314.8	48.4		
5	321.5	75.2		
6	306.6	135.4		
7	269.4	140.6		
8	279.2	138.1		
9	277.6	185.6		
10	284.7	209.1		
11	284.9	136.9		
12	278.5	107.9		
13	276.1	41.5		
14	304.9	71.0		
15	275.0	78.1		
16	273.3	57.9		
17	255.6	64.7		
18	272.3	106.0		
19	220.6	125.5		
20	247.3	67.7		
21	262.3	103.5	0.5	37.0
22	223.9	48.1	1.0	37.0
23	216.3	34.3	1.0	37.0
24	227.9	40.4		
25	244.5	43.0	1.5	37.0
26	258.2	66.0	2.0	37.0
27	263.2	39.2		
28	256.9	41.8		
29	248.1	58.9		
30	287.7	120.3		
31	355.0	143.5		
AVG.	275.0	90.2		

FEBRUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	300.3	101.8		
2	289.5	97.3		
3	259.9	60.9		
4	285.7	93.8		
5	296.5	110.8		
6	296.7	128.6		
7	298.1	90.6		
8	246.8	3.8		
9	291.5	51.0		
10	281.2	59.4		
11	229.7	14.8		
12	276.2	24.5		
13	268.8	5.1		
14	247.2	1.3		
15	274.9	28.3		
16	271.5	47.9		
17	256.8	16.0		
18	258.1	30.8		
19	265.9	45.5	0.3	38.0
20	289.2	38.5	0.3	38.0
21	270.8	24.3		
22	353.4	171.4		
23	328.8	103.4		
24	272.0	21.5		
25	275.3	15.3	0.4	40.0
26	279.4	26.7		
27	274.2	16.5		
28	261.5	0.0		
AVG.	278.6	51.1		

MARCH

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	257.7	0.0		
2	250.1	0.0		41.0
3	237.8	0.0		
4	229.6	1.3		
5	257.6	0.0		
6	260.6	0.0		
7	223.1	0.0		
8	240.2	0.0		
9	201.8	0.0		
10	219.1	0.0		
11	245.8	0.0		
12	251.1	0.0		
13	256.4	0.0		
14	265.1	0.0		
15	254.0	0.0		
16	223.2	0.0		
17	262.8	0.0		
18	260.0	5.5		
19	293.2	13.0		
20	311.5	43.7		
21	296.5	25.1		
22	324.1	104.3		
23	341.8	129.6		
24	302.0	104.4		
25	278.9	113.4		
26	344.5	155.8		
27	350.1	111.9		
28	412.1	175.6		
29	401.4	172.1		
30	381.1	185.4		
31	321.6	85.7		
AVG.	282.4	46.0		

TABLE 45

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

THE DALLES PROJECT
APRIL 1997

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1	4			0				24	1		0	323.4	81.1	0.8	45.0
2	17			0				48	4		0	366.4	80.0	0.8	45.0
3	4			0				10	2		0	293.4	25.1	1.5	45.0
4	19			0				37	5		0	307.2	19.6	1.9	45.0
5	13			0				13	0		0	296.9	6.4	1.5	45.0
6	46			0				25	2		0	241.7	0.0	1.5	46.0
7	63			1				30	3		0	267.4	0.0	2.0	45.0
8	123			0				31	6		0	263.7	0.0	2.0	46.0
9	91			0				25	8		0	260.7	0.0	2.0	45.0
10	120			1				34	10		0	274.1	55.2	1.0	46.0
11	166			0				16	2		0	273.7	74.1	1.5	47.0
12	988			0				25	5		0	254.0	66.0	2.0	46.0
13	1404			0				37	15		0	205.2	36.3	1.5	47.0
14	506			0				42	7		0	252.6	0.0	1.2	47.0
15	522			0				17	7		0	240.8	0.0	2.0	47.0
16	929			1				12	1		1	255.1	30.5	2.0	47.0
17	5092			2				21	6		1	270.7	82.6	2.0	47.0
18	2806			0				33	2		1	289.1	80.7	2.2	48.0
19	1489			1				18	3		0	306.1	10.6	1.8	49.0
20	3786			1				29	6		0	290.7	75.3	2.0	47.0
21	1824			2				16	1		0	334.8	118.2	1.3	48.0
22	1001			0				8	0		0	431.6	276.2	1.6	50.0
23	240			0				24	6		0	450.0	282.5	2.9	49.0
24	180			0				13	1		0	458.9	288.5	1.2	47.0
25	438			1				10	0		0	452.5	309.1	1.1	51.0
26	663			2				10	0		0	423.2	351.3	1.5	51.0
27	996			1				19	4		0	419.0	294.5	1.4	52.0
28	707			1				11	1		1	393.6	282.9	1.4	52.0
29	795			0				12	1		0	452.0	309.0	1.2	51.0
30	592			1				8	1		0	457.4	308.5	1.0	51.0
TOTAL	25,624			15				658	110		4				
AVG.	854			1				22	4			326.9	118.1	1.6	47.6

TABLE 45

TABLE 46

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

THE DALLES PROJECT
MAY 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1	680			0			0	4	1	1	0
2	798			2			0	6	0	0	0
3	1437			1			0	8	1	0	0
4	1957			3			0	10	2	0	0
5	2176			8			0	10	0	0	0
6	2792			2			0	17	1	0	0
7	1654			7			0	8	0	0	0
8	871			4			0	6	1	0	0
9	2356			4			0	9	1	0	0
10	3173			13			0	12	0	2	0
11	3718			23			0	16	1	0	0
12	2049			16			0	9	0	0	0
13	1641			13			0	15	0	2	0
14	1585			15			0	22	1	3	0
15	2240			23			0	18	0	7	0
16	2365			21			0	8	4	9	0
17	2190			30			0	15	0	48	0
18	1419			13			2	15	0	110	0
19	742			18			0	11	1	65	8
20	478			15			0	13	1	138	0
21	338			6			0	17	1	89	4
22	504			13			0	25	1	92	0
23	324			4			0	11	0	124	0
24	293			3			0	23	1	122	0
25	568			9			0	15	2	341	0
26	477			11			0	13	0	26	0
27	732			12			0	21	1	150	0
28	674			7			0	20	1	325	0
29	587			10			0	27	1	848	1
30	680			24			1	42	4	22,703	0
31	633			6			1	37	0	34,289	2
TOTAL	42,131			336			4	483	27	59,494	15
AVG.	1359			11				16	1	1,919	

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	478.6	315.6	1.0	50.0
2	468.1	300.0	1.4	49.0
3	427.6	286.9	1.5	51.0
4	399.9	290.4	1.0	51.0
5	383.9	243.7	1.2	51.0
6	403.8	261.8	1.1	51.0
7	403.8	255.9	1.1	52.0
8	403.8	260.1	1.2	51.0
9	404.4	257.9	1.5	52.0
10	386.8	249.3	1.1	52.0
11	379.4	243.5	2.1	51.0
12	452.7	279.6	1.1	51.0
13	509.8	343.8	1.1	52.0
14	496.7	330.4	1.3	56.0
15	454.6	293.0	1.2	54.0
16	443.1	284.0	1.3	55.0
17	481.9	307.2	1.3	57.0
18	515.7	327.0	1.0	56.0
19	526.8	335.5	1.3	55.0
20	526.5	333.2	1.2	55.0
21	522.7	336.4	1.2	55.0
22	503.0	331.4	1.6	55.0
23	493.6	319.0	1.4	55.0
24	498.4	317.3	1.0	56.0
25	465.3	299.0	2.8	56.0
26	467.7	305.2	1.0	56.0
27	455.1	292.0	1.3	56.0
28	464.0	301.7	1.0	56.0
29	468.0	286.2	1.2	56.0
30	449.5	225.8	1.8	56.0
31	461.5	298.7	1.6	56.0
AVG.	458.0	293.9	1.3	53.7

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	67,755	351

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
4	1,141	137	59,494	19

TABLE 47

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

THE DALLES PROJECT
JUNE 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1	718			14			0	33	1	19,184	0
2	516			4			0	39	2	22,528	0
3	376			6			2	34	2	52,302	1
4		504		3			3	34	2	47,772	2
5		424		5			8	29	0	41,056	0
6		414		3			0	23	0	43,884	0
7		599		1			1	35	0	45,039	0
8		485		2			2	45	0	37,165	0
9		338		7			7	24	0	49,085	0
10		569		8			38	56	0	95,761	0
11		471		2			18	28	0	85,688	1
12		320		8			14	36	4	63,056	1
13		568		5			43	34	2	71,438	2
14		481		6			71	40	0	59,133	2
15		402		6			105	49	3	92,112	6
16		369		8			156	62	1	92,462	6
17		356		25			187	66	1	103,853	0
18		396		4			318	47	0	80,425	7
19		438		7			302	59	5	48,694	12
20		571		6			384	83	5	73,833	14
21		706		12			516	84	5	91,456	10
22		649		12			720	96	6	85,015	12
23		517		2			603	86	4	85;231	27
24		465		15			990	99	7	43,339	19
25		564		26			975	143	7	88,205	31
26		569		12			1301	138	6	91,116	58
27		395		13			1085	126	13	88,992	44
28		463		20			1053	182	10	70,002	61
29		390		11			1234	168	10	60,869	60
30		417		15			1571	209	6	69,446	71
TOTAL	1,610	12,840		268			11,707	2,187	102	1,998,141	447
AVG.	537	476		9			390	73	3	66,605	15

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	483.9	336.5	1.3	56.0
2	506.3	303.2	1.2	57.0
3	556.9	339.3	1.2	57.0
4	532.8	358.5	1.2	57.0
5	520.2	344.9	1.7	58.0
6	501.2	347.1	1.0	57.0
7	511.7	378.5	1.0	57.0
8	511.6	399.7	1.3	57.0
9	496.6	314.2	1.3	57.0
10	516.6	314.1	1.3	58.0
11	516.9	345.6	1.4	58.0
12	540.9	400.4	1.2	59.0
13	566.1	362.9	1.2	58.0
14	564.0	369.6	1.5	58.0
15	570.7	407.3	1.5	58.0
16	554.2	340.7	1.2	59.0
17	557.1	404.4	1.3	58.0
18	542.6	337.4	1.4	58.0
19	529.1	330.2	1.3	59.0
20	502.8	340.8	1.3	59.0
21	487.2	303.5	1.3	59.0
22	464.3	295.8	1.3	59.0
23	441.7	240.4	1.4	59.0
24	453.0	244.6	1.3	59.0
25	400.8	243.9	1.5	60.0
26	368.8	194.5	1.5	60.0
27	385.4	239.0	1.3	60.0
28	372.5	236.4	2.0	61.0
29	351.0	230.0	2.8	60.0
30	302.8	172.6	1.6	62.0
AVG.	487.0	315.9	1.4	58.5

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	69,365	375
SUMMER	12,840	244
TOTAL	82,205	619

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
11,711	3,328	239	2,057,635	466

TABLE 48

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

THE DALLES PROJECT
JULY 1997

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1		409		26			1853	229	14	59,770	83	288.7	182.7	1.5	63.0
2		465		35			1388	278	25	65,052	72	289.1	180.7	1.4	62.0
3		399		29			1689	245	15	42,981	111	315.1	197.9	2.0	62.0
4		394		42			1738	282	31	50,415	123	274.9	175.5	2.5	61.0
5		400		42			1734	344	42	42,486	112	288.4	183.1	2.1	62.0
6		414		59			1621	343	36	40,564	138	284.6	183.0	3.0	64.0
7		462		36			1457	379	44	40,720	120	283.3	180.7	2.0	67.0
8		391		34			848	391	38	39,951	102	242.2	154.0	2.0	67.0
9		357		30			1092	384	72	29,659	92	249.3	158.5	2.2	66.0
10		338		31			622	414	59	17,824	115	276.5	176.8	2.5	65.0
11		287		27			552	417	83	13,174	102	285.4	181.0	2.0	65.0
12		232		30			466	416	60	12,135	69	270.1	171.5	2.0	61.0
13		244		19			377	446	88	11,214	48	258.0	163.9	3.5	61.0
14		244		27			282	521	78	9,157	52	261.3	166.2	1.4	61.0
15		175		51			416	479	86	7,153	52	276.6	176.3	1.5	61.0
16		172		36			380	430	76	6,154	114	289.9	184.1	2.0	66.0
17		126		47			465	446	111	6,640	50	299.7	191.6	1.6	62.0
18		143		10			316	410	78	3,960	52	294.8	188.5	2.0	65.0
19		137		17			396	555	57	2,339	46	302.4	191.7	2.0	67.0
20		101		9			268	443	91	2,757	42	270.0	170.1	2.0	63.0
21		135		21			366	588	107	1,485	35	267.9	171.3	1.5	67.0
22		143		25			339	871	243	1,836	52	261.2	169.9	3.0	67.0
23		99		16			249	868	172	1,177	52	279.0	177.5	2.0	67.0
24		114		34			268	977	260	1,146	44	244.0	155.0	2.8	69.0
25		84		41			234	839	212	776	28	261.0	164.3	2.5	68.0
26		95		34			238	753	195	701	27	260.5	165.9	2.0	68.0
27		106		42			205	1214	326	888	29	213.4	137.1	1.2	68.0
28		113		27			140	1129	332	451	17	261.4	167.5	2.8	70.0
29		103		31			103	1393	317	393	29	227.9	144.1	2.7	70.0
30		105		24			99	1097	264	225	20	206.5	131.7	2.8	69.0
31		70		22			91	1335	332	77	24	189.6	119.5	2.8	69.0
TOTAL		7,057		954			20,292	18,916	3,944	513,260	2,052				
AVG		228		31			655	610	127	16,557	66	266.9	169.7	2.2	65.3

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	69,365	375
SUMMER	19,897	1,198
TOTAL	89,262	1,573

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
32,003	22,244	4,183	2,570,895	2,518

TABLE 49

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

THE DALLES PROJECT

AUGUST 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	RIVER CONDITIONS DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1		126		19	0	0	59	1,848	470	97	37	196.8	122.4	2.5	70.0
2		97		20	0	0	40	1,679	413	51	31	172.6	108.9	3.0	69.0
3		81		18	0	0	38	1,778	426	48	26	167.8	107.3	3.1	70.0
4			121	18	0	0	43	1,970	468	30	29	176.9	113.1	4.0	71.0
5			153	34	0	0	52	1,428	300	13	26	199.0	125.2	3.0	70.0
6			200	34	0	0	26	1,847	440	20	36	245.0	154.8	2.3	70.0
7			230	36	0	0	20	1,929	333	29	26	209.2	132.5	2.3	70.0
8			108	12	0	0	12	1,032	205	12	17	211.8	135.8	2.5	70.0
9			167	16	0	0	8	861	151	17	19	224.5	141.9	2.5	70.0
10			115	14	0	0	14	932	137	-11	28	176.9	113.3	2.5	70.0
11			179	7	1	0	12	971	166	30	8	195.8	124.7	2.8	7.0
12			173	12	0	0	6	929	176	5	37	185.1	118.2	2.7	71.0
13			129	22	0	0	7	525	79	6	29	195.8	124.5	3.0	71.0
14			113	15	0	0	6	439	69	1	16	203.5	129.0	3.0	71.0
15			151	27	0	0	6	502	80	3	16	203.7	129.7	3.0	72.0
16			172	20	0	0	6	479	68	8	23	198.4	125.3	4.0	72.0
17			370	17	0	0	6	872	114	-4	20	177.1	112.1	3.0	72.0
18			279	33	0	0	2	998	168	6	26	186.6	120.0	3.0	72.0
19			468	17	0	0	6	602	85	4	26	201.8	128.8	3.0	72.0
20			883	21	0	0	0	502	48	-4	21	193.3	121.3	2.2	71.0
21			712	32	0	0	1	425	39	3	9	220.3	138.9	3.5	71.0
22			804	38	0	0	1	632	64	-1	30	214.9	136.4	3.2	71.0
23			457	25	0	0	2	950	106	1	34	199.1	126.1	2.9	71.0
24			367	26	1	0	2	1,064	103	3	26	157.7	100.8	4.0	72.0
25			775	28	0	0	3	1,164	117	2	18	194.2	124.4	3.0	71.0
26			1,193	30	0	0	2	1,120	133	6	17	179.1	115.1	3.0	72.0
27			1,457	55	2	0	5	1,018	111	-8	20	195.4	126.1	3.5	71.0
28			1,111	71	2	0	1	840	89	7	34	169.0	107.8	2.7	71.0
29			1,226	56	2	0	3	927	64	-2	28	180.3	122.8	3.0	71.0
30			2,879	59	7	1	4	1,310	71	-7	40	203.6	128.7	3.2	70.0
31			7,414	124	17	2	2	2,482	205	0	24	195.5	125.5	3.3	70.0
TOTAL		304	22,406	956	32	3	395	34,055	5,498	365	777				
AVG.		101	800	62	2		23	2,153	337	19	50	194.5	123.9	3.0	68.8

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	69,365	375
SUMMER	20,201	1,255
FALL	22,406	899
TOTAL	111,972	2,529

COHO ADULTS	COHO JACKS	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
32	3	32,398	56,299	9,681	2,571,260	3,295

TABLE 50

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

THE DALLES PROJECT
SEPTEMBER 1997

FISH COUNTS / RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1			9,277	124	30	2	1	2,946	185		27	141.5	0.0	3.1	71.0
2			11,288	216	55	10	8	3,480	396		55	142.9	0.0	4.2	72.0
3			4,781	207	85	12	9	2,796	282		27	148.4	0.0	3.5	71.0
4			4,627	220	78	12	7	3,214	356		77	140.5	0.0	3.5	72.0
5			4,522	326	85	9	0	2,615	278		49	145.2	0.0	3.5	71.0
6			2,592	340	64	5	0	2,164	237		54	148.5	0.0	3.5	71.0
7			3,754	397	92	4	1	3,823	398		53	109.9	0.0	3.5	71.0
8			3,735	329	106	12	1	3,644	316		80	115.9	0.0	3.3	70.0
9			2,936	282	60	12	0	2,527	274		38	129.3	0.0	4.2	71.0
10			2,608	279	61	13	0	2,345	222		52	140.3	0.0	4.5	72.0
11			1,779	304	47	22	0	1,895	150		72	129.0	0.0	4.5	71.0
12			2,698	326	72	14	0	1,705	180		60	152.2	0.0	3.0	69.0
13			3,906	323	71	15	0	1,900	161		71	133.7	0.0	3.4	70.0
14			3,594	355	72	15	0	2,512	235		68	116.9	0.0	3.4	70.0
15			4,621	417	110	21	0	2,930	307		70	119.8	0.0	3.4	69.5
16			3,983	539	72	10	0	2,497	279		55	144.0	0.0	3.8	68.0
17			3,668	682	112	18	0	3,774	501		93	149.9	0.0	4.5	71.0
18			2,035	452	189	17	0	4,833	599		62	164.2	0.0	3.2	71.0
19			1,707	494	381	37	0	4,439	441		89	170.1	0.0	4.0	71.0
20			1,439	346	231	61	0	2,175	218		117	163.6	0.0	2.2	68.0
21			1,675	520	205	25	0	2,755	242		117	173.0	0.0	2.0	68.0
22			914	182	141	29	0	2,102	220		36	150.1	0.0	2.7	68.0
23			899	274	87	26	0	2,312	232		86	164.5	0.0	4.0	68.0
24			1,060	376	101	15	0	2,368	239		112	196.4	0.0	4.0	68.0
25			1,111	385	82	25	2	1,826	180		79	183.3	0.0	4.2	68.0
26			837	426	60	15	0	1,997	202		59	167.1	0.0	3.0	67.0
27			1,281	494	78	19	0	3,458	419		98	163.9	0.0	3.1	65.0
28			1,018	414	134	15	0	4,168	550		61	167.8	0.0	3.5	65.0
29			904	464	123	17	0	3,065	270		88	131.9	0.0	3.5	65.0
30			542	368	51	7	0	1,741	108		122	154.7	0.0	3.8	65.0
TOTAL			89,791	10,861	3,135	514	29	84,006	8,677		2,127				
AVG.			2,993	362	105	17		2,800	289		71	148.6	0.0	3.5	69.3

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	69,365	375
SUMMER	20,201	1,255
FALL	112,197	11,760
TOTAL	201,763	13,390

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
3,167	517	32,427	140,305	18,358	2,571,260	5,422

TABLE 51

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

THE DALLES PROJECT
OCTOBER 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1			606	221	24	6	2	1,263	59		62
2			506	243	42	18	0	1,253	86		83
3			342	225	38	3	0	1,640	203		29
4			427	228	44	1	0	1,546	171		61
5			333	183	86	18	0	1,210	108		49
6			311	124	219	27	0	1,956	221		54
7			221	158	152	14	0	1,490	201		18
8			191	188	39	4	0	986	120		44
9			214	99	8	1	0	598	53		29
10			211	71	24	1	0	481	38		29
11			203	30	14	2	0	509	30		50
12			151	66	19	4	0	645	63		22
13			126	36	16	3	0	709	47		33
14			149	73	25	4	0	912	91		31
15			175	53	7	5	0	880	48		41
16			171	92	16	2	0	961	60		44
17			168	111	10	2	0	787	59		24
18			133	63	1	2	0	641	45		14
19			112	111	4	4	0	641	46		11
20			114	93	6	1	1	591	35		8
21			120	49	18	2	0	602	31		20
22			123	48	10	4	0	589	26		28
23			116	60	11	2	0	674	31		42
24			83	31	10	3	0	441	29		13
25			92	45	2	2	0	354	24		15
26			68	31	3	0	0	424	31		7
27			56	22	10	0	0	435	28		12
28			67	30	6	2	0	273	7		6
29			54	42	5	2	0	391	17		7
30			70	21	18	5	0	290	20		2
31			76	12	13	1	0	279	13		6
TOTAL			5,789	2,859	900	145	3	24,451	2,041		894
AVG.			187	92	29	5		789	66		29

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	176.1	0.0	4.0	69.0
2	155.7	0.0	4.0	69.0
3	182.2	0.0	4.0	69.0
4	135.0	0.0	4.5	68.0
5	131.6	0.0	3.5	68.0
6	183.1	0.0	3.6	59.0
7	147.0	0.0	4.5	68.0
8	204.8	0.0	3.2	57.0
9	193.3	0.0	3.6	66.0
10	175.3	0.0	3.5	62.0
11	190.0	0.0	4.5	63.0
12	214.0	2.5	3.4	63.0
13	176.0	0.0	3.8	62.0
14	186.4	0.0	3.7	60.0
15	202.8	0.0	3.8	59.0
16	200.2	0.0	3.6	59.0
17	208.1	0.0	3.0	61.0
18	177.7	0.0	3.8	60.0
19	154.6	0.0	3.3	59.0
20	142.4	0.0	4.3	59.0
21	133.2	0.0	4.0	59.0
22	129.6	0.0	3.0	60.0
23	153.8	0.0	3.0	60.0
24	168.2	0.0	3.0	60.0
25	109.2	0.0	4.0	59.0
26	112.4	0.0	0.0	58.0
27	125.4	0.0	3.5	60.0
28	153.9	0.0	3.6	58.0
29	132.6	0.0	4.0	58.0
30	131.2	0.0	3.5	58.0
31	141.6	0.0	3.5	59.0
AVG.	162.2	0.1	3.6	61.6

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	69,365	375
SUMMER	20,201	1,255
FALL	117,986	14,619
TOTAL	207,552	16,249

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
4,067	662	32,430	164,756	20,399	2,571,260	6,316

TABLE 52

DISCHARGE AND WATER QUALITY DATA
THE DALLES PROJECT - 1997

NOVEMBER

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	123.8	0.0		
2	118.6	0.0		
3	148.4	0.0		
4	160.1	0.0		
5	146.9	0.0		
6	173.0	0.0		
7	171.0	0.0		
8	122.4	0.0		
9	152.7	0.0		
10	141.3	0.0		
11	147.6	0.0		
12	145.3	0.0		
13	156.4	0.0		
14	147.6	0.0		
15	122.7	0.0		
16	166.0	0.0		
17	162.1	0.0		
18	142.1	0.0		
19	151.2	0.0		
20	119.5	0.0		
21	146.0	0.0		
22	145.9	0.0		
23	150.4	0.0		
24	142.5	0.0		
25	141.7	0.0		
26	180.7	0.0		
27	147.2	0.0		
28	136.1	0.0		
29	131.6	0.0		
30	136.1	0.0		
AVG.	145.9	0.0		

DECEMBER

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	154.3	0.0		
2	155.5	0.0		
3	192.4	0.0		
4	182.7	0.0		
5	172.7	0.0		
6	141.2	0.0		
7	179.8	0.0		
8	160.8	0.0		
9	180.6	0.0		
10	172.0	0.0		
11	199.3	0.0		
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
AVG.	171.9	0.0		

TABLE 53

YEARLY TOTALS OF SALMONIDS COUNTED OVER THE DALLES DAM
1957-1997

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
1993	184,953	124,829	62,252	4,360			376,394
1994	161,758	112,253	9,356	4,376			287,743
1995	141,793	145,844	7,166	3,269			298,072
1996	167,911	162,456	25,055	4,583			360,005
1997	223,801	164,756	32,430	4,729			425,716
Totals	9,439,068	5,884,708	2,426,350	438,823	196	181	18,189,326
10-Year Average	206,955	170,558	40,175	6,123			423,821

*Jacks Included

TABLE 54

TABLE 54

MONTHLY COUNT OF CHINOOK SALMON
THE DALLES DAM 1957 - 1997

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	35,843	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	25,083	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	3,084			195,049	43,617	50,527	100,905	67,552
1966			1,088	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	7,848	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	19,876	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	22,815	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
1993				42,391	25,824	14,165	6,481	19,297	71,395	5,400			184,953	69,356	20,063	95,534	12,298
1994				6,573	4,938	7,376	8,360	22,910	98,997	12,604			161,758	11,798	15,997	133,963	25,470
1995				3,008	4,244	6,176	7,111	23,094	82,723	15,437			141,793	7,553	13,558	120,682	32,813
1996				5,631	20,896	8,018	6,718	26,505	90,762	9,381			167,911	27,127	14,488	126,296	5,851
1997				25,639	42,467	14,718	8,011	23,666	100,652	8,648			223,801	69,740	21,456	132,605	16,249
Total			2,197	1,313,798	1,215,973	846,183	801,147	946,315	3,902,049	408,152	3,254		9,439,068	2,579,895	1,657,833	5,201,340	2,204,575
10-Year Average				24,811	20,408	11,657	8,661	28,578	102,163	10,592	736		206,955	46,049	20,207	140,700	28,776

*Jacks included

TABLE 55

MONTHLY COUNT OF SOCKEYE SALMON
THE DALLES DAM; 1957 - 1997

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
1993					2	36,517	25,584	146	3				62,252
1994						6,752	2,594	8	2				9,356
1995					1	4,195	2,890	61	15	4			7,166
1996						17,013	7,983	44	15				25,055
1997					4	11,707	20,292	395	29	3			32,430
Total				1	1,406	943,244	1,458,570	22,086	1,016	26	1		2,426,350
10-Year Average					4	19,885	20,080	191	15				40,175

TABLE 55

TABLE 56

MONTHLY COUNT OF COHO SALMON
THE DALLES DAM; 1957-1997

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
1993								18	3,256	1,086			4,360	3,416
1994							1	121	2,922	1,332			4,376	590
1995							6	204	2,013	1,046			3,269	483
1996							3	73	3,795	712			4,583	967
1997								35	3,649	1,045			4,729	662
Total							1,568	21,347	352,706	62,877	325		438,823	175,032
10-Year Average							3	107	4,581	1,421			6,123	1,823

*Includes Jacks

TABLE 57

MONTHLY COUNT OF STEELHEAD
THE DALLES DAM: 1957 - 1997

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
1993				2,367	731	3,847	17,962	20,194	61,600	18,128			124,829
1994				1,327	391	2,263	11,434	11,703	55,247	29,889			112,254
1995				435	407	2,329	11,953	46,428	59,604	24,688			145,844
1996				669	481	1,981	20,317	61,136	65,400	12,472			162,456
1997				658	483	2,187	18,916	34,055	84,006	24,451			164,756
Total		25	5,241	38,573	29,362	104,291	1,277,915	1,408,707	2,532,277	481,679	6,639		5,884,709
10-Year Average				1,423	660	2,887	21,274	36,680	85,109	22,111			170,558

WILD STEELHEAD COUNTED AT THE DALLES DAM 1997

THE DALLES DAM		Oregon Ladder	Washington Ladder
April	Wild Steelhead		
1	1	0	1
2	4	4	0
3	2	1	1
4	5	4	1
5	0	0	0
6	2	2	0
7	3	2	1
8	6	6	0
9	8	7	1
10	10	8	2
11	2	1	1
12	5	1	4
13	15	14	1
14	7	7	0
15	7	7	0
16	1	1	0
17	6	4	2
18	2	1	1
19	3	2	1
20	6	4	2
21	1	1	0
22	0	0	0
23	6	6	0
24	1	0	1
25	0	0	0
26	0	0	0
27	4	2	2
28	1	1	0
29	1	1	0
30	1	1	0
TOTAL	110	88	22
AVE	4	3	1

TOTAL	WILD STEELHEAD
TO DATE	110

TABLE 59

WILD STEELHEAD COUNTED AT
THE DALLES DAM 1997

THE DALLES DAM		Oregon	Washington
May	Wild Steelhead	Ladder	Ladder
1	1	1	0
2	0	0	0
3	1	1	0
4	2	2	0
5	0	0	0
6	1	0	1
7	0	0	0
8	1	1	0
9	1	1	0
10	0	0	0
11	1	0	1
12	0	0	0
13	0	0	0
14	1	1	0
15	0	0	0
16	4	1	3
17	0	0	0
18	0	0	0
19	1	1	0
20	1	1	0
21	1	0	1
22	1	1	0
23	0	0	0
24	1	1	0
25	2	2	0
26	0	0	0
27	1	1	0
28	1	1	0
29	1	1	0
30	4	0	4
31	0	0	0
TOTAL	27	17	10
AVE	1	1	0

TOTAL	WILD STEELHEAD
TO DATE	137

THE DALLES DAM		Oregon	Washington
June	Wild Steelhead	Ladder	Ladder
1	1	1	0
2	2	1	1
3	2	1	1
4	2	0	2
5	0	0	0
6	0	0	0
7	0	0	0
8	0	0	0
9	0	0	0
10	0	0	0
11	0	0	0
12	4	4	0
13	2	2	0
14	0	0	0
15	3	2	1
16	1	1	0
17	1	0	1
18	0	0	0
19	5	5	0
20	5	5	0
21	5	5	0
22	6	5	1
23	4	4	0
24	7	6	1
25	7	7	0
26	6	5	1
27	13	12	1
28	10	8	2
29	10	8	2
30	6	6	0
TOTAL	102	88	14
AVE	3	3	0

TOTAL	WILD STEELHEAD
TO DATE	239

TABLE 60

WILD STEELHEAD COUNTED AT THE DALLES DAM 1997

THE DALLES DAM		Oregon Ladder	Washington Ladder
July	Wild Steelhead		
1	14	8	6
2	25	24	1
3	15	13	2
4	31	23	8
5	42	37	5
6	36	29	7
7	44	36	8
8	38	31	7
9	72	56	16
10	59	49	10
11	83	72	11
12	60	48	12
13	88	80	8
14	78	71	7
15	86	74	12
16	76	71	5
17	111	91	20
18	78	73	5
19	57	43	14
20	91	73	18
21	107	72	35
22	243	203	40
23	172	150	22
24	260	208	52
25	212	166	46
26	195	158	37
27	326	278	48
28	332	218	114
29	317	196	121
30	264	174	90
31	332	304	28
TOTAL	3,944	3,129	815
AVE	127	101	26

TOTAL	WILD STEELHEAD
TO DATE	4,183

THE DALLES DAM		Oregon Ladder	Washington Ladder
August	Wild Steelhead		
1	470	396	74
2	413	334	79
3	426	360	66
4	468	401	67
5	300	199	101
6	440	386	54
7	333	263	70
8	205	182	23
9	151	115	36
10	137	124	13
11	166	130	36
12	176	158	18
13	79	53	26
14	69	50	19
15	80	67	13
16	68	52	16
17	114	108	6
18	168	119	49
19	85	66	19
20	48	47	1
21	39	28	11
22	64	54	10
23	106	84	22
24	103	91	12
25	117	65	52
26	133	91	42
27	111	85	26
28	89	66	23
29	64	48	16
30	71	48	23
31	205	161	44
TOTAL	5,498	4,431	1,067
AVE	177	143	34

TOTAL	WILD STEELHEAD
TO DATE	9,681

TABLE 61

WILD STEELHEAD COUNTED AT THE DALLES DAM

THE DALLES DAM		Oregon	Washington
September	Wild Steelhead	Ladder	Ladder
1	185	178	7
2	396	382	14
3	282	272	10
4	356	348	8
5	278	270	8
6	237	227	10
7	398	391	7
8	316	314	2
9	274	272	2
10	222	210	12
11	150	149	1
12	180	168	12
13	161	154	7
14	235	224	11
15	307	305	2
16	279	262	17
17	501	479	22
18	599	593	6
19	441	437	4
20	218	216	2
21	242	242	0
22	220	215	5
23	232	232	0
24	239	235	4
25	180	178	2
26	202	200	2
27	419	414	5
28	550	545	5
29	270	263	7
30	108	104	4
TOTAL	8,677	8,479	198
AVE	289	283	7

TOTAL	WILD STEELHEAD
TO DATE	18,358

THE DALLES DAM		Oregon	Washington
October	Wild Steelhead	Ladder	Ladder
1	59	58	1
2	86	84	2
3	203	202	1
4	171	170	1
5	108	108	0
6	221	220	1
7	201	200	1
8	120	119	1
9	53	52	1
10	38	38	0
11	30	30	0
12	63	62	1
13	47	47	0
14	91	90	1
15	48	48	0
16	60	60	0
17	59	59	0
18	45	44	1
19	46	46	0
20	35	36	-1
21	31	31	0
22	26	24	2
23	31	31	0
24	29	29	0
25	24	23	1
26	31	31	0
27	28	24	4
28	7	7	0
29	17	17	0
30	20	19	1
31	13	13	0
TOTAL	2,041	2022	19
AVE	66	65	1

TOTAL	WILD STEELHEAD
TO DATE	20,399

John Day Dam Lock and Dam

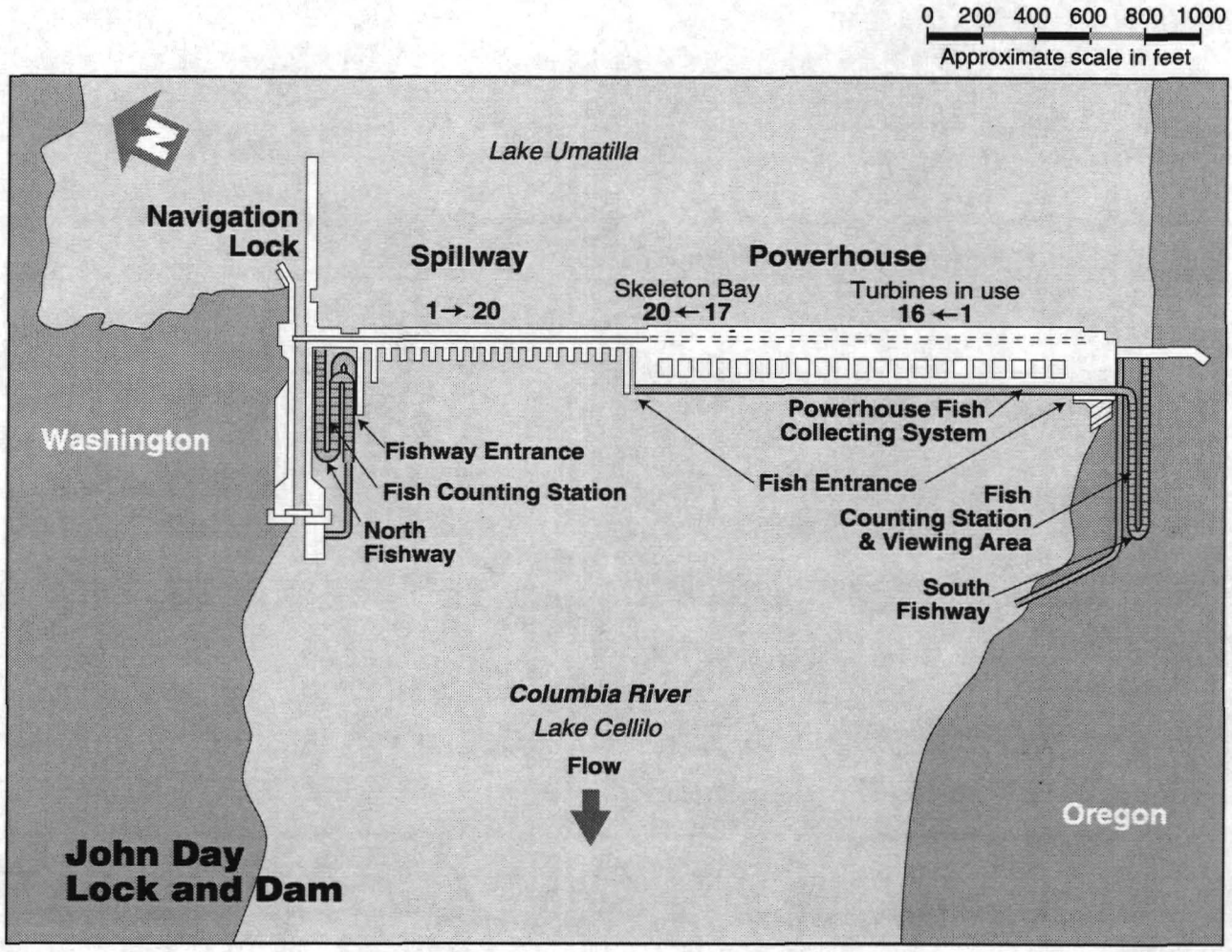


TABLE 62

MONTHLY TOTALS OF SALMONIDS AND SHAD COUNTED OVER JOHN DAY DAM

1997

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL*
CHINOOK*				13,579	45,408	16,551	8,328	10,355	81,039	9,980			185,240
STEELHEAD				2,171	810	2,021	12,847	22,179	75,119	41,891			157,038
SOCKEYE					10	11,605	23,604	603	4	4			35,830
COHO*								1	2,860	1,368			4,229
MINI-JACKS**						95	1,157	816	1,981	1,418			5,467
CHUM													
PINK													
TOTAL				15,750	46,228	30,272	45,936	33,954	161,003	54,661			387,804
SHAD					17	399,054	607,629	1,196					1,007,896

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

TABLE 62

TABLE 63

DISCHARGE AND WATER QUALITY DATA

JOHN DAY PROJECT 1997

JANUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	282.6	53.9		
2	314.9	34.7		
3	310.6	25.2		
4	306.3	21.6		
5	321.1	44.5		
6	300.8	49.8		
7	261.5	34.2		
8	272.3	51.1		
9	274.0	55.0	0.0	38.0
10	282.0	55.3	1.0	37.0
11	279.0	32.8		
12	274.3	29.9		
13	277.5	15.2		
14	299.9	31.1		
15	272.2	28.3		
16	279.5	36.2		
17	255.2	24.6		
18	274.7	41.8		
19	218.7	38.7		
20	253.5	12.5		
21	254.2	17.5		
22	223.6	10.8	1.0	36.0
23	212.9	6.3	0.5	38.0
24	223.2	7.2	0.0	37.0
25	247.0	7.2	1.8	37.0
26	260.4	24.8	1.3	37.0
27	268.2	8.4	1.0	37.0
28	252.7	5.2		
29	249.6	9.4		
30	292.9	35.2		
31	362.5	77.3		
AVG.	272.8	29.9		

FEBRUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	289.2	23.7		
2	274.3	13.6		
3	263.1	12.3		
4	286.6	28.2		
5	296.5	37.1		
6	299.6	30.4		
7	290.2	15.0		
8	248.0	0.1		
9	290.0	20.0		
10	282.8	29.7		
11	227.9	4.0		
12	276.9	0.0		
13	264.2	0.6	0.0	37.0
14	255.6	0.0	0.0	37.0
15	268.1	0.0	0.5	37.0
16	274.5	11.3	0.5	37.0
17	260.3	1.2	0.5	37.0
18	263.1	38.7	0.0	38.0
19	267.7	55.0		
20	284.5	72.6		
21	272.9	43.1		
22	359.6	60.1		
23	333.2	33.9		
24	277.5	14.3		
25	273.8	17.5		
26	275.6	18.0	0.4	40.0
27	276.7	14.0	1.0	40.0
28	259.3	0.0	1.0	40.0
AVG.	278.3	21.2		

MARCH

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	253.9	0.0		
2	252.3	0.0	1.0	40.0
3	232.0	0.0	1.5	41.0
4	231.0	3.1	1.1	40.0
5	258.6	12.5	1.5	40.0
6	256.2	5.3	1.2	40.0
7	219.7	0.0	1.5	40.0
8	239.0	0.0	2.0	40.0
9	203.0	0.0	2.0	41.0
10	215.2	0.0	2.5	41.0
11	252.2	0.0	1.5	42.0
12	244.7	0.0		
13	260.6	0.0		
14	264.6	0.0		
15	254.8	0.0		
16	219.0	0.0		
17	261.4	0.0		
18	268.2	4.3		
19	295.9	9.8	1.2	43.0
20	315.7	24.1		
21	300.6	15.3	1.1	43.0
22	328.1	24.0		
23	351.4	39.5		
24	304.8	25.1		
25	292.7	32.5	1.0	44.0
26	353.5	73.1		
27	355.5	58.9		
28	427.8	118.8		
29	409.6	103.3		
30	386.3	84.1		
31	335.8	41.1		
AVG.	285.3	21.8		

TABLE 64

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

JOHN DAY PROJECT

APRIL 1997

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCH	DEG
1	1			0				48	14			316.6	66.1	1.2	45.0
2	1			0				51	15			375.4	110.6	0.5	45.0
3	3			0				87	10			292.7	19.6	0.5	44.0
4	6			0				166	44			311.3	8.9	1.5	45.0
5	5			0				60	12			296.1	0.0	1.5	45.0
6	16			0				135	36			242.2	0.0	1.8	46.0
7	6			0				96	22			276.7	0.0	3.0	45.0
8	2			0				77	28			259.3	0.0	1.9	46.0
9	11			1				98	25			268.7	0.0	1.5	46.0
10	24			0				37	18			272.6	0.0	1.0	46.0
11	21			0				74	34			281.4	0.0	1.8	48.0
12	20			1				40	16			255.0	0.0	1.0	46.0
13	244			0				125	58			205.5	0.0	1.0	47.0
14	173			0				27	35			252.5	0.0	1.0	47.0
15	178			0				114	25			241.5	0.0	1.5	48.0
16	41			0				85	20			258.7	0.4	1.5	49.0
17	75			0				68	21			276.2	4.2	1.5	49.0
18	942			1				130	26			288.6	0.0	1.8	49.0
19	2268			0				118	33			313.6	0.0	2.0	49.0
20	2129			0				54	18			300.5	12.8	2.0	49.0
21	1499			0				109	40			342.2	32.0	1.5	51.0
22	1063			0				62	29			449.1	119.9	1.0	50.0
23	242			0				26	11			464.8	132.6	1.2	50.0
24	192			0				29	6			472.3	148.7	1.0	50.0
25	465			0				33	12			455.6	147.0	1.0	50.0
26	142			0				36	16			435.2	117.8	2.6	51.0
27	590			0				65	30			437.6	106.9	0.5	51.0
28	255			0				65	13			399.5	61.4	0.7	50.0
29	1767			0				32	12			471.1	141.4	1.0	49.0
30	1195			0				24	13			464.2	146.9	1.0	51.0
TOTAL	13,576			3				2,171	692						
AVG.	453							72	23			332.6	45.9	1.4	47.9

TABLE 65

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

JOHN DAY PROJECT

MAY 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1	548			0			0	13	5	0	
2	910			1			0	-2	1	0	
3	884			4			0	13	7	0	
4	2226			0			0	17	8	0	
5	2559			1			0	18	13	0	
6	2050			4			0	54	19	0	
7	2635			2			0	30	8	0	
8	2292			1			0	65	28	0	
9	1924			9			0	48	17	0	
10	2774			6			0	40	18	0	
11	4558			5			0	25	7	0	
12	1742			11			0	24	5	0	
13	2690			14			0	21	2	0	
14	1138			12			1	17	12	0	
15	1561			7			1	7	-1	0	
16	1592			14			0	54	21	0	
17	1803			25			0	47	19	0	
18	1692			12			0	29	9	0	
19	951			19			1	30	16	0	
20	642			22			5	36	6	0	
21	377			14			0	22	6	0	
22	259			7			0	19	9	0	
23	242			6			0	17	6	0	
24	120			3			0	20	9	0	
25	245			7			0	23	5	0	
26	557			13			0	16	6	0	
27	494			16			0	15	2	0	
28	890			8			0	21	2	2	
29	1089			12			2	32	10	5	
30	1441			13			0	14	0	4	
31	2244			11			0	25	-1	6	
TOTAL	45,129			279			10	810	274	17	
AVG.	1456			9				26	9		

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCH	TURBIDITY DEG
1	494.8	153.9	0.7	51.0
2	476.9	132.9	1.0	50.0
3	442.5	114.6	1.0	50.0
4	412.5	101.8	1.0	50.0
5	397.1	92.5	0.5	50.0
6	424.5	116.2	0.5	50.0
7	414.7	107.3	0.5	51.0
8	416.4	104.1	1.0	51.0
9	422.5	119.9	1.3	52.0
10	405.2	109.0	1.5	54.0
11	394.0	91.2	1.1	54.0
12	477.5	149.8	1.5	54.0
13	520.4	203.6	1.2	53.0
14	514.3	189.3	1.0	54.0
15	465.4	137.7	1.2	53.0
16	455.2	132.5	1.6	53.0
17	503.0	172.8	1.5	56.0
18	528.5	199.7	1.0	55.0
19	540.0	215.0	1.3	55.0
20	539.6	212.1	1.5	55.0
21	536.7	211.0	1.7	53.0
22	517.3	194.9	0.9	53.0
23	518.7	202.5	1.2	55.0
24	508.4	219.6	1.6	54.0
25	480.2	164.4	2.0	57.0
26	477.3	152.9	2.6	55.0
27	475.5	148.4	1.0	55.0
28	474.3	150.2	1.0	56.0
29	474.6	155.5	1.1	55.0
30	464.5	146.5	1.5	56.0
31	484.1	176.0	1.5	57.0
AVG.	472.8	154.1	1.2	53.5

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	58,705	282

STEELHEAD	WILD STEELHEAD	SHAD
2,981	966	17

TABLE 66

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

JOHN DAY PROJECT

JUNE 1997

FISH COUNTS / **RIVER CONDITIONS**

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCH	TURBIDITY DEG
1	1154			12			0	40	3	12	0	503.2	192.8	1.3	56.0
2	809			11			0	42	4	42	0	521.0	215.9	1.0	52.0
3	748			13			3	42	1	161	0	563.2	253.8	1.5	57.0
4	311			4			0	27	6	167	0	555.8	242.9	1.2	57.0
5	526			5			2	25	2	166	0	533.5	222.2	1.3	56.0
6		572		2			1	38	7	55	0	520.1	200.3	1.2	57.0
7		549		6			0	39	7	111	0	527.9	202.4	1.0	57.0
8		481		9			2	18	2	72	0	528.9	208.0	1.5	56.0
9		409		8			9	52	5	169	0	529.6	215.6	1.5	57.0
10		593		5			7	36	-2	2,703	0	528.9	208.8	1.1	58.0
11		448		8			13	54	0	2,899	0	529.8	208.9	1.5	58.0
12		319		10			18	42	7	1,106	0	560.1	245.1	1.1	57.0
13		231		2			10	31	1	1,006	1	581.0	261.3	1.5	57.0
14		360		5			42	24	2	5,060	0	580.6	259.4	1.5	57.0
15		558		5			48	42	1	20,824	0	580.1	262.0	1.5	57.0
16		591		1			111	58	5	25,103	0	578.8	250.3	1.5	58.0
17		492		8			120	68	0	30,311	0	568.3	246.8	1.5	58.0
18		382		2			228	70	0	16,858	0	560.2	263.3	1.3	60.0
19		277		5			245	66	1	4,184	6	544.4	221.5	1.1	59.0
20		321		4			228	36	1	4,428	0	521.8	201.6	1.0	59.0
21		444		4			398	60	1	8,439	0	503.7	181.8	1.5	58.0
22		543		1			561	84	0	14,827	5	482.7	174.9	1.5	58.0
23		587		10			780	110	4	12,122	6	467.6	155.7	1.2	59.0
24		564		6			881	63	4	13,081	6	470.3	159.3	1.2	59.0
25		693		14			1,074	109	10	39,607	15	412.5	100.6	1.4	59.0
26		623		14			1,194	95	0	33,577	1	389.8	95.9	1.4	60.0
27		603		28			1,371	144	12	45,652	17	396.1	87.1	1.2	60.0
28		578		26			1,170	155	8	38,669	6	387.4	69.0	1.5	60.0
29		773		24			1,422	150	22	27,526	18	362.3	49.5	1.8	60.0
30		747		13			1,667	201	7	50,117	14	313.4	23.7	1.2	60.0
TOTAL	3,548	12,738		265			11,605	2,021	121	399,054	95				
AVG.	710	510		9			387	67	4	13,302	3	503.4	189.3	1.3	57.9

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	62,253	327
SUMMER	12,738	220
TOTAL	74,991	547

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
11,615	5,002	1,087	399,071	95

TABLE 67

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

JOHN DAY PROJECT
JULY 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1		521		15			1,953	152	7	55,828	40
2		380		15			1,562	289	5	54,805	30
3		385		17			1,552	177	7	50,899	35
4		436		34			1,458	204	22	50,270	43
5		385		29			1,813	251	9	50,025	26
6		416		24			1,720	266	29	38,064	58
7		545		56			1,993	284	32	38,622	73
8		470		38			1,305	317	34	58,110	32
9		508		30			1,111	322	25	49,454	36
10		300		37			1,129	327	39	16,819	40
11		201		26			856	215	17	14,693	40
12		410		26			764	301	33	16,550	39
13		204		33			592	263	28	18,231	53
14		246		25			432	314	30	25,332	30
15		176		38			366	300	45	9,362	42
16		170		28			433	323	34	8,924	46
17		179		45			423	362	30	10,268	33
18		151		23			366	388	36	8,073	47
19		112		24			362	355	29	6,661	32
20		153		24			384	352	30	4,459	24
21		180		30			451	746	96	7,280	42
22		105		45			460	545	61	3,335	40
23		96		25			402	569	91	2,285	25
24		135		39			361	707	96	2,975	48
25		80		17			224	489	87	1,429	34
26		116		27			254	570	115	1,480	35
27		97		24			248	524	100	1,016	19
28		57		24			182	632	123	954	24
29		80		36			213	770	155	819	37
30		74		35			159	902	152	436	36
31		48		23			76	601	115	171	18
TOTAL		7,416		912			23,604	12,847	1,712	607,629	1,157
AVG		239		29			761	413	55	19,601	37

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCH	TURBIDITY DEG
1	300.0	49.6	1.5	61.0
2	302.6	49.0	1.5	60.0
3	324.3	52.9	2.0	60.0
4	293.1	57.5	1.5	60.0
5	305.7	57.3	1.3	63.0
6	304.0	57.3	1.4	64.0
7	291.8	60.2	1.6	65.0
8	254.3	62.4	1.8	65.0
9	260.6	37.3	2.1	65.0
10	285.9	80.8	2.2	65.0
11	300.9	62.1	1.4	64.0
12	284.7	57.3	1.7	64.0
13	261.0	56.9	1.6	64.0
14	274.8	45.3	2.1	66.0
15	286.0	57.2	2.7	65.0
16	305.9	57.2	2.0	69.0
17	308.2	58.0	2.0	65.0
18	306.3	50.5	2.9	65.0
19	315.9	57.8	1.8	67.0
20	285.2	57.7	1.8	67.0
21	275.5	38.1	2.2	66.0
22	277.0	57.5	1.9	65.0
23	284.3	58.6	2.0	68.0
24	252.0	39.0	2.3	67.0
25	270.1	38.3	2.0	67.0
26	272.5	38.5	2.0	67.0
27	216.3	35.2	2.0	68.0
28	278.3	37.9	1.9	68.0
29	233.4	37.5	2.2	68.0
30	207.9	38.6	2.0	68.0
31	205.1	37.8	2.1	69.0
AVG	278.2	51.0	1.9	65.3

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	62,253	327
SUMMER	20,154	1,132
TOTAL	82,407	1,459

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
35,219	17,849	2,799	1,006,700	1,252

TABLE 68

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

JOHN DAY PROJECT
AUGUST 1997

FISH COUNTS / RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCH	TURBIDITY DEG
1		60		18	0		82	985	181	172	10	197.0	38.2	2.0	69.0
2		55		42	0		132	793	150	141	23	180.6	42.8	2.7	69.0
3		46		19	0		96	1124	194	63	29	178.5	60.5	3.0	69.0
4		98		32	0		85	1183	233	97	39	182.5	38.7	3.0	69.0
5		95		18	0		43	1140	219	70	19	206.9	40.9	2.3	70.0
6			67	20	0		44	883	221	102	19	251.0	40.0	3.0	71.0
7			104	57	0		20	1116	168	75	31	219.5	40.6	3.0	71.0
8			94	19	0		20	784	165	46	26	218.2	43.7	3.0	70.0
9			98	38	0		17	959	146	58	25	232.4	42.6	2.0	70.0
10			85	24	0		19	877	143	35	17	178.3	42.1	2.0	70.0
11			113	25	0		4	643	109	25	32	204.6	40.3	2.0	69.0
12			86	19	0		3	510	117	54	25	193.4	40.3	2.0	71.0
13			164	31	0		7	825	145	33	28	202.6	39.6	3.5	70.0
14			80	12	0		9	561	68	20	42	210.7	40.5	3.5	70.0
15			127	13	0		6	467	58	35	23	213.5	40.7	2.2	70.0
16			100	9	0		4	424	51	16	17	201.4	39.5	2.2	71.0
17			57	13	0		1	300	53	43	19	182.9	40.6	2.5	71.0
18			160	42	1		3	584	58	24	36	192.1	39.6	3.2	70.0
19			168	20	0		1	574	112	18	26	206.1	40.8	2.2	70.0
20			229	11	0		0	573	94	22	17	194.9	39.7	2.0	71.0
21			579	42	0		1	464	86	3	41	233.8	41.9	2.1	71.0
22			472	32	0		1	352	22	5	18	222.0	40.2	3.1	70.0
23			415	52	0		0	401	65	0	45	208.8	41.1	2.5	70.0
24			702	52	0		0	939	89	2	45	160.2	39.9	2.0	70.0
25			302	21	0		1	603	82	7	23	194.4	41.0	1.8	71.0
26			367	32	0		2	677	69	12	30	189.6	40.3	3.0	71.0
27			806	39	0		0	633	85	6	20	199.7	40.8	3.2	70.0
28			617	54	0		2	619	54	6	21	171.9	39.5	2.0	70.0
29			773	39	0		0	624	101	6	25	191.4	40.3	2.0	69.0
30			594	60	0		0	648	66	4	15	206.1	40.3	3.1	69.0
31			1,686	51	0		0	914	97	-4	30	193.6	40.4	3.2	69.0
TOTAL		354	9,045	956	1		603	22,179	3,501	1,196	816				
AVG.		71	348	31			19	715	113	39	26	200.6	41.2	2.6	70.0

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	62,253	327
SUMMER	20,508	1,261
FALL	9,045	827
TOTAL	91,806	2,415

COHO ADULT
1

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
35,822	40,028	6,300	1,007,896	2,068

TABLE 69

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

JOHN DAY PROJECT
SEPTEMBER 1997

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCH	TURBIDITY DEG
	FISH COUNTS											RIVER CONDITIONS			
1			4,943	97	0	0	0	2,102	195		34	143.1	0.0	3.0	69.0
2			6,961	92	2	0	1	1,839	274		23	142.1	0.0	1.0	70.0
3			5,372	162	32	2	0	2,055	306		55	150.1	0.0	2.0	70.0
4			6,372	180	29	8	0	1,499	182		36	134.8	0.0	2.1	70.0
5			2,640	119	63	13	1	1,775	264		24	145.6	0.0	2.0	70.0
6			2,324	175	35	5	1	1,385	179		21	147.6	0.0	3.0	69.0
7			2,224	210	28	4	0	1,686	200		20	105.2	1.4	2.0	70.0
8			1,787	252	53	6	0	2,033	212		39	112.1	1.1	2.0	70.0
9			1,222	156	15	9	0	2,227	236		20	127.3	0.0	2.7	69.0
10			2,311	160	34	8	0	1,708	214		41	141.2	0.9	3.3	69.0
11			1,930	291	29	9	0	1,850	247		64	130.8	0.0	3.0	69.0
12			1,392	297	58	7	0	2,613	299		26	153.2	0.9	2.2	69.0
13			2,000	267	38	15	0	1,606	180		40	127.2	0.0	2.2	69.0
14			2,891	348	36	8	0	1,369	259		27	111.5	0.8	2.0	69.0
15			3,510	295	62	10	0	1,560	165		48	120.9	0.0	3.0	68.0
16			3,278	409	52	13	0	1,979	236		32	143.0	0.9	2.6	69.0
17			4,274	472	61	11	0	2,594	372		24	149.8	0.0	3.0	67.0
18			3,016	346	165	12	0	2,706	263		71	162.4	0.9	2.0	68.0
19			2,165	344	100	29	0	3,578	441		90	171.5	0.0	2.0	67.0
20			1,286	359	212	47	0	4,042	535		152	161.8	0.9	2.0	66.0
21			2,069	420	193	65	0	3,617	529		144	173.4	0.0	2.0	68.0
22			1,014	374	170	46	0	3,948	476		160	147.5	0.9	2.0	68.0
23			1,360	354	173	48	0	4,205	465		158	167.5	0.0	2.0	66.0
24			970	176	107	21	1	3,356	461		156	200.6	1.0	2.0	66.0
25			711	301	126	24	0	3,264	312		101	183.9	0.0	3.5	66.0
26			1,320	537	146	25	0	2,790	397		60	168.3	0.8	2.0	65.0
27			917	434	87	13	0	2,591	328		43	164.9	0.0	3.4	65.0
28			970	518	129	18	0	2,772	395		84	166.0	0.8	3.5	65.0
29			578	359	42	13	0	2,936	401		39	126.7	0.0	3.2	65.0
30			398	330	84	10	0	3,434	458		149	159.1	0.9	3.5	65.0
TOTAL			72,205	8,834	2,361	499	4	75,119	9,481		1,981				
AVG.			2,407	294	79	17		2,504	316		66	148.0	0.4	2.5	67.9

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	62,253	327
SUMMER	20,508	1,261
FALL	81,250	9,661
TOTAL	164,011	11,249

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
2,362	499	35,826	115,147	15,781	1,007,896	4,049

TABLE 70

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

JOHN DAY PROJECT
OCTOBER 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	RIVER CONDITIONS DISCH KCFS	SPILL KCFS	TURBIDITY SECCH	TURBIDITY DEG
1			777	471	101	22	0	2,845	367		145	171.6	0.0	2.6	65.0
2			415	301	64	7	0	2,445	294		132	151.2	1.1	3.0	66.0
3			214	238	49	23	0	1,442	172		55	188.1	0.0	2.0	65.0
4			581	273	51	6	0	1,959	286		128	133.1	0.9	3.5	64.0
5			481	355	52	11	0	2,453	272		47	137.9	0.0	3.0	65.0
6			223	115	56	13	0	1,386	143		69	172.7	1.0	3.0	64.0
7			119	154	85	18	0	1,857	239		52	154.2	0.0	2.0	64.0
8			219	235	177	29	0	2,358	357		24	205.4	1.0	2.0	62.0
9			278	198	94	13	1	1,750	225		30	192.5	0.0	2.0	62.0
10			297	191	47	9	0	1,728	388		74	175.3	1.0	2.0	62.0
11			190	118	54	9	0	1,234	184		46	194.6	0.0	2.3	62.0
12			153	114	35	8	1	1,374	196		53	211.8	1.0	2.2	60.0
13			152	128	34	7	1	1,252	196		55	175.4	0.0	2.0	61.0
14			144	122	43	6	1	1,095	199		43	196.9	1.0	2.2	60.0
15			98	91	31	1	0	1,318	192		47	198.7	0.0	2.0	60.0
16			98	103	30	4	0	1,249	187		42	205.4	1.0	2.5	59.0
17			60	145	14	2	0	1,253	147		18	206.5	0.0	2.0	59.0
18			145	127	9	1	0	1,178	106		24	178.9	0.9	3.1	59.0
19			130	146	6	1	0	1,038	162		12	151.0	0.0	3.0	58.0
20			50	82	14	1	0	1,007	137		28	131.3	0.9	2.0	60.0
21			56	155	16	2	0	1,274	199		94	136.0	0.0	2.0	59.0
22			84	85	21	4	0	942	96		28	129.4	0.9	2.5	58.0
23			95	131	27	8	0	1,347	154		63	146.2	0.0	2.1	58.0
24			68	67	8	0	0	847	83		8	168.6	0.9	3.0	58.0
25			68	36	8	3	0	728	89		30	109.2	0.0	4.0	58.0
26			48	27	14	0	0	931	107		9	111.5	0.9	3.0	58.0
27			54	43	0	0	0	551	88		20	126.5	0.0	2.0	58.0
28			72	34	0	2	0	663	80		12	151.2	0.9	2.9	68.0
29			80	63	2	1	0	717	93		9	130.3	0.0	3.0	58.0
30			26	32	0	0	0	592	74		13	129.2	1.0	3.5	58.0
31			80	45	14	1	0	1,078	220		8	141.6	0.0	2.0	57.0
TOTAL			5,555	4,425	1,156	212	4	41,891	5,732		1,418				
AVG.			179	143	37	7		1,351	185		46	161.7	0.5	2.5	60.8

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	62,253	327
SUMMER	20,508	1,261
FALL	86,805	14,086
TOTAL	169,566	15,674

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
3,518	711	35,830	157,038	21,513	1,007,896	5,467

TABLE 71

DISCHARGE AND WATER QUALITY DATA

JOHN DAY PROJECT 1997

NOVEMBER				
	DISCH	SPILL	TURBIDITY	
DATE	KCFS	KCFS	SECCHI	DEG F
1	113.5	0.0		
2	113.6	0.0	2.5	54.0
3	148.1	0.0		
4	157.3	0.0	2.0	56.0
5	149.4	0.0		
6	173.8	0.0		
7	161.7	0.0		
8	127.5	0.0		
9	145.4	0.0		
10	143.1	0.0		
11	146.6	0.0		
12	143.4	0.0		
13	155.2	0.0		
14	146.0	0.0		
15	122.4	0.0		
16	162.9	0.0		
17	159.0	0.0		
18	135.0	0.0	3.0	51.0
19	145.4	0.0		
20	124.5	0.0	2.2	51.0
21	143.7	0.0		
22	135.7	0.0	3.0	50.0
23	153.4	0.0	3.0	48.0
24	139.7	0.0	2.8	50.0
25	142.8	0.0	2.2	50.0
26	178.7	0.0		
27	137.5	0.0		
28	132.9	0.0		
29	131.9	0.0		
30	128.8	0.0		
AVG.	143.3	0.0		

DECEMBER				
	DISCH	SPILL	TURBIDITY	
DATE	KCFS	KCFS	SECCHI	DEG F
1	150.6	0.0		
2	158.8	0.0		
3	192.0	0.0	2.0	48.0
4	182.5	0.0		
5	173.0	0.0		
6	142.9	0.0	2.8	47.0
7	171.6	0.0	4.0	47.0
8	167.6	0.0	2.5	47.0
9	180.7	0.0	2.5	46.0
10	176.0	0.0	3.6	47.0
11	196.7	0.0	2.5	45.0
12				
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29				
30				
31				
AVG.	172.0	0.0		

TABLE 72

YEARLY TOTALS OF SALMONIDS COUNTED OVER JOHN DAY DAM
1968 - 1997

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
1993	141,705	95,642	61,218	2,995	301,560
1994	126,645	93,075	11,170	2,842	233,732
1995	107,277	123,246	8,667	2,117	241,307
1996	130,602	156,002	25,698	4,279	316,581
1997	185,240	157,038	35,830	4,229	382,337
TOTALS	5,675,683	3,727,650	2,239,122	250,212	11,892,667
10-Year Average	158,423	144,641	100,562	4,662	408,288

*Jacks included

TABLE 73

TABLE 73

MONTHLY COUNT OF CHINOOK SALMON
JOHN DAY DAM: 1968 - 1997

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				7,895	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				23,688	18,854	11,209	8,199	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
1993				26,309	28,204	13,295	6,311	10,703	51,667	5,216			141,705	56,144	18,364	67,197	9,621
1994				4,436	4,937	6,305	6,397	13,345	79,538	11,687			126,645	9,745	12,935	103,965	18,867
1995				2,034	3,378	4,977	6,273	14,694	61,273	14,648			107,277	5,776	11,476	90,025	24,192
1996				1,860	18,616	7,419	6,356	18,550	68,198	9,603			130,602	21,599	13,148	95,855	12,071
1997				13,579	45,408	16,551	8,328	10,355	81,039	9,980			185,240	62,580	21,769	100,891	15,674
TOTAL			27	594,652	850,478	414,730	419,458	449,609	2,557,994	384,694	4,041		5,675,683	1,495,230	823,008	3,357,445	1,575,297
10-Year Average				15,270	19,384	10,560	7,629	16,673	78,566	10,341			158,423	35,924	17,644	104,855	22,977

*Jacks included

TABLE 74

MONTHLY COUNT OF SOCKEYE SALMON
JOHN DAY DAM: 1968 - 1997

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
1993					1	30,668	30,348	198	2	1			61,218
1994						7,004	4,141	22	2	1			11,170
1995					1	4,242	4,352	71	1				8,667
1996						15,316	10,323	59					25,698
1997					10	11,605	23,604	603	4	4			35,830
TOTAL						617,923	1,006,006	14,683	432	55			1,639,122
10-Year Average						17,750	22,545	257	7				40,562

TABLE 74

TABLE 75

MONTHLY COUNT OF COHO SALMON
JOHN DAY DAM: 1968 - 1997

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
1993								11	2,233	751			2,995
1994								164	1,892	786			2,842
1995								63	1,199	855			2,117
1996								11	3,432	836			4,279
1997								1	2,860	1,368			4,229
TOTAL							48	7,885	197,325	44,413	541		250,212
10-Year Average								85	3,380	1,205			4,662

*Jacks included

TABLE 76

MONTHLY COUNT OF STEELHEAD
JOHN DAY DAM: 1968 - 1997

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
1993				3,453	808	2,845	9,434	11,018	46,447	21,637			95,642
1994				2,286	413	1,647	6,961	7,140	44,175	30,453			93,075
1995				1,498	488	1,757	7,755	26,450	45,087	40,211			123,246
1996				1,597	462	1,576	11,885	42,853	67,171	30,458			156,002
1997				2,171	810	2,021	12,847	22,179	75,119	41,891			157,038
TOTAL			3,925	79,625	32,513	44,375	398,301	615,519	1,811,540	728,590	13,262		3,727,650
10-YR Average				2,546	568	1,997	11,889	20,301	73,837	33,504			144,641

WILD STEELHEAD COUNTED AT
JOHN DAY DAM 1997

JOHN DAY DAM		Oregon	Washington
April	Wild Steelhead	Ladder	Ladder
1	14	18	-4
2	15	16	-1
3	10	11	-1
4	44	30	14
5	12	7	5
6	36	25	11
7	22	20	2
8	28	26	2
9	25	19	6
10	18	24	-6
11	34	32	2
12	16	17	-1
13	58	48	10
14	35	24	11
15	25	12	13
16	20	16	4
17	21	8	13
18	26	25	1
19	33	26	7
20	18	10	8
21	40	16	24
22	29	18	11
23	11	10	1
24	6	6	0
25	12	2	10
26	16	4	12
27	30	14	16
28	13	1	12
29	12	-1	13
30	13	6	7
TOTAL	692	490	202
AVE	23	16	7

TOTAL	WILD STEELHEAD
TO DATE	692

TABLE 78

WILD STEELHEAD COUNTED AT
JOHN DAY DAM 1997

JOHN DAY DAM		Oregon	Washington
May	Wild Steelhead	Ladder	Ladder
1	5	-5	10
2	1	1	0
3	7	0	7
4	8	0	8
5	13	2	11
6	19	0	19
7	8	6	2
8	28	6	22
9	17	7	10
10	18	8	10
11	7	2	5
12	5	1	4
13	2	0	2
14	12	4	8
15	-1	1	-2
16	21	10	11
17	19	5	14
18	9	4	5
19	16	2	14
20	6	2	4
21	6	0	6
22	9	2	7
23	6	0	6
24	9	5	4
25	5	0	5
26	6	6	0
27	2	0	2
28	2	4	-2
29	10	4	6
30	0	1	-1
31	-1	0	-1
TOTAL	274	78	196
AVE	9	3	6

TOTAL	WILD STEELHEAD
TO DATE	966

JOHN DAY DAM		Oregon	Washington
June	Wild Steelhead	Ladder	Ladder
1	3	4	-1
2	4	0	4
3	1	0	1
4	6	2	4
5	2	6	-4
6	7	5	2
7	7	5	2
8	2	2	0
9	5	4	1
10	-2	-2	0
11	0	0	0
12	7	7	0
13	1	1	0
14	2	2	0
15	1	0	1
16	5	4	1
17	0	0	0
18	0	0	0
19	1	1	0
20	1	1	0
21	1	1	0
22	0	0	0
23	4	4	0
24	4	5	-1
25	10	2	8
26	0	0	0
27	12	7	5
28	8	4	4
29	22	5	17
30	7	6	1
TOTAL	121	76	45
AVE	4	3	2

TOTAL	WILD STEELHEAD
TO DATE	1,087

TABLE 79

WILD STEELHEAD COUNTED AT JOHN DAY DAM 1997

JOHN DAY DAM July	Wild Steelhead	Oregon Ladder	Washington Ladder
1	7	1	6
2	5	0	5
3	7	1	6
4	22	11	11
5	9	13	-4
6	29	16	13
7	32	6	26
8	34	8	26
9	25	23	2
10	39	16	23
11	17	7	10
12	33	23	10
13	28	12	16
14	30	13	17
15	45	38	7
16	34	18	16
17	30	24	6
18	36	25	11
19	29	13	16
20	30	18	12
21	96	84	12
22	61	32	29
23	91	65	26
24	96	64	32
25	87	71	16
26	115	79	36
27	100	72	28
28	123	98	25
29	155	100	55
30	152	115	37
31	115	60	55
TOTAL	1,712	1,126	586
AVE	55	36	19

TOTAL TO DATE	WILD STEELHEAD
	2,799

JOHN DAY DAM August	Wild Steelhead	Oregon Ladder	Washington Ladder
1	181	107	74
2	150	94	56
3	194	108	86
4	233	142	91
5	219	167	52
6	221	120	101
7	168	113	55
8	165	94	71
9	146	73	73
10	143	59	84
11	109	48	61
12	117	37	80
13	145	74	71
14	68	43	25
15	58	36	22
16	51	34	17
17	53	31	22
18	58	38	20
19	112	40	72
20	94	77	17
21	86	25	61
22	22	18	4
23	65	54	11
24	89	60	29
25	82	52	30
26	69	50	19
27	85	61	24
28	54	36	18
29	101	40	61
30	66	34	32
31	97	49	48
TOTAL	3,501	2,014	1,487
AVE	113	65	48

TOTAL TO DATE	WILD STEELHEAD
	6,300

TABLE 80

WILD STEELHEAD COUNTED AT
JOHN DAY DAM 1997

JOHN DAY DAM		Oregon	Washington
September	Wild Steelhead	Ladder	Ladder
1	195	161	34
2	274	202	72
3	306	192	114
4	182	146	36
5	264	146	118
6	179	130	49
7	200	97	103
8	212	122	90
9	236	178	58
10	214	96	118
11	247	161	86
12	299	217	82
13	180	134	46
14	259	71	188
15	165	119	46
16	236	148	88
17	372	281	91
18	263	173	90
19	441	239	202
20	535	422	113
21	529	300	229
22	476	308	168
23	465	346	119
24	461	316	145
25	312	199	113
26	397	305	92
27	328	248	80
28	395	289	106
29	401	310	91
30	458	235	223
TOTAL	9,481	6,291	3,190
AVE	316	210	106

TOTAL	WILD STEELHEAD
TO DATE	15,781

JOHN DAY DAM		Oregon	Washington
October	Wild Steelhead	Ladder	Ladder
1	367	263	104
2	294	208	86
3	172	42	130
4	286	208	78
5	272	202	70
6	143	121	22
7	239	216	23
8	357	202	155
9	225	185	40
10	388	264	124
11	184	100	84
12	196	125	71
13	196	101	95
14	199	91	108
15	192	121	71
16	187	90	97
17	147	110	37
18	106	80	26
19	162	88	74
20	137	83	54
21	199	122	77
22	96	74	22
23	154	70	84
24	83	55	28
25	89	64	25
26	107	46	61
27	88	77	11
28	80	40	40
29	93	40	53
30	74	86	-12
31	220	88	132
TOTAL	5,732	3662	2070
AVE	185	118	67

TOTAL	WILD STEELHEAD
TO DATE	21,513

McNary Lock and Dam

600 0 600 1200

SCALE IN FEET

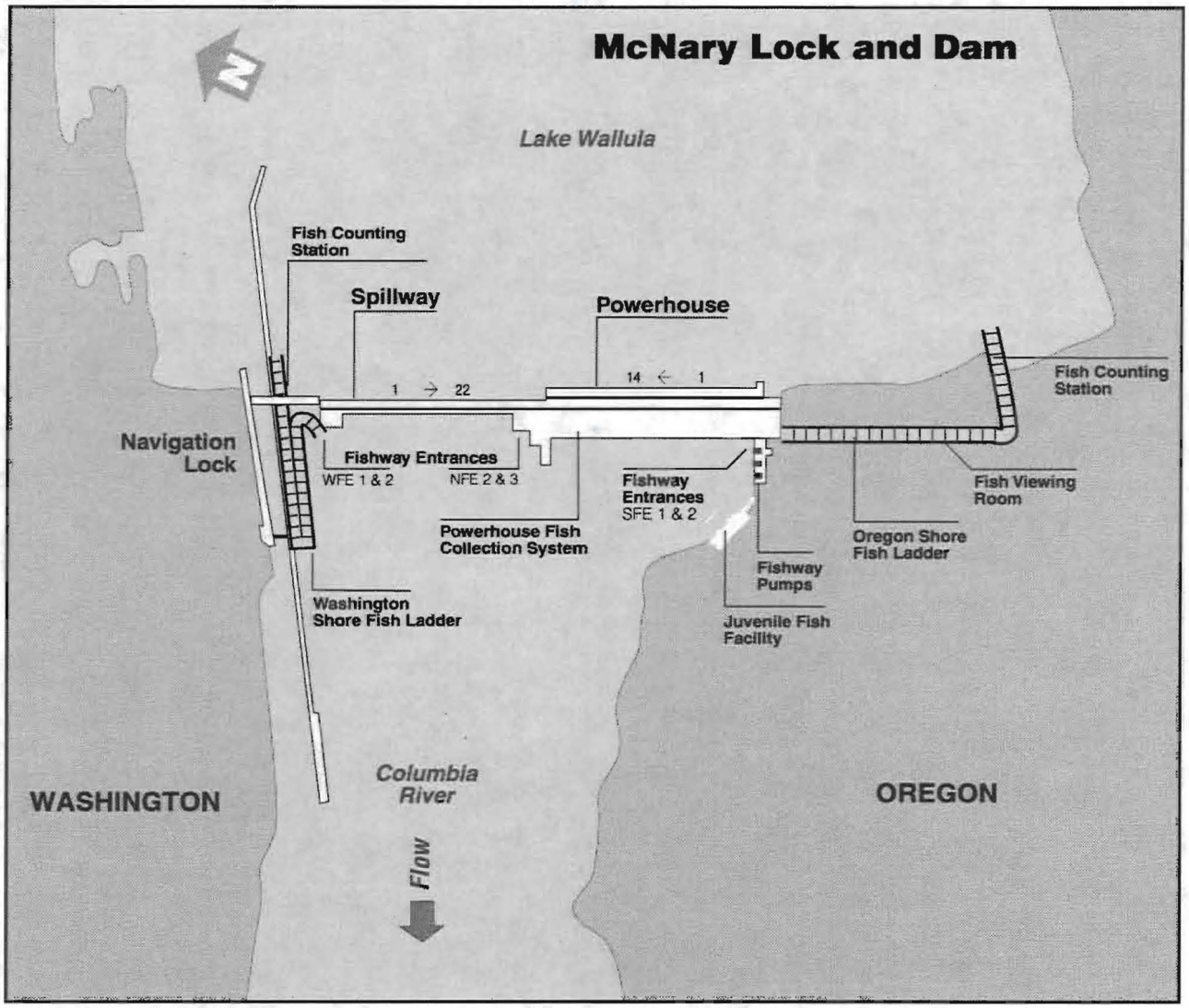

TABLE 81

MONTHLY TOTALS OF SALMONIDS AND SHAD COUNTED OVER McNARY DAM

1997

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL*
CHINOOK*				6,529	44,264	18,384	10,584	6,892	63,484	12,809			162,946
STEELHEAD				1,210	435	1,241	10,174	19,917	58,210	38,630			129,817
SOCKEYE						7,706	29,645	688	4				38,043
COHO*								29	1,577	974			2,580
MINI-JACKS**						87	1,305	636	1,068	187			3,283
CHUM													
PINK													
TOTAL				7,739	44,699	27,418	51,708	28,162	124,343	52,600			336,669
SHAD					15	94,001	244,194	1,880					340,090

*Jacks Included

**Salmonid fish under 12 inches in length.

TABLE 81

TABLE 82

DISCHARGE AND WATER QUALITY DATA

MCNARY PROJECT 1997

JANUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	261.7	115.7		
2	323.1	150.2		36.0
3	298.5	134.8		
4	289.5	133.0		
5	297.9	157.0		
6	269.3	131.1		
7	262.5	115.9		
8	258.9	119.6		
9	257.8	119.4		
10	207.6	123.9		
11	258.6	105.6		
12	246.7	94.4		
13	283.3	122.3		
14	266.1	113.1		
15	261.6	115.9	0.8	37.0
16	279.5	118.2	1.1	37.0
17	256.5	94.0	0.6	37.0
18	266.4	114.2	1.7	37.0
19	201.2	90.7	1.8	37.0
20	249.5	84.1	2.3	37.0
21	242.8	91.0		
22	220.2	73.8		
23	210.6	52.2		
24	216.7	64.8		
25	244.3	101.5		
26	258.9	116.2	1.7	37.0
27	253.1	112.0		
28	247.3	106.4		
29	236.6	100.1		
30	258.9	147.5		
31	284.4	163.4		36.0
AVG.	257.1	112.3		

FEBRUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	252.4	132.2		37.0
2	260.9	140.4		37.0
3	263.8	140.8		37.0
4	269.3	144.1		38.0
5	272.2	158.1		
6	276.8	158.8		37.0
7	270.0	128.0		
8	263.4	123.2		
9	277.1	135.0		
10	265.1	130.7		
11	230.7	92.1		
12	265.7	130.9		
13	249.4	71.8		
14	244.2	82.7		
15	246.7	88.8		
16	254.2	96.7		
17	244.1	96.4		
18	267.1	124.2		
19	265.9	122.1	1.6	40.0
20	302.3	158.1	1.2	40.0
21	262.7	120.7	0.9	40.0
22	313.8	169.4	1.0	40.0
23	299.9	159.7	1.2	40.0
24	278.0	136.8	1.2	40.0
25	274.1	129.3		
26	269.2	131.7		
27	272.5	133.4		
28	257.6	126.6		
AVG.	266.8	127.2		

MARCH

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	252.4	107.9		
2	257.1	113.8		
3	231.0	98.6		
4	232.4	101.3		
5	249.0	115.4		
6	254.8	121.2		
7	211.3	78.7		
8	201.0	68.4		
9	200.0	68.8		
10	213.6	82.0		41.0
11	235.7	97.7		42.0
12	264.1	117.9		
13	255.6	101.6		42.0
14	239.0	86.9		43.0
15	241.0	114.1		42.0
16	217.7	98.1		42.0
17	244.6	134.7		42.0
18	241.0	128.2		
19	255.4	147.5		
20	283.7	162.6		
21	314.6	188.1		
22	317.5	188.3		
23	300.8	172.4		
24	294.6	177.5		
25	299.7	196.3		
26	325.1	207.7	1.3	45.0
27	339.9	224.9	1.3	45.0
28	379.8	231.3	1.3	45.0
29	369.5	221.6	1.4	45.0
30	348.4	209.1	1.8	45.0
31	338.3	194.9	1.6	45.0
AVG.	271.2	140.6		

TABLE 83

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

MCNARY PROJECT

APRIL 1997

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1	0			0				117	27			325.9	172.8	1.8	45.0
2	1			0				61	14			311.7	158.6	1.8	45.0
3	0			0				53	15			280.5	128.9	1.8	45.0
4	0			0				38	10			288.3	137.5	1.8	45.0
5	0			0				30	5			277.9	125.2	2.0	45.0
6	0			0				41	9			238.8	85.6	2.0	45.0
7	1			0				35	16			275.3	124.8	2.0	45.0
8	0			0				54	9			256.5	117.5	2.0	46.0
9	2			0				34	13			261.2	94.6	2.4	46.0
10	5			0				32	3			254.7	89.1	2.1	46.0
11	12			0				34	12			273.1	106.8	2.6	46.0
12	6			0				41	12			241.5	75.2	2.4	46.0
13	7			0				39	8			201.3	35.3	4.6	46.0
14	14			0				45	12			227.8	61.8	2.0	46.0
15	13			0				29	14			248.0	84.5	2.5	46.0
16	48			0				38	16			261.2	96.4	2.5	47.0
17	49			0				56	22			256.8	91.5	2.6	48.0
18	83			0				36	17			268.3	102.5	2.5	48.0
19	104			0				47	26			286.6	119.5	2.5	48.0
20	139			0				36	13			295.1	129.4	2.5	48.0
21	623			0				54	26			321.4	155.3	2.5	48.0
22	505			0				34	15			399.2	234.2	2.6	48.0
23	1666			1				54	20			414.0	249.3	2.6	48.0
24	953			0				30	18			424.1	258.9	2.0	48.0
25	420			1				32	8			404.0	239.5	2.0	48.0
26	125			0				30	8			402.8	236.2	2.0	48.0
27	302			0				36	8			400.7	237.4	1.5	49.0
28	509			0				14	2			400.9	234.0	1.8	49.0
29	438			1				16	9			441.6	276.1	1.6	49.0
30	501			0				14	3			451.8	287.4	1.6	49.0
TOTAL	6,526			3				1,210	390						
AVG.	218							40	13			313.0	151.5	2.2	46.9

TABLE 84

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

MCNARY PROJECT

MAY 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	TOTAL STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1	502			0				14	3	0	
2	1277			1				25	3	0	
3	902			2				17	9	0	
4	646			0				22	4	0	
5	608			1				8	2	0	
6	1468			0				10	3	0	
7	2705			0				17	5	0	
8	1830			5				19	5	0	
9	3023			9				14	2	0	
10	2616			6				12	2	0	
11	2229			4				13	1	0	
12	2331			7				10	2	0	
13	3531			15				16	2	0	
14	2911			14				15	2	0	
15	1392			12				12	5	0	
16	2567			17				11	7	0	
17	1330			13				23	5	0	
18	1324			6				16	2	0	
19	1355			9				23	2	0	
20	1527			9				6	0	0	
21	1049			7				7	0	0	
22	712			11				5	0	0	
23	752			17				14	0	0	
24	504			16				14	1	0	
25	506			11				12	0	0	
26	577			15				10	1	1	
27	363			10				11	1	2	
28	467			9				17	2	2	
29	560			17				10	1	6	
30	1181			24				13	1	3	
31	1234			18				19	2	1	
TOTAL	43,979			285				435	75	15	
AVG.	1,419			9				14	2		

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	455.6	291.0	1.6	49.0
2	435.9	270.7	1.6	49.0
3	402.5	232.2	1.6	50.0
4	394.7	231.6	1.8	50.0
5	389.6	216.5	1.8	50.0
6	388.4	214.2	2.0	50.0
7	377.5	199.6	2.0	50.0
8	397.3	218.4	2.0	51.0
9	394.1	218.1	2.0	51.0
10	392.0	215.5	2.0	52.0
11	400.1	221.4	2.0	52.0
12	432.6	259.0	2.0	52.0
13	428.6	251.4	2.0	53.0
14	477.9	299.7	1.8	53.0
15	468.2	292.5	2.2	53.0
16	478.3	298.6	2.1	53.0
17	519.2	344.1	1.8	53.0
18	524.0	345.5	1.5	55.0
19	518.0	341.6	1.5	55.0
20	495.7	332.9	1.2	55.0
21	513.6	345.3	1.4	55.0
22	487.6	317.4	1.2	54.0
23	495.5	332.8	1.2	54.0
24	460.4	339.2	1.8	54.0
25	465.3	336.7	2.0	54.0
26	457.1	312.2	1.8	54.0
27	452.0	301.0	1.6	54.0
28	451.7	289.8	1.8	54.0
29	446.0	280.3	1.6	54.0
30	467.3	290.2	2.0	55.0
31	457.3	278.5	2.0	56.0
AVG.	449.2	281.2	1.8	52.7

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	50,505	288

STEELHEAD	WILD STEELHEAD	SHAD
1,645	465	15

TABLE 85

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

MCNARY PROJECT

JUNE 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1	1395			24			0	19	0	0	0
2	1474			26			0	19	2	2	0
3	1502			23			0	18	2	6	0
4	686			9			0	8	0	1	0
5	666			16			0	26	0	1	0
6	636			9			0	30	0	0	0
7	450			5			0	20	0	4	0
8	518			4			0	24	2	49	0
9		664		9			0	21	1	174	0
10		529		9			0	17	0	71	0
11		502		2			4	15	0	67	0
12		564		6			5	24	0	71	0
13		519		4			7	24	0	52	0
14		459		10			14	28	0	158	0
15		352		3			13	30	0	86	0
16		290		6			18	25	3	273	0
17		530		6			36	38	5	953	0
18		484		7			31	33	2	770	0
19		434		8			73	47	2	759	3
20		453		14			119	51	2	1538	1
21		369		5			144	49	3	1050	8
22		349		4			165	38	0	696	6
23		414		1			278	42	2	1402	2
24		413		3			456	49	4	3908	0
25		545		7			603	78	2	11001	6
26		489		5			759	82	1	7122	7
27		678		7			1,104	99	7	12796	10
28		551		17			1129	93	9	17584	14
29		601		20			1335	101	1	11328	14
30		577		22			1413	93	2	22079	16
TOTAL	7,327	10,766		291			7,706	1,241	52	94,001	87
AVG.	916	489		10			257	41	2	3,133	3

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	515.3	336.9	1.8	56.0
2	522.1	342.9	1.8	56.0
3	517.1	342.6	1.9	56.0
4	508.5	339.6	1.8	56.0
5	493.9	344.4	1.9	56.0
6	525.3	363.3	1.8	56.0
7	520.4	373.6	1.8	56.0
8	493.8	359.9	1.8	56.0
9	490.4	348.9	1.8	56.0
10	517.9	354.2	1.8	56.0
11	533.1	371.9	1.8	56.0
12	570.5	406.4	1.8	57.0
13	577.1	415.1	1.8	57.0
14	542.7	398.6	1.8	57.0
15	524.7	405.2	2.0	57.0
16	548.6	399.9	2.0	58.0
17	530.2	364.6	2.2	58.0
18	508.9	337.5	2.2	58.0
19	510.0	339.1	2.2	58.0
20	506.2	329.2	2.0	58.0
21	472.5	295.9	2.0	58.0
22	470.2	308.0	2.2	58.0
23	461.8	275.7	2.0	58.0
24	441.1	275.5	2.0	58.0
25	393.6	229.4	2.5	58.0
26	382.6	210.1	2.5	59.0
27	378.0	205.9	2.3	59.0
28	368.6	191.8	2.2	60.0
29	335.0	173.3	2.3	60.0
30	307.7	142.8	2.6	60.0
AVG.	482.3	319.4	2.0	57.4

TOTAL TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	57,832	404
SUMMER	10,766	175
TOTAL	68,598	579

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
7,706	2,886	517	94,016	87

TABLE 86

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

MCNARY PROJECT
JULY 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	RIVER CONDITIONS DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1		717		14			1352	117	6	17287	13	296.7	123.3	2.6	60.0
2		710		16			1678	144	4	16639	31	302.6	125.6	2.6	61.0
3		497		11			1761	197	7	19075	35	317.1	141.2	2.6	63.0
4		472		29			1900	171	9	23606	53	286.2	123.2	2.5	62.0
5		400		29			1610	182	14	11253	26	310.4	148.4	2.2	63.0
6		528		19			2048	221	9	11317	46	292.3	132.7	2.4	64.0
7		485		34			2138	272	12	16670	67	281.1	119.9	2.1	64.0
8		429		55			1862	265	22	28982	61	275.5	101.7	2.2	64.0
9		527		46			2029	244	20	20044	61	258.8	81.5	2.3	64.0
10		452		52			1559	257	18	6202	82	286.7	125.6	2.1	64.0
11		458		25			1550	272	26	5194	62	288.7	117.7	2.1	64.0
12		360		33			1358	288	24	6690	75	281.1	115.4	2.2	64.0
13		284		38			957	281	42	5783	61	254.9	100.2	2.2	63.0
14		362		30			793	296	28	7193	54	275.9	111.9	2.5	63.0
15		327		32			717	257	19	5250	52	284.6	129.9	2.2	63.0
16		308		34			631	306	30	4584	53	311.5	147.1	2.4	64.0
17		224		38			428	349	36	7767	53	291.2	132.9	2.4	64.0
18		242		30			502	323	33	4614	46	302.2	136.6	2.4	64.0
19		204		51			423	291	31	3432	41	294.5	126.3	2.5	66.0
20		204		40			445	323	34	3085	34	289.7	121.6	2.4	66.0
21		146		35			473	349	46	4233	36	285.2	121.5	2.5	65.0
22		201		41			561	416	59	4068	25	258.0	98.1	3.2	65.0
23		156		26			398	332	46	1731	26	283.6	118.4	3.0	65.0
24		152		44			480	438	50	1093	34	249.3	104.4	2.3	66.0
25		110		34			384	473	80	1882	31	270.0	92.5	2.5	66.0
26		109		30			302	427	64	1425	29	253.0	80.5	2.4	67.0
27		102		32			319	511	86	1066	24	230.6	67.9	2.4	67.0
28		126		21			268	468	66	1420	21	268.5	98.9	2.6	67.0
29		74		48			300	525	103	1231	33	226.8	55.5	2.6	67.0
30		108		19			192	582	119	803	19	195.7	34.4	2.6	67.0
31		87		37			227	597	121	575	21	210.6	50.7	2.4	67.0
TOTAL		9,561		1,023			29,645	10,174	1,264	244,194	1,305				
AVG.		308		33			956	328	41	7,877	42	274.6	109.2	2.4	64.5

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	57,832	404
SUMMER	20,327	1,198
TOTAL	78,159	1,602

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
37,351	13,060	1,781	338,210	1,392

TABLE 87

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

MCNARY PROJECT
AUGUST 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1		97		41	0	0	164	829	154	707	26
2		86		32	0	0	96	705	143	227	28
3		59		24	0	0	72	685	149	87	16
4		69		27	0	0	60	751	147	73	22
5		71		22	0	0	56	828	174	80	25
6		61		23	0	0	28	939	188	62	16
7		89		30	0	0	26	1,098	215	80	24
8		75		20	0	0	53	1,424	304	126	22
9			89	26	0	0	28	918	195	31	25
10			124	40	0	0	17	964	201	45	25
11			65	13	0	0	16	721	119	36	19
12			72	30	0	0	7	844	143	48	23
13			48	19	0	0	6	654	126	30	16
14			83	14	0	0	6	497	77	31	19
15			146	16	0	0	8	534	99	30	15
16			94	16	1	0	5	653	108	53	33
17			149	19	0	0	9	494	75	51	23
18			76	11	0	0	1	330	43	22	18
19			92	10	0	0	2	329	49	12	6
20			84	10	0	0	6	372	52	13	11
21			141	23	0	2	3	382	42	7	19
22			152	17	0	2	3	440	55	4	27
23			564	32	12	5	3	464	64	8	21
24			607	36	0	3	2	512	80	3	19
25			463	24	0	0	5	369	50	5	22
26			425	18	1	1	2	407	42	2	15
27			356	36	0	0	0	574	50	1	17
28			351	18	0	0	2	599	58	2	23
29			517	24	0	0	1	686	73	1	27
30			240	28	0	0	0	430	48	2	16
31			600	48	1	1	1	485	55	1	18
TOTAL		607	5,538	747	15	14	688	19,917	3,378	1,880	636
AVG.		76	241	24			22	642	109	61	21

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	192.9	31.9	2.6	67.0
2	181.4	35.1	2.6	70.0
3	183.4	75.4	2.5	70.0
4	216.4	70.5	2.5	70.0
5	216.2	72.4	2.5	70.0
6	215.2	64.1	2.6	70.0
7	213.4	46.8	2.6	70.0
8	204.4	71.2	2.6	70.0
9	238.1	74.7	2.6	70.0
10	187.7	33.3	2.6	69.0
11	196.2	43.3	2.6	69.0
12	204.8	49.6	2.6	69.0
13	213.6	62.3	2.6	68.0
14	208.5	47.9	2.8	70.0
15	210.7	46.9	3.0	69.0
16	189.7	23.7	2.7	69.0
17	176.9	12.9	3.3	69.0
18	188.8	48.6	3.3	69.0
19	206.6	70.7	3.2	69.0
20	211.6	63.8	2.4	69.0
21	221.9	66.2	2.6	69.0
22	215.6	45.3	2.6	69.0
23	195.5	27.3	2.6	69.0
24	162.3	4.6	2.6	69.0
25	188.2	31.4	2.6	69.0
26	184.5	54.6	3.2	69.0
27	198.6	66.5	3.0	69.0
28	173.2	24.9	3.1	68.0
29	174.4	12.4	3.5	68.0
30	206.0	46.8	2.7	68.0
31	173.7	17.9	3.6	68.0
AVG.	198.4	46.5	2.8	69.1

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	57,832	404
SUMMER	20,934	1,417
FALL	5,538	528
TOTAL	84,304	2,349

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
15	14	38,039	32,977	5,159	340,090	2,028

TABLE 88

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

MCNARY PROJECT
SEPTEMBER 1997

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
	FISH COUNTS											RIVER CONDITIONS			
1			664	33	1	1	0	458	66		16	148.2	0.0	3.3	68.0
2			1687	53	0	2	1	584	52		21	142.0	0.0	3.1	69.0
3			3931	72	11	1	0	1257	109		36	137.6	0.0	3.2	69.0
4			2323	67	1	2	1	1051	127		24	132.8	0.0	3.1	69.0
5			2469	111	1	0	1	1023	100		29	145.4	0.0	2.5	69.0
6			3615	138	8	0	0	1690	158		36	134.7	0.0	2.8	69.0
7			2572	201	5	1	0	1703	181		57	107.3	0.0	3.0	68.0
8			2468	174	7	1	0	1143	149		39	99.9	0.0	3.5	68.0
9			2692	198	15	6	0	1543	196		52	131.2	0.0	3.2	68.0
10			2125	179	16	5	0	1716	201		61	131.7	0.0	2.9	68.0
11			629	179	8	7	0	1518	177		58	137.2	0.0	3.1	68.0
12			1037	207	14	10	0	1880	218		51	133.3	0.0	3.8	68.0
13			1121	212	14	11	0	1424	124		12	124.9	0.0	3.8	68.0
14			925	201	8	2	0	1104	144		5	114.3	0.0	3.8	68.0
15			1732	292	24	8	0	1835	170		18	125.6	0.0	3.8	68.0
16			2694	344	41	11	0	1737	172		28	132.4	0.0	3.8	68.0
17			3674	414	24	4	0	1994	224		44	150.6	0.0	3.4	68.0
18			2601	332	25	2	0	1567	161		56	147.6	0.0	3.2	65.0
19			1617	304	30	6	0	1848	236		30	160.1	0.0	4.6	65.0
20			1739	366	37	1	0	1503	168		22	157.7	0.0	3.7	64.0
21			1597	435	40	2	1	2138	279		32	157.5	0.0	3.8	64.0
22			1793	440	105	18	0	3492	446		38	143.7	0.0	4.2	64.0
23			1973	445	128	19	0	3913	451		78	165.1	10.3	3.0	64.0
24			1115	504	108	15	0	2893	354		34	208.1	54.2	3.0	65.0
25			1490	434	128	27	0	3800	465		37	165.5	4.1	3.2	65.0
26			1042	500	137	22	0	3223	409		32	165.0	0.0	3.2	66.0
27			820	441	142	14	0	3460	443		47	162.4	0.0	3.2	66.0
28			900	468	115	17	0	2883	340		37	150.8	0.0	3.2	65.0
29			867	467	96	5	0	2213	273		22	126.3	0.0	4.2	65.0
30			964	397	61	7	0	1617	216		16	160.2	26.9	4.2	65.0
TOTAL			54,876	8,608	1,350	227	4	58,210	6,809		1,068				
AVG.			1,829	287	45	8		1,940	227		36	143.3	3.2	3.4	66.8

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	57,832	404
SUMMER	20,934	1,417
FALL	60,414	9,136
TOTAL	139,180	10,957

COHO ADULT	COHO JACKS	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1,365	241	38,043	91,187	11,968	340,090	3,096

TABLE 89

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

MCNARY PROJECT
OCTOBER 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	RIVER CONDITIONS DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1			757	450	47	9		1952	278		15	166.6	29.8	3.5	65.0
2			596	446	51	4		2865	421		1	150.1	7.3	3.8	65.0
3			715	436	67	5		2659	342		10	152.4	0.0	4.0	65.0
4			558	434	59	5		2210	275		11	143.6	0.0	4.0	64.0
5			410	453	73	9		2118	267		7	134.3	0.0	3.7	64.0
6			531	354	45	0		1944	213		7	159.0	12.9	3.9	64.0
7			398	362	32	5		1329	137		18	165.5	14.1	3.9	64.0
8			308	248	27	0		1530	195		7	184.0	36.0	4.0	63.0
9			177	317	43	4		1513	172		12	193.8	38.3	3.9	64.0
10			114	150	41	0		1362	174		3	164.7	0.0	4.0	63.0
11			256	172	107	5		1708	228		6	213.8	49.8	3.9	63.0
12			246	215	99	17		2024	268		21	192.2	28.5	3.9	63.0
13			226	216	75	2		1769	273		21	160.7	0.0	4.0	60.0
14			94	153	17	1		1065	115		7	194.9	49.7	4.2	60.0
15			110	127	13	0		966	108		0	213.3	63.6	4.2	60.0
16			113	108	13	0		790	106		0	195.2	32.1	4.3	59.0
17			109	138	6	0		824	102		1	195.9	33.6	3.9	59.0
18			80	99	17	0		816	105		2	159.6	7.2	3.9	59.0
19			60	120	20	0		1058	126		2	141.5	0.0	3.9	59.0
20			118	127	5	0		819	79		5	129.5	0.0	3.9	59.0
21			97	139	3	0		707	78		0	130.9	0.0	3.4	59.0
22			94	102	2	0		779	84		5	120.9	0.0	3.5	59.0
23			49	82	2	6		874	73		0	147.5	0.0	3.6	59.0
24			77	88	10	0		708	69		1	150.3	2.5	3.6	58.0
25			69	88	7	2		715	60		2	105.4	0.0	3.6	58.0
26			76	77	5	2		591	57		11	110.9	0.0	4.3	58.0
27			87	71	4	0		447	47		8	132.8	0.0	4.0	58.0
28			71	70	0	0		582	62		1	131.4	0.0	4.0	58.0
29			39	65	1	1		612	59		1	125.1	0.0	4.0	57.0
30			68	67	1	1		591	68		2	129.5	0.0	3.9	57.0
31			75	57	4	0		703	98		0	132.4	0.0	4.3	56.0
TOTAL			6,778	6,031	896	78		38,630	4,739		187				
AVG.			219	195	29	3		1,246	153		6	155.7	13.1	3.9	60.6

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	57,832	404
SUMMER	20,934	1,417
FALL	67,192	15,167
TOTAL	145,958	16,988

COHO ADULT	COHO JACKS	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
2,261	319	38,043	129,817	16,707	340,090	3,283

TABLE 90

DISCHARGE AND WATER QUALITY DATA

MCNARY PROJECT - 1997

NOVEMBER

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	102.8	0.0		
2	121.9	0.0		
3	132.2	0.0		
4	150.4	0.0	4.7	55.0
5	143.9	0.0	4.8	55.0
6	152.3	0.0	3.9	55.0
7	128.4	0.0	3.8	55.0
8	125.5	0.0	4.0	55.0
9	141.6	0.0	3.9	55.0
10	131.6	0.0	4.3	55.0
11	135.2	0.0	4.5	55.0
12	133.0	0.0	4.2	55.0
13	147.3	0.0		
14	129.5	0.0		
15	130.2	0.0		
16	141.8	0.0		
17	136.1	0.0		
18	134.8	0.0		
19	131.2	0.0		
20	128.1	0.0		
21	131.4	0.0		
22	136.1	0.0		
23	135.1	0.0		
24	138.1	0.0		
25	135.4	0.0		
26	173.2	32.7	4.6	49.0
27	130.4	5.0	4.5	49.0
28	121.8	0.0	4.5	49.0
29	125.7	0.0	5.6	49.0
30	123.0	0.0	5.5	49.0
AVG.	134.3	1.3	4.5	52.9

DECEMBER

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	DEG F
1	141.6	0.0	5.4	49.0
2	146.8	2.5	5.5	49.0
3	196.5	53.5	6.0	49.0
4	182.1	23.3		
5	184.4	18.4		
6	149.4	0.0		
7	162.7	0.0		
8	165.3	11.3		
9	171.0	13.2		
10	175.4	7.8		
11	187.0	17.0		47.0
12				47.0
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
AVG.	169.3	13.4		

YEARLY TOTALS OF SALMONIDS COUNTED OVER McNARY DAM
1954 - 1997

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
1993	143,412	93,183	66,485	481	303,561
1994	128,868	94,427	10,603	1,735	235,633
1995	113,354	114,910	8,320	1,021	237,605
1996	114,947	124,177	28,585	1,853	269,562
1997	162,946	129,817	38,043	2,580	333,386
Totals	7,314,588	4,563,059	2,593,856	396,336	14,867,839
10-Year Average	148,153	133,653	42,768	1,920	326,493

*Jacks included

TABLE 92

TABLE 92

MONTHLY COUNT OF CHINOOK SALMON
McNARY DAM: 1954 - 1997

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	44,280	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	52,758	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	45,614	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				4,894	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	7,298	1,376		144,148	68,414	31,589	44,145
1979			6	5,424	13,698	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	4,928	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	41,982	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	60,398	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				9,825	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
1993				18,649	37,255	14,880	8,119	8,414	48,093	8,002			143,412	59,556	20,374	63,482
1994				2,940	5,513	5,486	8,242	11,085	80,693	14,909			128,868	8,987	14,313	105,568
1995				1,392	3,871	4,343	8,270	13,224	61,633	20,621			113,354	5,930	13,219	94,205
1996				426	15,212	8,242	8,208	13,964	56,847	12,050			114,947	17,832	15,102	82,013
1997				6,529	44,264	18,384	10,584	6,892	63,484	12,809			162,946	58,236	22,351	82,359
Total			62	595,149	1,350,861	847,964	944,068	514,235	2,521,679	534,678	5,861	36	7,314,593	2,101,265	1,775,694	3,437,734
10 Year Average				11,563	21,514	10,823	9,053	12,481	67,665	14,944	1,074		148,153	35,539	18,794	93,820

TABLE 93

MONTHLY COUNT OF SOCKEYE SALMON
McNARY DAM; 1954 - 1997

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
1993						26,492	39,607	377	9				66,485
1994					1	5,910	4,672	20					10,603
1995					1	3,001	5,259	58		1			8,320
1996						11,594	16,927	64					28,585
1997						7,706	29,645	688	4				38,043
Total				1	181	426,138	2,069,515	84,858	9,368	3,789	5	1	2,593,856
10-Year Average						13,866	28,482	404	16	7			42,768

TABLE 94

MONTHLY COUNT OF COHO SALMON
McNARY DAM; 1954 - 1997

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
1993								2	254	225			481
1994								9	978	748			1,735
1995								8	344	669			1,021
1996							2	1	1,212	638			1,853
1997								29	1,577	974			2,580
TOTAL				1	14	50	515	19,536	316,766	56,101	3,333	20	396,336
10-Year Average								11	1,086	800	211		1,920

*Jacks included

TABLE 95

MONTHLY COUNT OF STEELHEAD
McNARY DAM: 1954-1997

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
1993				5,194	588	2,197	9,692	10,003	35,287	30,222			93,183
1994				2,622	336	1,169	7,436	5,468	40,871	36,525			94,427
1995				774	325	998	8,042	21,720	45,237	37,814			114,910
1996				701	301	950	8,726	34,385	50,723	28,391			124,177
1997				1,210	435	1,241	10,174	19,917	58,210	38,630			129,817
Total	1,059	925	10,897	91,699	37,107	43,134	401,569	858,267	2,123,138	961,517	28,764	5,253	4,563,329
10-Year Avg.				2,437	561	1,485	10,170	18,181	62,675	36,944			133,680

TABLE 96

WILD STEELHEAD COUNTED AT MCNARY DAM 1997

MCNARY DAM		Oregon	Washington
April	Wild Steelhead	Ladder	Ladder
1	27	25	2
2	14	13	1
3	15	14	1
4	10	10	0
5	5	5	0
6	9	7	2
7	16	16	0
8	9	8	1
9	13	13	0
10	3	2	1
11	12	12	0
12	12	11	1
13	8	7	1
14	12	13	-1
15	14	13	1
16	16	11	5
17	22	18	4
18	17	17	0
19	26	26	0
20	13	8	5
21	26	22	4
22	15	8	7
23	20	18	2
24	18	17	1
25	8	8	0
26	8	6	2
27	8	7	1
28	2	2	0
29	9	8	1
30	3	2	1
TOTAL	390	347	43
AVE	13	12	1

TOTAL	WILD STEELHEAD
TO DATE	390

MCNARY DAM		Oregon	Washington
May	Wild Steelhead	Ladder	Ladder
1	3	2	1
2	3	1	2
3	9	8	1
4	4	2	2
5	2	2	0
6	3	2	1
7	5	4	1
8	5	5	0
9	2	1	1
10	2	2	0
11	1	0	1
12	2	1	1
13	2	2	0
14	2	1	1
15	5	5	0
16	7	5	2
17	5	5	0
18	2	2	0
19	2	2	0
20	0	0	0
21	0	0	0
22	0	0	0
23	0	0	0
24	1	1	0
25	0	0	0
26	1	1	0
27	1	1	0
28	2	1	1
29	1	1	0
30	1	0	1
31	2	2	0
TOTAL	75	59	16
AVE	2	2	1

TOTAL	WILD STEELHEAD
TO DATE	465

TABLE 97

WILD STEELHEAD COUNTED AT
MCNARY DAM 1997

MCNARY DAM		Oregon	Washington
June	Wild Steelhead	Ladder	Ladder
1	0	0	0
2	2	0	2
3	2	1	1
4	0	0	0
5	0	0	0
6	0	0	0
7	0	1	-1
8	2	1	1
9	1	1	0
10	0	0	0
11	0	0	0
12	0	0	0
13	0	0	0
14	0	0	0
15	0	0	0
16	3	2	1
17	5	4	1
18	2	1	1
19	2	2	0
20	2	0	2
21	3	2	1
22	0	0	0
23	2	1	1
24	4	4	0
25	2	2	0
26	1	1	0
27	7	6	1
28	9	5	4
29	1	1	0
30	2	2	0
TOTAL	52	37	15
AVE	2	1	1

TOTAL	WILD STEELHEAD
TO DATE	517

MCNARY DAM		Oregon	Washington
July	Wild Steelhead	Ladder	Ladder
1	6	6	0
2	4	2	2
3	7	7	0
4	9	7	2
5	14	10	4
6	9	7	2
7	12	10	2
8	22	20	2
9	20	16	4
10	18	16	2
11	26	19	7
12	24	22	2
13	42	26	16
14	28	22	6
15	19	13	6
16	30	25	5
17	36	30	6
18	33	23	10
19	31	20	11
20	34	32	2
21	46	35	11
22	59	55	4
23	46	38	8
24	50	36	14
25	80	64	16
26	64	48	16
27	86	70	16
28	66	53	13
29	103	79	24
30	119	91	28
31	121	91	30
TOTAL	1,264	993	271
AVE	41	32	9

TOTAL	WILD STEELHEAD
TO DATE	1,781

TABLE 97

TABLE 98

WILD STEELHEAD COUNTED AT MCNARY DAM 1997

MCNARY DAM August	Wild Steelhead	Oregon Ladder	Washington Ladder
1	154	112	42
2	143	107	36
3	149	121	28
4	147	121	26
5	174	122	52
6	188	152	36
7	215	161	54
8	304	254	50
9	195	163	32
10	201	148	53
11	119	103	16
12	143	108	35
13	126	121	5
14	77	72	5
15	99	82	17
16	108	80	28
17	75	59	16
18	43	38	5
19	49	43	6
20	52	47	5
21	42	37	5
22	55	44	11
23	64	56	8
24	80	72	8
25	50	42	8
26	42	35	7
27	50	44	6
28	58	46	12
29	73	56	17
30	48	40	8
31	55	38	17
TOTAL	3,378	2,724	654
AVE	109	88	21

TOTAL TO DATE	WILD STEELHEAD
	5,159

MCNARY DAM September	Wild Steelhead	Oregon Ladder	Washington Ladder
1	66	65	1
2	52	48	4
3	109	96	13
4	127	115	12
5	100	92	8
6	158	128	30
7	181	158	23
8	149	133	16
9	196	178	18
10	201	181	20
11	177	151	26
12	218	202	16
13	124	106	18
14	144	125	19
15	170	151	19
16	172	160	12
17	224	199	25
18	161	145	16
19	236	218	18
20	168	152	16
21	279	257	22
22	446	384	62
23	451	419	32
24	354	282	72
25	465	427	38
26	409	374	35
27	443	409	34
28	340	314	26
29	273	245	28
30	216	173	43
TOTAL	6,809	6,087	722
AVE	227	203	24

TOTAL TO DATE	WILD STEELHEAD
	11,968

TABLE 99

WILD STEELHEAD COUNTED AT
MCNARY DAM 1997

MCNARY DAM		Oregon	Washington
October	Wild Steelhead	Ladder	Ladder
1	278	176	102
2	421	380	41
3	342	324	18
4	275	253	22
5	267	244	23
6	213	158	55
7	137	109	28
8	195	160	35
9	172	146	26
10	174	168	6
11	228	209	19
12	268	254	14
13	273	262	11
14	115	107	8
15	108	101	7
16	106	82	24
17	102	86	16
18	105	104	1
19	126	116	10
20	79	73	6
21	78	70	8
22	84	73	11
23	73	68	5
24	69	67	2
25	60	60	
26	57	55	2
27	47	43	4
28	62	55	7
29	59	53	6
30	68	62	6
31	98	96	2
TOTAL	4,739	4214	525
AVE	153	136	18

TOTAL	WILD STEELHEAD
TO DATE	16,707

SNAKE RIVER TABLES

Ice Harbor Lock and Dam

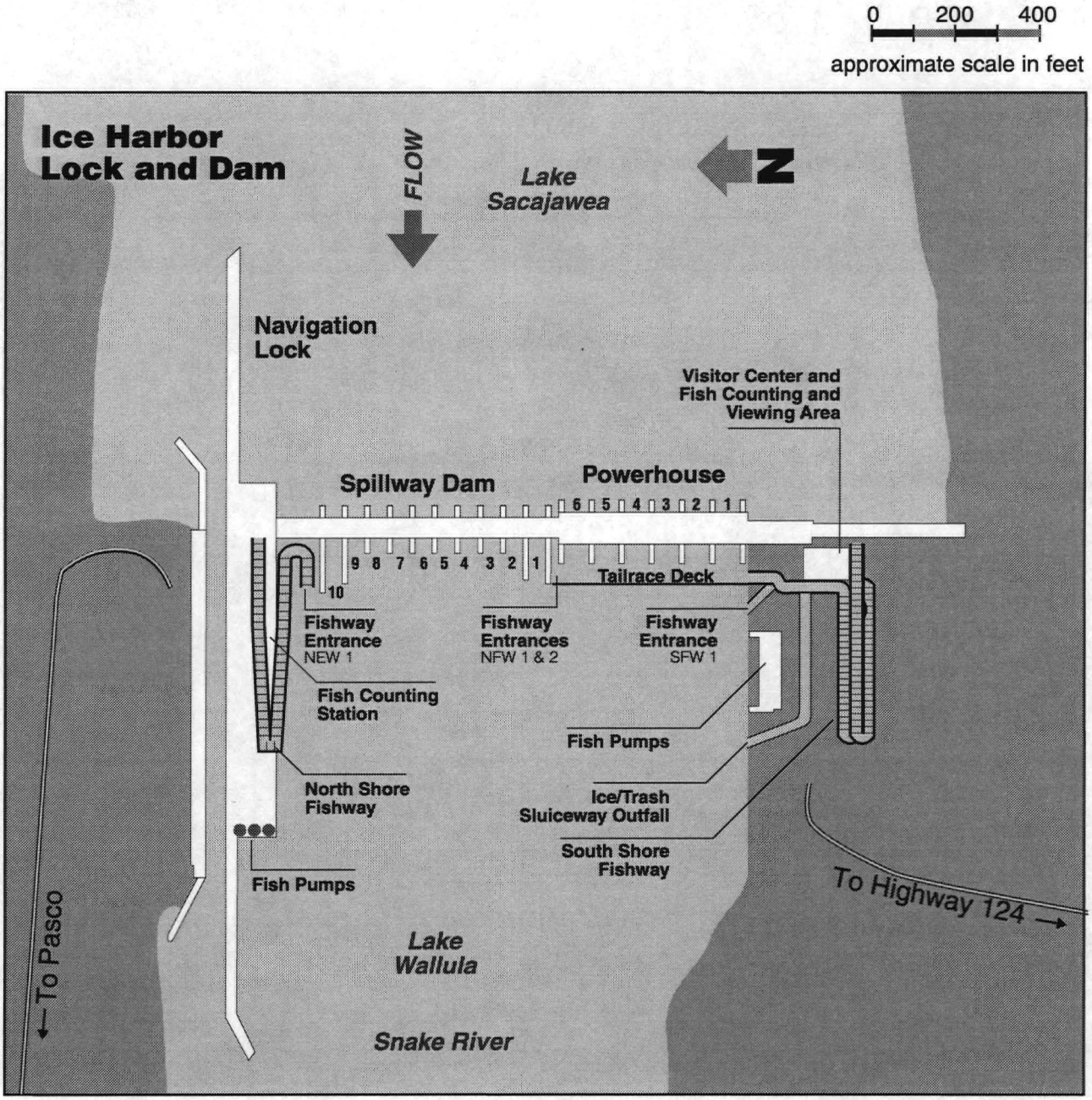

TABLE 100

MONTHLY TOTALS OF SALMONIDS AND SHAD COUNTED OVER ICE HARBOR DAM
1997

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*				3,442	30,332	14,678	2,224	411	2,502	1,680	143	0	55,412
STEELHEAD				1,187	216	280	4,323	11,522	40,238	37,036	8,484	544	103,830
SOCKEYE							6	8	1				15
COHO									18	83	27		128
PINK													
MINI-JACK**					1	1	247	298	47	36			630
TOTAL				4,629	30,549	14,959	6,800	12,239	42,806	38,835	8,654	544	160,015
SHAD						706	4,630	98					5,434

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

These counts include the extended season videotaped counts that were made between 0600 and 1600 hours in November and December.

TABLE 101

DISCHARGE AND WATER QUALITY DATA
ICE HARBOR PROJECT - 1997

JANUARY

DAT	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	178.6	100.0		
2	227.7	143.1		
3	204.5	119.5		
4	180.0	95.6		
5	147.4	63.2		
6	104.9	28.8		
7	76.4	20.5		
8	82.3	21.2		
9	89.0	28.2		
10	100.3	20.0		
11	81.1	0.0		
12	87.4	7.4		
13	80.5	7.7		
14	78.5	5.8		
15	70.3	0.0		
16	71.9	0.0		
17	68.5	0.0		
18	67.2	0.0		
19	58.2	0.0		
20	74.8	0.0		
21	71.8	0.0		
22	57.9	0.0		
23	64.7	0.0		
24	67.6	5.9		
25	76.0	9.2		
26	76.0	13.8		
27	85.5	5.6		
28	79.0	0.0		
29	74.4	0.0		
30	88.1	10.3		
31	103.4	24.3		
AVG	95.9	23.6		

FEBRUARY

DAT	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	117.0	36.3		
2	122.1	38.1		
3	107.5	25.3		
4	109.4	27.3		
5	109.4	27.9		
6	99.4	20.2		
7	96.8	16.7		
8	91.2	9.7		
9	95.2	13.8		
10	87.5	10.1		
11	87.4	8.4		
12	86.2	12.5		
13	94.9	12.3		
14	84.6	2.9		
15	98.0	16.7		
16	110.8	28.8		
17	97.3	16.6		
18	106.8	26.1		
19	105.5	23.3		
20	109.0	25.1		
21	97.9	15.3		
22	108.1	26.4		
23	99.5	18.1		
24	93.3	12.4		
25	96.0	15.6		
26	92.1	12.2		
27	97.1	15.7		
28	95.0	12.3		
AVG	99.8	18.8		

MARCH

DAT	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	95.0	13.5		
2	94.2	13.2		
3	91.8	12.7		
4	87.5	16.3		
5	97.8	32.1		
6	88.4	23.7		
7	83.4	18.4		
8	84.4	21.3		
9	98.8	31.8		
10	98.7	33.2		
11	101.5	35.5		
12	110.9	44.5		
13	98.4	31.8		
14	93.0	26.2		
15	94.2	32.9		
16	88.8	29.1		
17	109.8	49.0		
18	107.7	47.1		
19	125.4	64.5		
20	129.3	68.7		
21	147.7	85.0		
22	143.4	82.3		
23	140.8	79.2		
24	136.8	79.8		
25	135.2	73.7		
26	128.4	69.8		
27	134.9	76.2		
28	148.8	87.5		
29	141.2	79.8		
30	131.3	70.4		
31	126.4	66.5		
AVG	112.7	48.2		

TABLE 102

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ICE HARBOR PROJECT

APRIL 1997

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	0							92	21			121.2	55.6	1.7	46.0
2	0							74	22			105.9	35.9	1.7	46.0
3	0							123	31			98.6	24.8	1.7	46.0
4	1							63	23			104.3	29.8	1.7	46.0
5	0							50	10			96.0	21.7	1.5	46.0
6	0							44	9			93.9	21.3	2.0	46.0
7	0							57	11			89.6	19.0	1.8	47.0
8	1							51	10			101.9	28.2	2.0	47.0
9	0							45	13			94.1	21.6	2.0	47.0
10	2							34	11			99.9	28.3	1.9	48.0
11	0							21	10			88.8	25.4	2.0	48.0
12	3							30	8			87.3	23.2	2.2	48.0
13	5							25	3			81.5	22.3	1.9	48.0
14	3							32	8			85.7	23.9	2.0	48.0
15	3							22	7			88.9	24.3	2.0	48.0
16	7							36	8			95.6	26.0	1.6	48.0
17	9							42	15			112.1	37.7	1.6	48.0
18	39							26	10			117.2	43.8	2.2	48.0
19	22							37	13			126.9	53.6	2.0	48.0
20	46							37	16			157.0	84.3	1.9	48.0
21	43							24	7			181.7	110.8	1.8	48.0
22	37							31	17			181.2	108.4	1.8	48.0
23	291							36	19			168.9	99.2	1.6	49.0
24	157							21	11			186.9	117.8	1.1	50.0
25	264							20	7			172.2	105.6	1.1	50.0
26	513							23	10			162.7	94.9	1.0	50.0
27	649							33	24			157.0	87.2	1.0	50.0
28	413							17	7			173.8	102.5	1.1	50.0
29	366							13	10			180.1	114.1	1.2	50.0
30	568							28	17			175.7	108.4	1.2	50.0
TOTAL	3,442							1,187	388						
AVG.	115							40	13			126.2	56.7	1.7	48.0

TABLE 103

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ICE HARBOR PROJECT

MAY 1997

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	722			0				29	10		0	168.1	96.8	1.1	50.0
2	277			0				14	7		0	162.2	89.1	1.0	50.0
3	708			2				19	10		0	137.0	63.7	1.0	51.0
4	1672			2				15	10		0	137.6	64.7	1.4	51.0
5	836			1				13	8		0	137.5	64.2	1.5	51.0
6	540			0				9	4		0	138.9	66.5	1.5	51.0
7	720			2				16	7		0	150.9	77.3	1.6	51.0
8	1376			0				2	2		0	148.2	74.4	1.6	51.0
9	1850			1				9	7		0	153.8	79.7	1.6	50.0
10	1798			1				11	7		0	153.3	78.8	1.8	52.0
11	1612			2				6	6		0	164.1	89.5	2.0	53.0
12	1577			0				6	5		0	170.3	95.3	2.0	53.0
13	1514			0				2	1		0	172.9	98.1	2.0	54.0
14	2019			4				7	2		0	190.7	116.6	2.0	54.0
15	2265			8				16	2		0	193.7	119.2	1.8	54.0
16	1320			1				5	1		0	204.7	129.3	1.5	54.0
17	1224			0				0	0		0	214.5	139.6	1.5	54.0
18	252			0				1	1		0	217.2	142.8	1.2	54.0
19	422			4				6	6		0	199.1	124.9	1.2	54.0
20	647			2				4	2		0	185.1	116.0	1.2	54.0
21	410			0				1	1		0	176.1	110.7	1.2	54.0
22	454			0				3	1		0	178.7	104.6	1.2	54.0
23	449			0				2	1		0	164.0	97.4	1.0	54.0
24	833			4				5	1		0	163.4	104.5	1.1	54.0
25	985			5				7	1		0	164.6	97.9	1.1	54.0
26	857			4				2	0		0	146.0	84.3	1.3	54.0
27	659			5				0	0		0	142.3	70.4	1.5	54.0
28	518			1				0	0		0	140.4	68.0	1.8	54.0
29	720			2				2	0		0	144.2	72.6	1.8	54.0
30	587			4				4	0		1	145.6	73.0	1.8	54.0
31	453			1				0	0		0	164.7	94.0	1.8	54.0
TOTAL	30,276			56				216	103		1				
AVG.	977			2				7	3			165.5	93.7	1.5	52.9

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	STEELHEAD	WILD STEELHEAD	MINI-JCK
SPRING	33,718	56	1,403	491	1

TABLE 104

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

ICE HARBOR PROJECT
JUNE 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1	877			4				1	0	0	0
2	1002			2				0	0	0	0
3	631			0				7	1	0	0
4	1593			6				5	1	0	0
5	636			2				1	0	0	0
6	491			2				4	0	0	0
7	540			0				1	0	0	0
8	444			0				6	0	0	0
9	462			0				7	0	0	0
10	325			1				2	1	0	0
11	679			2				6	0	0	0
12		453		2				5	0	0	0
13		527		4				2	1	0	0
14		445		1				4	0	0	0
15		332		2				6	0	0	0
16		380		5				7	0	0	0
17		160		2				6	0	0	0
18		302		2				13	1	1	0
19		498		4				7	0	0	0
20		514		2				11	2	0	0
21		366		6				7	2	0	1
22		358		0				10	0	2	0
23		414		2				11	0	0	0
24		299		4				10	0	2	0
25		291		5				21	2	12	0
26		265		1				12	0	15	0
27		366		6				6	1	92	0
28		328		0				32	0	154	0
29		330		1				19	3	132	0
30		295		7				51	1	296	0
TOTAL	7,680	6,923		75				280	16	706	1
AVG.	698	364		3				9		24	

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	171.0	101.4	1.8	54.0
2	184.7	112.6	1.8	55.0
3	176.2	107.6	1.5	55.0
4	177.0	104.7	1.5	55.0
5	184.7	114.9	1.2	55.0
6	189.5	117.4	1.2	55.0
7	178.5	119.0	1.4	55.0
8	170.8	119.9	1.4	55.0
9	170.1	111.7	1.4	55.0
10	175.0	110.0	1.5	55.0
11	183.5	121.0	1.5	55.0
12	198.0	137.8	1.4	56.0
13	191.1	121.6	1.4	56.0
14	183.4	121.6	1.5	58.0
15	190.7	132.9	1.5	58.0
16	190.9	126.7	1.3	58.0
17	182.8	119.0	1.3	58.0
18	180.1	122.2	1.4	58.0
19	183.9	115.5	1.4	58.0
20	171.3	104.8	1.4	58.0
21	159.0	94.7	1.2	58.0
22	154.0	96.1	1.2	58.0
23	142.7	81.1	1.3	58.0
24	127.8	58.7	1.3	59.0
25	127.0	56.2	1.3	59.0
26	108.3	49.0	1.3	59.0
27	117.3	44.5	4.0	60.0
28	113.6	44.5	3.8	60.0
29	120.5	47.7	3.5	60.0
30	111.2	42.6	3.7	61.0
AVG.	163.8	98.6	1.7	57.1

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	41,398	75
SUMMER	6,923	56
TOTAL	48,321	131

STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1,683	507	706	2

TABLE 105

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

ICE HARBOR PROJECT
JULY 1997

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1		270		2			0	31	2	122	0	110.4	43.4	3.2	61.0
2		240		3			0	47	6	91	0	113.7	40.7	3.0	62.0
3		261		0			0	37	1	177	1	103.7	41.7	3.2	62.0
4		185		1			0	76	6	225	0	95.5	40.1	2.9	62.0
5		138		0			0	51	1	349	1	94.6	40.0	2.7	62.0
6		138		0			0	64	7	249	5	86.6	40.0	2.7	62.0
7		121		1			0	67	5	253	6	78.2	40.0	2.9	62.0
8		113		1			0	95	4	356	6	76.4	39.9	3.3	63.0
9		106		5			0	127	6	299	15	77.2	40.0	3.3	63.0
10		66		2			0	103	7	138	9	77.9	40.1	3.3	63.0
11		66		1			0	102	12	137	7	78.4	40.1	3.3	63.0
12		47		4			0	120	11	105	13	64.9	40.1	3.2	63.0
13		56		5			0	114	12	170	6	60.0	36.3	3.6	63.0
14		42		1			0	123	10	171	7	60.6	31.4	3.6	64.0
15		48		4			0	131	8	371	8	65.1	29.2	3.6	64.0
16		34		3			0	137	12	236	13	69.6	37.7	3.6	65.0
17		40		0			0	147	20	194	7	72.3	39.2	3.5	67.0
18		22		1			0	117	10	150	4	69.5	39.2	4.8	67.0
19		10		2			0	114	8	168	3	72.1	38.8	4.8	68.0
20		19		2			1	151	8	165	9	77.1	39.9	4.8	68.0
21		25		1			1	145	25	74	0	66.8	35.6	4.1	69.0
22		22		0			0	185	9	74	18	67.7	36.0	4.4	69.0
23		9		4			0	202	38	54	4	65.5	35.6	4.4	69.0
24		13		0			0	215	20	52	12	68.2	36.4	4.4	69.0
25		16		1			2	216	39	59	15	66.5	37.4	4.4	69.0
26		11		0			0	185	18	44	12	67.2	39.9	4.4	69.0
27		10		3			2	176	22	31	22	62.8	36.5	4.5	69.0
28		6		0			0	221	23	33	16	64.8	36.4	4.5	69.0
29		14		7			0	285	21	43	5	67.9	36.5	4.5	69.0
30		8		5			0	271	40	16	7	63.7	35.9	3.5	69.0
31		7		2			0	268	45	24	16	64.7	35.3	2.5	69.0
TOTAL		2,163		61			6	4,323	456	4,630	247				
AVG.		155		2				139	15	149	8	75.1	38.0	3.7	65.6

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	41,398	75
SUMMER	9,086	117
TOTAL	50,484	192

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
6	6,006	963	5,336	249

TABLE 106

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

ICE HARBOR PROJECT
AUGUST 1997

FISH COUNTS / RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1		9		2			0	226	31	17	5	60.5	33.1	4.4	69.0
2		12		2			0	263	24	15	15	60.4	36.0	4.5	69.0
3		16		0			2	267	42	20	23	64.0	38.9	4.5	70.0
4		6		1			1	417	57	6	20	64.4	38.8	4.1	70.0
5		10		0			1	400	58	9	20	58.5	38.8	4.7	70.0
6		9		0			0	361	65	12	11	58.4	38.5	5.0	70.0
7		9		0			0	411	67	0	18	59.9	42.0	5.0	70.0
8		17		0			0	522	89	3	12	58.6	40.7	5.0	70.0
9		10		0			1	427	56	5	15	54.7	35.5	5.0	70.0
10		8		0			2	516	83	0	8	58.9	39.5	5.0	70.0
11		4		0			0	512	66	4	13	52.0	38.9	5.0	70.0
12			8	2			0	485	56	1	8	60.5	39.8	5.0	70.0
13			9	0			0	431	59	2	11	51.2	38.6	5.0	70.0
14			7	1			0	422	42	0	32	61.1	44.8	5.0	70.0
15			6	0			1	473	68	3	10	54.6	35.9	5.0	70.0
16			10	0			0	315	29	0	20	50.7	37.6	4.8	71.0
17			9	2			0	231	20	1	8	48.6	37.5	4.8	71.0
18			8	1			0	317	35	0	7	49.1	34.7	4.8	71.0
19			10	0			0	404	49	0	2	48.7	37.7	4.8	71.0
20			6	1			0	287	30	0	8	44.6	34.7	4.8	71.0
21			12	0			0	356	37	0	4	49.1	35.9	4.8	70.0
22			7	1			0	249	26	0	7	45.9	34.5	6.0	70.0
23			11	4			0	288	35	0	1	52.5	40.0	6.0	70.0
24			9	6			0	319	25	0	1	48.1	34.2	6.0	70.0
25			23	2			0	274	23	0	1	45.7	32.3	5.7	70.0
26			15	3			0	333	36	0	4	43.9	33.8	5.7	70.0
27			22	3			0	328	30	0	2	53.0	38.6	5.7	70.0
28			22	1			0	412	31	0	7	32.5	26.7	4.7	69.0
29			18	0			0	375	26	0	2	39.4	33.1	4.1	69.0
30			26	2			0	421	23	0	1	31.4	30.4	4.0	69.0
31			25	4			0	480	30	0	2	36.3	28.6	4.1	69.0
TOTAL		110	263	38			8	11,522	1,348	98	298				
AVG.		10	13					372	43	3	10	51.5	36.5	4.9	70.0

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	41,398	75
SUMMER	9,196	122
FALL	263	33
TOTAL	50,857	230

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
14	17,528	2,311	5,434	547

TABLE 107

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

ICE HARBOR PROJECT
SEPTEMBER 1997

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1			14	1	0		0	708	59		4	29.5	0.2	4.1	69.0
2			48	7	0		0	434	41		2	16.4	0.0	4.1	67.0
3			26	1	0		0	539	47		6	22.5	0.0	4.1	67.0
4			87	4	0		0	557	41		1	29.5	0.0	5.2	67.0
5			76	1	0		0	681	46		0	30.2	0.0	4.9	69.0
6			89	4	0		0	830	70		2	35.4	0.0	5.0	68.0
7			95	7	0		0	883	59		0	23.2	0.0	5.0	68.0
8			92	6	0		0	797	59		0	31.2	0.0	0.0	68.0
9			114	14	0		0	1346	119		0	27.8	0.1	5.0	68.0
10			114	10	0		0	1114	80		2	29.4	0.0	5.0	68.0
11			57	4	0		0	976	83		0	28.0	0.0	5.2	68.0
12			109	8	0		0	1345	124		0	29.9	0.0	4.7	68.0
13			73	11	0		0	1218	98		0	29.9	0.0	4.0	68.0
14			33	11	0		0	831	60		4	30.6	0.0	4.2	68.0
15			31	12	0		0	981	76		0	32.6	0.0	3.8	68.0
16			45	12	0		0	1303	135		0	45.8	0.0	3.8	67.0
17			59	8	0		1	1346	125		1	48.2	0.0	3.8	67.0
18			47	21	0		0	1272	101		4	48.1	0.0	3.8	67.0
19			107	25	0		0	1457	168		2	40.8	0.0	4.8	66.0
20			116	17	0		0	1099	108		2	39.0	0.0	4.8	66.0
21			79	17	0		0	1244	87		0	45.6	0.0	4.7	66.0
22			74	34	0		0	1279	102		0	40.0	0.0	5.0	66.0
23			59	24	1		0	1690	144		7	37.5	0.0	5.0	66.0
24			62	21	0		0	1641	153		5	41.2	0.0	5.0	66.0
25			63	21	2		0	2463	185		2	43.1	0.0	5.0	66.0
26			59	51	0		0	2502	260		0	37.7	0.0	5.0	66.0
27			53	30	1		0	2597	258		0	38.0	0.0	4.4	66.0
28			45	27	5		0	2591	282		0	43.3	0.0	5.6	66.0
29			44	44	8		0	2382	182		2	40.0	0.0	5.0	66.0
30			42	37	1		0	2132	174		1	41.3	0.0	5.2	66.0
TOTAL			2,012	490	18		1	40,238	3,526		47				
AVG.			63	16				1,341	118		2	35.2	0.0	4.5	67.1

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	41,398	75
SUMMER	9,196	122
FALL	2,275	523
TOTAL	52,869	720

COHO ADULT
18

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
15	57,766	5,837	5,434	594

TABLE 108

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

ICE HARBOR PROJECT
OCTOBER 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	RIVER CONDITIONS DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1			36	54	1	0		1867	168		0	40.3	0.0	5.2	66.0
2			42	52	4	0		1830	174		2	37.1	0.0	5.2	66.0
3			47	26	1	0		1839	184		10	40.2	0.0	5.0	66.0
4			34	58	2	0		2346	214		2	35.4	0.0	4.2	66.0
5			15	25	2	0		1988	192		0	37.6	0.0	4.2	66.0
6			34	50	4	0		2012	170		2	39.5	0.0	4.4	65.0
7			28	60	7	0		1812	170		0	42.7	0.0	4.0	64.0
8			13	47	5	0		1496	141		1	40.7	0.0	3.8	64.0
9			24	70	7	0		1653	163		2	38.1	0.0	3.8	63.0
10			18	46	1	0		1570	157		0	39.4	0.0	4.8	62.0
11			20	34	4	0		1587	144		5	38.3	0.0	4.8	62.0
12			22	49	2	0		1591	154		0	40.8	0.0	4.8	62.0
13			12	26	1	0		1412	125		2	39.1	0.0	5.2	62.0
14			13	35	0	1		1588	159		1	45.0	0.0	5.2	61.0
15			24	39	4	0		1159	139		2	44.5	0.0	5.0	61.0
16			12	30	0	0		878	60		1	45.0	0.0	5.0	61.0
17			11	47	4	0		1294	140		0	46.9	0.0	4.8	61.0
18			5	30	6	0		893	76		1	43.0	0.0	4.2	61.0
19			8	48	6	0		868	96		2	43.2	0.0	4.0	60.0
20			8	44	2	0		932	135		1	16.5	0.0	4.4	60.0
21			4	29	0	0		572	49		0	19.0	0.0	4.4	60.0
22			7	45	2	0		580	59		0	27.3	0.0	4.4	60.0
23			7	33	1	0		862	71		0	23.6	0.0	4.6	60.0
24			9	30	1	0		557	39		0	23.8	0.0	4.8	60.0
25			4	27	0	0		667	75		0	19.0	0.0	4.8	60.0
26			2	26	1	0		409	49		1	26.1	0.0	4.0	58.0
27			8	33	1	0		618	50		0	23.7	0.0	4.0	58.0
28			2	22	4	0		576	55		0	20.4	0.0	4.2	58.0
29			0	39	4	0		407	30		1	24.5	0.0	4.2	58.0
30			6	19	4	0		589	54		0	23.9	0.0	4.2	56.0
31			2	30	1	0		584	50		0	43.6	0.0	5.5	56.0
TOTAL			477	1,203	82	1		37,036	3,542		36				
AVG.			15	39	3			1,195	114			34.5	0.0	4.6	61.4

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	41,398	75
SUMMER	9,196	122
FALL	2,752	1,726
TOTAL	53,346	1,923

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
100	1	15	94,802	9,379	5,434	630

TABLE 109

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

Extended Season Daytime Counts @ Ice Harbor
Counting took place between 0600 and 1600 Hours PST
November 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1			1	17	4			605	60		
2			2	16	4			595	51		
3			0	10	1			283	15		
4			0	17	0			376	30		
5			0	7	3			481	38		
6			1	11	4			451	44		
7			0	10	2			595	46		
8			2	8	1			841	88		
9			2	7	2			640	79		
10			0	0	2			485	61		
11			0	2	0			371	55		
12			1	2	1			312	30		
13			2	1	1			282	34		
14			2	2	0			212	25		
15			0	0	1			211	35		
16			1	5	0			178	22		
17			0	4	0			147	13		
18			0	1	0			172	39		
19			0	1	0			74	5		
20			-1	1	1			102	8		
21			0	0	0			133	19		
22			0	2	0			131	13		
23			0	2	0			112	13		
24			0	0	0			132	18		
25			0	1	0			126	11		
26			0	0	0			70	6		
27			0	0	0			93	11		
28			2	0	0			110	14		
29			0	0	0			99	10		
30			0	1	0			65	3		
TOTAL			15	128	27			8,484	896		
AVG.			1	4	1			283	30		

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	41,398	75
SUMMER	9,196	122
FALL	2,767	1,854
TOTAL	53,361	2,051

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
127	1	15	103,286	10,275	5,434	630

TABLE 110

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

Extended Season Daytime Counts @ Ice Harbor
Counting took place between 0600 and 1600 Hours PST
December 1997

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1				0				75	4		
2				0				60	6		
3				0				91	6		
4				0				73	6		
5				0				47	7		
6				0				39	5		
7				0				31	3		
8				-1				37	5		
9				0				17	2		
10				0				19	1		
11				0				7	1		
12				1				10	0		
13				0				13	0		
14				0				16	1		
15				0				9	2		
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
TOTAL				0				544	49		
AVG.				0				36	3		

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	41,398	75
SUMMER	9,196	122
FALL	2,767	1,854
TOTAL	53,361	2,051

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
127	1	15	103,830	10,324	5,434	630

TABLE 111

DISCHARGE AND WATER QUALITY DATA
ICE HARBOR PROJECT - 1997

NOVEMBER

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SEC	TURBIDITY DEG F
1	43.0	0.0		
2	38.5	0.0		
3	31.4	0.0		
4	25.6	0.0		
5	32.3	0.0		
6	27.5	0.0		
7	22.5	0.0		
8	30.9	0.0		
9	29.7	0.0		
10	27.8	0.0		
11	27.6	0.0		
12	26.5	0.0		
13	24.3	0.0		
14	25.1	0.0		
15	24.0	0.0		
16	26.3	0.0		
17	21.6	1.3		
18	23.3	0.0		
19	28.0	0.0		
20	26.1	0.0		
21	29.6	0.0		
22	29.8	0.0		
23	30.4	0.0		
24	25.5	0.0		
25	26.7	0.0		
26	32.1	0.0		
27	23.4	0.0		
28	28.3	0.0		
29	25.6	0.0		
30	22.9	0.0		
AVG.	27.9	0.0		

DECEMBER

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SEC	TURBIDITY DEG F
1	37.5	0.0		
2	22.6	0.0		
3	34.6	0.0		
4	17.3	0.0		
5	32.9	0.0		
6	17.6	0.0		
7	10.3	0.0		
8	21.3	0.0		
9	27.1	0.0		
10	27.7	0.0		
11	35.6	0.0		
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
AVG.	25.9	0.0		

TABLE 112

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

NIGHT VIDEO FISH COUNTS @ ICE HARBOR
April 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
1	0			0				4	0			
2	0			0				7	1			
3	0			0				6	1			
4	0			0				6	3			
5	0			0				7	4			
6	0			0				3	2			
7	0			0				5	1			
8	0			0				3	3			
9	0			0				7	0			
10	0			0				4	3			
11	0			0				3	1			
12	0			0				4	0			
13	0			0				5	1			
14	0			0				3	2			
15	0			0				7	0			
16	0			0				2	1			
17	1			0				4	2			
18	0			0				6	3			
19	1			0				0	0			
20	0			0				3	2			
21	0			0				6	2			
22	2			0				2	1			
23	2			0				2	1			
24	1			0				2	1			
25	2			0				1	1			
26	13			0				1	0			
27	6			0				2	0			
28	4			0				2	1			
29	16			0				0	0			
30	13			0				1	0			
TOTAL	61			0	0	0	0	108	37	0	0	0
AVG.	3			0	0	0	0	3	1	0	0	0

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	61	0
TOTAL	61	0

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
0	0	0	108	37	0	0	0

Night video fish counting took place between 2000 and 0400 hours PST.

TABLE 113

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

NIGHT VIDEO FISH COUNTS @ ICE HARBOR
May 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
1	19			0				0	0			0
2	10			0				0	0			0
3	60			0				1	1			0
4	33			0				1	0			0
5	18			0				0	0			0
6	26			0				1	1			0
7	24			0				0	0			0
8	111			0				1	0			0
9	35			0				1	1			0
10	83			0				0	0			2
11	49			0				1	0			0
12	20			0				0	0			0
13	42			0				0	0			0
14	60			0				1	0			0
15	45			0				0	0			1
16	17			0				0	0			0
17	8			0				0	0			0
18	3			0				0	0			0
19	7			0				0	0			0
20	6			0				0	0			0
21	11			0				0	0			0
22	14			1				0	0			0
23	19			0				0	0			0
24	21			0				0	0			0
25	26			0				0	0			0
26*	4			0				0	0			0
27	20			0				0	0			0
28	23			0				0	0			0
29	20			0				0	0			0
30	36			0				0	0			0
31	20			0				0	0			1
TOTAL	890			1	0	0	0	7	3	0	0	4
AVG.	21			0	0	0	0	0	0	0	0	0

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	951	1
TOTAL	951	1

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
0	0	0	115	40	0	0	4

Night video fish counting took place between 2000 and 0400 hours PST.
* No counts on the South ladder

TABLE 114

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

NIGHT VIDEO FISH COUNTS @ ICE HARBOR
June 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
1	22			0				0	0	0	0	0
2	32			0				0	0	0	0	0
3	38			0				1	0	0	0	0
4	48			0				0	0	0	0	0
5	17			0				0	0	0	0	0
6	19			0				0	0	0	0	0
7	10			0				0	0	0	0	0
8	17			0				0	0	0	0	0
9	10			0				1	0	0	0	1
10	12			0				0	0	0	0	0
11	19			0				0	0	0	0	0
12		18		0				1	0	0	0	0
13		15		0				0	0	0	0	0
14		29		0				0	0	0	0	0
15		17		0				0	0	0	0	2
16		7		0				0	0	0	0	0
17		16		2				0	0	0	0	0
18*		7		0				0	0	0	0	1
19		32		2				0	0	0	0	2
20		15		0				0	0	0	0	0
21		12		0				2	0	1	0	0
22		12		0				2	0	0	0	0
23		16		0				1	0	3	0	0
24		12		0				3	0	0	0	3
25		6		0				0	0	1	0	3
26		11		0				0	0	2	0	1
27		9		0				1	0	16	0	1
28		5		0				0	0	13	0	0
29		15		0				2	0	37	1	0
30		8		0				1	0	46	0	0
TOTAL	244	262		4	0	0	0	15	0	119	1	14
AVG.	22	14		0	0	0	0	1	0	6	0	1

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	1,195	1
SUMMER	262	4
TOTAL	1,457	5

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
0	0	0	130	40	119	1	18

Night video fish counting took place between 2000 and 0400 hours PST.
* No counts on the South Ladder

TABLE 115

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

NIGHT VIDEO FISH COUNTS @ ICE HARBOR
July 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
1		14		0				1	0	41		1
2		5		0				1	0	104		0
3		10		0				1	0	83		1
4		3		0				1	0	102		1
5		8		0				8	0	136		0
6		9		0				2	0	105		1
7		5		0				2	0	111		1
8		5		0				4	0	82		0
9		2		0				5	0	92		0
10		4		0				1	0	67		0
11		4		0				2	0	41		1
12		0		0				4	0	70		0
13		1		0				3	0	68		3
14		3		0				3	0	115		2
15		0		0				3	0	102		1
16		3		0				4	0	105		8
17		0		0				4	0	77		6
18		0		0				1	0	57		14
19		2		1				5	0	25		9
20		1		0				5	0	14		15
21		1		0				4	0	-9		6
22		1		1				5	0	-25		4
23		1		0				4	0	-26		3
24		1		0				4	0	-15		18
25		0		0				7	1	-24		13
26		0		0				7	0	-21		17
27		2		0				5	1	-23		-7
28		1		0				4	0	-29		12
29		0		0				4	0	-18		8
30		0		0				7	0	-22		1
31		0		0				10	1	-14		12
TOTAL		86		2	0	0	0	121	3	1,371	0	151
AVG.		1		0	0	0	0	5	0	20	0	7

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	1,195	1
SUMMER	348	6
TOTAL	1,543	7

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
0	0	0	251	43	1,490	1	169

Night video fish counting took place between 2000 and 0400 hours PST.

TABLE 116

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

NIGHT VIDEO FISH COUNTS @ ICE HARBOR
August 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
1		1		0			0	12	0	-22	0	2
2		1		0			0	8	1	-26	2	37
3		0		0			0	7	2	-16	1	24
4		2		0			0	14	1	-15	-2	4
5		0		0			0	7	1	-15	0	21
6		1		1			0	6	0	-15	0	14
7		0		0			0	14	4	-21	0	20
8		0		0			1	12	3	-12	0	18
9		0		0			0	11	2	-13	0	14
10		1		0			0	11	1	-11	1	3
11		0		0			0	13	2	-4	0	17
12			0	0			0	16	2	-11	0	8
13			0	0			0	4	1	-12	0	17
14			1	0			0	9	2	-14	0	6
15			0	1			0	7	2	-2	1	11
16			0	0			0	2	1	-7	0	-1
17			1	0			0	6	1	-7	1	17
18			0	0			0	12	4	-8	0	10
19			1	0			0	9	3	-4	0	10
20			0	0			0	17	3	-6	0	14
21			0	0			0	10	1	-8	1	13
22			0	0			0	10	2	-4	0	10
23			0	0			0	10	1	-2	0	21
24			1	0			0	8	1	1	0	11
25			0	0			0	13	5	-5	0	8
26			3	0			0	9	0	-5	0	10
27			2	0			0	9	2	-5	0	6
28			0	0			0	2	0	-2	0	2
29			0	0			0	7	1	-2	0	12
30			3	0			0	3	0	-3	1	6
31			4	0			0	18	3	-7	0	12
TOTAL		6	16	2	0	0	1	296	52	-283	6	377
AVG.		1	1	0	0	0	0	9	2	-6	0	10

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	1,195	1
SUMMER	354	7
FALL	16	1
TOTAL	1,565	9

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
0	0	1	547	95	1,207	7	546

Night video fish counting took place between 2000 and 0400 hours PST.

TABLE 117

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

NIGHT VIDEO FISH COUNTS @ ICE HARBOR
September 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
1			0	0				19	3		0	15
2			0	0				13	2		0	9
3			4	2				49	6		0	11
4			10	0				68	12		0	0
5			15	0				68	8		0	9
6			7	2				87	6		0	10
7			7	1				44	2		0	5
8			5	0				85	7		0	9
9			4	1				50	2		0	2
10			2	2				74	10		1	6
11			6	0				99	11		1	4
12			3	0				84	6		0	3
13			4	0				82	8		0	2
14			1	3				83	6		0	3
15			1	1				87	3		0	3
16			1	1				108	4		0	3
17			2	0				52	4		0	-4
18			5	2				200	13		0	-2
19			0	1				84	7		0	7
20			4	3				112	6		0	2
21			9	1				133	8		0	1
22			3	2				195	13		0	3
23			3	2				236	19		0	1
24			3	4				336	28		0	1
25			5	3				325	25		0	0
26			3	4				318	24		0	2
27			6	1				250	13		0	2
28			5	3				317	19		0	1
29			0	1				211	7		0	1
30			1	1				192	14		0	4
TOTAL			119	41	0	0	0	4,061	296	0	2	113
AVG.			3	2	0	0	0	179	12	0	0	2

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	1,195	1
SUMMER	354	7
FALL	135	42
TOTAL	1,684	50

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
0	0	1	4,608	391	1,207	9	659

Night video fish counting took place between 2000 and 0400 hours PST.

TABLE 118

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

NIGHT VIDEO FISH COUNTS @ ICE HARBOR
October 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
1			0	4	1			208	19			0
2			2	4	0			184	9			5
3			3	2	0			358	23			1
4			1	1	0			95	4			0
5*			1	1	0			5	1			0
6			2	0	0			183	11			0
7			1	2	0			161	8			0
8			1	3	0			168	15			0
9			4	3	0			157	10			0
10			0	5	0			135	10			0
11			2	1	1			149	8			1
12			2	1	0			155	11			1
13			1	3	0			168	17			0
14			2	4	0			206	16			1
15			1	1	0			110	7			0
16			2	1	0			123	7			0
17			1	1	0			96	6			0
18			0	0	0			105	10			0
19			0	1	0			50	2			0
20			0	2	0			109	9			0
21			1	3	0			57	5			0
22			0	2	0			59	2			0
23			0	0	0			57	4			0
24			1	5	0			46	2			0
25			0	0	0			40	4			0
26			0	2	0			50	3			0
27			0	2	1			48	2			0
28			0	4	0			38	2			0
29			1	2	0			62	5			0
30			0	2	0			75	2			0
31			2	0	1			33	2			0
TOTAL			31	62	4	0	0	3,490	236	0	0	9
AVG.			1	2	0	0	0	87	6	0	0	0

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	1,195	1
SUMMER	354	7
FALL	166	104
TOTAL	1,715	112

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
4	0	1	8,098	627	1,207	9	668

Night video fish counting took place between 2000 and 0400 hours PST.
* No counts on the South Ladder

TABLE 119

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

NIGHT VIDEO FISH COUNTS @ ICE HARBOR
November 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
1			0	4	0			146	14			
2			2	5	1			76	2			
3			1	1	1			113	4			
4			0	1	0			18	2			
5			0	4	0			205	11			
6			0	0	0			409	18			
7			1	0	0			345	14			
8			1	1	0			247	9			
9			0	4	0			230	20			
10			1	0	0			175	16			
11			0	2	0			114	11			
12			0	1	0			80	9			
13			1	1	0			96	4			
14			0	1	1			86	9			
15			0	1	0			53	4			
16			1	0	0			37	7			
17			0	1	0			44	6			
18			1	0	0			29	0			
19			1	0	0			20	2			
20			0	0	0			31	1			
21			0	1	0			27	2			
22			0	1	0			31	5			
23			0	0	0			32	4			
24			0	0	0			19	2			
25			0	0	0			31	3			
26			0	0	0			18	1			
27			1	0	0			30	3			
28			1	0	0			20	1			
29			1	0	0			28	5			
30			0	0	0			25	5			
TOTAL			13	29	3	0	0	2,815	194	0	0	0
AVG.			0	0	0	0	0	39	4	0	0	0

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	1,195	1
SUMMER	354	7
FALL	179	133
TOTAL	1,728	141

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
7	0	1	10,913	821	1,207	9	668

Night video fish counting took place between 1600 and 0600 hours PST.

TABLE 120

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

NIGHT VIDEO FISH COUNTS @ ICE HARBOR
December 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
1			0	0	0			15	3			
2			0	0	0			17	3			
3			0	0	0			22	4			
4			1	0	1			5	1			
5			0	0	0			14	1			
6			0	1	0			17	1			
7			0	0	0			15	0			
8			0	0	0			8	0			
9			0	0	0			8	1			
10			0	0	0			5	0			
11			0	0	0			9	1			
12			0	0	0			2	0			
13			0	0	0			1	0			
14			0	0	0			2	0			
15			0	0	0			2	0			
TOTAL			1	1	1	0	0	142	15	0	0	0
AVG.			0	0	0	0	0	2	0	0	0	0

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	1,195	1
SUMMER	354	7
FALL	180	134
TOTAL	1,729	142

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
8	0	1	11,055	836	1,207	9	668

Night video fish counting took place between 1600 and 0600 hours PST.

YEARLY TOTALS OF SALMONIDS COUNTED OVER ICE HARBOR DAM
1962 - 1997

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
1993	34,991	73,107	17		108,115
1994	7,577	51,704		1	59,282
1995	7,990	92,026	5	4	100,025
1996	16,419	100,805	1		117,225
1997	55,412	103,830	15	128	159,385
Totals	1,693,978	2,654,962	10,332	43,907	4,403,179
10-Year Average	28,873	101,142	12		130,039

*Jacks included

TABLE 122

MONTHLY COUNT OF CHINOOK SALMON
ICE HARBOR DAM: 1962 - 1997

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-15-Dec
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			32,444	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	22,026	8,299	1,672	169	3,664	2,021			52,615	39,087	7,746	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
1993				5,776	15,879	8,705	1,405	338	2,087	801			34,991	24,935	6,919	3,137
1994				717	2,268	1,183	289	170	1,693	1,257			7,577	3,472	1,003	3,102
1995				256	1,253	928	315	387	2,920	1,931			7,990	1,873	915	5,202
1996				97	6,254	3,954	1,367	792	2,983	928	44		16,419	7,671	4,086	4,662
1997				3,442	30,332	14,678	2,224	411	2,502	1,680	143	0	55,412	41,473	9,318	4,621
TOTAL		1	206	259,919	646,886	296,133	198,228	31,323	191,956	66,395	2,858	74	1,693,979	989,453	424,897	279,628
10-Year Avg.				4,865	11,703	5,951	1,327	428	3,081	1,509			28,873	18,898	5,028	4,947

*Jacks included

The '97 season was extended to include counts made between 0600 and 1600 hours daily in November and December.

TABLE 123

MONTHLY COUNT OF STEELHEAD
ICE HARBOR DAM: 1962 -1997

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
1993				7,418	287	745	5,896	8,086	21,614	29,061			73,107
1994				3,040	126	394	3,295	3,162	16,702	24,985			51,704
1995				828	84	193	4,699	14,521	39,494	32,207			92,026
1996				743	81	229	3,427	15,391	48,722	28,657	2,303	1,252	100,805
1997				1,187	216	280	4,323	11,522	40,238	37,036			94,802
Totals	268	287	11,329	85,174	20,373	9,425	107,813	220,116	1,307,089	852,613	28,107	3,340	2,645,934
10-Year Average				2,893	237	416	4,237	7,897	45,786	38,419			100,239

The '96 season was extended to include counts made between 0600 and 1600 hours daily in November and December.

TABLE 124

WILD STEELHEAD COUNTED AT
ICE HARBOR DAM 1997

ICE HARBOR DAM		South	North
April	Wild Steelhead	Ladder	Ladder
1	21	19	2
2	22	17	5
3	31	18	13
4	23	18	5
5	10	6	4
6	9	8	1
7	11	7	4
8	10	6	4
9	13	11	2
10	11	10	1
11	10	6	4
12	8	8	0
13	3	2	1
14	8	7	1
15	7	6	1
16	8	7	1
17	15	13	2
18	10	8	2
19	13	12	1
20	16	16	0
21	7	7	0
22	17	16	1
23	19	18	1
24	11	11	0
25	7	7	0
26	10	10	0
27	24	22	2
28	7	7	0
29	10	10	0
30	17	17	0
TOTAL	388	330	58
AVE	13	11	2

TOTAL	WILD STEELHEAD
TO DATE	388

ICE HARBOR DAM		South	North
May	Wild Steelhead	Ladder	Ladder
1	10	10	0
2	7	7	0
3	10	10	0
4	10	6	4
5	8	8	0
6	4	4	0
7	7	7	0
8	2	2	0
9	7	6	1
10	7	7	0
11	6	6	0
12	5	5	0
13	1	1	0
14	2	2	0
15	2	2	0
16	1	1	0
17	0	0	0
18	1	1	0
19	6	6	0
20	2	2	0
21	1	0	1
22	1	1	0
23	1	1	0
24	1	1	0
25	1	1	0
26	0	0	0
27	0	0	0
28	0	0	0
29	0	0	0
30	0	0	0
31	0	0	0
TOTAL	103	97	6
AVE	3	3	0

TOTAL	WILD STEELHEAD
TO DATE	491

TABLE 125

WILD STEELHEAD COUNTED AT ICE HARBOR DAM 1997

ICE HARBOR DAM		South	North
June	Wild Steelhead	Ladder	Ladder
1	0	0	0
2	0	0	0
3	1	1	0
4	1	1	0
5	0	0	0
6	0	0	0
7	0	0	0
8	0	0	0
9	0	0	0
10	1	1	0
11	0	0	0
12	0	0	0
13	1	1	0
14	0	0	0
15	0	0	0
16	0	0	0
17	0	0	0
18	1	1	0
19	0	0	0
20	2	1	1
21	2	1	1
22	0	0	0
23	0	0	0
24	0	0	0
25	2	1	1
26	0	0	0
27	1	0	1
28	0	0	0
29	3	2	1
30	1	1	0
TOTAL	16	11	5
AVE	1	0	0

TOTAL	WILD STEELHEAD
TO DATE	507

ICE HARBOR DAM		South	North
July	Wild Steelhead	Ladder	Ladder
1	2	2	0
2	6	5	1
3	1	1	0
4	6	5	1
5	1	1	0
6	7	7	0
7	5	4	1
8	4	4	0
9	6	4	2
10	7	7	0
11	12	12	0
12	11	10	1
13	12	7	5
14	10	10	0
15	8	8	0
16	12	10	2
17	20	16	4
18	10	4	6
19	8	2	6
20	8	4	4
21	25	12	13
22	9	7	2
23	38	22	16
24	20	12	8
25	39	22	17
26	18	16	2
27	22	18	4
28	23	17	6
29	21	14	7
30	40	29	11
31	45	28	17
TOTAL	456	320	136
AVE	15	10	4

TOTAL	WILD STEELHEAD
TO DATE	963

TABLE 126

WILD STEELHEAD COUNTED AT ICE HARBOR DAM

ICE HARBOR DAM		South	North
August	Wild Steelhead	Ladder	Ladder
1	31	25	6
2	24	13	11
3	42	26	16
4	57	35	22
5	58	35	23
6	65	35	30
7	67	43	24
8	89	65	24
9	56	40	16
10	83	55	28
11	66	56	10
12	56	43	13
13	59	49	10
14	42	30	12
15	68	55	13
16	29	25	4
17	20	18	2
18	35	35	0
19	49	41	8
20	30	25	5
21	37	35	2
22	26	22	4
23	35	30	5
24	25	20	5
25	23	17	6
26	36	26	10
27	30	18	12
28	31	30	1
29	26	26	0
30	23	23	0
31	30	29	1
TOTAL	1,348	1,025	323
AVE	43	33	10

TOTAL	WILD STEELHEAD
TO DATE	2,311

ICE HARBOR DAM		South	North
September	Wild Steelhead	Ladder	Ladder
1	59	59	0
2	41	41	0
3	47	47	0
4	41	41	0
5	46	46	0
6	70	70	0
7	59	59	0
8	59	59	0
9	119	114	5
10	80	80	0
11	83	82	1
12	124	120	4
13	98	94	4
14	60	56	4
15	76	66	10
16	135	124	11
17	125	124	1
18	101	96	5
19	168	144	24
20	108	104	4
21	87	83	4
22	102	98	4
23	144	144	0
24	153	152	1
25	185	180	5
26	260	252	8
27	258	247	11
28	282	268	14
29	182	175	7
30	174	166	8
TOTAL	3,526	3,391	135
AVE	118	113	5

TOTAL	WILD STEELHEAD
TO DATE	5,837

TABLE 127

WILD STEELHEAD COUNTED AT ICE HARBOR DAM 1997

ICE HARBOR DAM		South	North
October	Wild Steelhead	Ladder	Ladder
1	168	161	7
2	174	169	5
3	184	182	2
4	214	212	2
5	192	188	4
6	170	164	6
7	170	169	1
8	141	136	5
9	163	161	2
10	157	156	1
11	144	138	6
12	154	150	4
13	125	124	1
14	159	157	2
15	139	139	0
16	60	59	1
17	140	134	6
18	76	74	2
19	96	86	10
20	135	131	4
21	49	47	2
22	59	55	4
23	71	70	1
24	39	38	1
25	75	71	4
26	49	48	1
27	50	49	1
28	55	53	2
29	30	29	1
30	54	52	2
31	50	49	1
TOTAL	3,542	3,451	91
AVE	114	111	3

TOTAL	WILD STEELHEAD
TO DATE	9,379

ICE HARBOR DAM		South	North
November	Wild Steelhead	Ladder	Ladder
1	60	58	2
2	51	50	1
3	15	13	2
4	30	28	2
5	38	38	0
6	44	43	1
7	46	46	0
8	88	83	5
9	79	76	3
10	61	61	0
11	55	52	3
12	30	28	2
13	34	33	1
14	25	24	1
15	35	30	5
16	22	17	5
17	13	12	1
18	39	37	2
19	5	5	0
20	8	8	0
21	19	16	3
22	13	11	2
23	13	11	2
24	18	17	1
25	11	11	0
26	6	6	0
27	11	10	1
28	14	14	0
29	10	10	0
30	3	3	0
TOTAL	896	851	45
AVE	30	28	2

TOTAL	WILD STEELHEAD
TO DATE	10,275

ICE HARBOR DAM		South	North
December	Wild Steelhead	Ladder	Ladder
1	4	4	0
2	6	6	0
3	6	5	1
4	6	6	0
5	7	6	1
6	5	3	2
7	3	2	1
8	5	3	2
9	2	2	0
10	1	1	0
11	1	1	0
12	0	0	0
13	0	0	0
14	1	1	0
15	2	2	0
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
TOTAL	49	42	7
AVE	3	3	0

TOTAL	WILD STEELHEAD
TO DATE	10,324

Lower Monumental Lock and Dam

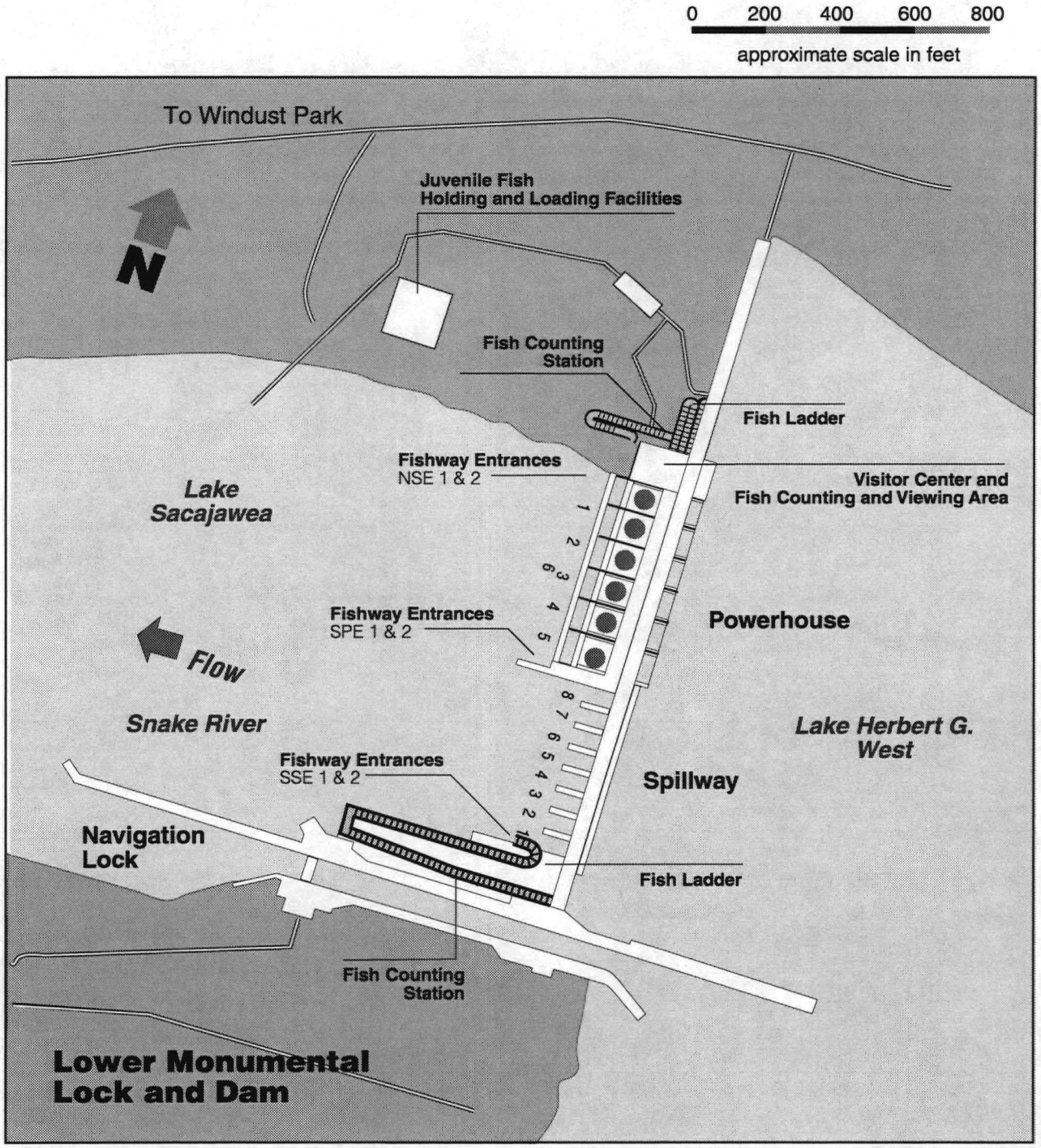

TABLE 128

MONTHLY TOTALS OF SALMONIDS AND SHAD COUNTED OVER LOWER MONUMENTAL DAM
1997

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*				1,493	26,966	16,833	2,484	309	2,174	1,297			51,556
STEELHEAD				1,044	162	177	3,422	9,326	34,521	36,950			85,602
SOCKEYE							15	1					16
COHO*										30			30
PINK													
MINI-JACK**						2	31	109	49	227			418
TOTAL				2,537	27,128	17,010	5,921	9,636	36,695	38,277			137,622
SHAD						156	6,139	584					6,879

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

TABLE 129

DISCHARGE AND WATER QUALITY DATA

LOWER MONUMENTAL PROJECT - 1997

JANUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	194.3	106.9		
2	235.5	147.0		
3	209.3	127.5		
4	181.8	115.2		
5	153.3	86.7		
6	107.3	47.0		
7	75.8	38.8		
8	81.4	44.5		
9	86.9	53.9		
10	93.4	51.5		
11	83.7	32.1		
12	85.8	24.1		
13	79.8	24.0		
14	75.3	20.6		
15	69.2	14.0		
16	70.5	7.5		
17	69.0	2.9		
18	66.1	18.2		
19	62.9	18.1		
20	70.2	12.9		
21	72.4	21.4		
22	61.5	5.8		
23	63.9	2.7		
24	70.1	4.6		
25	74.7	11.6		
26	75.7	16.8		
27	85.3	14.2		
28	79.5	9.8		
29	73.5	6.6		
30	88.3	27.6		
31	103.6	32.6		
AVG.	96.8	37.0		

FEBRUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	118.4	28.7		
2	123.9	30.0		
3	111.8	20.6		
4	108.6	27.7		
5	112.0	26.9		
6	100.8	16.0		
7	98.6	31.9		
8	91.7	16.5		
9	95.4	8.5		
10	88.0	9.1		
11	88.7	3.2		
12	84.2	2.2		
13	96.6	4.6		
14	87.8	0.0		
15	99.8	9.3		
16	111.7	20.1		
17	101.5	8.4		
18	107.7	15.1		
19	102.1	6.2		
20	109.4	4.3		
21	100.8	0.0		
22	108.1	4.6		
23	98.9	2.7		
24	95.6	1.5		
25	96.4	0.0		
26	93.8	0.0		
27	97.7	0.0		
28	96.7	0.0		
AVG.	101.0	10.6		

MARCH

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	97.3	0.0		
2	92.4	0.0		
3	92.9	0.0		
4	91.9	0.5		
5	98.9	7.5		
6	85.1	0.0		
7	83.2	0.0		
8	84.5	0.0		
9	102.1	2.7		
10	102.2	7.9		
11	103.5	3.9		
12	113.0	6.2		
13	103.3	3.8		
14	95.4	0.0		
15	97.1	0.0		
16	93.6	0.0		
17	108.4	6.0		
18	112.9	15.9		
19	123.8	28.7		
20	132.5	37.9		
21	151.8	48.7		
22	148.9	48.7		
23	145.1	47.9		
24	142.2	49.6		
25	137.8	51.8		
26	131.5	42.4		
27	136.5	46.5		
28	153.2	52.1		
29	144.2	42.5		
30	132.2	30.3		
31	128.1	29.2		
AVG.	115.0	19.7		

TABLE 130

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER MONUMENTAL PROJECT

APRIL 1997

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1	0			0				0	0			122.9	23.4	0.0	46.0
2	0			0				41	0			105.1	14.9	0.0	46.0
3	0			0				124	6			99.0	0.0	0.0	46.0
4	0			0				49	7			104.7	3.0	0.0	46.0
5	0			0				94	16			94.2	0.0	0.0	46.0
6	0			0				58	5			94.7	0.0	0.0	46.0
7	0			0				78	26			91.0	0.0	0.0	47.0
8	0			0				50	13			101.9	3.4	1.0	47.0
9	0			0				40	10			93.3	0.0	1.0	47.0
10	0			0				34	12			100.8	9.8	1.0	47.0
11	0			0				42	14			90.5	18.7	1.0	47.0
12	1			0				29	16			86.4	19.9	1.0	47.0
13	3			0				17	7			82.7	20.0	1.0	47.0
14	2			0				17	4			86.5	21.5	1.0	47.0
15	2			0				33	9			86.6	20.8	1.0	48.0
16	2			0				30	4			96.8	21.3	1.0	48.0
17	6			0				36	18			112.4	24.3	1.0	48.0
18	8			0				25	10			116.7	21.5	1.0	48.0
19	10			0				24	7			131.9	27.6	1.0	48.0
20	28			0				33	4			163.6	49.5	1.0	48.0
21	22			0				33	8			191.3	72.9	1.0	48.0
22	36			0				20	0			192.4	71.6	1.0	50.0
23	17			0				6	1			179.7	61.5	1.0	50.0
24	25			1				13	1			198.6	83.5	0.0	50.0
25	68			1				16	0			178.8	58.9	0.0	50.0
26	115			2				18	0			172.6	66.8	0.0	50.0
27	180			7				22	1			164.0	62.1	0.0	50.0
28	361			9				16	0			183.1	69.5	1.0	50.0
29	231			5				13	1			193.2	74.9	0.0	50.0
30	348			3				33	0			186.8	68.2	1.0	50.0
TOTAL	1,465			28				1,044	200						
AVG.	95			1				35	7			130.1	33.0	0.6	47.9

TABLE 131

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER MONUMENTAL PROJECT

MAY 1997

FISH COUNTS / RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	187			0				16	0			177.1	61.1	0.0	50.0
2	210			0				12	1			167.1	53.0	0.0	50.0
3	719			1				14	2			142.7	42.2	0.0	50.0
4	633			3				8	0			139.8	40.3	0.0	50.0
5	1,129			2				17	0			142.3	37.5	0.0	50.0
6	1,043			0				10	1			143.7	37.3	0.0	50.0
7	940			2				5	1			153.8	38.7	0.0	50.0
8	606			0				5	1			159.3	41.2	1.0	52.0
9	1,207			10				9	4			154.1	39.8	1.0	52.0
10	1,826			9				9	1			159.0	47.2	1.0	52.0
11	1,852			6				3	0			169.9	56.3	1.0	53.0
12	1,639			7				5	0			178.6	63.6	1.4	53.0
13	1,451			1				2	0			183.4	66.5	1.0	53.0
14	825			1				6	0			205.1	91.4	1.0	53.0
15	1,094			7				4	0			205.3	87.4	1.0	53.0
16	1,974			14				7	0			222.7	104.0	1.0	53.0
17	680			0				5	0			231.1	115.1	1.0	54.0
18	247			1				5	0			236.3	121.3	1.0	54.0
19	333			0				1	0			214.3	101.4	1.0	54.0
20	161			4				0	0			197.4	84.3	0.8	54.0
21	231			1				1	0			188.9	77.3	0.8	54.0
22	240			0				1	0			186.9	71.7	0.5	54.0
23	527			1				2	0			173.8	65.3	0.5	54.0
24	573			1				2	0			173.1	71.8	0.5	54.0
25	759			1				1	0			171.5	68.3	0.5	54.0
26	1,238			3				0	0			153.6	56.3	0.5	54.0
27	1,124			2				2	0			146.5	41.5	0.5	54.0
28	1,271			8				5	0			145.2	41.2	0.8	54.0
29	650			4				3	0			148.5	51.8	0.8	54.0
30	580			2				0	0			151.7	42.8	0.8	54.0
31	922			4				2	0			171.5	66.1	0.8	54.0
TOTAL	26,871			95				162	11						
AVG.	867			3				5				174.0	64.0	0.7	52.7

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	STEELHEAD	WILD STEELHEAD
SPRING	28,336	123	1,206	211

TABLE 132

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER MONUMENTAL PROJECT

JUNE 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1	940			0				0	0	0	0
2	442			1				0	0	0	0
3	1519			5				1	0	0	0
4	307			0				0	0	0	0
5	1239			2				2	1	0	0
6	285			2				0	0	0	0
7	445			0				1	0	0	0
8	346			0				0	0	0	0
9	1263			4				2	0	0	0
10	1092			1				1	0	0	0
11	519			3				1	0	0	0
12	1079			4				1	1	0	0
13	667			1				3	0	0	0
14		229		0				4	0	0	0
15		325		3				0	0	0	1
16		249		0				4	0	0	0
17		222		2				1	0	0	0
18		783		6				2	0	0	0
19		703		2				2	0	0	0
20		635		7				12	0	0	0
21		557		4				12	0	2	0
22		479		7				8	0	1	0
23		354		1				8	2	0	0
24		351		4				9	1	4	0
25		331		3				16	1	2	0
26		300		4				12	0	4	0
27		276		4				16	1	3	0
28		338		7				14	2	33	0
29		254		5				14	1	33	0
30		220		2				31	6	74	1
TOTAL	10,143	6,606		84				177	16	156	2
AVG.	780	389		3				6		5	

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	182.7	72.9	0.0	55.0
2	195.6	75.2	0.0	55.0
3	184.6	71.9	0.0	55.0
4	182.9	72.8	0.0	55.0
5	189.1	81.6	0.0	55.0
6	193.7	89.5	0.0	55.0
7	184.5	88.6	0.0	55.0
8	176.0	92.7	0.0	55.0
9	175.0	85.6	0.0	55.0
10	175.4	81.1	0.0	55.0
11	186.7	104.4	0.5	56.0
12	200.2	96.7	0.5	56.0
13	191.6	93.6	0.5	57.0
14	186.4	94.2	0.5	57.0
15	194.3	107.1	0.5	57.0
16	192.2	97.5	0.5	57.0
17	184.7	87.5	0.5	58.0
18	183.3	81.3	0.5	58.0
19	185.3	71.3	0.5	58.0
20	170.7	72.4	0.5	59.0
21	157.6	56.3	0.5	59.0
22	153.5	53.4	1.0	59.0
23	140.8	48.9	0.5	59.0
24	126.4	19.4	1.0	59.0
25	121.2	8.8	1.0	60.0
26	107.4	2.5	1.0	61.0
27	114.7	0.0	1.0	61.0
28	113.2	10.2	1.0	61.0
29	118.9	3.7	1.0	61.0
30	109.8	0.0	1.0	61.0
AVG.	165.9	64.0	0.5	57.5

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	38,479	146
SUMMER	6,606	61
TOTAL	45,085	207

STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1,383	227	156	2

TABLE 132

TABLE 133

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER MONUMENTAL PROJECT

JULY 1997

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1		361		0			0	20	0	149	0	107.3	13.7	1.0	62.0
2		302		2			0	38	1	56	0	111.9	23.1	1.5	63.0
3		185		2			0	43	0	187	0	100.8	3.3	1.5	64.0
4		228		2			0	44	9	175	0	93.6	2.3	1.5	64.0
5		185		0			0	35	3	180	0	92.3	0.0	1.5	64.0
6		145		0			0	60	4	233	1	84.8	0.0	1.5	64.0
7		146		1			0	62	1	315	0	77.8	0.0	2.0	65.0
8		101		1			0	53	0	324	0	74.7	0.0	2.0	65.0
9		77		1			0	53	2	182	1	74.5	0.0	2.0	65.0
10		87		1			0	127	9	128	1	78.0	0.0	2.0	65.0
11		64		1			0	101	4	187	0	74.8	0.0	2.0	65.0
12		80		2			0	74	5	113	0	62.3	0.0	2.0	65.0
13		63		0			0	86	3	284	0	57.6	0.0	2.0	65.0
14		35		1			0	66	4	493	0	58.1	0.4	2.0	65.0
15		30		2			1	90	9	307	0	66.4	8.5	2.0	65.0
16		76		2			0	152	20	344	0	66.2	6.4	2.0	66.0
17		44		1			0	94	6	458	0	68.7	0.0	2.0	66.0
18		44		1			0	148	14	176	0	66.3	0.0	2.0	66.0
19		21		1			0	126	4	132	1	70.1	0.0	2.0	67.0
20		16		1			0	95	7	159	0	74.4	0.0	2.0	67.0
21		26		2			0	121	7	219	0	64.9	0.0	2.0	67.0
22		20		4			2	150	14	138	0	66.9	0.0	2.0	67.0
23		20		1			0	166	16	207	1	63.2	0.0	2.0	67.0
24		19		0			1	167	13	109	6	65.5	0.0	2.0	67.0
25		13		0			2	177	15	111	0	65.6	0.0	2.0	67.0
26		7		0			3	165	12	128	0	64.5	0.0	2.0	68.0
27		13		1			4	178	19	77	5	61.2	0.0	2.0	68.0
28		18		0			0	153	14	244	3	63.5	0.0	2.0	68.0
29		9		1			2	192	13	134	4	63.9	0.0	2.0	68.0
30		6		0			0	140	8	105	1	61.4	0.0	2.0	68.0
31		11		1			0	246	18	85	7	62.7	0.0	2.0	68.0
TOTAL		2,452		32			15	3,422	254	6,139	31				
AVG.		79		1				110	8	198	1	73.0	1.9	1.9	65.8

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	38,479	146
SUMMER	9,058	93
TOTAL	47,537	239

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
15	4,805	481	6,295	33

TABLE 134

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

LOWER MONUMENTAL PROJECT
AUGUST 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1		11		0			0	275	36	101	5
2		1		1			0	186	27	62	5
3		7		0			0	241	24	83	2
4		5		1			0	210	34	56	3
5		5		1			0	204	33	56	3
6		6		1			0	365	50	28	6
7		7		1			0	391	59	40	4
8		10		0			0	348	38	13	6
9		4		1			0	353	47	15	2
10		13		0			1	452	69	13	5
11		12		0			0	362	57	7	2
12		5		1			0	393	40	11	7
13		9		0			0	481	27	15	9
14			4	0			0	385	31	5	11
15			7	0			0	457	45	26	7
16			3	0			0	323	27	12	4
17			4	1			0	307	44	2	1
18			9	0			0	233	19	8	2
19			7	2			0	225	15	5	2
20			10	0			0	263	22	8	0
21			3	0			0	271	26	0	1
22			7	0			0	255	28	9	0
23			17	1			0	286	24	0	3
24			5	0			0	220	17	2	5
25			9	3			0	284	26	0	3
26			15	3			0	274	21	1	3
27			16	2			0	279	30	2	1
28			16	3			0	184	22	2	2
29			24	0			0	279	12	-1	3
30			13	2			0	252	16	2	0
31			20	1			0	288	13	1	2
TOTAL		95	189	25			1	9,326	979	584	109
AVG.		7	11	1				301	32	19	4

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	59.7	0.0	2.0	68.0
2	59.2	0.0	2.0	68.0
3	60.7	0.0	2.0	69.0
4	60.8	0.0	2.0	69.0
5	56.1	0.0	2.0	69.0
6	57.8	0.0	2.0	70.0
7	57.0	0.1	3.0	70.0
8	55.4	8.9	2.5	70.0
9	53.7	0.0	3.0	71.0
10	55.7	0.0	3.0	69.0
11	51.3	0.0	3.0	70.0
12	56.6	0.0	3.0	70.0
13	50.4	0.0	3.0	69.0
14	58.6	0.0	3.0	69.0
15	53.3	0.0	3.0	69.0
16	48.4	0.0	3.0	69.0
17	45.6	0.0	3.0	69.0
18	47.4	0.0	3.0	69.0
19	46.0	0.0	3.0	69.0
20	44.1	0.0	3.0	69.0
21	47.1	0.0	3.0	69.0
22	42.8	0.0	3.0	69.0
23	47.6	0.0	3.0	69.0
24	46.1	0.0	3.0	69.0
25	44.4	0.0	3.0	68.0
26	43.3	0.0	3.0	68.0
27	46.0	0.0	3.0	68.0
28	33.3	0.0	3.0	68.0
29	35.3	8.4	3.0	68.0
30	29.4	0.0	3.0	68.0
31	33.0	0.0	3.0	68.0
AVG.	49.2	0.6	2.8	68.9

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	38,479	146
SUMMER	9,153	100
FALL	189	18
TOTAL	47,821	264

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
16	14,131	1,460	6,879	142

TABLE 135

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER MONUMENTAL PROJECT

SEPTEMBER 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1			24	0				259	10		4
2			6	1				210	16		2
3			6	2				153	11		-1
4			39	5				362	35		1
5			63	4				779	30		0
6			60	3				772	27		0
7			63	1				507	19		1
8			57	1				580	37		1
9			75	5				767	65		0
10			109	12				830	67		0
11			93	13				1140	46		2
12			77	8				1330	57		0
13			52	9				889	43		0
14			60	12				1116	54		0
15			56	10				1082	75		0
16			30	17				1117	71		0
17			31	6				853	51		1
18			55	12				1475	112		3
19			42	11				936	49		1
20			98	19				1321	78		2
21			72	17				882	46		2
22			78	24				1014	63		6
23			60	28				1271	97		3
24			54	35				1269	84		5
25			56	33				1792	126		0
26			72	34				2439	223		5
27			59	32				2790	254		10
28			93	38				2365	165		0
29			45	19				1940	159		-2
30			42	36				2281	182		3
TOTAL			1,727	447				34,521	2,352		49
AVG.			59	15				1,151	78		2

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	30.6	0.0	3.0	68.0
2	16.9	2.5	3.0	68.0
3	22.9	2.6	3.0	69.0
4	29.9	1.2	3.0	69.0
5	31.1	0.0	3.0	69.0
6	35.7	0.0	3.0	69.0
7	23.3	0.0	3.0	69.0
8	32.2	0.0	3.0	69.0
9	29.3	0 0	3.0	68.0
10	28.9	0.0	3.0	68.0
11	28.8	0.0	3.0	68.0
12	30.1	0.0	3.0	68.0
13	31.3	0.0	2.5	68.0
14	31.0	0.0	2 5	68 0
15	35.8	0.0	2.5	68.0
16	44 4	0.0	2.5	68.0
17	46.1	0.0	2.5	68.0
18	46.6	0.0	2.5	68.0
19	42.6	0.0	2.5	68.0
20	38.6	0.0	2.5	68.0
21	46.4	0.0	2.5	68.0
22	40.5	0.0	2.5	68.0
23	39.8	0.0	2.5	68.0
24	42.5	0.0	2.5	68.0
25	42.7	0.0	2.5	68.0
26	39.8	0.0	2.5	68.0
27	37.6	0.0	2.5	68.0
28	42 5	0.0	2.5	68.0
29	40.6	0.0	2.5	68.0
30	40.6	0.0	2.5	67.0
AVG.	35.6	0.2	2.7	68.2

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	38,479	146
SUMMER	9,153	100
FALL	1,916	465
TOTAL	49,548	711

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
16	48,652	3,812	6,879	191

TABLE 136

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER MONUMENTAL PROJECT

OCTOBER 1997

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1			30	28	0	0		1,584	100		1	39.6	0.0	2.5	67.0
2			38	47	0	0		2,615	189		10	38.3	0.0	3.0	67.0
3			33	46	0	0		2,088	173		6	40.3	0.0	3.0	67.0
4			29	41	2	0		1,754	117		6	34.9	0.0	3.0	67.0
5			29	56	1	0		2,423	176		6	38.6	0.0	3.0	67.0
6			16	21	1	0		1,632	111		8	40.0	0.0	3.0	67.0
7			15	27	2	0		1,688	118		4	42.8	0.0	2.5	64 0
8			19	27	1	0		1,709	137		29	42.1	0.0	2.5	64.0
9			13	20	1	0		1,394	112		10	37.9	0.0	2.5	63.0
10			6	49	2	0		1,558	135		16	38.5	0.0	2.5	63.0
11			14	48	3	0		1,664	106		8	39.1	0.0	2.5	62.0
12			17	33	0	0		1,668	131		10	41.3	0.0	2.5	62.0
13			16	45	1	0		1,307	92		5	40.1	0 0	2 5	62.0
14			8	35	1	0		1,183	86		2	44.6	0.0	2.5	61.0
15			9	18	3	1		1,309	143		5	44.1	0.0	2.5	61.0
16			8	30	0	0		1,402	157		6	47.1	0.0	2.5	60.0
17			10	37	2	0		1,156	107		12	46.0	0.0	2.5	60.0
18			10	33	0	0		966	80		7	42.5	0.0	2.5	60.0
19			5	29	0	0		844	68		7	42.2	0 0	2 5	59.0
20			5	17	3	0		911	82		14	20.9	0.0	2.5	59.0
21			2	18	0	0		578	47		4	20.5	0.0	2.5	58.0
22			3	15	1	0		885	80		10	28.2	0.0	2.5	58.0
23			3	34	1	0		627	65		3	22.8	0.0	2 5	58.0
24			1	22	1	0		553	49		7	24.0	0.0	2.5	58 0
25			4	34	0	0		662	60		3	20.4	0.0	2.5	58.0
26			6	28	0	0		434	40		1	24.6	0.0	2.5	57.0
27			5	6	0	0		472	48		11	24.5	0.0	2.5	57.0
28			2	13	1	1		443	36		3	21.4	0.0	2.5	57.0
29			4	20	0	0		439	33		5	24.9	0.0	2.5	57.0
30			4	28	0	0		533	38		5	24.9	0.0	2.5	55.0
31			1	27	1	0		469	34		3	40.0	0.0	2.5	55.0
TOTAL			365	932	28	2		36,950	2,950		227				
AVG.			12	30				1,192	95		7	34.7	0.0	2.6	61.0

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	38,479	146
SUMMER	9,153	100
FALL	2,281	1,397
TOTAL	49,913	1,643

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
28	2	16	85,602	6,762	6,879	418

TABLE 137

DISCHARGE AND WATER QUALITY DATA

LOWER MONUMENTAL PROJECT - 1997

NOVEMBER

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	43.8	0.0		
2	38.3	0.0		
3	33.7	0.0		
4	27.0	1.6		
5	31.2	0.0		
6	28.3	0.0		
7	27.6	0.0		
8	29.3	0.0		
9	31.6	0.0		
10	27.9	0.0		
11	28.0	0.0		
12	27.7	0.0		
13	23.8	0.0		
14	25.0	0.0		
15	25.5	0.0		
16	26.5	0.0		
17	22.4	0.0		
18	23.2	0.0		
19	27.9	0.0		
20	26.5	0.0		
21	29.8	0.0		
22	30.2	0.0		
23	30.2	0.0		
24	28.3	0.0		
25	26.9	0.0		
26	31.4	0.0		
27	24.1	0.0		
28	28.4	0.0		
29	25.6	0.0		
30	23.8	0.0		
AVG.	28.5	0.1		

DECEMBER

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	37.6	0.0		
2	22.1	0.0		
3	30.3	0.0		
4	20.8	0.0		
5	29.6	0.0		
6	17.2	0.0		
7	12.2	0.0		
8	20.9	0.0		
9	26.6	0.0		
10	28.9	0.0		
11	36.0	0.0		
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
AVG.	25.7	0.0		

TABLE 138

YEARLY TOTALS OF SALMONIDS COUNTED OVER LOWER MONUMENTAL DAM 1969 - 1997

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
1993	34,195	70,992	18		105,205
1994	7,219	49,917	7		57,143
1995	7,883	90,157	4	4	98,048
1996	15,606	96,609	3	6	112,224
1997	51,556	85,602	16	30	137,204
Total	1,088,357	1,906,151	4,582	16,420	3,015,510
10-Year Average	26,288	86,062	11		112,368

*Jacks included

TABLE 139

MONTHLY COUNT OF CHINOOK SALMON

LOWER MONUMENTAL DAM; 1969 - 1997

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
1993				3,848	16,154	9,720	2,016	313	1,591	509	44		34,195
1994				574	2,448	1,287	322	156	1,308	1,124			7,219
1995				210	1,435	1,092	471	280	2,183	2,212			7,883
1996				62	5,836	4,442	1,407	395	2,547	917			15,606
1997				1,493	26,966	16,833	2,484	309	2,174	1,297			51,556
Total	1		2	149,654	491,633	224,177	111,762	14,473	66,951	28,190	506	8	1,087,357
10-Year Average				3,608	11,707	6,177	1,490	303	1,852	1,047			26,188

TABLE 140

MONTHLY COUNT OF STEELHEAD

LOWER MONUMENTAL DAM: 1969 - 1997

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
1993				7,752	277	564	5,367	8,197	16,146	30,228	2,461		70,992
1994				2,844	76	186	2,595	2,998	14,901	26,317			49,917
1995				1,072	162	138	4,074	10,424	38,890	35,397			90,157
1996				934	96	137	3,199	12,413	47,234	32,596			96,609
1997				1,044	162	177	3,422	9,326	34,521	36,950			85,602
Total	252	1,030	3,466	70,417	17,995	4,264	72,945	164,804	851,812	730,788	8,265	782	1,926,820
10-Yr. Average				2,535	243	246	3,389	6,748	37,472	37,251			88,129

TABLE 141

WILD STEELHEAD COUNTED AT
LOWER MONUMENTAL DAM 1997

LOWER MONUMENTAL DAM		South	North
April	Wild Steelhead	Ladder	Ladder
1	0	0	0
2	0	0	0
3	6	0	6
4	7	0	7
5	16	0	16
6	5	0	5
7	26	0	26
8	13	3	10
9	10	3	7
10	12	6	6
11	14	5	9
12	16	0	16
13	7	1	6
14	4	2	2
15	9	1	8
16	4	0	4
17	18	6	12
18	10	3	7
19	7	4	3
20	4	1	3
21	8	2	6
22	0	0	0
23	1	1	0
24	1	0	1
25	0	0	0
26	0	0	0
27	1	0	1
28	0	0	0
29	1	0	1
30	0	0	0
TOTAL	200	38	162
AVE	7	1	5

TOTAL	WILD STEELHEAD
TO DATE	200

LOWER MONUMENTAL DAM		South	North
May	Wild Steelhead	Ladder	Ladder
1	0	0	0
2	1	0	1
3	2	1	1
4	0	0	0
5	0	0	0
6	1	1	0
7	1	0	1
8	1	0	1
9	4	2	2
10	1	1	0
11	0	0	0
12	0	0	0
13	0	0	0
14	0	0	0
15	0	0	0
16	0	0	0
17	0	0	0
18	0	0	0
19	0	0	0
20	0	0	0
21	0	0	0
22	0	0	0
23	0	0	0
24	0	0	0
25	0	0	0
26	0	0	0
27	0	0	0
28	0	0	0
29	0	0	0
30	0	0	0
31	0	0	0
TOTAL	11	5	6
AVE	0	0	0

TOTAL	WILD STEELHEAD
TO DATE	211

TABLE 142

WILD STEELHEAD COUNTED AT LOWER MONUMENTAL DAM 1997

LOWER MONUMENTAL DAM		South	North
June	Wild Steelhead	Ladder	Ladder
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	1	1	0
6	0	0	0
7	0	0	0
8	0	0	0
9	0	0	0
10	0	0	0
11	0	0	0
12	1	0	1
13	0	0	0
14	0	0	0
15	0	0	0
16	0	0	0
17	0	0	0
18	0	0	0
19	0	0	0
20	0	0	0
21	0	0	0
22	0	0	0
23	2	0	2
24	1	1	0
25	1	1	0
26	0	0	0
27	1	0	1
28	2	0	2
29	1	1	0
30	6	0	6
TOTAL	16	4	12
AVE	1	0	0

TOTAL	WILD STEELHEAD
TO DATE	227

LOWER MONUMENTAL DAM		South	North
July	Wild Steelhead	Ladder	Ladder
1	0	0	0
2	1	0	1
3	0	0	0
4	9	1	8
5	3	0	3
6	4	0	4
7	1	0	1
8	0	0	0
9	2	0	2
10	9	6	3
11	4	3	1
12	5	2	3
13	3	1	2
14	4	1	3
15	9	2	7
16	20	7	13
17	6	1	5
18	14	5	9
19	4	1	3
20	7	4	3
21	7	0	7
22	14	1	13
23	16	7	9
24	13	2	11
25	15	5	10
26	12	7	5
27	19	6	13
28	14	2	12
29	13	1	12
30	8	0	8
31	18	5	13
TOTAL	254	70	184
AVE	8	2	6

TOTAL	WILD STEELHEAD
TO DATE	481

TABLE 143

WILD STEELHEAD COUNTED AT
LOWER MONUMENTAL DAM 1997

LOWER MONUMENTAL DAM		South	North
August	Wild Steelhead	Ladder	Ladder
1	36	11	25
2	27	7	20
3	24	9	15
4	34	6	28
5	33	14	19
6	50	13	37
7	59	7	52
8	38	6	32
9	47	14	33
10	69	20	49
11	57	21	36
12	40	3	37
13	27	2	25
14	31	7	24
15	45	11	34
16	27	6	21
17	44	7	37
18	19	6	13
19	15	4	11
20	22	7	15
21	26	6	20
22	28	8	20
23	24	2	22
24	17	5	12
25	26	2	24
26	21	6	15
27	30	4	26
28	22	3	19
29	12	1	11
30	16	3	13
31	13	1	12
TOTAL	979	222	757
AVE	32	7	24

TOTAL	WILD STEELHEAD
TO DATE	1,460

LOWER MONUMENTAL DAM		South	North
September	Wild Steelhead	Ladder	Ladder
1	10	0	10
2	16	11	5
3	11	8	3
4	35	5	30
5	30	2	28
6	27	4	23
7	19	1	18
8	37	3	34
9	65	9	56
10	67	19	48
11	46	6	40
12	57	7	50
13	43	4	39
14	54	6	48
15	75	16	59
16	71	20	51
17	51	2	49
18	112	13	99
19	49	1	48
20	78	7	71
21	46	8	38
22	63	9	54
23	97	11	86
24	84	9	75
25	126	8	118
26	223	43	180
27	254	39	215
28	165	20	145
29	159	24	135
30	182	17	165
TOTAL	2,352	332	2,020
AVE	78	11	67

TOTAL	WILD STEELHEAD
TO DATE	3,812

TABLE 144

WILD STEELHEAD COUNTED AT
LOWER MONUMENTAL DAM 1997

LOWER MONUMENTAL DAM		Oregon	Washington
October	Wild Steelhead	Ladder	Ladder
1	100	17	83
2	189	28	161
3	173	26	147
4	117	16	101
5	176	40	136
6	111	15	96
7	118	17	101
8	137	13	124
9	112	28	84
10	135	22	113
11	106	18	88
12	131	15	116
13	92	18	74
14	86	21	65
15	143	44	99
16	157	29	128
17	107	11	96
18	80	12	68
19	68	14	54
20	82	11	71
21	47	11	36
22	80	17	63
23	65	7	58
24	49	10	39
25	60	4	56
26	40	2	38
27	48	7	41
28	36	4	32
29	33	5	28
30	38	5	33
31	34	8	26
TOTAL	2,950	495	2,455
AVE	95	16	79

TOTAL	WILD STEELHEAD
TO DATE	6,762

Little Goose Lock and Dam

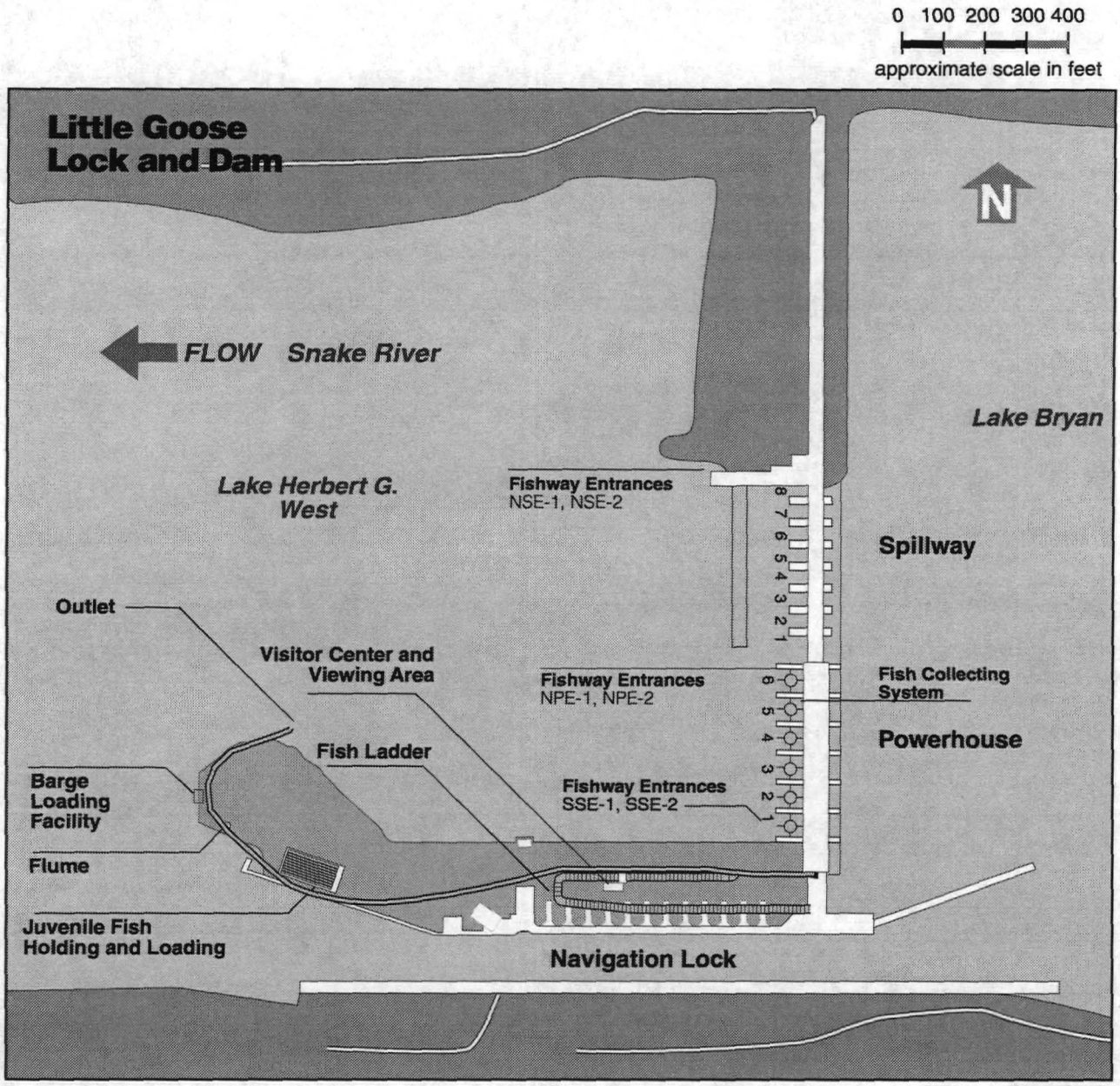

TABLE 145

MONTHLY TOTALS OF SALMONIDS AND SHAD COUNTED OVER LITTLE GOOSE DAM

1997

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*				519	26,980	16,769	3,007	296	1,302	791			49,664
STEELHEAD				1,208	197	92	1,919	6,629	25,883	38,291			74,219
SOCKEYE						1	7	1		1			10
COHO									2	57			59
PINK													
MINI-JACK**				4	3		54	119	49	188			417
TOTAL				1,727	27,177	16,862	4,933	6,926	27,187	39,140			124,369
SHAD						12	460	61					533

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

TABLE 145

TABLE 146

DISCHARGE AND WATER QUALITY DATA

LITTLE GOOSE PROJECT 1997

JANUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	172.3	62.7		
2	201.8	69.9		
3	187.6	55.2		
4	167.3	35.4		
5	141.6	13.9		
6	100.5	24.8		
7	72.5	21.5		
8	77.2	28.7		
9	81.5	21.2		
10	88.4	26.6		
11	75.1	20.4		
12	80.5	8.5		
13	73.0	3.3		
14	65.9	3.8		
15	68.0	4.2		
16	66.7	4.4		
17	64.7	4.3		
18	60.9	13.6		
19	60.6	12.9		
20	65.6	13.6		
21	66.5	12.4		
22	56.7	6.0		
23	58.3	0.7		
24	67.4	3.9		
25	69.0	3.7		
26	73.7	15.2		
27	83.2	3.9		
28	71.7	1.9		
29	72.5	5.5		
30	86.3	21.0		
31	88.5	10.6		
AVG.	89.2	17.2		

FEBRUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	104.4	8.8		
2	107.2	13.1		
3	98.0	5.7		
4	103.1	19.9		
5	100.4	14.4		
6	94.6	10.9		
7	88.3	10.0		
8	86.9	0.0		
9	90.0	0.7		
10	81.5	10.2		
11	83.3	2.5		
12	80.6	0.0		
13	89.1	0.0		
14	83.3	0.0		
15	90.7	0.0		
16	101.1	1.9		
17	94.3	0.0		
18	98.4	3.8		
19	97.0	3.3		
20	99.5	1.9		
21	93.2	0.0		
22	98.7	7.0		
23	94.7	4.4		
24	86.2	1.8		
25	88.5	0.0		
26	88.8	0.0		
27	90.9	0.0		
28	91.2	0.0		
AVG.	93.0	4.3		

MARCH

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	91.3	0.0		
2	88.2	0.0		
3	86.5	0.0		
4	89.6	0.0		
5	88.5	0.0		
6	81.1	0.0		
7	74.0	0.0		
8	83.3	0.0		
9	87.1	0.0		
10	94.5	0.0		
11	94.5	0.0		
12	104.9	0.0		
13	93.9	0.0		
14	88.3	0.0		
15	84.8	4.1		
16	86.6	0.0		
17	98.3	5.5		
18	101.6	0.0		
19	115.7	1.9		
20	126.6	9.9		
21	141.6	30.1		
22	137.4	15.2		
23	134.3	23.3		
24	135.9	38.7		
25	129.2	39.9		
26	127.3	35.5		
27	133.8	33.9		
28	140.9	24.6		
29	136.1	16.0		
30	125.7	29.4		
31	122.9	23.0		
AVG.	107.2	10.7		

TABLE 147

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

LITTLE GOOSE PROJECT
APRIL 1997

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1	0							126	10		0	113.0	13.2	4.5	46.0
2	0							62	11		0	95.7	11.6	4.6	47.0
3	0							119	22		0	96.2	2.0	4.9	47.0
4	0							7	0		0	96.5	7.8	4.9	47.0
5	0							73	14		0	89.7	13.8	4.9	47.0
6	0							121	29		0	87.6	0.0	4.9	47.0
7	0							45	12		0	86.6	8.0	4.9	48.0
8	1							57	12		0	93.1	13.0	4.9	48.0
9	0							39	9		0	83.8	5.9	4.9	47.0
10	1							45	15		0	89.0	22.6	4.9	46.0
11	0							52	14		0	85.0	31.5	4.0	48.0
12	1							36	8		0	80.3	35.7	3.0	48.0
13	1							30	3		0	78.0	24.8	2.5	48.0
14	0							22	8		0	81.0	35.7	2.3	48.0
15	0							28	7		0	81.7	26.5	2.0	48.0
16	0							17	3		0	89.6	26.4	2.0	47.0
17	3							46	10		0	103.1	24.2	2.0	47.0
18	2							38	15		0	109.5	22.3	2.0	48.0
19	5							19	1		0	122.0	31.6	2.0	48.0
20	4							28	13		0	153.2	40.8	2.0	48.0
21	16							27	6		1	177.0	55.8	1.8	49.0
22	15							25	8		0	176.7	55.0	1.6	49.0
23	4							16	2		2	168.7	52.1	0.5	48.0
24	7							10	3		0	181.3	64.4	0.5	48.0
25	12							20	1		0	163.7	52.6	0.5	49.0
26	10							11	0		0	158.5	78.1	0.5	49.0
27	54							20	3		1	152.4	52.7	0.5	49.0
28	125							26	5		0	169.5	63.6	0.5	49.0
29	175							18	3		0	175.2	73.7	0.5	50.0
30	83							25	2		0	170.3	67.1	0.5	50.0
TOTAL	519							1,208	249		4				
AVG.	39							40	8			120.3	33.8	2.7	47.9

TABLE 148

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

LITTLE GOOSE PROJECT

MAY 1997

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	323			4				12	2		0	164.2	62.3	0.6	50.0
2	179			0				10	4		0	153.0	61.4	0.5	50.0
3	350			0				17	3		0	131.4	44.4	0.5	50.0
4	431			0				8	1		0	132.4	51.8	0.5	51.0
5	917			4				13	5		0	134.1	41.8	0.6	51.0
6	999			1				12	5		0	134.0	35.4	0.5	52.0
7	1390			1				18	1		0	144.9	40.1	0.5	52.0
8	945			1				14	6		0	150.9	40.4	0.6	53.0
9	664			1				6	4		0	143.4	39.2	0.7	53.0
10	790			2				5	1		0	149.9	51.2	0.9	54.0
11	2002			3				10	4		0	160.3	53.4	1.0	54.0
12	1545			6				13	4		0	167.4	73.4	1.0	54.0
13	1029			4				12	0		0	169.1	80.3	1.0	54.0
14	1118			4				5	0		0	189.9	83.8	0.8	54.0
15	1182			6				5	0		0	189.1	73.0	0.8	55.0
16	378			0				2	0		0	207.6	93.2	0.8	55.0
17	306			1				1	0		0	212.2	98.4	0.8	55.0
18	171			1				2	0		0	217.3	102.6	0.8	55.0
19	251			3				3	0		0	197.3	85.5	0.8	55.0
20	236			5				2	1		2	184.8	80.7	0.8	55.0
21	211			1				0	0		0	173.7	88.1	0.8	55.0
22	166			1				0	0		0	173.8	90.5	0.8	55.0
23	1496			3				1	0		0	165.9	68.4	0.8	52.0
24	1255			2				8	0		0	163.2	76.7	1.2	52.0
25	1019			3				8	0		0	155.7	71.5	1.2	52.0
26	1071			1				1	0		0	145.9	61.2	1.5	53.0
27	1191			4				2	1		1	140.0	52.1	1.6	54.0
28	1271			3				2	1		0	137.4	53.2	1.6	53.0
29	1181			1				1	0		0	138.4	74.8	1.6	53.0
30	1648			6				2	0		0	146.3	44.9	1.6	53.0
31	1189			4				2	0		0	161.9	47.7	1.0	54.0
TOTAL	26,904			76				197	43		3				
AVG.	868			2				6	1			162.4	65.2	0.9	53.2

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	27,423	76

STEELHEAD	WILD STEELHEAD	MINI-JCK
1,405	292	7

TABLE 149

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

LITTLE GOOSE PROJECT

JUNE 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1	862			4			0	2	0	0	
2	1234			2			0	3	0	0	
3	543			1			0	0	0	0	
4	977			2			0	1	0	0	
5	448			2			0	0	0	0	
6	497			2			0	1	0	0	
7	528			1			0	1	0	0	
8	236			2			0	0	0	0	
9	544			0			0	2	0	0	
10	920			2			0	1	0	0	
11	1345			7			0	1	0	0	
12	521			3			0	2	1	0	
13	971			2			0	1	1	0	
14	508			0			0	1	0	0	
15	317			2			0	1	0	0	
16		436		0			0	1	0	0	
17		233		1			0	1	0	0	
18		621		2			0	1	0	0	
19		649		2			0	1	0	0	
20		846		4			0	1	0	0	
21		1055		0			0	7	0	0	
22		0		0			0	0	0	0	
23		516		2			1	12	1	1	
24		291		1			0	4	0	0	
25		332		1			0	8	0	0	
26		343		4			0	9	1	2	
27		270		1			0	6	0	6	
28		239		4			0	7	1	2	
29		243		2			0	11	0	1	
30		187		1			0	6	0	0	
TOTAL	10,451	6,261		57			1	92	5	12	
AVG.	697	430		2				3			

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	173.4	58.3	0.8	55.0
2	182.7	67.4	0.8	55.0
3	175.0	60.5	0.8	55.0
4	171.4	62.1	0.8	55.0
5	176.5	67.2	0.8	55.0
6	182.4	69.5	0.8	55.0
7	168.1	62.4	1.0	56.0
8	164.8	73.3	0.8	55.0
9	163.5	64.1	1.0	56.0
10	166.9	61.0	1.0	56.0
11	174.2	67.0	1.0	56.0
12	185.8	77.9	1.0	56.0
13	179.4	64.4	1.0	58.0
14	175.0	64.8	1.0	56.0
15	183.0	70.6	1.0	56.0
16	179.3	72.5	1.0	56.0
17	172.3	92.0	1.0	58.0
18	169.8	80.4	1.0	58.0
19	171.1	67.6	1.0	59.0
20	161.6	74.1	1.0	59.0
21	150.5	68.4	1.4	59.0
22	142.5	59.4	1.6	59.0
23	132.0	47.5	1.6	60.0
24	122.2	21.0	1.6	60.0
25	111.9	8.9	1.6	60.0
26	101.6	0.0	1.6	61.0
27	104.8	0.0	1.8	63.0
28	106.8	13.8	1.8	63.0
29	110.2	6.5	1.8	63.0
30	101.1	0.0	2.0	63.0
AVG.	155.3	53.4	1.2	57.9

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	37,874	108
SUMMER	6,261	25
TOTALS	44,135	133

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1	1,497	297	12	7

No counts on the2 2nd.

TABLE 150

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

LITTLE GOOSE PROJECT
JULY 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	RIVER CONDITIONS DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1		283		2			0	10	0	0	0	100.8	0.0	2.6	65.0
2		299		3			0	26	1	2	1	106.3	2.9	3.1	66.0
3		297		4			0	11	1	2	0	92.6	0.0	3.4	66.0
4		275		1			0	30	0	5	0	87.6	0.0	3.5	66.0
5		190		0			0	14	0	7	1	84.9	0.0	3.5	67.0
6		280		0			0	30	0	2	0	79.7	0.0	3.2	64.0
7		134		1			0	26	1	3	0	70.6	0.0	3.2	64.0
8		201		1			0	51	1	7	1	71.1	0.0	3.2	64.0
9		130		0			0	38	2	8	0	68.4	0.0	3.3	65.0
10		100		2			0	38	2	5	0	71.0	0.0	3.3	65.0
11		114		1			0	53	0	29	1	68.7	0.0	3.3	66.0
12		77		2			0	61	1	12	5	56.9	0.0	3.3	67.0
13		57		2			0	48	1	4	9	53.4	0.0	3.3	67.0
14		73		2			0	49	10	15	2	53.3	0.5	3.3	68.0
15		43		1			0	58	3	7	0	61.5	8.0	3.6	67.0
16		50		0			1	68	4	25	1	62.6	2.6	3.6	67.0
17		47		0			0	80	9	33	0	63.3	0.0	3.6	67.0
18		69		1			0	107	4	8	0	62.7	0.0	3.6	67.0
19		41		0			0	89	11	34	6	64.9	0.0	3.6	67.0
20		18		0			0	69	4	34	3	68.5	0.0	3.6	67.0
21		27		0			0	79	14	9	1	60.1	0.0	3.6	67.0
22		31		1			0	76	7	15	5	60.7	0.0	3.8	67.0
23		28		3			2	89	5	11	0	60.0	0.0	3.8	67.0
24		20		0			1	69	12	20	1	60.6	0.0	3.8	67.0
25		15		0			0	85	2	19	0	61.1	0.0	4.2	67.0
26		10		0			1	88	9	22	3	59.0	0.0	4.4	67.0
27		17		0			0	97	7	20	0	57.7	0.0	4.6	68.0
28		19		1			0	79	15	8	1	59.1	0.0	4.6	68.0
29		8		2			2	101	10	46	0	58.6	0.0	4.6	68.0
30		8		0			0	82	13	25	2	55.9	0.0	4.4	68.0
31		14		2			0	118	15	23	11	56.8	0.0	4.4	68.0
TOTAL		2,975		32			7	1,919	164	460	54				
AVG.		96		1				62	5	15	2	67.7	0.5	3.7	66.6

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	37,874	108
SUMMER	9,236	57
TOTAL	47,110	165

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
8	3,416	461	472	61

TABLE 151

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

LITTLE GOOSE PROJECT
AUGUST 1998

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1		16		0			0	138	12	6	0
2		3		1			0	140	14	2	3
3		8		4			0	128	15	1	3
4		7		1			0	130	21	2	2
5		3		1			0	101	19	8	4
6		8		0			1	153	16	2	3
7		7		0			0	169	27	0	8
8		15		1			0	298	34	2	9
9		10		0			0	227	41	-1	10
10		9		0			0	290	46	3	6
11		15		0			0	310	59	11	6
12		12		0			0	298	50	6	1
13		9		0			0	329	64	7	5
14		7		0			0	278	38	6	10
15		7		0			0	400	41	0	4
16			8	0			0	273	39	4	2
17			6	0			0	279	26	0	2
18			8	0			0	234	30	3	4
19			6	0			0	208	36	0	4
20			3	1			0	183	21	0	2
21			12	1			0	242	29	0	6
22			7	1			0	210	22	0	1
23			4	0			0	176	20	-1	1
24			7	0			0	206	24	0	4
25			12	0			0	198	16	0	4
26			8	0			0	180	28	0	1
27			15	2			0	250	23	0	4
28			10	0			0	140	18	0	3
29			15	0			0	192	14	0	2
30			6	2			0	126	14	0	1
31			17	1			0	143	14	0	4
TOTAL		136	144	16			1	6,629	871	61	119
AVG.		9	9	1				214	28	2	4

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	55.7	0.0	4.4	69.0
2	55.5	0.0	4.4	69.0
3	56.8	0.0	4 6	69.0
4	55.7	0.0	4.6	69.0
5	53.0	0.0	4.6	70.0
6	52.5	0.0	4.6	70.0
7	54.3	0.0	4.8	70.0
8	51.6	7 4	4.8	70.0
9	50 6	0 0	4.8	70.0
10	53.0	0.0	4.8	70.0
11	47.9	0.0	4.8	70.0
12	53.3	0.0	5.0	70.0
13	48.0	0.0	5.0	70.0
14	52.9	0.0	4.8	69.0
15	49.0	0.0	4.8	69.0
16	45.3	0.0	5 0	70.0
17	43.2	0.0	5.0	70.0
18	43 5	0.0	4.6	70 0
19	43.5	0 0	4.6	70 0
20	41.5	0.0	4.3	70.0
21	44.6	0.0	4.3	70.0
22	40.4	0.0	4.3	70.0
23	42.1	0.0	4.3	70.0
24	42.1	0 0	4.5	70.0
25	41.9	0.0	4.7	69.0
26	42.9	0.0	4.8	69.0
27	40.8	0.0	4.8	69.0
28	32.7	0.0	4.8	69.0
29	33.1	7.4	4.8	69.0
30	28.5	0.0	4.8	69.0
31	29.9	0.0	4.8	69.0
AVG.	46.0	0.5	4.7	69.6

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	37,874	108
SUMMER	9,372	65
FALL	144	8
TOTALS	47,390	181

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
9	10,045	1,332	533	180

TABLE 152

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

LITTLE GOOSE PROJECT
SEPTEMBER 1997

FISH COUNTS / RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1			16	0	0			200	33		1	28.7	0.0	4.8	69.0
2			18	0	0			136	10		2	19.2	0.0	4.8	69.0
3			9	0	0			92	14		2	24.8	0.0	4.8	69.0
4			4	0	0			105	12		2	28.1	0.0	4.8	69.0
5			26	2	0			250	21		2	29.9	0.0	4.8	70.0
6			57	3	0			363	31		2	32.5	0.0		
7			32	3	0			397	30		4	22.7	0.0		
8			56	1	0			362	37		0	31.9	0.0	5.2	79.0
9			40	0	0			513	41		1	28.0	0.0	5.2	71.0
10			43	5	0			293	25		1	26.7	0.0	5.2	71.0
11			61	1	0			517	26		2	27.8	0.0	5.2	71.0
12			53	4	0			693	55		1	28.0	0.0	5.0	71.0
13			58	4	0			700	47		2	29.4	0.0	5.0	70.0
14			48	2	0			664	43		1	30.5	0.0	5.0	70.0
15			42	2	0			726	50		0	34.8	0.0	5.0	70.0
16			42	3	0			963	67		1	41.6	0.0	5.0	70.0
17			19	6	0			558	34		0	42.1	0.0	5.0	70.0
18			24	3	0			775	51		0	45.2	0.0	5.0	69.0
19			8	0	0			452	34		0	41.1	0.0	5.0	68.0
20			32	6	0			842	51		0	36.9	0.0	5.0	68.0
21			60	9	0			928	59		2	43.3	0.0	5.0	68.0
22			48	11	0			1005	71		0	40.1	0.0	4.5	68.0
23			61	12	0			1001	59		2	37.6	0.0	4.5	68.0
24			45	5	0			1080	50		1	40.2	0.0	4.5	69.0
25			36	16	0			1466	66		1	40.2	0.0	4.5	69.0
26			34	7	0			1680	96		7	38.3	0.0	4.5	69.0
27			48	19	1			2650	150		3	37.4	0.0	4.5	68.0
28			48	11	0			2374	130		4	40.7	0.0	4.5	68.0
29			32	16	0			1950	145		1	38.0	0.0	4.5	68.0
30			33	18	1			2148	157		4	38.4	0.0	4.5	66.0
TOTAL			1,133	169	2			25,883	1,695		49				
AVG.			38	6				863	57		2	34.1	0.0	4.8	69.5

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	37,874	108
SUMMER	9,372	65
FALL	1,277	177
TOTALS	48,523	350

COHO ADULT
2

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
9	35,928	3,027	533	229

TABLE 153

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

LITTLE GOOSE PROJECT

OCTOBER 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1			33	15	0	0	0	2193	157		4
2			27	11	4	0	0	2770	203		0
3			27	15	2	0	0	2277	178		3
4			21	21	1	0	0	2382	187		14
5											
6			20	16	1	0	0	1351	103		6
7			16	6	1	1	1	2131	175		7
8			8	11	1	0	0	1648	128		5
9			16	18	1	0	0	1591	119		7
10			20	24	3	0	0	1913	161		8
11			6	19	5	0	0	1598	146		13
12			14	28	3	0	0	1881	161		10
13			17	24	2	0	0	1679	137		9
14			9	12	7	1	0	794	59		11
15			8	15	1	0	0	1277	97		10
16			11	15	1	0	0	1303	108		3
17			11	22	1	0	0	1430	131		5
18			12	19	2	0	0	1402	151		14
19			8	15	2	0	0	894	80		12
20			4	16	1	0	0	530	54		4
21			6	13	5	0	0	1091	94		7
22			2	5	0	0	0	959	77		4
23			2	12	1	0	0	845	101		5
24			3	24	2	0	0	753	66		0
25			7	7	1	0	0	435	39		4
26			8	10	1	0	0	656	61		7
27			3	16	0	0	0	484	39		3
28			9	19	0	1	0	526	54		5
29			2	2	0	0	0	439	41		2
30			6	12	0	0	0	494	35		4
31			6	7	2	3	0	565	53		2
TOTAL			342	449	51	6	1	38,291	3,195		188
AVG.			11	15	2			1,276	107		6

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	38.1	0 0	4.5	66.0
2	37.7	0.0	4.5	66.0
3	37.0	0.0	4.5	66.0
4	33.4	0.0	4.6	65.0
5	36.3	0.0	4.6	65.0
6	38.6	0.0	4.6	65.0
7	40.3	0.0	4.6	63.0
8	39.9	0 0	3.7	62.0
9	36.8	0.0	3.4	61.0
10	36 2	0.0	3.4	62 0
11	37.4	0.0	3.4	61 0
12	38.5	0.0	3.4	61 0
13	38 9	0.0	3.8	61 0
14	42.6	0.0	3.8	60.0
15	42.3	0.0	3 8	60.0
16	43.9	0.0	3.8	60.0
17	43.3	0.0	3.8	60 0
18	41.4	0.0	3 8	59 0
19	39.5	0.0	3.8	59.0
20	20.1	0.0	3.8	58.0
21	20.1	0.0	4.0	58.0
22	25.4	0.0	4.0	58.0
23	21.3	0 0	4.0	58.0
24	23.1	0.0	4.0	58.0
25	19.0	0.0	4.0	58.0
26	21.7	0.0	4.0	58.0
27	24.1	0.0	4.0	57.0
28	19.2	0.0	4.0	57.0
29	22.9	0.0	4.0	57.0
30	23.8	0.0	4.8	57.0
31	37.7	0.0	4.8	57.0
AVG.	32.9	0.0	4.0	60.4

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	37,874	108
SUMMER	9,372	65
FALL	1,619	626
TOTALS	48,865	799

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
53	6	10	74,219	6,222	533	417

No counts on the 5th.

TABLE 154

DISCHARGE AND WATER QUALITY DATA

LITTLE GOOSE PROJECT 1997

NOVEMBER

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	40.7	0.0		
2	35.8	0.0		
3	30.6	0.0		
4	27.6	0.0		
5	28.7	0.0		
6	26.9	0.0		
7	26.3	0.0		
8	27.3	0.0		
9	29.0	0.0		
10	27.3	0.0		
11	27.5	0.0		
12	25.2	0.0		
13	23.2	0.0		
14	23.5	0.0		
15	24.3	0.0		
16	25.8	0.0		
17	21.8	0.0		
18	21.1	0.0		
19	26.8	0.0		
20	24.2	0.0		
21	28.7	0.0		
22	28.5	0.0		
23	29.6	0.0		
24	25.6	0.0		
25	23.9	0.0		
26	29.0	0.0		
27	21.9	0.0		
28	27.1	0.0		
29	23.7	0.0		
30	22.6	0.0		
AVG.	26.8	0.0		

DECEMBER

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	28.5	0.0		
2	25.0	0.0		
3	28.0	0.0		
4	19.2	0.0		
5	26.9	0.0		
6	18.0	0.0		
7	13.0	0.0		
8	20.7	0.0		
9	23.8	0.0		
10	29.3	0.0		
11	33.4	0.0		
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
AVG.	24.2	0.0		

YEARLY TOTALS OF SALMONIDS COUNTED
LITTLE GOOSE DAM: 1970 - 1981 AND 1991 - 1997

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
1993	32,384	59,740	16		92,140
1994	5,457	45,815	44		51,316
1995	5,061	77,744	17	9	82,831
1996	13,538	82,203	1		95,742
1997	49,664	74,219	10	59	123,952
Total	649,333	1,007,934	3,807	10,547	1,671,621
1972-1981 10-Yr Avg	36,837	32,403	264	530	70,035
1991-1997 Average	20,941	79,178	16		100,145

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

TABLE 156

MONTHLY COUNT OF CHINOOK SALMON
LITTLE GOOSE DAM: 1970-1981 AND 1991-1997

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
1993				2,032	16,308	10,018	2,425	241	989	317	54		32,384
1994				294	2,307	1,281	282	98	540	610	45		5,457
1995				82	1,117	1,041	481	146	1,179	1,015			5,061
1996				57	4,872	4,695	1,450	280	1,572	612			13,538
1997				519	26,980	16,769	3,007	296	1,302	791			49,664
Total				65,918	278,249	130,274	80,356	7,695	22,611	7,298	484	8	592,893
**1972-1981 10-Year Average				5,003	18,657	6,421	4,851	498	981	421			36,837
**1991-1997 Average				1,636	9,666	6,257	1,544	177	1,037	581	74		20,941

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

TABLE 157

MONTHLY COUNT OF STEELHEAD
LITTLE GOOSE DAM: 1970 - 1981 AND 1991 - 97

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
1993				1,569	343	322	3,601	5,891	12,770	32,357	2,887		59,740
1994				771	148	162	1,522	2,239	8,828	25,830	6,315		45,815
1995				1,130	232	107	1,644	5,743	31,493	37,395			77,744
1996				936	99	105	1,489	7,560	40,468	31,546			82,203
1997				1,208	197	92	1,919	6,629	25,883	38,291			74,219
Total	668	700	6,517	28,641	9,001	1,906	26,551	74,345	396,100	428,607	33,174	1,714	1,007,924
1972-1981 10-Yr Avg				1,564	445	63	1,097	3,225	12,337	12,898			32,402
1991-1997 Average				984	211	147	1,830	4,468	29,406	38,289	6,727		79,178

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

TABLE 158

WILD STEELHEAD COUNTED AT LITTLE GOOSE DAM 1997

LITTLE GOOSE DAM	
April	Wild Steelhead
1	10
2	11
3	22
4	0
5	14
6	29
7	12
8	12
9	9
10	15
11	14
12	8
13	3
14	8
15	7
16	3
17	10
18	15
19	1
20	13
21	6
22	8
23	2
24	3
25	1
26	0
27	3
28	5
29	3
30	2
TOTAL	249
AVE	8
TOTAL TO DATE	WILD STEELHEAD 249

LITTLE GOOSE DAM	
May	Wild Steelhead
1	2
2	4
3	3
4	1
5	5
6	5
7	1
8	6
9	4
10	1
11	4
12	4
13	0
14	0
15	0
16	0
17	0
18	0
19	0
20	1
21	0
22	0
23	0
24	0
25	0
26	0
27	1
28	1
29	0
30	0
31	0
TOTAL	43
AVE	1
TOTAL TO DATE	WILD STEELHEAD 292

LITTLE GOOSE DAM	
June	Wild Steelhead
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	1
13	1
14	0
15	0
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	1
24	0
25	0
26	1
27	0
28	1
29	0
30	0
TOTAL	5
AVE	0
TOTAL TO DATE	WILD STEELHEAD 297

TABLE 159

WILD STEELHEAD COUNTED AT LITTLE GOOSE DAM 1997

LITTLE GOOSE DAM	
July	Wild Steelhead
1	0
2	1
3	1
4	0
5	0
6	0
7	1
8	1
9	2
10	2
11	0
12	1
13	1
14	10
15	3
16	4
17	9
18	4
19	11
20	4
21	14
22	7
23	5
24	12
25	2
26	9
27	7
28	15
29	10
30	13
31	15
TOTAL	164
AVE	5
TOTAL TO DATE	WILD STEELHEAD 461

LITTLE GOOSE DAM	
August	Wild Steelhead
1	12
2	14
3	15
4	21
5	19
6	16
7	27
8	34
9	41
10	46
11	59
12	50
13	64
14	38
15	41
16	39
17	26
18	30
19	36
20	21
21	29
22	22
23	20
24	24
25	16
26	28
27	23
28	18
29	14
30	14
31	14
TOTAL	871
AVE	28
TOTAL TO DATE	WILD STEELHEAD 1,332

LITTLE GOOSE DAM	
September	Wild Steelhead
1	33
2	10
3	14
4	12
5	21
6	31
7	30
8	37
9	41
10	25
11	26
12	55
13	47
14	43
15	50
16	67
17	34
18	51
19	34
20	51
21	59
22	71
23	59
24	50
25	66
26	96
27	150
28	130
29	145
30	157
TOTAL	1,695
AVE	57
TOTAL TO DATE	WILD STEELHEAD 3,027

WILD STEELHEAD COUNTED AT LITTLE GOOSE DAM 1997

LITTLE GOOSE DAM	
October	Wild Steelhead
1	157
2	203
3	178
4	187
5	no counts
6	103
7	175
8	128
9	119
10	161
11	146
12	161
13	137
14	59
15	97
16	108
17	131
18	151
19	80
20	54
21	94
22	77
23	101
24	66
25	39
26	61
27	39
28	54
29	41
30	35
31	53

TOTAL	3,195
AVE	107

TOTAL	WILD STEELHEAD
TO DATE	6,222

Lower Granite Lock and Dam

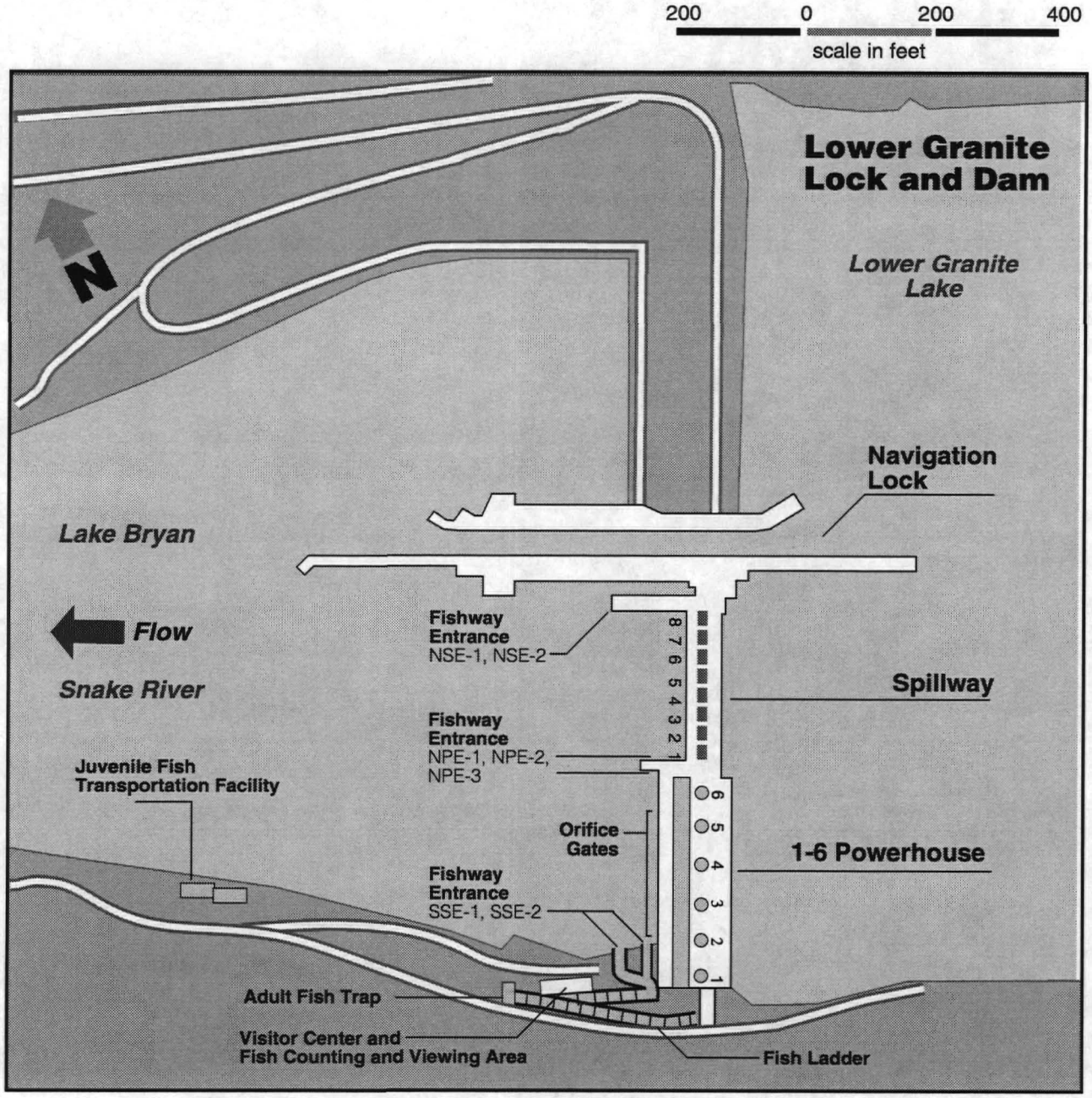

TABLE 161

MONTHLY TOTALS OF SALMONIDS AND SHAD COUNTED OVER LOWER GRANITE DAM
1997

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*				222	22,323	18,376	3,690	274	1,159	631	52		46,727
STEELHEAD			2,043	1,408	183	65	1,423	5,975	22,424	42,544	9,305	547	85,917
SOCKEYE						1	3	7					11
COHO*									2	72	18		92
PINK													
MINI-JACK**							27	87	25	221	70		430
TOTAL			2,043	1,630	22,506	18,442	5,116	6,256	23,585	43,247	9,375	547	133,177
SHAD							42	69					111

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

TABLE 162

DISCHARGE AND WATER QUALITY DATA

LOWER GRANITE PROJECT - 1997

JANUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	181.1	92.7		
2	213.3	106.7		
3	194.7	84.3		
4	170.7	58.4		
5	137.0	27.3		
6	103.3	23.8		
7	78.7	26.0		
8	80.7	32.3		
9	86.0	48.3		
10	91.8	44.9		
11	81.2	23.2		
12	83.3	16.0		
13	74.4	4.1		
14	66.9	10.9		
15	65.5	5.6		
16	71.1	11.3		
17	68.7	7.6		
18	59.7	23.8		
19	65.0	26.9		
20	67.6	19.3		
21	73.0	33.5		
22	64.1	14.0		
23	65.2	7.6		
24	69.4	4.9		
25	68.4	5.7		
26	76.0	19.3		
27	79.3	7.6		
28	73.1	2.6		
29	73.9	6.8		
30	83.8	20.4		
31	86.9	12.7		
AVG.	92.1	26.7		

FEBRUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	110.1	8.4		
2	112.8	10.7		
3	101.9	15.3		
4	103.7	27.9		
5	100.7	25.4		
6	101.6	23.6		
7	87.8	16.6		
8	91.8	0.0		
9	92.3	0.8		
10	82.2	20.6		
11	82.7	18.9		
12	85.6	23.6		
13	90.3	28.4		
14	90.4	25.9		
15	95.4	4.1		
16	99.5	2.7		
17	98.0	15.2		
18	98.1	29.1		
19	102.3	37.4		
20	104.7	42.3		
21	103.9	33.1		
22	99.4	9.1		
23	94.2	6.6		
24	87.3	2.3		
25	90.7	0.0		
26	89.8	0.0		
27	89.8	0.0		
28	89.9	0.0		
AVG.	95.6	15.3		

TABLE 163

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER GRANITE PROJECT

MARCH 1997

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1								89	9			90.3	0.0	5.0	45.0
2								93	7			94.3	0.0	5.0	45.0
3								63	12			87.9	11.2	5.0	44.0
4								55	6			90.0	7.8	5.0	44.0
5								66	3			83.7	4.4		44.0
6								38	2			79.6	0.0		44.0
7								49	4			82.0	0.0		44.0
8								75	3			85.1	0.0		44.0
9								70	13			87.6	0.0		44.0
10								54	5			97.4	0.0		44.0
11								49	4			97.3	11.1		43.0
12								44	4			103.0	14.1		43.0
13								56	5			97.2	10.1		43.0
14								47	3			87.7	0.0		43.0
15								47	3			86.7	0.0		43.0
16								58	3			88.8	0.0		44.0
17								57	5			96.4	0.0		45.0
18								59	3			101.9	0.0		45.0
19								66	2			113.0	1.5		46.0
20								62	2			130.2	25.3		46.0
21								78	4			144.1	33.0		46.0
22								54	1			140.4	18.3		46.0
23								79	1			133.9	21.5		46.0
24								66	6			135.3	32.1		46.0
25								86	15			131.6	25.1		46.0
26								82	7			125.1	18.3		46.0
27								85	8			138.6	26.1		46.0
28							*Camera Failure	68	7			141.1	32.3		47.0
29								63	8			138.1	25.0		48.0
30								98	6			124.8	12.2		48.0
31								87	9			122.4	17.3		
TOTAL								2,043	170						
AVG.								66	6			108.2	11.2		44.9

***Turbidity data was not entered in March. Fish counts were made by videotaping and daily turbidity readings were not available.

TABLE 163

TABLE 164

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER GRANITE PROJECT

APRIL 1997

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1	0							143	34			112.4	11.7	1.8	48.0
2	0							130	28			103.8	8.3	1.8	48.0
3	0							98	13			97.7	0.0	1.8	48.0
4	0							72	18			95.2	0.0	1.8	48.0
5	0							96	32			85.3	0.0	1.6	48.0
6	0							80	18			79.9	0.0	1.6	48.0
7	0							72	20			82.7	0.0	1.2	48.0
8	0							86	22			87.3	0.0	1.4	48.0
9	0							60	20			83.1	0.0	1.2	49.0
10	1							47	13			89.1	11.2	1.5	49.0
11	0							80	28			88.5	22.4	1.5	49.0
12	0							40	16			82.0	22.7	1.3	49.0
13	0							32	11			81.8	22.3	1.4	49.0
14	0							38	14			82.9	23.6	1.3	49.0
15	1							30	11			88.2	28.0	1.3	48.0
16	1							26	12			92.7	25.2	1.4	48.0
17	0							30	26			105.5	28.1	1.3	49.0
18	1							24	4			110.8	28.2	1.4	49.0
19	4							35	14			122.6	28.2	1.3	50.0
20	2							23	7			156.5	42.4	1.0	50.0
21	2							12	2			181.0	56.1	1.0	50.0
22	1							13	4			178.5	51.3	0.5	49.0
23	5							18	4			172.8	51.7	0.9	50.0
24	11							25	1			179.2	51.7	0.1	50.0
25	4							6	2			170.7	50.1	0.8	50.0
26	11							13	6			162.3	57.4	1.0	50.0
27	19							25	10			160.0	48.2	1.2	51.0
28	26							14	2			172.7	51.3	1.2	50.0
29	14							10	4			180.6	61.2	0.7	50.0
30	119							30	10			173.6	50.4	1.0	50.0
TOTAL	222							1,408	406						
AVG.	7							47	14			122.0	27.7	1.2	49.1

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	STEELHEAD	WILD STEELHEAD
	222	0	3,451	576

TABLE 165

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

LOWER GRANITE PROJECT
MAY 1997

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1	107			0				12	5			168.7	56.7	1.2	51.0
2	137			0				8	5			156.8	41.5	1.0	51.0
3	227			0				23	7			135.3	36.2	1.3	51.0
4	211			0				13	7			136.3	40.7	1.3	51.0
5	336			0				17	10			134.1	30.1	1.4	52.0
6	565			0				12	7			137.7	27.4	1.5	52.0
7	1016			0				13	11			153.7	37.4	1.5	53.0
8	1118			0				12	6			155.0	39.1	1.5	53.0
9	1028			0				11	6			148.9	37.5	1.5	52.0
10	830			1				8	1			159.0	46.8	1.5	52.0
11	666			0				6	5			167.7	63.6	1.5	52.0
12	1457			1				12	4			174.0	62.8	1.4	52.0
13	1128			0				10	5			179.6	68.2	1.4	54.0
14	712			0				4	0			196.0	86.9	1.3	54.0
15	463			0				1	1			201.6	83.9	1.3	53.0
16	529			0				2	0			212.7	86.9	1.0	53.0
17	284			1				0	0			224.7	101.9	1.0	53.0
18	113			0				0	0			225.3	101.1	0.8	53.0
19	67			0				2	1			208.0	83.7	0.7	53.0
20	112			0				0	0			191.3	85.1	0.8	53.0
21	608			0				2	0			185.6	69.0	1.0	53.0
22	973			2				5	0			178.5	66.6	0.1	53.0
23	974			0				1	0			173.6	55.2	1.2	54.0
24	420			1				2	0			171.4	75.3	1.0	53.0
25	1502			2				1	1			165.0	62.2	1.0	53.0
26	966			1				1	0			152.9	56.4	1.2	52.0
27	1013			0				2	0			145.7	39.3	1.2	53.0
28	1117			2				1	0			142.0	30.9	1.2	53.0
29	1038			5				0	0			144.2	49.3	1.0	55.0
30	1037			4				0	0			151.2	43.4	1.3	55.0
31	1547			2				2	0			163.6	57.4	1.4	55.0
TOTAL	22,301			22				183	82						
AVG.	719			1				6	3			169.0	58.8	1.2	52.8

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	STEELHEAD	WILD STEELHEAD
SPRING	22,523	22	3,634	658

TABLE 166

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

LOWER GRANITE PROJECT
JUNE 1997

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1	1115			8			0	1	1			179.5	64.3	1.3	55.0
2	1088			4			0	4	0			191.4	72.9	0.8	55.0
3	770			2			0	1	0			183.4	71.8	1.2	55.0
4	492			4			0	1	1			177.7	73.3	1.0	55.0
5	574			5			0	0	0			184.7	81.2	1.0	55.0
6	587			1			0	0	0			188.5	83.4	1.0	55.0
7	594			4			0	1	0			178.1	83.0	1.0	55.0
8	410			2			0	0	0			173.1	89.8	1.0	55.0
9	857			1			0	1	0			169.4	77.1	1.3	57.0
10	442			2			0	0	0			174.2	75.9	1.3	57.0
11	324			1			0	0	0			182.1	98.8	1.4	57.0
12	716			1			0	1	0			192.7	89.1	1.2	57.0
13	1013			7			0	1	0			187.6	84.9	1.0	56.0
14	1042			10			0	1	0			180.8	87.4	1.4	56.0
15	287			2			0	0	0			189.8	100.9	1.0	55.0
16	758			5			0	0	0			187.3	84.0	1.0	56.0
17	263			0			0	0	0			184.0	83.4	0.0	57.0
18		654		0			0	2	0			178.9	75.6	1.0	58.0
19		457		6			0	0	0			178.5	66.0	1.5	59.0
20		452		2			0	2	0			168.4	68.2	1.5	60.0
21		774		4			0	1	0			159.5	58.5	1.7	60.0
22		1033		7			0	-1	0			147.8	55.1	1.7	60.0
23		884		2			0	5	0			138.9	46.2	1.7	60.0
24		524		2			0	2	0			123.4	22.9	1.7	61.0
25		366		8			1	10	0			109.2	1.6	1.8	62.0
26		296		4			0	2	0			103.7	6.3	1.9	62.0
27		346		2			0	8	0			105.4	2.3	1.9	62.0
28		454		6			0	6	0			108.9	10.5	1.9	62.0
29		378		4			0	6	0			110.1	4.7	1.9	63.0
30		314		6			0	10	0			101.9	0.0	2.0	63.0
TOTAL	11,332	6,932		112			1	65	2						
AVG.	667	533		4				2				161.3	60.6	1.3	58.0

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	33,855	81
SUMMER	6,932	53
TOTAL	40,787	134

SOCKEYE	STEELHEAD	WILD STEELHEAD
1	3,699	660

TABLE 167

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

LOWER GRANITE PROJECT
JULY 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1		391		4			0	8	1	0	0
2		245		5			0	13	0	0	0
3		426		5			0	10	0	0	0
4		322		6			0	11	0	0	1
5		229		5			0	10	1	1	0
6		208		4			0	29	0	1	0
7		275		1			0	32	1	1	0
8		224		2			0	2	0	1	0
9		150		4			0	29	1	0	1
10		146		1			0	37	0	2	0
11		137		0			0	40	2	1	0
12		101		5			0	38	4	0	1
13		53		0			0	32	1	0	0
14		98		4			0	53	5	0	7
15		64		0			0	28	0	0	6
16		98		5			0	52	7	0	2
17		34		0			0	47	6	0	1
18		85		1			0	64	4	0	1
19		77		2			0	60	6	4	1
20		29		0			0	61	7	1	0
21		42		1			0	82	10	0	0
22		20		0			0	61	5	0	0
23		29		4			0	64	11	1	2
24		18		2			0	76	8	1	0
25		37		4			0	83	11	0	2
26		17		1			0	62	4	0	2
27		13		0			0	56	5	7	0
28		13		1			0	77	10	8	0
29		14		0			1	104	12	8	0
30		17		0			1	34	8	5	0
31		10		1			1	68	13	0	0
TOTAL		3,622		68			3	1,423	143	42	27
AVG.		117		2				46	5	1	1

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	100.5	0.0	2.0	63.0
2	107.2	5.9	2.1	63.0
3	95.3	5.9	2.0	63.0
4	89.9	6.0	2.1	63.0
5	85.9	6.0	2.1	63.0
6	82.0	1.7	2.2	64.0
7	73.7	0.0	2.2	65.0
8	70.6	2.8	2.2	66.0
9	68.2	0.0	2.2	66.0
10	72.9	0.0	2.2	66.0
11	69.3	4.1	2.2	65.0
12	57.7	1.8	2.2	65.0
13	56.7	4.1	2.8	65.0
14	54.1	1.8	2.9	64.0
15	62.5	5.5	3.2	65.0
16	64.6	7.7	3.8	66.0
17	64.3	5.9	4.6	66.0
18	63.8	2.9	4.6	66.0
19	64.1	0.0	4.6	66.0
20	68.5	2.6	4.6	66.0
21	62.3	2.0	4.6	66.0
22	62.8	4.1	5.0	65.0
23	62.7	5.9	5.0	66.0
24	61.2	5.9	5.0	66.0
25	61.5	2.0	5.0	66.0
26	58.6	0.0	3.9	66.0
27	57.8	4.2	4.3	66.0
28	61.3	6.1	4.5	67.0
29	58.7	1.2	4.0	66.0
30	57.9	3.9	4.0	66.0
31	59.4	5.6	4.0	66.0
AVG.	68.9	3.4	3.4	65.2

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	33,855	81
SUMMER	10,554	121
TOTAL	44,409	202

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
4	5,122	803	42	27

TABLE 168

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

LOWER GRANITE PROJECT
AUGUST 1997

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1		18		0			1	118	13	7	0	56.1	1.8	4.5	66.0
2		19		2			2	112	16	1	4	56.3	0.0	4.6	66.0
3		13		0			1	116	25	10	4	57.4	0.0	4.5	67.0
4		5		0			0	106	12	5	6	55.8	0.0	4.5	67.0
5		7		0			0	77	6	2	1	52.7	0.0	4.5	67.0
6		7		1			0	132	30	4	4	53.9	0.0	4.5	67.0
7		10		0			0	114	20	5	0	54.2	0.0	4.5	67.0
8		2		0			0	134	20	4	1	51.8	7.7	4.5	66.0
9		7		1			0	130	18	6	7	51.7	0.0	4.5	66.0
10		6		0			1	185	42	4	1	52.5	0.0	4.5	66.0
11		8		0			0	191	30	5	4	49.1	0.0	4.5	66.0
12		7		1			0	197	46	0	1	51.9	0.0	4.5	66.0
13		11		0			0	259	48	1	4	50.5	0.0	4.5	66.0
14		11		0			0	344	56	5	2	51.8	0.0	4.5	66.0
15		11		0			0	313	55	1	6	49.0	0.0	4.5	66.0
16		8		1			0	242	34	1	2	45.5	0.0	4.7	66.0
17		5		0			0	233	40	1	10	43.4	0.0	4.5	66.0
18			6	0			0	304	48	1	1	42.8	0.0	4.5	66.0
19			2	0			0	161	25	2	6	42.1	0.0	4.5	67.0
20			10	1			0	200	20	2	1	40.1	0.0	4.5	67.0
21			5	1			1	202	26	0	0	43.7	0.0	4.5	69.0
22			12	0			0	220	31	0	6	40.8	0.0	4.6	68.0
23			11	1			0	228	37	0	2	41.3	0.0	4.8	68.0
24			2	0			0	185	24	0	2	42.5	0.0	4.9	69.0
25			4	0			0	302	56	0	5	42.7	0.0	4.9	69.0
26			7	1			1	206	30	0	2	43.1	0.0	4.9	69.0
27			17	2			0	242	30	0	5	41.0	0.0	4.9	69.0
28			8	1			0	180	20	1	0	34.6	0.0	4.9	69.0
29			11	0			0	187	32	0	0	33.0	3.4	4.9	69.0
30			2	2			0	163	25	1	0	29.7	0.0	4.9	68.0
31			6	1			0	192	26	0	0	29.5	0.0	5.0	69.0
TOTAL		155	103	16			7	5,975	941	69	87				
AVG		9	7					193	30	2	3	46.1	0.4	4.6	67.2

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	33,855	81
SUMMER	10,709	127
FALL	103	10
TOTAL	44,667	218

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
11	11,097	1,744	111	114

TABLE 169

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

LOWER GRANITE PROJECT
SEPTEMBER 1997

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1			14	0	0			124	25		0	29.3	0.0	5.0	71.0
2			31	4	0			215	18		0	28.6	0.0	5.0	70.0
3			7	2	0			101	10		0	29.0	0.0	5.0	71.0
4			16	0	0			138	12		0	29.1	0.0	5.0	71.0
5			12	0	0			155	12		0	29.5	0.0	5.0	71.0
6			17	2	0			211	24		0	30.0	0.0	5.0	71.0
7			37	2	0			265	34		2	29.2	0.0	5.0	71.0
8			23	2	0			301	30		0	28.7	0.0	5.0	71.0
9			10	0	0			208	19		0	30.5	11.0	5.0	71.0
10			43	6	0			251	24		0	29.4	11.2	5.0	71.0
11			43	4	0			540	71		1	26.4	0.0	5.0	71.0
12			44	1	0			679	66		1	28.3	0.0	4.9	71.0
13			46	5	0			553	52		1	29.8	0.0	4.9	71.0
14			36	6	0			619	66		1	32.1	0.0	4.9	70.0
15			37	4	0			703	86		0	34.9	0.0	4.9	70.0
16			29	4	0			852	89		0	36.9	2.4	4.7	70.0
17			19	0	0			530	74		0	45.2	3.5	4.7	69.0
18			25	4	0			767	55		0	41.9	0.0	4.8	68.0
19			23	2	0			602	66		1	40.2	0.0	4.8	68.0
20			31	2	0			590	61		1	40.4	0.0	4.8	66.0
21			41	2	0			896	94		1	40.3	0.0	4.8	66.0
22			38	10	0			952	119		1	40.1	0.0	4.8	66.0
23			49	7	0			1147	125		5	40.2	2.6	4.8	66.0
24			60	11	0			1225	110		5	44.9	0.0	4.8	66.0
25			35	18	0			1061	108		0	41.7	0.0	4.9	66.0
26			55	13	0			1411	185		0	40.6	0.0	4.8	66.0
27			41	17	0			1886	223		0	41.6	0.0	4.8	66.0
28			31	16	0			1590	196		4	42.3	0.0	4.8	66.0
29			34	16	0			1651	154		0	42.3	0.0	4.8	66.0
30			49	23	2			2201	292		1	41.7	0.0	4.8	66.0
TOTAL			976	183	2			22,424	2,500		25				
AVG.			39	6				747	83		1	35.5	1.0	4.9	68.8

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	33,855	81
SUMMER	10,709	127
FALL	1,079	193
TOTAL	45,643	401

COHO ADULT
2

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
11	33,521	4,244	111	139

TABLE 169

TABLE 170

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

LOWER GRANITE PROJECT
OCTOBER 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
1			23	5	0	0		1902	178		1
2			36	23	0	0		2384	223		5
3			29	11	6	0		2860	250		1
4			23	12	2	0		2624	234		2
5			20	16	0	0		2705	274		5
6			13	19	0	1		1543	140		5
7			16	13	1	0		1846	149		12
8			11	10	6	0		1256	108		5
9			8	8	0	0		1312	175		4
10			13	14	1	0		1742	130		8
11			30	17	0	0		1708	166		11
12			10	10	5	0		1915	150		17
13			12	2	6	0		1970	158		8
14			10	10	2	0		1147	116		7
15			10	10	0	0		1190	127		11
16			5	10	4	0		1108	100		7
17			10	18	7	0		1327	148		7
18			5	6	2	2		1272	103		7
19			7	8	2	1		1345	94		5
20			7	5	5	0		1408	131		5
21			7	6	0	0		1069	73		8
22			7	0	1	1		668	53		8
23			6	1	4	0		1260	109		7
24			5	2	5	0		968	89		12
25			6	6	0	0		800	85		6
26			1	8	0	0		686	79		13
27			1	4	0	0		602	60		6
28			4	2	2	0		674	74		7
29			10	7	1	0		362	35		8
30			5	2	0	0		376	32		12
31			5	11	4	1		515	46		1
TOTAL			355	276	66	6		42,544	3,889		221
AVG.			11	9	2			1,372	125		7

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	41.1	0.0	4.8	66.0
2	41.5	0.0	4.8	66.0
3	39.0	0.0	4.8	66.0
4	39.0	0.0	4.9	65.0
5	40.0	0.0	4.9	65.0
6	40.5	0.0	4.9	65.0
7	42.0	0.0	4.8	63.0
8	44.0	0.0	4.8	63.0
9	41.3	0.0	4.8	62.0
10	41.3	0.0	4.8	62.0
11	42.5	0.0	4.8	62.0
12	41.8	0.0	4.9	60.0
13	41.1	0.0	5.0	60.0
14	45.6	0.0	4.9	59.0
15	47.7	0.0	4.8	59.0
16	48.3	0.0	4.8	59.0
17	47.2	0.0	4.5	59.0
18	48.5	0.0	4.9	59.0
19	39.9	0.0	5.0	59.0
20	23.9	0.0	5.0	59.0
21	21.0	0.0	5.0	59.0
22	23.4	0.0	4.9	59.0
23	22.6	0.0	4.9	59.0
24	22.3	0.0	4.8	59.0
25	19.6	0.0	4.8	57.0
26	22.8	0.0	4.8	57.0
27	22.9	0.0	4.8	56.0
28	21.9	0.0	4.8	56.0
29	22.3	0.0	4.8	56.0
30	25.7	0.0	4.8	54.0
31	36.9	0.0	4.8	53.0
TOTAL	35.4	0.0	4.8	60.1

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	33,855	81
SUMMER	10,709	127
FALL	1,434	469
TOTAL	45,998	677

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
68	6	11	76,065	8,133	111	360

TABLE 171

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER GRANITE PROJECT

NOVEMBER 1997

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1			1	2	1	0		368	24		12	39.9	0.0	4.8	53.0
2			2	3	0	0		538	60		8	34.6	0.0		53.0
3			3	1	3	0		329	28		13	30.8	0.0		52.0
4			0	5	0	0		348	29		7	28.5	0.0		52.0
5			0	4	2	1		332	22		7	27.8	0.0		52.0
6			1	1	0	0		245	14		4	27.4	0.0		52.0
7			1	2	2	0		339	23		2	25.5	0.0		52.0
8			2	3	0	0		271	27		2	27.3	0.0		52.0
9			1	1	1	0		218	14		1	27.6	0.0		52.0
10			0	2	1	0		375	26		2	26.7	0.0		52.0
11			0	3	0	0		499	47		3	26.6	0.0		50.0
12			0	1	0	1		438	39		1	25.8	0.0		51.0
13			0	2	1	0		384	39		2	23.5	0.0		53.0
14			2	0	0	0		364	42		0	23.6	0.0		50.0
15			0	0	0	0		277	26		0	23.6	0.0		50.0
16			0	2	0	0		434	28		0	23.3	0.0		50.0
17			2	1	1	0		377	35		1	20.7	0.0		50.0
18			0	0	0	0		422	44		0	22.0	0.0		50.0
19			0	1	0	0		259	18		0	27.0	0.0		50.0
20			0	0	1	0		373	37		0	24.3	0.0		48.0
21			2	0	0	0		465	57		0	28.1	0.0		48.0
22			0	0	0	0		256	18		0	29.3	0.0		47.0
23			0	0	0	0		277	27		2	26.4	0.0		47.0
24			0	0	0	0		240	21		1	25.8	0.0		46.0
25			0	1	0	0		110	9		0	26.2	0.0		47.0
26			0	0	2	0		150	13		0	29.0	0.0		47.0
27			0	0	1	0		218	13		2	23.0	0.0		47.0
28			0	0	0	0		128	21		0	25.0	0.0		46.0
29			0	0	0	0		128	13		0	24.1	0.0		46.0
30			0	0	0	0		143	11		0	22.5	0.0		46.0
TOTAL			17	35	16	2		9,305	825		70				
AVG.			1	1				310	28		2	26.5	0.0	4.8	49.7

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	33,855	81
SUMMER	10,709	127
FALL	1,451	504
TOTAL	46,015	712

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
84	8	11	85,370	8,958	111	430

TABLE 172

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

LOWER GRANITE PROJECT
DECEMBER 1997

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	MINI-JCK	KCFS	KCFS	SECCHI	DEG F
1								68	3			26.0	0.0		46.0
2								74	3			27.5	0.0		46.0
3								85	11			23.9	0.0		46.0
4								57	3			18.7	0.0		47.0
5								44	2			23.4	0.0		45.0
6								28	0			16.7	0.0		45.0
7								11	1			15.2	0.0		45.0
8								19	1			22.2	0.0		45.0
9								41	1			24.7	0.0		45.0
10								48	2			29.7	0.0		45.0
11								32	2			31.4	0.0		45.0
12								16	1			29.1	0.0		43.0
13								11	1			26.4	0.0		44.0
14								8	1			26.8	0.0		44.0
15								5	1			24.1	0.0		44.0
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															
26															
27															
28															
29															
30															
31															
TOTAL								547	33						
AVG.								36	2			24.4	0.0		45.0

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	33,855	81
SUMMER	10,709	127
FALL	1,451	504
TOTAL	46,015	712

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK
84	8	11	85,917	8,991	111	430

TABLE 173

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

NIGHT VIDEO FISH COUNTS @ LOWER GRANITE
April 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
1	0							21	2			0
2	0							18	0			0
3	0							14	1			0
4	0							17	2			0
5	0							24	1			0
6	0							19	3			0
7	0							22	4			0
8	0							5	0			0
9	0							12	2			0
10	0							8	1			0
11	0							2	1			0
12	0							2	0			0
13	0							5	1			0
14	0							0	0			0
15	0							0	0			0
16	0							1	0			0
17	0							2	0			0
18	0							3	0			0
19	0							2	0			0
20	0							1	0			0
21	0							0	0			0
22	0							0	0			0
23	0							0	0			0
24	0							0	0			0
25	1							0	0			0
26	2							1	0			0
27	1							3	0			0
28	2							1	0			0
29	1							1	0			0
30	6							4	0			-1
TOTAL	13							188	18			(1)
AVG.	1							1	0			0

TOTALS TO DATE	CHINOOK ADULT
SPRING	13
TOTAL	13

STEELHEAD	WILD STEELHEAD	LAMPREY
188	18	(1)

Night video fish counting took place between 2000 and 0400 hours PST.

TABLE 174

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

NIGHT VIDEO FISH COUNTS @ LOWER GRANITE
May 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
1	3			0				1	1			0
2	17			0				1	1			0
3	10			0				0	0			0
4	20			0				0	0			0
5	64			0				0	0			0
6	118			0				3	2			0
7	67			0				2	0			0
8	108			0				2	0			0
9	53			0				0	0			0
10	31			0				0	0			0
11	58			0				1	0			0
12	123			0				0	0			0
13	106			0				2	2			0
14	17			0				0	0			0
15	16			0				0	0			0
16	10			0				0	0			0
17	4			0				0	0			0
18	3			0				0	0			0
19	2			0				0	0			0
20	0			0				0	0			0
21	70			0				0	0			0
22	24			0				0	0			0
23	23			0				0	0			0
24	43			0				0	0			0
25	149			0				0	0			0
26	89			0				0	0			0
27	123			0				1	0			0
28	123			0				0	0			0
29	207			2				0	0			0
30	207			0				2	1			0
31	163			0				0	0			1
TOTAL	2,051			2				15	7			1
AVG.	75			0				0	0			0

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	2,064	2
TOTAL	2,064	2

STEELHEAD	WILD STEELHEAD	LAMPREY
203	25	0

Night video fish counting took place between 2000 and 0400 hours PST.

TABLE 175

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

NIGHT VIDEO FISH COUNTS @ LOWER GRANITE
June 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
1	4			0				0				0
2	50			0				0				0
3	87			0				0				0
4	29			0				0				0
5	96			0				0				0
6	68			0				0				0
7	87			0				0				0
8	60			0				0				0
9	73			0				0				1
10	45			0				0				0
11	30			0				0				0
12	52			0				0				0
13	11			0				0				0
14	68			1				0				0
15	119			0				0				0
16	47			0				0				0
17	30			0				0				0
18		16		0				0				0
19		68		2				0				0
20		95		3				0				0
21		67		0				0				0
22		36		0				1				0
23		30		1				0				0
24		34		0				1				0
25		38		0				0				0
26		23		0				0				1
27		21		0				1				0
28		14		1				0				0
29		16		1				0				0
30		27		0				0				0
TOTAL	956	485		9				3				2
AVG.	56	37		0				0				0

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	3,020	3
SUMMER	485	8
TOTAL	3,505	11

STEELHEAD	WILD STEELHEAD	LAMPREY
206	25	2

Night video fish counting took place between 2000 and 0400 hours PST.

TABLE 176

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

NIGHT VIDEO FISH COUNTS @ LOWER GRANITE
July 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
1		14		0			0	2	0		0	0
2		13		1			0	0	0		0	2
3		33		0			0	1	0		0	0
4		12		1			0	0	0		0	0
5		21		0			0	2	0		0	0
6		16		0			0	0	0		1	0
7		15		0			0	5	1		0	0
8		21		1			0	2	1		0	0
9		8		0			0	3	0		0	0
10		8		1			0	4	0		0	0
11		7		0			0	4	0		0	0
12		7		0			0	2	0		7	0
13		3		0			0	5	0		0	0
14		3		0			0	2	0		0	0
15		2		0			0	1	0		0	1
16		2		0			0	3	0		0	0
17		3		0			0	4	1		0	0
18		21		2			0	20	2		0	0
19		2		0			0	0	0		0	0
20		2		0			0	4	0		0	0
21		2		0			0	6	0		0	2
22		1		0			0	1	1		0	1
23		6		0			0	4	1		0	1
24		0		0			2	7	1		0	2
25		4		0			0	6	0		0	1
26		0		0			0	1	0		0	1
27		0		0			2	0	0		0	14
28		0		0			0	0	0		0	7
29		2		0			0	6	3		0	11
30		1		0			1	4	0		0	17
31		2		0			0	7	1		0	6
TOTAL		231		6			5	106	12		8	66
AVG.		3		0			0	4	1		0	3

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	3,020	3
SUMMER	716	14
TOTAL	3,736	17

SOCKEYE	STEELHEAD	WILD STEELHEAD	MINI-JCK	LAMPREY
5	312	37	8	68

Night video fish counting took place between 2000 and 0400 hours PST.

TABLE 177

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

NIGHT VIDEO FISH COUNTS @ LOWER GRANITE
August 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
1		1		1			0	4	1	0	0	11
2		2		0			0	2	0	0	0	4
3		1		0			1	7	2	0	0	16
4		0		0			0	5	1	0	0	22
5		0		0			0	6	2	1	0	34
6		1		0			0	3	1	0	0	27
7		1		0			0	2	0	0	1	16
8*		0		0			0	0	0	0	0	0
9		1		0			0	7	1	0	0	45
10		1		0			0	15	5	3	0	24
11		1		0			0	6	0	0	0	21
12		0		0			0	8	1	3	0	22
13		0		0			0	5	0	0	0	27
14		0		0			0	10	1	3	0	27
15		0		0			0	5	0	0	0	30
16		1		0			0	7	1	0	0	33
17		1		0			0	8	2	0	0	33
18			1	0			0	11	3	1	0	21
19			0	0			0	6	0	0	0	32
20			0	0			0	14	4	0	0	29
21			1	0			0	7	1	0	0	33
22			0	0			0	8	0	0	0	33
23			0	0			0	10	2	0	0	16
24			0	0			0	19	3	0	0	48
25			0	0			0	7	0	0	0	29
26			0	0			0	9	0	0	0	44
27			0	0			0	15	2	1	0	38
28			1	1			0	9	1	0	0	21
29			0	0			0	7	0	0	0	31
30			0	0			0	3	0	0	0	24
31			0	0			0	9	1	0	0	27
TOTAL		11	3	2			1	234	35	12	1	818
AVG.		1	0	0			0	9	1	0	0	30

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	3,020	3
SUMMER	727	15
FALL	3	1
TOTAL	3,750	19

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
6	546	72	12	9	886

Night video fish counting took place between 2000 and 0400 hours PST.
* No counts.

TABLE 178

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

NIGHT VIDEO FISH COUNTS @ LOWER GRANITE
September 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
1			0	0				9	1		0	13
2			1	0				5	0		0	7
3			3	0				11	1		0	15
4			0	0				15	4		0	25
5			0	0				6	1		0	18
6			1	0				24	4		0	12
7			0	0				24	2		0	23
8			1	2				28	3		0	10
9			2	0				45	1		0	6
10			0	0				37	4		0	7
11			1	0				35	4		0	4
12			0	0				31	5		0	6
13			2	0				31	5		0	5
14			3	1				31	7		0	6
15			2	0				97	14		0	5
16			4	0				111	20		0	13
17			3	0				66	7		0	6
18			0	0				61	6		0	9
19			2	1				73	13		0	4
20			1	0				66	11		0	3
21			1	0				60	8		0	0
22			1	1				91	20		0	0
23			3	0				64	10		0	1
24			2	1				47	6		0	1
25			1	1				94	5		0	2
26			3	1				165	11		0	1
27			1	0				182	17		0	4
28			1	1				264	42		0	5
29			0	1				233	21		0	3
30			3	3				221	23		1	3
TOTAL			42	13				2,227	276		1	217
AVG.			2	1				105	13		0	4

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	3,020	3
SUMMER	727	15
FALL	45	14
TOTAL	3,792	32

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
6	2,773	348	12	10	1,103

Night video fish counting took place between 2000 and 0400 hours PST.

TABLE 179

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

NIGHT VIDEO FISH COUNTS @ LOWER GRANITE
October 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
1			1	4	0			185	14		1	2
2			0	2	0			228	24		0	4
3			0	1	0			143	15		0	6
4			1	4	0			272	27		0	0
5			0	1	0			199	18		1	1
6			1	1	0			163	11		0	2
7			0	2	0			124	11		3	1
8			1	0	0			147	10		1	1
9			2	0	0			203	26		1	0
10			0	1	0			118	11		1	0
11			1	2	0			170	15		0	0
12			1	1	0			114	9		1	0
13			0	0	0			94	7		1	0
14			0	1	0			132	11		2	1
15			2	0	1			109	9		2	0
16			0	0	0			105	17		0	0
17			0	0	0			158	19		2	0
18			0	1	0			181	19		1	0
19			0	2	0			122	14		3	1
20			0	1	0			74	5		1	1
21			0	1	0			61	6		0	0
22			0	2	0			140	15		2	0
23			0	2	0			122	6		2	0
24			2	0	1			99	11		0	0
25			1	0	0			74	7		0	0
26			0	1	0			55	4		1	0
27			0	0	0			51	5		2	0
28			1	0	0			37	3		0	0
29			1	3	0			37	4		1	0
30			0	4	0			53	8		1	0
31			1	0	0			44	9		1	0
TOTAL			16	37	2			3,814	370		31	20
AVG.			0	1	0			92	9		1	0

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	3,020	3
SUMMER	727	15
FALL	61	51
TOTAL	3,808	69

COHO ADULT
2

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
6	6,587	718	12	41	1,123

Night video fish counting took place between 2000 and 0400 hours PST.

TABLE 180

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

NIGHT VIDEO FISH COUNTS @ LOWER GRANITE
November 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
1			3	1	0	0		85	7		5	-1
2			2	1	1	0		93	4		2	0
3			1	0	1	0		80	1		2	0
4			0	0	1	1		63	6		2	0
5			0	0	1	0		93	5		2	0
6			0	0	0	0		71	7		0	0
7			0	0	0	0		62	7		0	0
8			0	0	0	0		68	8		0	0
9			0	0	0	0		86	7		0	0
10			1	0	0	0		90	10		0	0
11			0	0	0	1		132	9		0	0
12			3	1	0	0		94	10		0	0
13			2	3	0	0		125	9		1	0
14			0	1	0	0		105	10		0	0
15			0	0	0	0		123	5		0	0
16			0	0	0	0		157	13		1	0
17			0	1	1	0		115	10		0	0
18			0	2	0	0		138	9		0	0
19			0	0	0	0		92	7		1	0
20			0	0	1	0		99	11		0	0
21			0	0	1	0		69	9		0	0
22			0	0	0	0		54	7		0	0
23			0	0	0	0		63	4		0	0
24			0	0	0	0		41	1		0	0
25			0	0	0	0		30	5		0	0
26			0	0	0	0		64	5		0	0
27			0	0	0	0		58	11		0	0
28			0	0	0	0		29	2		0	0
29			0	0	0	0		37	3		0	0
30			0	0	0	0		20	5		0	0
TOTAL			12	10	7	2		2,436	207		16	(1)
AVG.			0	0	0	0		80	7		0	0

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	3,020	3
SUMMER	727	15
FALL	73	61

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
9	2	6	9,023	925	12	57	1,122

Night video fish counting took place between 1600 and 0600 hours PST.

TABLE 181

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

NIGHT VIDEO FISH COUNTS @ LOWER GRANITE
December 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
1					0			14	2			
2					0			20	4			
3					0			17	1			
4					0			10	1			
5					0			5	1			
6					0			7	0			
7					0			7	1			
8					0			8	3			
9					0			6	2			
10					1			13	1			
11					0			5	1			
12					0			5	1			
13					0			1	0			
14					0			1	1			
15					0			1	0			
TOTAL					1			120	19			
AVG.					0			8	1			

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	3,020	3
SUMMER	727	15
FALL	73	61
TOTAL	3,820	79

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	MINI-JCK	LAMPREY
10	2	6	9,143	944	12	57	1,122

Night video fish counting took place between 1600 and 0600 hours PST.

YEARLY TOTALS OF SALMONIDS COUNTED OVER LOWER GRANITE DAM 1975 - 1997

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	0		80,204
1991	13,618	100,381	8		114,007
1992	26,193	121,459	15		147,667
1993	30,446	66,699	12		97,157
1994	5,077	47,550	5		52,632
1995	3,702	80,853	3		84,558
1996	11,129	86,072	3		97,204
1997	46,727	85,917	11	92	132,747
Total	593,364	1,675,706	2,203	2,664	2,273,937
10-Year Average	21,768	86,541	8		108,326

*Jacks included

TABLE 183

MONTHLY COUNT OF CHINOOK SALMON
LOWER GRANITE: 1975 -1997

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
1993				638	15,627	9,728	3,095	281	736	300	41		30,446
1994				99	2,283	1,180	436	73	422	539	45		5,077
1995				22	870	936	438	113	757	539	27		3,702
1996				38	3,415	4,260	1,557	210	1,133	471	45		11,129
1997				222	22,323	18,376	3,690	274	1,159	631	52		46,727
Total			1	44,003	295,614	148,271	66,624	6,771	18,689	11,897	1,468	26	593,364
10-Year Average				1,558	10,552	6,388	1,987	163	646	421	51	4	21,768

*Jacks included

TABLE 184

MONTHLY COUNT OF STEELHEAD
LOWER GRANITE DAM: 1975 - 1997

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
1993			3,232	8,118	364	191	2,621	5,298	10,374	32,618	3,702	181	66,699
1994			1,644	3,007	132	97	888	1,693	7,089	25,913	6,772	315	47,550
1995			3,176	1,166	193	33	1,216	3,540	27,585	37,260	5,176	1,508	80,853
1996			1,720	1,017	71	52	1,068	4,218	38,109	34,267	4,607	943	86,072
1997			2,043	1,408	183	65	1,423	5,975	22,424	42,544	9,305	547	85,917
Total	539	790	50,148	68,305	10,684	1,670	26,868	80,838	538,381	759,692	125,508	12,283	1,675,706
10-Yr Average			2,317	3,372	265	86	1,219	2,956	26,183	41,264	8,065	816	86,541

TABLE 185

WILD STEELHEAD COUNTED AT LOWER GRANITE DAM 1997

LOWER GRANITE DAM	
*March	Wild Steelhead
1	9
2	7
3	12
4	6
5	3
6	2
7	4
8	3
9	13
10	5
11	4
12	4
13	5
14	3
15	3
16	3
17	5
18	3
19	2
20	2
21	4
22	1
23	1
24	6
25	15
26	7
27	8
28	7
29	8
30	6
31	9
TOTAL	170
AVE	5
TOTAL TO DATE	WILD STEELHEAD 170

*March counts made by videotaping.

LOWER GRANITE DAM	
April	Wild Steelhead
1	34
2	28
3	13
4	18
5	32
6	18
7	20
8	22
9	20
10	13
11	28
12	16
13	11
14	14
15	11
16	12
17	26
18	4
19	14
20	7
21	2
22	4
23	4
24	1
25	2
26	6
27	10
28	2
29	4
30	10
TOTAL	406
AVE	14
TOTAL TO DATE	WILD STEELHEAD 576

LOWER GRANITE DAM	
May	Wild Steelhead
1	5
2	5
3	7
4	7
5	10
6	7
7	11
8	6
9	6
10	1
11	5
12	4
13	5
14	0
15	1
16	0
17	0
18	0
19	1
20	0
21	0
22	0
23	0
24	0
25	1
26	0
27	0
28	0
29	0
30	0
31	0
TOTAL	82
AVE	3
TOTAL TO DATE	WILD STEELHEAD 658

TABLE 186

WILD STEELHEAD COUNTED AT LOWER GRANITE DAM 1997

LOWER GRANITE DAM	
June	Wild Steelhead
1	1
2	0
3	0
4	1
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0
29	0
30	0

TOTAL	2
AVE	0

TOTAL TO DATE	WILD STEELHEAD 660

LOWER GRANITE DAM	
July	Wild Steelhead
1	1
2	0
3	0
4	0
5	1
6	0
7	1
8	0
9	1
10	0
11	2
12	4
13	1
14	5
15	0
16	7
17	6
18	4
19	6
20	7
21	10
22	5
23	11
24	8
25	11
26	4
27	5
28	10
29	12
30	8
31	13

TOTAL	143
AVE	5

TOTAL TO DATE	WILD STEELHEAD 803

LOWER GRANITE DAM	
August	Wild Steelhead
1	13
2	16
3	25
4	12
5	6
6	30
7	20
8	20
9	18
10	42
11	30
12	46
13	48
14	56
15	55
16	34
17	40
18	48
19	25
20	20
21	26
22	31
23	37
24	24
25	56
26	30
27	30
28	20
29	32
30	25
31	26

TOTAL	941
AVE	30

TOTAL TO DATE	WILD STEELHEAD 1,744

TABLE 187

WILD STEELHEAD COUNTED AT LOWER GRANITE DAM 1997

LOWER GRANITE DAM	
September	Wild Steelhead
1	25
2	18
3	10
4	12
5	12
6	24
7	34
8	30
9	19
10	24
11	71
12	66
13	52
14	66
15	86
16	89
17	74
18	55
19	66
20	61
21	94
22	119
23	125
24	110
25	108
26	185
27	223
28	196
29	154
30	292

TOTAL	2,500
AVE	83

TOTAL	WILD STEELHEAD
TO DATE	4,244

LOWER GRANITE DAM	
October	Wild Steelhead
1	178
2	223
3	250
4	234
5	274
6	140
7	149
8	108
9	175
10	130
11	166
12	150
13	158
14	116
15	127
16	100
17	148
18	103
19	94
20	131
21	73
22	53
23	109
24	89
25	85
26	79
27	60
28	74
29	35
30	32
31	46

TOTAL	3,889
AVE	125

TOTAL	WILD STEELHEAD
TO DATE	8,133

LOWER GRANITE DAM	
November	Wild Steelhead
1	24
2	60
3	28
4	29
5	22
6	14
7	23
8	27
9	14
10	26
11	47
12	39
13	39
14	42
15	26
16	28
17	35
18	44
19	18
20	37
21	57
22	18
23	27
24	21
25	9
26	13
27	13
28	21
29	13
30	11

TOTAL	825
AVE	28

TOTAL	WILD STEELHEAD
TO DATE	8,958

TABLE 188

WILD STEELHEAD COUNTED AT LOWER GRANITE DAM 1997

LOWER GRANITE DAM	
December	Wild Steelhead
1	3
2	3
3	11
4	3
5	2
6	0
7	1
8	1
9	1
10	2
11	2
12	1
13	1
14	1
15	1
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
31	

TOTAL	33
AVE	2

TOTAL	WILD STEELHEAD
TO DATE	8,991

MID - COLUMBIA RIVER TABLES

TABLE 189

MONTHLY TOTALS OF SALMONIDS AND SHAD COUNTED OVER PRIEST RAPIDS DAM
1997

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*				32	5,345	3,564	10,253	3,686	9,244	835	77		33,036
STEELHEAD				5	17	39	574	2,822	4,176	1,224	91		8,948
SOCKEYE					1	1,358	41,751	2,293	9				45,412
COHO*									15	11			26
PINK													
MINI-JACK**													
TOTAL				37	5,363	4,961	52,578	8,801	13,444	2,070	168		87,422
SHAD					3	352	9,665	294					10,314

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

TABLE 190

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

PRIEST RAPIDS PROJECT

APRIL 1997

	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 16 APRIL									217.7	68.7		
2										170.8	28.4		
3										177.1	37.8		
4										187.4	37.4		
5										153.7	9.7		
6										154.7	0.0		
7										151.1	0.0		
8										164.4	0.0		
9										158.4	0.0		
10										157.9	0.0		
11										158.3	0.0		
12										132.8	0.0		
13										120.2	0.0		
14										148.2	7.0		
15										164.4	4.1	3.9	44.0
16	0			0				0		147.1	0.0	3.9	44.0
17	0			0				0		132.6	0.0	4.1	44.0
18	0			0				0		125.4	0.0	4.7	44.0
19	4			0				0		144.4	0.0	5.3	44.0
20	0			0				0		116.5	0.0	5.0	44.0
21	1			0				2		176.7	23.7	5.7	45.0
22	0			0				0		231.6	85.7	5.9	46.0
23	0			0				0		196.8	58.5	5.7	46.0
24	0			0				1		222.5	113.3	4.1	46.0
25	2			0				0		212.7	107.4	4.5	46.0
26	2			0				1		236.6	118.8	4.0	46.0
27	4			0				0		241.9	120.1	4.5	46.0
28	4			0				1		249.5	129.6	5.1	46.0
29	6			0				0		256.7	133.2	4.9	46.0
30	9			0				0		285.8	159.6	5.2	46.0
TOTAL	32			0				5					
AVG.	2									179.8	41.4	4.8	45.3

TABLE 191

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

PRIEST RAPIDS PROJECT

MAY 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD
1	11			0			0	0	0
2	18			0			0	0	0
3	34			0			0	0	0
4	34			0			0	0	0
5	24			0			0	1	0
6	28			0			0	0	0
7	47			0			0	2	0
8	27			0			0	0	0
9	78			0			0	0	0
10	243			0			0	0	0
11	247			0			0	0	0
12	145			1			0	0	0
13	85			0			0	-1	0
14	312			0			0	0	0
15	280			0			0	1	0
16	586			0			0	2	0
17	243			0			0	0	0
18	344			0			0	0	0
19	63			0			0	0	0
20	38			0			0	1	0
21	39			0			0	0	0
22	52			0			0	0	0
23	72			0			0	0	0
24	710			0			0	0	0
25	451			0			0	0	0
26	415			0			0	10	0
27	115			0			0	0	1
28	109			3			0	0	1
29	48			0			1	0	1
30	89			0			0	1	0
31	354			0			0	0	0
TOTAL	5,341			4			1	17	3
AVG.	172								

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	269.2	152.3	4.8	46.0
2	272.2	155.4	4.3	47.0
3	255.1	131.9	4.4	47.0
4	237.2	119.8	4.0	47.0
5	237.4	124.5	3.1	46.0
6	230.8	119.0	4.0	47.0
7	239.4	127.9	4.0	47.0
8	230.7	123.6	3.6	49.0
9	261.3	140.0	3.7	48.0
10	224.2	113.4	4.6	49.0
11	240.5	121.9	5.2	49.0
12	253.4	132.8	5.0	50.0
13	265.5	138.7	5.0	51.0
14	268.3	141.4	4.8	51.0
15	268.9	149.0	5.4	51.0
16	278.1	158.9	3.9	50.0
17	292.5	172.6	3.0	51.0
18	311.2	184.9	3.5	50.0
19	299.0	177.9	3.4	51.0
20	311.5	190.1	3.5	51.0
21	300.7	182.2	3.5	51.0
22	313.8	195.5	2.0	52.0
23	306.9	192.6	3.2	51.0
24	300.6	183.3	3.9	52.0
25	310.0	189.2	4.0	52.0
26	295.3	178.4	4.2	52.0
27	313.0	197.4	4.2	52.0
28	306.0	189.0	4.7	53.0
29	317.4	194.9	5.1	54.0
30	315.2	196.6	4.4	54.0
31	325.0	220.1	4.5	55.0
AVG.	279.0	161.1	4.1	50.2

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	5,373	4

SOCKEYE	STEELHEAD	SHAD
1	22	3

TABLE 192

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

PRIEST RAPIDS PROJECT

JUNE 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD
1	103			1			0	0	0
2	33			0			0	0	0
3	38			1			0	0	1
4	64			0			0	0	0
5	56			0			0	1	1
6	116			0			0	0	0
7	270			0			0	2	0
8	405			1			0	1	0
9	115			0			0	0	1
10	73			0			2	1	0
11	54			0			0	0	0
12	43			1			0	0	2
13	37			0			0	2	0
14		47		0			0	1	0
15		106		0			1	0	2
16		57		0			0	5	0
17		62		2			0	0	5
18		56		0			0	0	5
19		19		0			1	0	1
20		20		1			2	0	12
21		45		1			7	0	2
22		84		2			15	0	19
23		99		0			18	0	15
24		93		5			32	4	13
25		119		0			39	4	23
26		122		2			66	1	23
27		152		4			102	6	29
28		171		1			186	3	26
29		671		5			407	3	72
30		204		3			480	5	100
TOTAL	1,407	2,127		30			1,358	39	352
AVG.	108	125		1			45	1	12

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	328.0	211.3	4.5	54.0
2	332.6	215.6	4.4	54.0
3	334.3	203.5	4.3	53.0
4	325.6	201.6	4.1	54.0
5	338.3	220.9	3.8	54.0
6	341.2	228.5	4.3	54.0
7	335.3	226.2	4.4	54.0
8	328.4	214.4	3.9	55.0
9	328.3	217.9	4.0	55.0
10	350.2	234.3	4.0	54.0
11	388.8	265.2	4.2	54.0
12	414.9	290.8	4.0	55.0
13	369.7	259.8	4.0	54.0
14	367.8	255.0	4.0	55.0
15	369.8	243.2	4.0	56.0
16	365.9	234.8	3.9	56.0
17	356.3	228.0	4.1	57.0
18	360.3	245.0	4.6	56.0
19	338.8	221.2	4.5	57.0
20	339.1	218.2	4.5	57.0
21	338.0	214.6	4.3	57.0
22	343.9	217.9	4.4	57.0
23	341.0	221.5	4.3	57.0
24	304.9	186.7	4.3	57.0
25	281.6	152.8	4.2	58.0
26	286.7	150.1	4.3	56.0
27	282.4	146.4	6.3	59.0
28	270.1	138.9	5.8	59.0
29	192.2	57.4	6.0	59.0
30	184.2	40.3	7.1	59.0
AVG.	328.0	205.4	4.5	55.9

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	6,780	8
SUMMER	2,127	26
TOTAL	8,907	34

SOCKEYE	STEELHEAD	SHAD
1,359	61	355

TABLE 193

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

PRIEST RAPIDS PROJECT
JULY 1997

	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		364		6			914	5	177	185.1	28.5	6.1	59.0
2		234		6			1335	6	154	188.5	37.4	4.4	58.0
3		648		7			1773	15	432	206.9	56.7	7.9	60.0
4		388		4			1852	3	353	205.5	57.8	6.0	61.0
5		546		5			2148	13	650	204.1	54.7	6.5	61.0
6		388		5			1829	8	583	202.2	44.9	6.8	62.0
7		499		13			2562	12	527	182.7	27.8	6.8	62.0
8		389		2			2520	11	707	204.1	60.6	6.2	62.0
9		425		8			1826	8	859	205.5	66.5	6.6	62.0
10		376		11			1864	3	474	216.9	76.1	6.7	62.0
11		306		27			1912	7	438	212.2	66.7	6.7	61.0
12		513		12			2399	10	334	203.8	60.7	6.1	61.0
13		402		12			2038	4	418	204.8	59.9	6.2	61.0
14		306		11			1884	8	415	217.8	84.9	7.5	62.0
15		281		9			1449	7	400	248.2	121.4	6.5	62.0
16		390		12			1578	13	315	242.5	109.7	6.5	62.0
17		435		13			1586	12	380	230.4	94.9	6.6	62.0
18		286		10			1213	20	230	245.0	109.6	7.5	62.0
19		277		11			1128	16	225	231.8	102.0	7.0	62.0
20		288		14			1241	18	261	202.5	63.5	7.0	63.0
21		72		14			821	26	165	198.8	57.4	7.2	63.0
22		462		21			853	28	227	208.3	68.2	8.2	63.0
23		210		27			679	18	147	210.5	77.5	10.5	63.0
24		177		11			638	52	211	211.1	79.5	8.5	63.0
25		177		21			534	20	94	210.0	69.9	8.9	64.0
26		181		30			684	27	133	178.7	44.9	9.0	64.0
27		150		10			529	32	90	174.9	44.2	8.8	64.0
28		188		14			651	18	89	163.8	42.8	9.0	64.0
29		89		6			387	40	56	153.5	39.4	9.0	65.0
30		328		24			597	71	78	139.4	35.4	11.2	64.0
31		82		20			327	43	43	159.3	48.2	8.2	65.0
TOTAL		9,857		396			41,751	574	9,665				
AVG.		318		13			1,347	19	312	201.6	64.2	7.4	62.2

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	6,780	8
SUMMER	11,984	422
TOTAL	18,764	430

SOCKEYE	STEELHEAD	SHAD
43,110	635	10,020

TABLE 194

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

PRIEST RAPIDS PROJECT
AUGUST 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD
1		76		4			313	40	21
2		96		13			420	69	26
3		139		7			245	82	31
4		78		6			222	75	30
5		82		5			144	47	23
6		66		7			142	43	24
7		120		5			197	94	24
8		89		8			96	83	29
9		51		9			78	104	8
10		54		2			80	75	22
11		35		3			41	66	13
12		165		8			72	98	13
13		72		10			34	86	8
14			94	13			44	113	6
15			61	13			36	140	1
16			51	7			20	122	0
17			54	12			20	108	4
18			70	6			19	126	2
19			52	15			13	119	3
20			67	12			9	131	1
21			41	14			15	60	2
22			60	7			6	87	0
23			96	16			7	102	1
24			83	8			2	90	0
25			48	12			6	67	0
26			147	12			2	102	0
27			473	17			2	125	0
28			216	18			2	66	0
29			131	20			1	91	1
30			222	11			4	125	0
31			274	23			1	86	1
TOTAL		1,123	2,240	323			2,293	2,822	294
AVG.		86	124	10			74	91	9

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	131.1	33.6	7.6	65.0
2	113.3	28.3	10.8	66.0
3	127.4	31.9	10.9	65.0
4	168.4	44.6	8.9	65.0
5	172.0	44.2	9.7	66.0
6	156.1	39.4	10.0	66.0
7	159.7	40.0	9.2	67.0
8	165.8	42.2	8.6	66.0
9	156.4	40.4	6.7	66.0
10	128.1	31.4	8.4	66.0
11	148.5	38.3	11.3	66.0
12	156.8	47.3	10.4	67.0
13	161.9	48.7	8.9	67.0
14	159.3	48.0	8.4	67.0
15	140.8	42.4	8.4	67.0
16	131.3	39.6	8.8	67.0
17	142.0	43.6	9.8	67.0
18	155.2	48.8	8.8	67.0
19	163.6	58.6	10.6	67.0
20	184.6	65.3	10.0	67.0
21	187.0	66.1	10.0	67.0
22	169.6	58.7	10.2	67.0
23	153.6	54.5	8.8	67.0
24	128.0	44.7	8.7	67.0
25	124.3	43.7	10.2	67.0
26	141.9	20.4	10.6	67.0
27	141.5	8.3	10.3	67.0
28	157.7	7.8	9.8	67.0
29	169.6	11.4	10.0	67.0
30	163.0	9.1	10.6	67.0
31	151.3	0.0	11.0	67.0
AVG.	151.9	38.1	9.6	66.6

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	6,780	8
SUMMER	13,107	509
FALL	2,240	236
TOTAL	22,127	753

SOCKEYE	STEELHEAD	SHAD
45,403	3,457	10,314

TABLE 195

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

PRIEST RAPIDS PROJECT
SEPTEMBER 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD
1			231	12	0		4	149	
2			589	25	0		0	125	
3			414	26	0		0	122	
4			403	32	0		0	132	
5			601	12	0		1	102	
6			1,282	17	0		0	140	
7			325	22	0		1	121	
8			1,812	66	0		1	190	
9			276	18	0		0	178	
10			297	25	0		0	176	
11			226	35	0		0	135	
12			98	12	0		0	124	
13			54	21	0		1	181	
14			35	16	0		0	122	
15			61	32	0		0	116	
16			205	27	0		0	168	
17			56	11	0		0	104	
18			55	19	2		1	99	
19			52	21	0		0	90	
20			97	25	0		0	113	
21			263	37	0		0	210	
22			187	40	1		0	119	
23			84	32	6		0	92	
24			232	59	2		0	171	
25			183	39	1		0	176	
26			71	15	0		0	164	
27			45	19	0		0	170	
28			22	21	2		0	118	
29			115	31	1		0	161	
30			61	45	0		0	108	
TOTAL			8,432	812	15		9	4,176	
AVG.			281	27				139	

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	111.9	0.0	11.3	67.0
2	134.2	0.0	10.7	67.0
3	106.4	0.0	11.0	67.0
4	108.6	0.0	8.7	66.0
5	116.6	0.0	12.4	67.0
6	108.4	0.0	10.0	67.0
7	70.9	0.0	11.1	68.0
8	110.0	1.3	11.4	67.0
9	102.7	2.7	14.3	67.0
10	115.1	0.0	13.8	67.0
11	103.0	0.2	13.9	67.0
12	117.7	2.3	11.6	66.0
13	91.0	0.0	11.1	65.0
14	70.8	0.0	10.1	66.0
15	118.1	0.0	9.8	67.0
16	96.9	0.0	11.6	65.0
17	104.4	0.0	10.8	64.0
18	101.7	0.0	12.6	64.0
19	105.5	0.0	9.8	65.0
20	129.3	0.0	10.0	64.0
21	119.1	0.0	10.1	65.0
22	126.5	0.0	10.6	65.0
23	134.3	0.0	10.3	65.0
24	142.2	0.0	10.0	65.0
25	143.1	0.0	10.9	65.0
26	128.3	0.0	10.0	65.0
27	112.4	0.0	11.0	64.0
28	102.5	0.0	11.0	64.0
29	128.8	0.0	10.9	64.0
30	129.9	0.0	10.9	64.0
AVG.	113.0	0.2	11.1	65.6

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	6,780	8
SUMMER	13,107	509
FALL	10,672	1,048
TOTAL	30,559	1,565

COHO ADULT
15

SOCKEYE	STEELHEAD	SHAD
45,412	7,633	10,314

TABLE 196

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

PRIEST RAPIDS PROJECT
OCTOBER 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD
1			42	25	0	0		120	
2			24	28	0	0		101	
3			34	18	0	0		107	
4			31	24	0	0		127	
5			44	30	0	0		67	
6			41	22	0	0		87	
7			9	15	1	0		38	
8			11	5	1	0		37	
9			8	15	0	0		44	
10			6	11	1	0		63	
11			12	6	0	0		35	
12			14	13	2	0		56	
13			(1)	5	0	0		10	
14			6	1	0	1		29	
15			5	7	1	0		38	
16			29	16	2	0		42	
17			14	13	0	0		42	
18			34	19	0	0		28	
19			14	4	0	0		14	
20			5	6	0	0		18	
21			11	14	0	0		16	
22			14	14	0	0		19	
23			3	6	1	0		21	
24			5	6	0	0		7	
25			4	4	0	0		11	
26			4	8	0	0		7	
27			6	8	1	0		9	
28			7	2	0	0		14	
29			8	7	0	0		6	
30			12	5	0	0		7	
31			15	7	0	0		4	
TOTALS			471	364	10	1		1,224	
AVG.			15	12				41	

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	109.5	0.0	8.8	64.0
2	113.4	0.0	11.4	65.0
3	97.3	0.0	14.3	64.0
4	116.5	0.0	14.0	64.0
5	116.1	2.6	13.3	64.0
6	124.6	0.0	13.5	64.0
7	138.0	0.0	13.1	62.0
8	142.3	0.0	13.0	61.0
9	142.9	0.5	13.0	60.0
10	152.7	8.5	14.1	61.0
11	167.8	45.0	14.1	61.0
12	134.0	8.6	10.9	59.0
13	159.9	12.2	11.5	59.0
14	162.9	1.5	13.4	61.0
15	163.3	0.0	13.6	61.0
16	138.3	0.0	13.6	61.0
17	128.7	0.0	13.0	60.0
18	102.9	0.0	11.8	60.0
19	98.8	0.0	14.2	59.0
20	112.4	0.0	14.2	59.0
21	112.4	0.0	14.5	59.0
22	119.9	0.0	14.0	59.0
23	115.0	0.0	12.4	57.0
24	106.2	0.0	12.3	59.0
25	102.4	0.0	14.1	57.0
26	98.9	0.0	14.0	58.0
27	95.9	0.0	9.0	58.0
28	105.5	0.0	11.3	57.0
29	110.8	0.0	13.0	56.0
30	105.3	0.0	5.7	57.0
31	84.1	0.0	12.5	58.0
AVG.	121.9	2.5	12.6	60.1

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	6,780	8
SUMMER	13,107	509
FALL	11,143	1,412
TOTAL	31,030	1,929

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD
25	1	45,412	8,857	10,314

TABLE 197

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

PRIEST RAPIDS PROJECT
NOVEMBER 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD
1			5	1				13	
2			5	4				5	
3			5	2				1	
4			22	4				13	
5			5	1				6	
6			2	1				6	
7			1	0				9	
8			3	1				4	
9			3	1				5	
10			0	4				4	
11			2	0				8	
12			4	0				3	
13			0	0				6	
14			1	0				3	
15			0	0				5	
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
TOTALS			58	19				91	
AVG.			4	1				6	

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
1	83.3	0.0	12.0	56.0
2	90.5	0.0	12.5	57.0
3	110.4	0.0	13.5	55.0
4	118.9	0.0	12.7	55.0
5	107.1	0.0	11.5	56.0
6	112.9	0.0	12.0	54.0
7	113.9	0.0	11.5	54.0
8	109.8	0.0	11.0	55.0
9	100.7	0.0	13.7	56.0
10	106.7	0.0	13.5	54.0
11	109.6	0.0	13.5	54.0
12	112.0	0.0	13.0	54.0
13	112.7	0.0	13.3	53.0
14	111.5	0.0	13.4	52.0
15	113.2	0.0	11.2	52.0
16	113.9	0.0		
17	114.4	0.0		
18	116.5	0.0		
19	109.6	0.0		
20	107.9	0.0		
21	108.9	0.0		
22	98.2	0.0		
23	85.7	0.0		
24	118.8	0.0		
25	136.6	0.0		
26	138.8	0.0		
27	87.5	0.0		
28	96.8	0.0		
29	106.7	0.0		
30	97.3	0.0		
AVG.	108.4	0.0	12.6	54.5

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	6,780	8
SUMMER	13,107	509
FALL	11,201	1,431
TOTAL	31,088	1,948

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD
25	1	45,412	8,948	10,314

TABLE 198

YEARLY TOTALS OF SALMONIDS COUNTED OVER PRIEST RAPIDS DAM
1982 - 1997

YEAR	CHINOOK*	STEELHEAD	SOCKEYE	COHO*	TOTALS
1982	32,051	11,160	40,461	1,810	85,482
1983	31,008	31,809	90,008	502	153,327
1984	41,425	26,213	114,761	173	182,572
1985	62,164	34,589	118,542	219	215,514
1986	68,703	22,401	43,084	83	134,271
1987	73,214	14,011	76,578	108	163,911
1988	53,963	10,208	51,135	68	115,374
1989	49,246	10,730	45,301	32	105,309
1990	36,257	7,830	46,331	31	90,449
1991	31,482	13,939	71,245	22	116,688
1992	37,752	13,733	80,857	1	132,343
1993	58,528	5,468	86,626	1	150,623
1994	32,890	6,706	12,385		51,981
1995	30,542	4,962	9,216	11	44,731
1996	26,836	8,355	29,457	6	64,654
1997	33,036	8,948	45,412	26	87,422
Total	699,097	231,062	961,399	3,093	1,894,651
10-Year Average	39,053	9,088	47,797	22	95,957

*Jacks included

TABLE 199

MONTHLY COUNT OF STEELHEAD
PRIEST RAPIDS DAM: 1960-1997

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
* 1993				31	41	130	992	1,770	2,016	472	41		5,468
1994				7	13	78	902	1,286	3,087	1,269	64		6,706
* 1995				4	19	32	540	1,316	2,062	363	21		4,962
* 1996				9	14	36	552	3,217	3,872	627	49		8,355
1997				5	17	39	574	2,822	4,176	1,224	91		8,948
TOTAL	40	56	288	3,888	8,594	4,928	35,682	116,849	178,131	51,507	3,216	63	403,242
10-Year Average				26	54	106	1,104	2,648	3,936	930	107		9,088

*Yearly totals for 1993, 1995, and 1996 were updated Updated monthly totals, however, were unavailable.

TABLE 200

MONTHLY TOTALS OF SALMONIDS COUNTED OVER ROCK ISLAND DAM
1997

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*				6	3,961	3,407	8,759	2,476	3,078	961	99		22,747
STEELHEAD				19	22	7	300	2,343	3,461	1,466	108		7,726
SOCKEYE				1		135	37005	4,232	120	11			41,504
COHO						5							5
PINK													
MINI-JACK**						1	155	104	166	82	30		538
TOTAL				26	3,983	3,555	46,219	9,155	6,825	2,520	237		72,520

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

TABLE 201

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROCK ISLAND PROJECT

APRIL 1997

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
1	BEGIN COUNTING 15 APR										194.1	1.8		
2											163.2	0.2		
3											164.1	0.0		
4											155.6	0.0		
5											154.9	0.0		
6											142.5	0.0		
7											152.9	0.0		
8											153.9	0.0		
9											146.5	0.0		
10											136.9	0.0		
11											135.5	0.0		
12											126.1	0.0		
13											116.5	0.0		
14											153.0	0.0		
15	0						0	1			140.7	0.0		
16	0						0	1			124.7	4.0	3.6	42.6
17	0						0	1			131.7	23.9	4.0	42.8
18	0						0	1			138.1	23.9	4.8	43.2
19	0						0	1			131.1	23.9	4.0	43.7
20	0						0	1			124.1	24.0	3.6	43.5
21	0						0	2			180.0	23.8	3.6	43.5
22	1						0	3			207.6	32.5	4.0	43.9
23	1						0	1			177.9	31.4	4.8	44.1
24	0						0	2			203.6	34.9	5.0	44.4
25	0						0	1			219.8	23.9	4.0	44.8
26	1						1	2			216.1	28.5	4.0	44.8
27	0						0	1			229.3	33.1	3.0	45.3
28	0						0	1			231.5	29.4	3.0	45.3
29	1						0	0			245.9	39.7	3.0	45.5
30	2						0	0			254.7	44.5	2.0	45.9
TOTAL	6						1	19						
AVG.								1			168.4	14.1	3.8	44.2

TABLE 201

TABLE 202

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

ROCK ISLAND PROJECT
MAY 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK
1	2			0				0		
2	2			0				0		
3	4			0				2		
4	0			0				1		
5	2			0				0		
6	6			0				3		
7	16			0				1		
8	9			0				3		
9	19			0				1		
10	24			0				0		
11	45			0				1		
12	67			6				1		
13	100			0				2		
14	135			3				1		
15	66			0				0		
16	66			0				0		
17	81			0				1		
18	196			0				1		
19	157			1				0		
20	238			0				1		
21	250			0				0		
22	171			0				0		
23	182			0				1		
24	189			0				0		
25	218			0				0		
26	407			6				0		
27	381			0				0		
28	431			0				0		
29	246			0				0		
30	127			0				1		
31	108			0				1		
TOTAL	3,945			16				22		
AVG.	127									

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG
1	249.1	43.1	2.4	45.7
2	245.1	39.6	2.8	45.7
3	232.5	30.2	3.0	46.0
4	217.4	20.9	3.2	46.2
5	217.0	21.0	3.8	46.0
6	215.1	27.4	3.5	46.0
7	226.6	36.4	3.5	47.0
8	216.6	31.2	3.2	47.1
9	229.8	38.1	3.0	47.5
10	224.1	35.8	3.0	47.8
11	230.8	43.5	3.2	48.2
12	236.1	43.9	3.0	48.6
13	245.1	46.4	3.0	48.9
14	242.2	46.5	2.4	49.1
15	250.0	57.0	2.0	49.2
16	255.4	61.7	1.8	49.3
17	265.6	74.8	1.6	49.6
18	276.2	91.6	1.2	49.8
19	275.7	84.0	1.6	49.8
20	271.0	78.5	1.4	50.2
21	288.4	100.7	1.4	50.2
22	268.6	82.3	2.0	51.4
23	276.4	70.8	2.0	51.4
24	282.2	78.3	2.4	51.6
25	274.6	70.6	3.2	52.2
26	271.8	66.7	3.2	52.2
27	281.4	78.0	3.8	52.2
28	275.2	71.9	3.4	52.7
29	287.5	84.6	3.2	53.2
30	285.9	93.3	3.2	53.2
31	294.1	87.1	3.0	53.2
AVG.	255.1	59.2	2.7	49.4

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	3,951	16

SOCKEYE	STEELHEAD
1	41

TABLE 203

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROCK ISLAND PROJECT

JUNE 1997

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
1	99			2	0		0	0		0	296.7	91.8	2.8	52.5
2	122			0	0		0	0		0	303.3	98.9	2.2	52.5
3	183			2	0		0	0		0	302.5	100.1	1.6	52.7
4	96			4	0		0	1		0	191.0	100.0	2.0	52.6
5	82			1	0		0	0		0	311.5	118.0	2.2	52.5
6	86			2	0		0	0		0	319.5	134.1	2.6	52.7
7	92			0	0		0	0		0	298.4	111.4	2.6	53.1
8	124			4	0		0	0		0	304.9	131.0	2.6	53.1
9	338			0	0		0	0		0	304.1	116.3	2.4	53.2
10	281			8	0		0	0		0	318.7	134.5	3.0	53.6
11	212			3	0		0	1		0	353.3	175.9	2.8	53.4
12	94			1	0		0	0		0	361.7	190.2	3.0	53.4
13	98			4	0		0	0		0	332.6	151.2	2.6	53.2
14	60			3	0		0	0		0	324.0	142.2	2.4	53.8
15	82			2	0		0	1		0	338.5	168.9	2.8	54.1
16	69			0	0		0	0		0	323.9	141.8	3.0	54.7
17	84			0	0		0	0		0	319.6	138.3	3.0	54.5
18		60		0	0		0	0		0	322.7	148.5	1.0	54.5
19		66		0	0		0	0		0	313.7	128.7	3.4	54.5
20		96		2	0		0	0		0	312.1	130.5	3.0	54.5
21		35		2	0		1	1		0	313.1	139.2	3.8	55.2
22		41		3	0		1	0		0	310.6	138.4	3.8	55.0
23		59		0	0		0	0		0	305.9	126.9	4.0	55.2
24		79		2	0		1	0		0	272.4	89.8	4.0	55.2
25		81		0	0		7	0		0	259.3	76.0	5.0	56.1
26		100		0	0		4	0		0	259.5	73.3	4.8	56.5
27		96		4	0		15	1		1	253.0	54.9	5.2	56.7
28		117		1	0		25	1		0	240.4	46.8	5.2	57.4
29		79		1	5		34	1		0	190.9	38.5	5.8	57.7
30		239		6	0		47	0		0	176.2	21.1	6.0	57.7
TOTAL	2,202	1,148		57	5		135	7		1				
AVG.	130	88		2			5				4.7	54.1	3.3	54.4

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	6,153	52
SUMMER	1,148	21
TOTALS	7,301	73

COHO ADULT	SOCKEYE	STEELHEAD	MINI-JCK
5	136	48	1

TABLE 203

TABLE 204

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

ROCK ISLAND PROJECT
JULY 1997

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
1		454		4			138	2		1	178.4	11.0	5.6	57.9
2		246		8			227	0		3	178.1	0.5	6.0	58.1
3		169		4			406	2		3	195.4	1.2	6.0	58.6
4		218		5			522	4		4	196.1	3.2	6.4	58.8
5		136		3			750	6		1	193.6	1.5	6.4	59.0
6		312		1			1102	7		0	181.4	0.2	6.4	59.0
7		346		5			1329	4		0	183.3	14.5	6.4	59.0
8		349		0			1171	2		3	188.0	21.0	6.8	59.5
9		262		2			1263	6		2	202.1	35.3	7.0	59.0
10		261		3			1198	5		7	207.9	41.5	7.0	59.0
11		350		2			1691	3		3	190.1	41.7	7.0	58.3
12		312		11			2137	2		8	199.2	41.9	7.2	58.6
13		347		14			1951	7		3	198.3	41.9	7.0	59.0
14		262		7			2008	6		21	210.2	41.5	7.0	59.0
15		315		17			1795	9		6	231.0	42.6	7.0	59.4
16		283		23			2035	2		5	223.9	46.7	7.0	59.5
17		390		14			2095	6		2	222.3	49.3	7.4	59.7
18		414		22			2070	6		4	224.8	43.1	17.0	60.3
19		332		6			1887	10		0	217.6	41.5	7.4	60.4
20		425		34			1837	12		10	184.7	41.7	7.4	60.4
21		331		16			1547	11		22	194.0	41.6	7.4	61.3
22		265		12			1087	17		3	201.4	41.6	7.0	61.2
23		287		22			1136	17		6	198.9	41.5	7.6	61.2
24		193		13			1110	21		4	196.5	35.6	8.2	61.2
25		232		16			698	16		6	192.4	31.1	8.0	61.5
26		190		15			653	14		8	162.7	31.2	9.0	61.2
27		168		20			661	19		9	161.1	31.2	9.0	61.2
28		180		22			790	18		4	160.7	31.0	9.6	61.7
29		169		7			538	20		2	142.8	31.4	10.0	62.2
30		87		8			622	28		2	138.5	31.5	10.2	61.7
31		131		7			551	18		3	149.5	33.2	9.0	61.7
TOTAL		8,416		343			37,005	300		155				
AVG.		271		11			1,194	10		5	190.5	30.4	7.8	60.0

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	6,153	52
SUMMER	9,564	364
TOTALS	15,717	416

COHO ADULT	SOCKEYE	STEELHEAD	MINI-JCK
5	37,141	348	156

TABLE 205

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

ROCK ISLAND PROJECT
AUGUST 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK
1		165		19			772	46		2
2		143		21			597	40		6
3		86		10			379	35		0
4		117		20			503	49		5
5		108		8			299	39		5
6		72		7			207	60		4
7		68		23			161	45		0
8		93		18			232	50		5
9		65		11			172	60		1
10		61		17			118	68		1
11		82		23			108	94		4
12		33		2			119	65		2
13		45		9			86	89		2
14		39		13			66	69		5
15		69		12			53	61		0
16		80		13			49	67		1
17		70		24			48	123		3
18			52	22			67	108		3
19			31	14			31	98		0
20			56	26			26	111		2
21			33	10			15	83		2
22			30	4			33	88		0
23			38	15			19	107		1
24			13	13			9	80		9
25			41	16			10	85		1
26			54	31			10	109		5
27			19	12			9	59		5
28			17	15			9	83		3
29			44	20			6	64		8
30			55	13			10	111		13
31			116	20			9	97		6
TOTAL		1,396	599	481			4,232	2,343		104
AVG.		82	43	16			137	76		3

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG
1	95.7	31.4	9.0	62.4
2	108.4	31.6	9.2	63.0
3	129.8	31.7	9.0	63.3
4	163.3	31.7	9.6	63.3
5	156.9	31.7	9.4	64.0
6	148.4	31.8	10.0	64.2
7	153.0	31.8	10.2	64.0
8	159.3	31.7	10.0	64.0
9	146.3	31.7	10.4	64.0
10	119.8	31.9	10.4	64.0
11	139.5	31.8	11.0	64.4
12	152.2	31.8	11.0	64.4
13	145.8	32.5	10.4	64.6
14	149.1	14.5	10.4	64.2
15	137.0	14.7	10.0	64.6
16	121.2	21.1	10.8	65.1
17	136.1	21.1	10.8	65.1
18	146.3	21.1	11.0	65.1
19	157.0	21.1	10.6	65.3
20	174.3	21.0	10.4	65.3
21	175.2	21.7	10.4	64.6
22	161.5	13.2	11.0	64.9
23	138.1	0.0	11.2	65.3
24	114.0	1.1	10.4	66.0
25	138.6	1.0	11.2	66.0
26	139.4	0.0	11.4	65.5
27	133.0	0.0	11.4	65.3
28	144.3	0.0	11.4	65.3
29	168.4	0.0	9.0	65.1
30	151.1	0.0	10.6	65.1
31	131.2	0.0	11.0	65.1
TOTAL	143.0	18.9	10.4	64.6

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	6,153	52
SUMMER	10,960	614
FALL	599	231
TOTALS	17,712	897

COHO ADULT	SOCKEYE	STEELHEAD	MINI-JCK
5	41,373	2,691	260

TABLE 206

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

ROCK ISLAND PROJECT
SEPTEMBER 1997

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
1			40	8			9	73		7	104.8	0.0	11.6	65.5
2			42	18			7	89		1	108.2	0.0	10.4	65.7
3			76	6			9	101		8	100.7	0.0	10.4	66.2
4			22	6			4	63		6	110.1	0.0	11.4	66.2
5			41	14			11	91		1	104.3	0.0	11.0	66.2
6			112	25			6	105		1	82.1	0.0	11.6	66.2
7			130	11			8	94		9	62.0	0.0	12.0	65.7
8			124	6			5	83		18	105.7	0.0	12.0	65.5
9			189	16			5	141		8	114.6	0.0	11.0	65.5
10			190	8			9	107		5	108.2	0.0	13.0	65.7
11			229	5			0	129		19	111.6	0.0	11.4	66.5
12			200	2			1	152		13	97.9	0.0	10.0	65.5
13			160	11			2	156		14	86.1	0.0	10.4	65.3
14			199	31			2	135		2	63.0	0.0	11.2	64.8
15			68	8			2	157		5	108.0	0.0	13.0	64.2
16			48	11			4	141		1	96.1	0.0	13.0	64.6
17			96	20			1	146		3	100.2	0.0	12.6	64.0
18			39	5			0	70		5	99.9	0.0	11.0	63.7
19			49	2			0	89		0	102.3	0.0	12.0	63.5
20			77	11			8	83		2	128.1	0.0	12.0	63.5
21			66	7			2	143		6	101.7	0.0	12.4	63.5
22			50	18			8	139		10	124.4	0.0	11.4	63.7
23			38	8			6	118		7	129.4	0.0	12.0	64.2
24			68	7			4	126		2	116.5	0.0	11.4	64.2
25			63	15			3	97		9	121.1	0.0	11.6	64.4
26			79	13			0	101		2	123.1	0.0	11.6	64.6
27			83	13			1	136		0	99.8	0.0	11.4	64.2
28			56	12			0	133		1	105.3	0.0	13.0	64.0
29			59	19			0	140		1	117.1	0.0	11.8	63.5
30			38	11			3	123		0	107.6	0.0	11.8	63.5
TOTAL			2,731	347			120	3,461		166				
AVG.			91	12			4	115		6	104.7	0.0	11.6	64.8

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	6,153	52
SUMMER	10,960	614
FALL	3,330	578
TOTALS	20,443	1,244

COHO ADULT	SOCKEYE	STEELHEAD	MINI-JCK
5	41,493	6,152	426

TABLE 207

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

ROCK ISLAND PROJECT
OCTOBER 1997

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
1			33	9			4	98		3	103.4	0.0	12.0	63.0
2			41	17			0	119		0	108.2	0.0	12.0	63.0
3			44	9			1	82		4	85.5	0.0	12.0	62.8
4			49	13			0	122		3	109.0	0.0	12.0	63.0
5			46	18			0	125		0	111.2	0.0	12.8	61.3
6			13	11			0	66		3	121.4	0.0	10.0	60.6
7			22	20			0	88		5	152.3	0.0	11.0	60.4
8			11	9			1	62		5	135.6	0.0	11.4	60.6
9			37	13			1	76		2	157.8	0.0	11.0	60.3
10			22	8			0	66		5	163.2	0.0	11.0	60.1
11			13	12			0	57		3	151.7	0.0	10.6	59.5
12			11	7			2	51		9	132.0	0.0	10.6	59.2
13			11	6			0	67		2	156.6	0.0	11.2	59.4
14			25	8			0	39		3	135.5	0.0	12.0	59.4
15			15	4			0	35		3	125.5	0.0	12.0	59.4
16			13	6			0	27		4	113.4	0.0	12.0	59.4
17			15	4			0	18		3	120.2	0.0	12.4	59.5
18			21	6			0	25		4	112.9	0.0	12.4	59.2
19			19	6			1	40		6	105.0	0.0	12.4	59.0
20			21	10			0	28		1	131.0	0.0	12.4	58.8
21			23	8			0	38		4	117.0	0.0	11.0	58.5
22			24	10			1	31		1	105.0	0.0	11.1	58.0
23			18	2			0	13		0	87.1	0.0	11.2	57.9
24			27	4			0	15		3	82.8	0.0	11.0	57.6
25			47	4			0	17		0	85.0	0.0	11.0	57.4
26			11	7			0	9		3	91.5	0.0	11.4	56.8
27			7	4			0	18		2	95.5	0.0	10.0	56.5
28			11	4			0	6		0	100.2	0.0	11.0	56.3
29			25	1			0	9		0	90.5	0.0	11.0	56.3
30			14	6			0	9		0	92.5	0.0	11.0	56.1
31			25	1			0	10		1	86.4	0.0	9.0	55.4
TOTAL			714	247			11	1,466		82				
AVG.			23	8				47		3				
											115.0	0.0	11.4	59.2

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	6,153	52
SUMMER	10,960	614
FALL	4,044	825
TOTALS	21,157	1,491

COHO ADULT	SOCKEYE	STEELHEAD	MINI-JCK
5	41,504	7,618	508

TABLE 207

TABLE 208

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

ROCK ISLAND PROJECT
NOVEMBER 1997

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
1			10	0				10		3	83.0	0.0	10.0	54.9
2			14	1				14		0	102.6	0.0	11.4	54.5
3			19	0				10		3	100.6	0.0	11.6	54.9
4			14	0				2		3	104.9	0.0	12.0	54.5
5			7	2				6		1	109.3	0.0	11.2	54.7
6			7	0				11		2	106.9	0.0	11.0	54.7
7			3	0				10		4	104.8	0.0	11.0	54.9
8			0	0				8		5	97.2	0.0	12.0	54.7
9			6	1				8		0	85.6	0.0	12.0	54.5
10			7	0				3		2	106.1	0.0	12.0	51.1
11			1	0				8		2	104.6	0.0	11.6	53.4
12			1	0				8		2	109.1	0.0	12.0	53.1
13			3	0				6		1	109.3	0.0	12.0	52.3
14			2	1				4		2	108.2	0.0	12.0	51.8
15											107.6	0.0		
16											101.55	0.0		
17											109.7	0.0		
18											105.62	0.0		
19											107.13	0.0		
20											104.12	0.0		
21											90.59	0.0		
22											98.22	0.0		
23											96.64	0.0		
24											132.02	0.0		
25											138.23	0.0		
26											132.99	0.0		
27											82.5	0.0		
28											93.32	0.0		
29											98.51	0.0		
30											89.57	0.0		
TOTAL			94	5				108		30	102.6	0.0	11.6	53.9
AVG.			7					8		3				

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	6,153	52
SUMMER	10,960	614
FALL	4,138	830
TOTALS	21,251	1,496

COHO ADULT	SOCKEYE	STEELHEAD	MINI-JCK
5	41,504	7,726	538

TABLE 209

MONTHLY COUNT OF STEELHEAD

ROCK ISLAND DAM: 1981 - 1997

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
1993				97	88	87	1,427	546	1,930	597	57		4,829
1994				29	16	50	631	1,151	2,181	1,437	125		5,620
1995				23	35	44	421	951	2,153	510	38		4,175
1996				17	34	27	303	2,224	3,701	920	79		7,305
1997				19	22	7	300	2,343	3,461	1,466	108		7,726
Total				1,294	1,738	2,182	20,629	60,633	93,470	34,354	3,927		218,227
10-Year Average				68	71	91	814	2,124	3,336	1,231	124		7,859

TABLE 209

TABLE 210

MONTHLY TOTALS OF SALMONIDS COUNTED OVER ROCKY REACH DAM
1997

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*					1,193	1,105	4,387	2,009	1,496	884	278		11,352
STEELHEAD				40	15	1	192	1,789	2,901	1,576	208		6,722
SOCKEYE						91	26,224	4,100	70				30,485
COHO													
PINK													
MINI-JACK**						3	94	104	251	232	41		725
TOTAL				40	1,208	1,200	30,897	8,002	4,718	2,692	527		49,284
SHAD													

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

TABLE 211

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROCKY REACH PROJECT

APRIL 1997

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 ECCH	TURBIDITY DEG
1	BEGIN COUNTING 15 APRIL										195.5	31.5		
2											164.2	6.4		
3											164.3	9.3		
4											153.9	6.5		
5											153.6	4.1		
6											144.0	0.0		
7											154.9	0.0		
8											154.9	0.0		
9											146.7	0.0		
10											135.3	0.0		
11											136.2	0.0		
12											124.2	0.0		
13											118.3	0.0		
14											150.9	0.0		
15								3			141.0	0.0		
16								11			122.8	0.0	4.0	42.5
17								3			128.3	12.3	4.0	42.8
18								3			138.0	8.0	5.0	52.9
19								3			126.1	20.1	6.0	44.6
20								1			119.9	15.2	6.0	44.6
21								2			177.2	19.1	6.0	44.6
22								2			201.5	39.4	4.5	44.6
23								4			172.2	28.5	5.0	44.6
24								4			194.3	33.1	5.0	44.6
25								0			217.2	46.1	5.0	44.6
26								1			212.2	43.0	5.0	45.3
27								2			221.6	57.6	5.0	46.1
28								1			230.3	60.9	4.0	46.5
29								0			241.6	65.8	2.5	47.3
30								0			251.0	67.9	2.5	47.5
TOTAL								40						
AVG.								3			166.4	19.2	4.6	45.5

TABLE 212

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

ROCKY REACH PROJECT
MAY 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK
1	2			0				1		
2	0			0				1		
3	1			0				1		
4	2			0				1		
5	1			0				2		
6	0			0				2		
7	1			0				1		
8	0			0				1		
9	3			0				2		
10	4			0				1		
11	3			0				0		
12	13			0				2		
13	12			0				0		
14	9			0				0		
15	23			0				0		
16	23			0				0		
17	12			0				0		
18	5			0				0		
19	33			0				0		
20	46			0				0		
21	33			0				0		
22	91			0				0		
23	61			0				0		
24	76			0				0		
25	46			0				0		
26	55			0				0		
27	85			0				0		
28	111			2				0		
29	222			0				0		
30	114			0				0		
31	104			0				0		
TOTAL	1,191			2				15		
AVG.	38									

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY ECCH	TURBIDITY DEG
1	247.7	70.8	2.5	47.3
2	246.3	64.0	2.5	46.0
3	229.6	52.0	3.5	46.0
4	221.0	50.8	3.5	46.0
5	217.3	44.3	3.5	46.0
6	216.8	39.2	3.5	46.0
7	221.7	50.0	4.0	46.0
8	214.9	41.2	4.0	46.0
9	225.8	62.6	4.0	46.0
10	219.7	55.3	4.0	46.0
11	223.4	66.2	4.0	46.0
12	225.9	59.0	4.0	46.0
13	236.2	64.2	4.0	48.3
14	231.8	60.6	4.0	48.3
15	240.1	70.8	2.5	48.0
16	239.0	87.6	2.5	48.0
17	253.7	103.7	1.5	50.8
18	264.8	122.6	1.5	50.8
19	261.3	108.6	1.5	50.5
20	260.1	103.6	1.5	50.0
21	280.3	123.2	1.5	50.0
22	271.5	122.0	1.5	50.0
23	270.7	129.1	1.5	50.0
24	277.2	137.9	1.5	50.0
25	269.9	134.1	1.5	50.5
26	268.9	131.7	2.0	50.5
27	275.7	133.6	4.0	51.0
28	272.5	134.7	4.0	51.0
29	283.1	128.2	4.0	51.9
30	275.8	126.3	4.0	51.9
31	287.8	144.9	3.5	51.9
AVG.	249.4	91.1	2.9	48.6

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	1,191	2

STEELHEAD
55

TABLE 213

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

ROCKY REACH PROJECT
JUNE 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK
1	65			1			0	0		0
2	25			0			0	0		0
3	61			0			0	0		0
4	58			0			0	0		0
5	32			0			0	0		0
6	19			0			0	0		0
7	32			0			0	0		0
8	20			0			0	0		0
9	29			0			0	0		0
10	104			0			0	0		0
11	47			0			0	0		0
12	42			0			0	0		0
13	16			2			0	0		0
14	27			1			0	0		0
15	12			1			0	0		0
16	22			1			0	0		0
17	24			2			0	0		0
18	14			0			0	0		0
19	16			0			0	0		0
20		10		0			0	0		0
21		78		0			1	0		0
22		49		1			0	0		0
23		10		0			1	0		0
24		23		2			1	0		0
25		43		3			1	0		0
26		23		0			8	0		0
27		43		1			7	0		0
28		49		1			13	0		2
29		60		0			23	0		1
30		36		0			36	1		0
TOTAL	665	424		16			91	1		3
AVG.	35	39		1			3			

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY ECCH	TURBIDITY DEG
1	288.5	127.5	3.5	52.0
2	291.6	129.9	2.0	46.0
3	296.8	137.4	2.0	46.0
4	280.9	127.6	2.0	51.9
5	302.7	144.4	2.0	51.0
6	309.5	158.0	2.0	53.0
7	288.9	147.0	2.0	53.0
8	296.5	173.8	2.0	49.0
9	293.6	145.5	2.5	53.0
10	317.0	166.8	2.5	53.0
11	354.3	214.3	2.0	53.0
12	358.2	216.9	2.0	53.0
13	332.0	192.4	1.5	53.0
14	324.0	178.2	1.5	53.0
15	340.7	200.6	1.5	53.0
16	319.9	175.5	1.5	50.0
17	316.2	178.0	1.5	50.0
18	316.5	179.2	3.0	50.0
19	304.4	171.8	4.0	55.4
20	310.8	178.3	5.5	55.4
21	311.0	170.3	5.5	55.4
22	311.0	176.8	5.5	55.4
23	308.3	166.4	6.0	55.5
24	272.7	138.9	6.0	55.5
25	262.2	130.9	6.0	55.5
26	260.6	118.1	7.0	55.6
27	255.5	101.6	7.0	55.6
28	238.9	92.2	7.0	55.6
29	184.9	48.5	7.0	55.6
30	173.3	14.7	7.0	57.3
AVG.	294.0	150.0	3.7	53.0

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	1,856	10
SUMMER	424	8
TOTALS	2,280	18

SOCKEYE	STEELHEAD
91	56

MINI-JCK
3

TABLE 214

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

ROCKY REACH PROJECT
JULY 1997

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 ECCH	TURBIDITY DEG
1		35		1			12	0		0	175.1	9.8	7.0	57.3
2		69		2			35	0		0	175.1	11.3	7.0	57.3
3		95		3			112	2		3	195.7	25.5	7.0	57.3
4		43		6			167	0		10	194.4	29.1	8.0	59.0
5		88		2			425	2		3	189.2	21.7	8.0	59.0
6		64		7			457	2		3	172.1	4.2	8.0	59.0
7		94		2			641	1		10	179.0	4.9	9.0	59.1
8		61		5			685	5		5	181.0	3.9	9.0	59.1
9		87		7			682	0		4	197.7	17.5	9.0	59.1
10		121		0			1088	5		0	201.1	25.7	9.0	59.1
11		123		4			1015	5		0	184.9	21.1	12.0	60.6
12		127		2			1100	6		0	196.9	22.2	9.0	57.2
13		181		3			1114	3		0	198.0	23.2	9.0	57.2
14		75		4			911	3		0	210.6	34.0	10.5	57.2
15		151		2			1253	2		0	233.3	60.0	10.5	57.2
16		260		4			1745	2		2	220.6	55.1	10.5	57.2
17		122		8			1612	4		6	224.3	56.9	10.5	59.2
18		202		17			1243	4		6	222.1	64.2	10.5	59.2
19		173		10			1546	9		3	217.0	55.0	10.5	59.1
20		344		20			1830	11		3	180.4	29.2	10.5	59.1
21		171		13			1292	11		6	190.2	26.6	10.5	59.1
22		170		9			1088	7		0	201.0	35.9	11.0	59.1
23		75		7			556	4		0	198.9	30.8	11.0	59.1
24		267		37			1150	8		5	197.0	30.1	11.5	59.1
25		101		25			719	15		3	191.5	21.6	11.5	59.1
26		214		28			1116	12		3	161.9	20.1	13.0	60.9
27		81		11			437	17		4	160.8	18.1	13.0	60.9
28		78		30			510	9		4	159.1	17.0	13.0	60.9
29		167		38			669	14		5	142.2	16.5	13.0	60.9
30		142		24			603	9		2	136.9	15.7	13.0	60.8
31		65		10			411	20		4	146.6	14.7	13.0	60.8
TOTALS		4,046		341			26,224	192		94				
AVG.		131		11			846	6		3				
											188.2	26.5	10.3	59.0

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	1,856	10
SUMMER	4,470	349
TOTAL	6,326	359

SOCKEYE	STEELHEAD	MINI-JCK
26,315	248	97

TABLE 215

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

ROCKY REACH PROJECT
AUGUST 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	MINI-JCK
1		114		9			617	17		0
2		59		9			249	15		1
3		195		13			538	35		1
4		29		9			325	19		3
5		81		11			351	31		0
6		79		6			254	29		3
7		50		13			265	45		2
8		79		19			282	51		6
9		40		30			180	44		2
10		49		24			160	48		0
11		31		16			137	37		5
12		67		16			106	45		4
13		19		15			54	68		3
14		37		26			72	50		4
15		65		36			109	95		4
16		58		24			38	53		5
17		19		19			45	42		0
18		39		15			45	64		2
19		34		35			46	80		4
20			25	11			28	54		4
21			53	18			41	122		0
22			42	21			27	71		1
23			45	20			19	110		5
24			2	12			17	36		4
25			23	21			26	81		12
26			10	15			18	57		5
27			20	14			12	84		3
28			6	9			8	62		3
29			17	19			12	56		5
30			14	25			7	75		6
31			41	37			12	113		7
TOTAL		1,144	298	567			4,100	1,789		104
AVG.		60	25	18			132	58		3

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY ECCH	TURBIDITY DEG
1	128.2	14.6	13.0	60.8
2	108.4	14.3	13.0	60.8
3	131.5	12.6	13.0	62.6
4	164.3	14.2	13.0	62.6
5	156.6	15.7	13.0	60.9
6	149.1	16.9	13.0	60.9
7	153.2	16.0	14.0	62.7
8	161.3	15.1	14.0	62.7
9	145.3	15.9	14.0	62.7
10	120.1	13.7	14.0	62.7
11	143.2	12.1	14.0	64.4
12	152.3	12.2	14.0	64.4
13	147.3	11.4	14.0	64.4
14	149.1	6.3	14.0	64.7
15	138.0	11.0	14.0	64.7
16	122.7	1.3	14.0	64.7
17	138.0	10.7	14.0	64.7
18	147.9	5.5	14.0	64.7
19	159.6	3.1	14.0	64.5
20	178.6	10.4	14.0	64.5
21	174.6	8.3	14.0	64.5
22	167.1	11.5	14.0	64.4
23	137.6	3.7	14.0	64.4
24	116.4	32.5	14.0	64.4
25	139.7	19.4	16.0	62.8
26	143.0	25.6	16.0	62.0
27	135.9	13.8	16.0	62.8
28	145.7	20.8	13.0	62.8
29	176.4	44.5	13.0	62.8
30	152.6	23.1	13.0	62.7
31	134.4	4.0	13.0	62.7
AVG.	145.7	14.2	13.9	63.3

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	1,856	10
SUMMER	5,614	694
FALL	298	222
TOTALS	7,768	926

SOCKEYE	STEELHEAD	MINI-JCK
30,415	2,037	201

TABLE 216

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

ROCKY REACH PROJECT
SEPTEMBER 1997

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 ECCH	TURBIDITY DEG
1			56	14			2	58		2	105.1	0.0	13.0	62.7
2			40	9			4	85		2	112.4	7.3	13.0	64.4
3			13	20			3	53		1	103.3	0.0	13.0	64.4
4			22	20			15	153		6	112.1	6.8	16.0	64.4
5			41	10			5	73		2	105.2	0.2	16.0	64.4
6			8	6			6	58		3	83.2	0.0	16.0	64.4
7			13	11			2	73		6	63.9	0.0	16.0	64.4
8			29	18			17	69		4	107.9	0.0	16.0	64.4
9			108	34			6	108		6	119.3	0.0	16.0	64.5
10			31	29			4	99		4	108.1	0.0	16.0	64.5
11			94	13			4	120		3	113.0	1.5	16.0	64.5
12			182	11			1	129		5	98.9	0.0	16.0	64.5
13			155	8			0	105		7	87.3	0.0	16.0	62.7
14			99	14			0	139		7	63.5	0.0	16.0	62.7
15			21	3			0	88		2	109.1	0.0	16.0	62.7
16			21	10			0	139		6	97.8	0.0	16.0	62.7
17			11	11			0	132		5	100.9	0.0	16.0	62.7
18			14	10			0	142		2	100.3	0.0	16.0	62.7
19			8	5			0	64		9	103.6	0.0	18.0	62.7
20			8	5			1	78		22	129.0	0.1	18.0	62.7
21			10	6			0	63		35	102.3	0.0	18.0	62.7
22			35	15			0	95		30	124.4	0.0	18.0	62.7
23			20	7			0	91		15	130.8	0.0	18.0	62.7
24			13	9			0	115		7	117.9	0.0	18.0	62.7
25			22	7			0	53		3	122.7	0.0	18.0	64.4
26			49	14			0	117		14	125.8	0.0	18.0	64.4
27			10	3			0	79		12	99.7	0.0	18.0	64.4
28			6	8			0	90		10	105.9	0.0	18.0	64.4
29			7	9			0	118		10	117.3	0.0	18.0	64.4
30			5	6			0	115		11	107.2	0.0	18.0	64.4
TOTAL			1,151	345			70	2,901		251				
AVG.			38	12			2	97		8	105.9	0.5	16.5	63.7

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	1,856	10
SUMMER	5,614	694
FALL	1,449	567
TOTALS	8,919	1,271

SOCKEYE	STEELHEAD
30,485	4,938

MINI-JCK
452

TABLE 217

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

ROCKY REACH PROJECT
OCTOBER 1997

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 ECCH	TURBIDITY DEG
1			7	8				117		6	101.6	0.0	19.0	64.4
2			16	16				111		8	108.4	0.0	19.0	60.9
3			45	11				67		7	85.4	0.0	19.0	60.9
4			60	11				113		10	108.4	0.0	19.0	60.9
5			16	6				93		6	104.3	0.0	19.0	59.1
6			10	3				107		2	120.3	0.0	19.0	59.1
7			7	7				81		3	150.2	11.6	19.0	59.0
8			48	3				72		2	133.7	1.7	16.5	59.0
9			16	8				72		10	158.8	0.0	16.5	59.0
10			15	9				99		17	163.9	0.0	16.5	59.0
11			13	10				81		21	148.7	2.5	16.5	59.0
12			15	12				73		35	133.3	0.0	16.5	57.3
13			5	9				45		23	159.1	2.5	16.5	57.3
14			9	7				50		25	135.5	0.2	16.5	59.0
15			26	8				41		15	124.9	0.0	16.5	59.0
16			15	4				32		3	115.3	0.0	16.5	59.0
17			40	9				37		4	123.4	0.0	16.5	59.0
18			13	6				23		2	111.9	0.0	18.0	57.3
19			16	3				27		4	106.3	0.0	18.0	57.3
20			9	5				22		3	132.2	0.0	18.0	57.3
21			24	2				24		0	118.2	1.5	18.0	57.3
22			31	6				31		7	104.5	0.0	18.0	57.3
23			28	4				18		2	88.1	0.0	18.0	55.5
24			58	5				14		1	86.1	0.0	18.0	55.5
25			25	2				15		9	85.3	0.0	18.0	48.2
26			16	1				8		1	92.9	0.0	18.0	48.2
27			6	0				14		0	98.8	0.0	18.0	48.2
28			4	1				17		0	100.8	0.0	18.0	48.2
29			6	4				10		2	91.7	0.0	18.0	48.2
30			35	4				16		1	91.0	0.0	18.0	55.4
31			63	3				46		3	83.0	0.0	18.0	55.4
TOTAL			697	187				1,576		232				
AVG.			22	6				51		7	115.0	0.6	17.7	56.8

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	1,856	10
SUMMER	5,614	694
FALL	2,146	754
TOTALS	9,616	1,458

SOCKEYE	STEELHEAD	MINI-JCK
30,485	6,514	684

TABLE 218

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

ROCKY REACH PROJECT
NOVEMBER 1997

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 ECCH	TURBIDITY DEG
1			35	1				47		8	78.0	0.0	17.0	55.6
2			6	2				32		6	100.4	0.0	17.0	55.6
3			36	0				21		6	97.3	0.0	17.0	55.6
4			32	3				16		10	103.9	0.3	17.0	55.6
5			46	3				18		5	108.9	0.0	17.0	55.6
6			37	0				14		0	106.4	0.0	17.0	55.6
7			21	2				7		0	102.4	0.0	17.0	55.6
8			11	0				13		0	96.8	0.0	17.0	55.6
9			16	1				11		1	85.1	0.0	17.0	55.6
10			15	0				2		3	107.4	0.0	17.0	55.6
11			3	0				10		0	105.5	0.0	17.0	55.6
12			4	0				7		1	110.3	0.6	17.0	53.6
13			0	0				3		1	110.8	0.0	17.0	53.6
14			4	0				7		0	108.7	0.0	17.0	53.6
15											109.5	0.0		
16											102.1	0.0		
17											111.3	0.0		
18											106.9	0.0		
19											108.6	0.0		
20											105.2	0.0		
21											91.7	0.0		
22											99.5	0.0		
23											98.7	0.0		
24											136.1	5.4		
25											138.2	0.8		
26											133.4	0.0		
27											82.1	0.0		
28											95.7	0.0		
29											99.7	0.0		
30											91.4	0.0		
TOTAL			266	12				208		41				
AVG.			19	1				15		3	104.4	0.2	17.0	55.2

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	1,856	10
SUMMER	5,614	694
FALL	2,412	766
TOTALS	9,882	1,470

SOCKEYE	STEELHEAD	MINI-JCK
30,485	6,722	725

TABLE 219

MONTHLY COUNT OF STEELHEAD

ROCKY REACH DAM: 1981 - 1997

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
1993				49	52	24	346	869	1,066	379	31		2,816
1994				12	11	30	301	578	1,002	821	63		2,818
1995				18	12	9	147	398	827	315	32		1,758
1996				23	26	12	179	1,585	2,868	969	112		5,774
1997				40	15	1	192	1,789	2,901	1,576	208		6,722
Total				796	1,294	1,424	11,989	38,563	62,761	25,367	3,138		145,332
10-Year Average				40	46	51	426	1,418	2,176	923	101		5,180

TABLE 219

TABLE 220

MONTHLY TOTALS OF SALMONIDS COUNTED OVER WELLS DAM
1997

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*					494	535	2,157	541	320	322	92		4,461
STEELHEAD					38	6	82	868	1,758	1,199	156		4,107
SOCKEYE						11	20,831	4,741	143	28			25,754
COHO								3		5			8
TOTAL					532	552	23,070	6,153	2,221	1,554	248		34,330
SHAD													

*Jacks included

TABLE 221

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

WELLS PROJECT

MAY 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD
1	0			1				3	
2	0			0				7	
3	0			0				5	
4	0			0				2	
5	0			1				0	
6	1			1				3	
7	0			0				3	
8	0			0				0	
9	0			0				1	
10	0			0				2	
11	1			0				4	
12	3			2				0	
13	0			8				2	
14	1			0				1	
15	9			2				0	
16	6			1				0	
17	7			1				2	
18	8			0				0	
19	11			0				2	
20	9			0				1	
21	9			0				0	
22	35			0				0	
23	38			0				0	
24	39			0				0	
25	30			0				0	
26	19			1				0	
27	8			0				0	
28	5			0				0	
29	67			0				0	
30	73			0				0	
31	96			1				0	
TOTAL	475			19				38	
AVG.								1	

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG
1	250.2	64.5	4.0	46.0
2	248.5	64.5	4.0	47.0
3	223.9	55.5	4.0	46.0
4	222.9	59.4	4.0	46.0
5	215.6	50.9	4.0	47.0
6	218.1	39.1	4.0	47.0
7	216.7	31.6	4.0	47.0
8	215.6	38.8	4.0	47.0
9	220.6	60.3	4.0	48.0
10	215.2	52.8	5.0	48.0
11	225.2	65.0	4.0	49.0
12	221.3	52.0	4.0	49.0
13	235.8	65.4	4.0	49.0
14	229.6	61.1	4.0	49.0
15	241.9	67.8	4.0	50.0
16	233.9	70.7	4.0	50.0
17	257.2	92.1	3.0	50.0
18	267.9	97.0	5.0	50.0
19	263.3	98.5	3.0	50.0
20	265.5	80.0	4.0	51.0
21	286.6	99.8	3.0	52.0
22	274.7	100.4	3.0	52.0
23	278.9	108.6	3.0	52.0
24	288.6	113.0	4.0	53.0
25	279.6	111.7	4.0	53.0
26	279.6	115.4	3.0	53.0
27	284.1	119.5	4.0	53.0
28	282.3	120.6	3.0	53.0
29	293.4	123.2	4.0	53.0
30	281.3	118.1	4.0	53.0
31	291.5	131.4	4.0	53.0
AVG.	251.9	81.6	3.8	49.9

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK	STEELHEAD
SPRING	475	19	38

TABLE 222

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

WELLS PROJECT
JUNE 1997

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD
1	67			0			0	0	
2	27			0			0	0	
3	22			0			0	0	
4	8			1			0	0	
5	13			0			0	0	
6	13			0			0	0	
7	12			1			0	0	
8	3			1			0	0	
9	15			1			0	0	
10	3			0			0	0	
11	5			0			0	0	
12	17			3			0	0	
13	25			0			0	0	
14	39			0			0	1	
15	17			0			0	0	
16	13			1			0	0	
17	4			0			0	0	
18	8			0			0	0	
19	6			0			0	0	
20	6			1			0	0	
21	14			0			0	2	
22	15			0			0	3	
23	31			0			0	0	
24	12			0			0	0	
25	4			0			0	0	
26	17			1			0	0	
27	14			0			0	0	
28	37			0			3	0	
29		52		1			2	0	
30		5		0			6	0	
TOTAL	467	57		11			11	6	
AVG.	17	29							

RIVER CONDITIONS

DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG
289.4	117.2	3.0	53.0
293.5	125.0	3.0	53.0
300.8	137.3	3.0	53.0
283.6	128.6	3.0	53.0
306.7	146.9	3.0	53.0
310.1	151.2	3.0	53.0
296.0	131.3	3.0	53.0
301.3	145.9	4.0	54.0
301.8	141.7	4.0	54.0
325.5	152.0	4.0	54.0
354.8	182.7	4.0	54.0
362.5	192.3	5.0	54.0
342.1	189.3	5.0	54.0
329.7	176.1	4.0	55.0
342.3	181.9	3.0	55.0
326.4	171.7	3.0	55.0
319.2	174.4	3.0	55.0
322.9	175.9	3.0	55.0
314.6	164.5	5.0	56.0
322.1	164.2	5.0	56.0
325.4	163.8	5.0	56.0
328.6	163.2	6.0	57.0
323.4	166.2	6.0	56.0
285.5	136.4	6.0	56.0
273.5	118.9	5.0	58.0
268.0	93.4	6.0	58.0
262.9	93.9	6.0	58.0
241.2	77.0	6.0	59.0
183.6	32.6	7.0	59.0
170.2	23.1	7.0	60.0
300.3	140.6	4.4	55.3

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	942	29
SUMMER	57	1
TOTAL	999	30

SOCKEYE	STEELHEAD
11	44

TABLE 223

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

WELLS PROJECT
JULY 1997

	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
1		5		0			9	0		169.8	13.1	8.0	59.0
2		4		0			10	0		170.6	18.1	7.0	59.0
3		13		0			21	0		192.9	38.2	5.0	60.0
4		90		0			42	3		190.0	31.6	5.0	60.0
5		18		1			50	0		180.9	21.7	5.0	60.0
6		22		0			161	1		161.3	8.4	5.0	60.0
7		28		0			233	0		173.2	10.0	5.0	60.0
8		28		0			238	1		178.8	10.0	5.0	60.0
9		22		0			337	0		188.4	10.0	5.0	60.0
10		36		0			473	0		189.0	10.0	7.0	60.0
11		39		0			656	0		178.9	10.0	7.0	60.0
12		20		0			706	1		193.4	10.0	7.0	60.0
13		34		4			884	1		193.9	10.0	8.0	60.0
14		21		1			756	0		209.7	19.0	8.0	60.0
15		24		4			804	3		236.4	56.8	8.0	61.0
16		22		1			931	3		215.5	30.1	8.0	61.0
17		129		0			934	1		226.2	45.2	8.0	61.0
18		109		2			1136	2		216.4	41.8	11.0	62.0
19		84		7			1255	4		204.2	27.7	11.0	62.0
20		223		5			1325	3		177.9	11.6	11.0	62.0
21		112		0			1097	2		185.4	17.8	11.0	62.0
22		68		2			1476	0		189.3	9.9	11.0	62.0
23		62		6			1035	6		191.3	11.1	11.0	62.0
24		179		17			1151	7		194.6	16.3	11.0	62.0
25		190		6			702	5		183.4	14.4	11.0	62.0
26		106		5			821	3		154.3	10.0	10.0	62.0
27		146		3			856	7		157.3	10.0	10.0	62.0
28		42		0			905	5		153.2	10.0	7.0	62.0
29		41		2			685	6		137.4	10.0	7.0	62.0
30		39		5			532	10		128.8	8.8	11.0	63.0
31		125		5			610	8		141.3	8.8	11.0	63.0
TOTAL		2,081		76			20,831	82					
AVG.		67		2			672	3		182.7	18.1	8.2	61.0

TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	942	29
SUMMER	2,138	77
TOTAL	3,080	106

SOCKEYE	STEELHEAD
20,842	126

TABLE 224

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

WELLS PROJECT
AUGUST 1997

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
1		25		7	0	0	478	9		123.7	8.3	11.0	63.0
2		35		12	0	0	505	13		104.4	7.6	11.0	64.0
3		15		7	0	0	413	12		131.8	40.1	11.0	64.0
4		22		2	0	0	283	5		158.4	12.8	11.0	64.0
5		28		3	0	0	440	14		151.9	10.0	11.0	64.0
6		14		3	2	0	343	16		145.6	10.0	11.0	65.0
7		48		5	0	0	322	17		146.7	10.0	11.0	65.0
8		36		2	0	0	232	14		157.8	10.0	11.0	65.0
9		40		4	0	0	229	18		139.3	10.0	11.0	65.0
10		50		6	0	0	253	29		113.7	8.2	11.0	65.0
11		5		1	0	0	259	15		143.9	10.0	11.0	64.0
12		0		1	0	0	124	11		144.0	10.4	11.0	65.0
13		6		0	0	1	102	15		144.4	10.4	12.0	66.0
14		17		3	0	0	113	25		142.8	10.7	12.0	65.0
15		6		2	0	0	88	16		135.2	6.5	12.0	65.0
16		7		1	0	0	66	20		117.8	0.0	12.0	65.0
17		20		6	0	0	68	50		132.0	0.0	13.0	65.0
18		6		1	0	0	43	13		148.5	0.0	13.0	66.0
19		2		2	0	0	35	28		154.3	0.0	13.0	65.0
20		0		0	0	0	43	22		170.8	0.5	13.0	65.0
21		25		5	0	0	67	71		165.7	0.0	13.0	66.0
22		12		0	0	0	36	49		160.0	2.7	12.0	66.0
23		5		0	0	0	42	46		125.8	0.0	13.0	67.0
24		6		0	0	0	42	47		120.3	0.6	12.0	66.0
25		0		0	0	0	10	19		130.9	0.0	12.0	66.0
26		0		2	0	0	20	17		138.1	0.0	12.0	66.0
27		1		0	0	0	21	30		132.9	0.0	12.0	66.0
28		1		1	0	0	16	52		134.4	2.3	12.0	66.0
29			2	2	0	0	14	55		174.2	14.2	12.0	66.0
30			15	4	0	0	14	47		144.0	0.0	12.0	66.0
31			6	4	0	0	20	73		126.9	0.0	8.0	68.0
TOTAL		432	23	86	2	1	4,741	868					
AVG.		15	8	3			153	28		140.7	6.3	11.7	65.3

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	942	29
SUMMER	2,570	153
FALL	23	10
TOTAL	3,535	192

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD
2	1	25,583	994

TABLE 225

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

WELLS PROJECT
SEPTEMBER 1997

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	TURBIDITY DEG
	FISH COUNTS									RIVER CONDITIONS			
1			12	4			10	74		92.5	0.0	8.0	67.0
2			12	5			16	33		107.4	0.0	8.0	66.0
3			6	2			5	21		100.8	0.0	12.0	67.0
4			3	3			9	28		109.6	0.0	14.0	67.0
5			64	12			22	86		98.6	0.0	14.0	66.0
6			19	2			19	56		70.2	0.0	14.0	67.0
7			7	4			9	71		66.1	0.0	12.0	67.0
8			22	6			9	56		101.7	0.0	15.0	67.0
9			4	7			11	33		114.0	0.0	15.0	67.0
10			2	1			6	35		103.7	0.0	15.0	66.0
11			1	4			4	27		107.2	0.0	14.0	67.0
12			9	10			2	91		93.4	0.0	14.0	66.0
13			6	5			2	94		80.2	0.0	14.0	66.0
14			21	6			3	85		59.9	0.0	14.0	66.0
15			7	0			2	45		102.4	0.0	13.0	66.0
16			10	1			1	21		96.1	0.0	12.0	66.0
17			6	0			1	62		92.8	0.0	13.0	65.0
18			1	1			2	84		93.0	0.0	10.0	65.0
19			3	1			0	119		103.5	0.2	11.0	65.0
20			5	1			0	101		122.1	0.0	12.0	66.0
21			0	0			5	103		96.0	0.0	14.0	66.0
22			0	1			0	29		121.1	0.0	14.0	66.0
23			0	0			2	24		122.0	0.0	13.0	66.0
24			2	1			3	40		112.9	0.0	14.0	66.0
25			0	0			0	44		118.3	0.0	14.0	66.0
26			2	0			0	82		120.0	0.0	13.0	65.0
27			10	4			0	87		94.4	0.0	13.0	65.0
28			4	0			0	76		102.7	0.0	12.0	65.0
29			0	0			0	35		113.1	0.0	12.0	65.0
30			0	1			0	16		101.6	0.0	12.0	65.0
TOTAL			238	82			143	1,758					
AVG.			8	3				59		100.6	0.0	12.8	66.0

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	942	29
SUMMER	2,570	153
FALL	261	92
TOTAL	3,773	274

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD
2	1	25,726	2,752

TABLE 226

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

WELLS PROJECT
OCTOBER 1997

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	TURBIDITY DEG
1			0	0	0	0	0	54		98.5	0.0	12.0	65.0
2			0	2	0	0	3	90		99.8	0.0	13.0	64.0
3			4	4	0	0	3	108		78.8	0.0	13.0	64.0
4			8	3	0	0	3	77		108.0	0.0	13.0	64.0
5			7	3	0	0	5	73		94.8	0.0	13.0	63.0
6			1	1	0	0	0	36		119.5	0.0	12.0	62.0
7			10	2	0	0	0	34		147.4	0.0	11.0	62.0
8			0	1	0	0	3	28		127.2	0.0	11.0	62.0
9			7	2	0	0	0	51		153.4	0.0	11.0	62.0
10			2	1	0	0	0	85		159.3	2.9	14.0	62.0
11			6	3	0	0	0	45		135.5	0.0	14.0	61.0
12			6	8	0	0	4	65		131.9	0.0	14.0	61.0
13			4	2	0	2	0	19		152.7	0.0	14.0	61.0
14			4	2	0	0	1	39		124.2	0.0	14.0	61.0
15			7	1	0	0	1	40		117.6	0.0	14.0	62.0
16			6	0	0	0	1	36		109.6	0.0	14.0	62.0
17			7	1	0	2	0	35		119.4	0.0	13.0	61.0
18			7	1	0	0	1	42		106.8	0.0	13.0	60.0
19			6	0	0	0	1	34		97.9	0.0	13.0	60.0
20			10	1	0	0	1	16		126.7	0.0	12.0	60.0
21			9	0	0	0	1	12		111.7	0.0	12.0	60.0
22			3	0	0	0	0	18		95.8	0.0	13.0	59.0
23			12	4	0	0	0	25		83.4	0.0	12.0	59.0
24			23	0	0	0	0	17		81.4	0.0	13.0	59.0
25			25	3	0	0	0	17		76.5	0.0	12.0	58.0
26			25	4	0	0	0	24		81.4	0.0	13.0	58.0
27			5	3	0	0	0	13		90.3	0.0	13.0	58.0
28			11	2	0	0	0	19		94.8	0.0	12.0	58.0
29			37	1	0	0	0	8		85.7	0.0	14.0	58.0
30			8	3	0	0	0	13		86.9	0.0	12.0	57.0
31			3	1	1	0	0	26		78.5	0.0	14.0	57.0
TOTAL			263	59	1	4	28	1,199					
AVG.			8	2				39		108.9	0.1	12.8	60.6

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	942	29
SUMMER	2,570	153
FALL	524	151
TOTAL	4,036	333

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD
3	5	25,754	3,951

TABLE 227

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

WELLS PROJECT
NOVEMBER 1997

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	TURBIDITY DEG F
	FISH COUNTS									RIVER CONDITIONS			
1			9	2				17		73.3	0.0	13.0	57.0
2			26	1				12		97.9	0.0	12.0	56.0
3			10	0				7		91.6	0.0	12.0	56.0
4			0	1				17		97.9	0.0	12.0	56.0
5			9	1				16		101.6	0.0	13.0	56.0
6			12	0				6		99.1	0.0	13.0	56.0
7			7	0				15		100.2	0.0	13.0	56.0
8			3	0				6		91.8	0.0	13.0	56.0
9			3	0				4		80.1	0.0	12.0	55.0
10			3	0				4		101.6	0.0	12.0	55.0
11			1	0				15		100.3	0.0	12.0	54.0
12			1	0				8		104.8	0.0	13.0	54.0
13			1	0				11		105.5	0.0	13.0	54.0
14			0	0				9		103.0	0.0	12.0	53.0
15			2	0				9		104.1	0.0	12.0	53.0
16										95.4	0.0		
17										108.3	0.0		
18										100.9	0.0		
19										103.2	0.0		
20										101.7	0.0		
21										87.8	0.0		
22										94.6	0.0		
23										94.3	0.0		
24										131.1	0.0		
25										135.5	0.0		
26										122.3	0.0		
27										77.9	0.0		
28										92.1	0.0		
29										94.4	0.0		
30										87.3	0.0		
TOTALS			87	5				156					
AVG.			6					10		99.3	0.0	12.5	55.1

TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	942	29
SUMMER	2,570	153
FALL	611	156
TOTAL	4,123	338

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD
3	5	25,754	4,107	0

TABLE 228

MONTHLY COUNT OF STEELHEAD
WELLS DAM: 1976 - 1997

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			4,400
1989					43	11	351	1,168	2,223	804			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	181		7,067
1993					48	10	240	706	883	490	23		2,400
1994					7	8	240	442	670	695	121		2,183
1995					5	6	77	160	509	188	**		945
1996					11	7	79	764	2,099	921	246		4,127
1997					38	6	82	868	1,758	1,199	156		4,107
TOTAL					1,654	1,056	8,793	31,752	59,503	36,858	7,123		146,739
10-Year Average					36	34	296	998	1,759	905	163		4,143

**Wells Dam did not count in November of 1995.