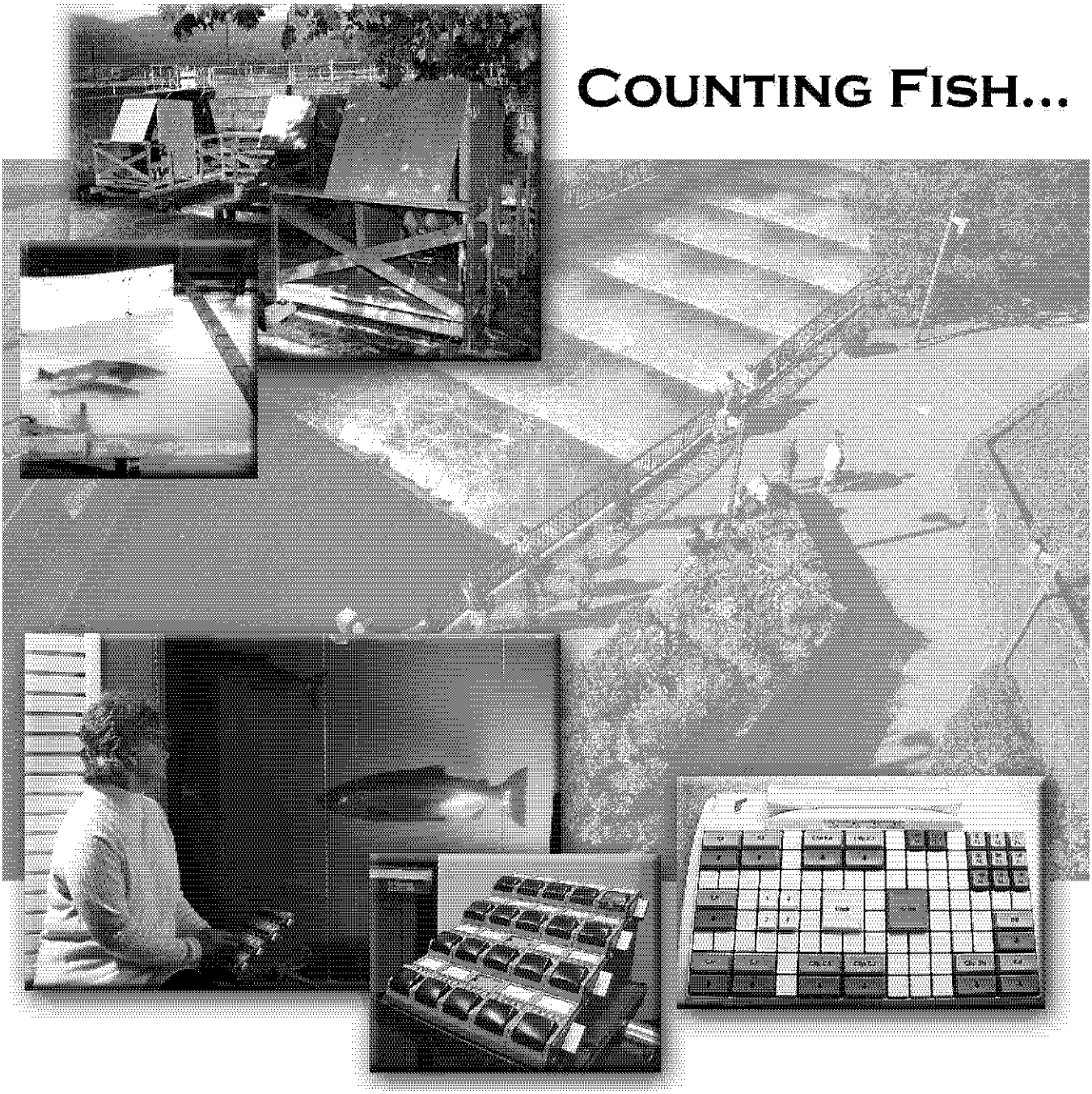
US Army Corps of Engineers ®
Portland District
Walla Walla District

Annual Fish Passage Report 2003



Columbia and Snake River Projects

2003

ANNUAL FISH PASSAGE REPORT

COLUMBIA AND SNAKE RIVERS

for

SALMON, STEELHEAD, SHAD, AND LAMPREY

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

General

Plate 1. Columbia and Snake River Projects 1

Table 1. Fish Escapement at Main Stem Dams Columbia and Snake Rivers: 1997—2003. 2
Table 2. Fish Escapement at Mid Columbia River Dams: 1997—2003.....3
Table 3. Steelhead over Columbia and Snake River Dams 1953 – 2003: by Run-Year 4-5
Table 4. Steelhead over Mid Columbia River Dams 1959 – 2003: by Run-Year 6

Corps of Engineers Projects

BONNEVILLE DAM

Plate 2. Bonneville Dam General Site Map, Fish Passage Facilities.....7

Fish Counting Schedule 8
Adult Fish Facilities Operating Schedule 8
Downstream Migrant Facilities Operating Schedule..... 8-9
Fishway Activities 9-11

Bonneville Historic Fish Count Schedule..... 12-16

Table 5. Monthly Totals of Salmonids, Shad, and Lamprey: 2003 17
Table 6-17. Monthly Discharge, Water Quality Data, and Fish Count January through December: 2003 18-29
Table 18. Yearly Totals of Salmonids: 1938—2003 30
Table 19. Monthly Count of Chinook Salmon: 1938—2003 31-32
Table 20. Monthly Count of Sockeye Salmon: 1938—2003..... 33-34
Table 21. Monthly Count of Coho Salmon: 1938—2003..... 35-36
Table 22. Monthly Count of Steelhead: 1938—2003..... 37-38
Table 23. Monthly Count of Shad: 1938—2003 39-40
Table 24. Monthly Count of Lamprey 1939—2003 41

THE DALLES DAM

Plate 3. The Dalles Dam General Site Map, Fish Passage Facilities.....42

Fish Counting Schedule 43
Adult Fish Facilities Operating Schedules.....43
Fish Related Dewaterings 44-45

TABLE OF CONTENTS

(Continued)

Fishway Inspection Comparison 46-47

The Dalles Historic Fish Count Schedule 48-49

Table 25. Monthly Totals of Salmonids, Shad, and Lamprey: 2003 50
Table 26-37. Monthly Discharge, Water Quality, and Fish Counts January through December: 2003 51-62
Table 38. Yearly totals of Salmonids: 1957—2003 63
Table 39. Monthly Count of Chinook Salmon: 1957—2003 64
Table 40. Monthly Count of Sockeye Salmon: 1957—2003 65
Table 41. Monthly Count of Coho Salmon: 1957—2003 66
Table 42. Monthly Count of Steelhead: 1957—2003 67

JOHN DAY DAM

Plate 4. John Day Dam General Site Map, Fish Passage Facilities 68

Fish Counting Schedule 69
Adult Fish Facilities Operating Schedules 69
Fish Related Dewaterings 70-71
Fishway Inspection Comparison 72

John Day Historic Fish Count Schedule 73

Table 43. Monthly Totals of Salmonids, Shad, and Lamprey: 2003 74
Table 44-54. Monthly Discharge, Water Quality, and Fish Counts January through December: 2003 75-85
Table 55. Yearly totals of Salmonids: 1968—2003 86
Table 56. Monthly Count of Chinook Salmon: 1968—2003 87
Table 57. Monthly Count of Sockeye Salmon: 1968—2003 88
Table 58. Monthly Count of Coho Salmon: 1968—2003 89
Table 59. Monthly Count of Steelhead: 1968—2003 90

McNARY DAM

Plate 5. McNary Dam General Site Map, Fish Passage Facilities 91

Fish Counting Schedule 92
Fish Ladder Operating Schedule 92
Fishway Activities 92

McNary Historic Fish Count Schedule 93-95

TABLE OF CONTENTS
(Continued)

Table 60. Monthly Totals of Salmonids, Shad, and Lamprey: 2003 96
Table 61-71 Monthly Discharge, Water Quality, and Fish Counts January through December: 2003 97-107
Table 72 Yearly totals of Salmonids: 1954-2003 108
Table 73 Monthly Count of Chinook Salmon: 1954—2003 109-110
Table 74 Monthly Count of Sockeye Salmon: 1954—2003 111-112
Table 75 Monthly Count of Coho Salmon: 1954—2003 113-114
Table 76 Monthly Count of Steelhead: 1954—2003 115-116

Snake River

ICE HARBOR DAM

Plate 6. Ice Harbor Dam General Site Map, Fish Passage Facilities 117

Fish Counting Schedule 118
Fish Ladder Operating Schedule 118
Fishway Activities 118

Ice Harbor Historic Fish Count Schedule 119-120

Table 77. Monthly Totals of Salmonids, Shad, and Lamprey: 2003 121
Table 78-87 Monthly Discharge, Water Quality, and Fish Counts January through December: 2003 122-131
Table 88 Yearly totals of Salmonids: 1962—2003 132
Table 89 Monthly Count of Chinook Salmon: 1962—2003 133
Table 90 Monthly Count of Steelhead: 1962—2003 134

LOWER MONUMENTAL DAM

Plate 7. Lower Monumental Dam General Site Map, Fish Passage Facilities 135

Fish Counting Schedule 136
Fish Ladder Operating Schedule 136
Fishway Activities 136

Lower Monumental Historic Fish Count Schedule 137-138

TABLE OF CONTENTS
(Continued)

Table 91 Monthly Totals of Salmonids, Shad, and Lamprey: 2003 139
Table 92-103 Monthly Discharge, Water Quality, and Fish Counts January through December: 2003 140-151
Table 104 Yearly totals of Salmonids: 1969—2003 152
Table 105 Monthly Count of Chinook Salmon: 1969—2003 153
Table 106 Monthly Count of Steelhead: 1969—2003.....154

LITTLE GOOSE DAM

Plate 8. Little Goose Dam General Site Map, Fish Passage Facilities 155

Fish Counting Schedule 156
Fish Ladder Operating Schedule.....156
Fishway Activities 156

Little Goose Historic Fish Count Schedule 157

Table 107. Monthly Totals of Salmonids, Shad, and Lamprey: 2003 158
Table 108-119 Monthly Discharge, Water Quality, and Fish Counts January through December: 2003 159-170
Table 120 Yearly totals of Salmonids: 1970—1981, 1991—2003 171
Table 121 Monthly Count of Chinook Salmon: 1970—1981, 1991—2003 172
Table 122 Monthly Count of Steelhead: 1970—1981, 1991—2003.....173

LOWER GRANITE

Plate 9. Lower Granite Dam General Site Map, Fish Passage Facilities.....174

Fish Counting Schedule 175
Fish Ladder Operating Schedule.....175
Fishway Activities 175

Lower Granite Historic Fish Count Schedule..... 176-177

Table 123. Monthly Totals of Salmonids, Shad, and Lamprey: 2003 178
Table 124-134 Monthly Discharge, Water Quality, and Fish Counts January through December: 2003 179-189
Table 135 Yearly totals of Salmonids: 1975—2003 190
Table 136 Monthly Count of Chinook Salmon: 1975—2003 191
Table 137 Monthly Count of Steelhead: 1975—2003.....192

TABLE OF CONTENTS

(Continued)

Mid - Columbia River

Public Utility District Projects

PRIEST RAPIDS AND WANAPUM DAMS

Fishway Counting Schedule 193
Fish Ladder Operating Schedule..... 193-194
Fishway Activities 194

Priest Rapids Historic Fish Count Schedule 195

Table 138. Monthly Totals of Salmonids, Shad, and Lamprey: 2003 196
Table 139-146 Monthly Discharge, Water Quality, and Fish Counts April through November: 2003..... 197-204
Table 147 Yearly totals of Salmonids: 1982—2003 205
Table 148 Monthly Count of Steelhead: 1960—2003.....206

ROCK ISLAND DAM

Fish Counting Schedule 207
Fish Ladder Operating Schedule.....207
Fishway Activities 207

Rock Island Historic Fish Count Schedule 208

Table 149. Monthly Totals of Salmonids: 2003 209
Table 150-157 Monthly Discharge, Water Quality, and Fish Counts April through November: 2003..... 210-217
Table 158 Monthly Count of Steelhead: 1981—2003.....218

ROCKY REACH DAM

Fish Counting Schedule 219
Fish Ladder Operating Schedule.....219
Fishway Activities 219

Rocky Reach Historic Fish Count Schedule 220

TABLE OF CONTENTS
(Continued)

Table 159. Monthly Totals of Salmonids: 2003 221
Table 160-167 Monthly Discharge, Water Quality, and Fish Counts April through November: 2003..... 222-229
Table 168 Monthly Count of Steelhead: 1981—2003.....230

WELLS DAM

Fish Counting Schedule 231
Description of the Adult Passage Facilities 231-232
Fish Ladder Operating Schedule..... 232-233
Juvenile Passage Facilities.....233

Wells Historic Fish Count Schedule.....234

Table 169 Monthly Totals of Salmonids: 2003 235
Table 170-176 Monthly Discharge, Water Quality, and Fish Counts May through November: 2003..... 236-242
Table 177 Monthly Count of Steelhead: 1976—2003.....243

ADDENDUM

Corrections to previous reports..... 244-247

Plate 1 Columbia and Snake River Projects

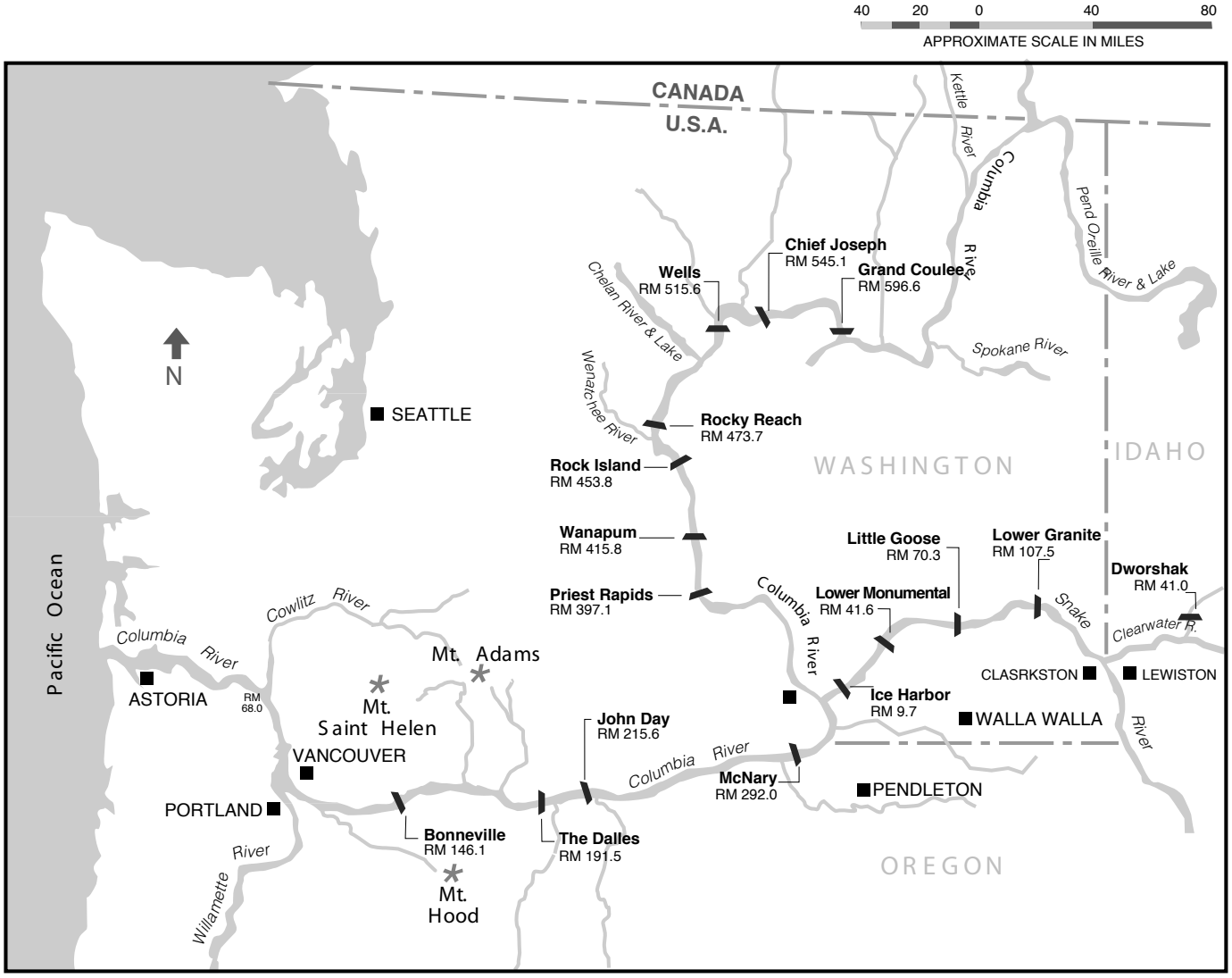


TABLE 1

FISH ESCAPEMENT AT MAIN STEM DAMS
COLUMBIA AND SNAKE RIVERS 1999-2003

SPECIES	BONNEVILLE	THE DALLES	JOHN DAY	MCNARY	ICE HARBOR	LOWER MONUMENTAL	LITTLE GOOSE	LOWER GRANITE
1999								
CHINOOK	343,176	199,491	163,282	121,946	23,331	20,271	17,235	15,884
Spring*	47,360	23,743	20,498	13,232	8,008	6,650	6,135	5,803
Summer*	30,191	24,937	24,714	21,618	5,211	4,716	4,856	4,844
Fall*	265,625	150,811	118,070	87,096	10,112	8,905	6,244	5,237
Jacks	36,195	28,412	19,611	15,055	7,494	7,467	6,321	5,947
STEELHEAD	206,488	156,874	165,314	84,088	84,163	72,482	65,471	74,370
SOCKEYE	17,877	13,715	14,809	11,884	8	15	16	14
COHO*	45,152	15,041	13,232	4,934	144	88	89	262
Adults	40,864	13,393	11,901	4,736	135	81	85	242
Jacks	4,468	1,648	1,331	198	6	7	4	20
SHAD	1,638,272	1,718,683	763,007	248,895	32,578	41,759	7,412	1,006
LAMPREY	22,830	10,415	9,877	1,074	365	76	81	53
2000								
CHINOOK	491,905	316,836	394	191,231	64,909	68,961	62,886	62,659
Spring*	199,561	117,749	394	75,644	41,815	45,856	44,482	44,140
Summer*	44,170	35,580	0	27,696	6,638	7,957	7,991	7,695
Fall*	248,174	163,507	0	87,891	16,456	15,148	10,413	10,824
Jacks	90,194	63,769	6,208	38,468	22,591	23,314	20,765	21,204
STEELHEAD	275,178	205,241	483,409	130,332	126,424	112,616	101,030	113,211
SOCKEYE	93,398	73,383	107,869	60,242	215	291	296	299
COHO*	97,032	29,536	885	11,152	1,224	750	313	925
Adults	85,649	24,966	857	10,147	1,023	579	313	889
Jacks	11,383	4,570	28	1,005	201	171	0	36
SHAD	1,244,317	1,556,619	1,796,826	350,457	70,685	74,266	20,185	3,250
LAMPREY	19,002	8,050	4,005	1,281	315	94	71	28
2001								
CHINOOK	971,119	629,334	510,987	489,784	215,697	225,322	214,368	210,381
Spring*	405,539	313,865	270,385	265,372	174,199	182,614	177,811	175,093
Summer*	90,879	82,388	74,235	77,514	17,667	20,899	18,732	17,539
Fall*	474,701	233,081	166,367	146,898	23,831	21,809	17,825	17,749
Jacks	103,391	72,644	57,877	52,664	15,619	11,918	12,782	15,773
STEELHEAD	633,073	503,327	483,409	398,784	283,694	252,923	232,669	262,568
SOCKEYE	114,934	102,562	107,869	97,188	38	32	72	36
COHO*	266,314	64,557	51,181	24,730	1,595	957	540	1,087
Adults	259,533	62,378	48,870	22,918	1,501	798	490	968
Jacks	6,781	2,179	2,311	1,812	94	159	50	119
SHAD	2,297,959	2,724,948	1,796,826	1,063,568	287,874	224,248	63,102	18,432
LAMPREY	27,947	9,061	4,005	2,539	203	60	104	27
2002								
CHINOOK	924,585	583,155	447,729	417,090	137,404	124,673	119,324	119,304
Spring*	275,290	185,046	142,290	133,229	87,033	77,841	79,047	77,114
Summer*	135,388	118,812	110,969	116,747	29,044	25,454	23,108	24,112
Fall*	513,907	279,297	194,470	167,114	21,327	21,378	17,169	18,078
Jacks	54,644	42,982	37,568	36,114	10,342	9,432	8,333	9,769
STEELHEAD	480,309	387,920	390,300	286,805	202,173	212,639	203,494	218,718
SOCKEYE	49,610	40,554	41,915	39,424	61	46	38	55
COHO*	94,901	12,786	9,272	3,192	231	149	133	395
Adults	88,084	9,765	7,669	2,144	199	138	109	246
Jacks	6,817	3,021	1,603	1,048	32	11	24	149
SHAD	3,164,556	3,218,050	1,850,942	599,294	81,373	58,677	15,171	3,119
LAMPREY	100,476	23,417	26,821	11,282	1,127	284	365	138
2003								
CHINOOK	992,231	608,153	467,085	420,603	143,197	122,817	114,458	119,676
Spring*	206,268	142,817	111,642	106,673	86,190	77,947	76,096	78,904
Summer*	128,166	111,931	105,615	104,948	25,343	22,307	17,877	20,559
Fall*	657,797	353,405	249,828	208,982	31,664	22,563	20,485	20,213
Jacks	75,338	61,671	54,606	52,258	23,288	19,855	17,151	20,913
STEELHEAD	361,412	273,172	286,176	230,418	186,474	172,596	161,026	180,072
SOCKEYE	39,291	34,176	35,417	32,037	37	14	23	11
COHO*	133,870	45,374	38,577	19,830	1,431	999	807	1,265
Adults	125,743	42,563	34,453	18,095	1,362	924	734	1,135
Jacks	8,127	2,811	4,124	1,735	69	75	73	130
SHAD	4,558,550	4,258,889	2,735,108	1,077,670	245,805	160,292	56,834	17,545
LAMPREY	117,027	28,995	20,922	13,324	1,702	468	660	282

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

SPRING	15 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: 1999 - 2003

SPECIES	PRIEST RAPIDS		ROCK ISLAND		ROCKY REACH		WELLS	
1999								
CHINOOK*	57,054	*	32,798	*	22,880	*	10,678	*
Spring*	4,910	*	4,225	*	1,622	*	345	*
Summer*	21,415	*	20,136	*	11,676	*	7,787	*
Fall*	30,729	*	8,437	*	9,582	*	2,546	*
Jacks	2,465		3,310		5,463		1,266	
STEELHEAD	8,277		6,362		4,815		3,504	
SOCKEYE	16,432		18,371		14,111		12,388	
COHO*	55	*	12	*	1	*	224	*
Adults	51		12		1		201	
Jacks	4						23	
SHAD	4,212							
LAMPREY	1,130							
2000								
CHINOOK*	91,223	*	61,118	*	31,693	*	16,161	*
Spring*	21,190	*	16,410	*	5,728	*	2,587	*
Summer*	24,810	*	32,307	*	18,831	*	10,156	*
Fall*	45,223	*	12,401	*	7,134	*	3,418	*
Jacks	10,006		16,627		5,954		5,372	
STEELHEAD	11,331		10,516		8,275		6,280	
SOCKEYE	89,547		76,515		57,428		59,944	
COHO*	378	*	1,624		550		0	
Adults	336		1,624		550		0	
Jacks	42		**		**		0	
SHAD	2,464		**		**		**	
LAMPREY	1,468		822		767		155	
2001								
CHINOOK*	139,929	*	123,184	*	72,941	*	58,587	*
Spring*	52,120	*	41,603	*	15,191	*	10,871	*
Summer*	57,052	*	61,930	*	44,722	*	38,126	*
Fall*	30,757	*	19,651	*	13,028	*	9,590	*
Jacks	10,725		21,141		10,037		8,427	
STEELHEAD	30,090		28,613		22,045		18,503	
SOCKEYE	111,326		104,847		66,222		74,490	
COHO*	11,189	*	10,465		1,628		612	*
Adults	10,143		10,465		1,628		612	
Jacks	1,046		**		**		0	
SHAD	4,417		**		**		**	
LAMPREY	1,622		1,460		805		259	
2002								
CHINOOK*	161,510	*	130,491	*	98,756	*	76,716	*
Spring*	34,279	*	24,844	*	10,160	*	7,626	*
Summer*	97,784	*	90,041	*	75,911	*	62,626	*
Fall*	29,447	*	15,606	*	12,685	*	6,464	*
Jacks	4,279		5,135		4,281		659	
STEELHEAD	15,895		15,282		11,853		9,482	
SOCKEYE	47,883		44,320		12,372		10,762	
COHO*	1,555	*	1,751	*	481		132	*
Adults	1,143		1,750		481		132	
Jacks	412		1		0		0	
SHAD	4,836		**		**		**	
LAMPREY	4,008		4,878		1,842		342	
2003								
CHINOOK*	160,433	*	132,167	*	88,011	*	59,346	*
Spring*	18,792	*	17,634	*	4,669	*	4,702	*
Summer*	86,837	*	88,401	*	69,362	*	46,391	*
Fall*	54,804	*	26,132	*	13,980	*	8,253	*
Jacks	10,847		11,939		9,363		2,984	
STEELHEAD	17,652		17,509		13,650		9,963	
SOCKEYE	36,551		34,779		30,355		28,977	
COHO*	5,216	*	5,869	*	993		168	*
Adults	4,803		5,869		993		168	
Jacks	413		0		0		0	
SHAD	7,067		0		0		0	
LAMPREY	4,338		5,000		2,521		1,408	

ASSUMED 2003 DATES FOR CHINOOK RUNS (MAY VARY FROM PREVIOUS YEARS)

SPRING	15 APR - 13 JUN	14 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 - 14 NOV	20 AUG - 14 NOV	29 AUG - 15 NOV

***Includes jack counts.**

Priest Rapids 1999 through 2002 changes are from PUD correspondence.

Wells 2001 and 2002 changes are from PUD correspondence.

TABLE 3 and TABLE 4

STEELHEAD OVER COLUMBIA AND SNAKE RIVER DAMS 1953-2003
BY RUN-YEAR (JUNE 1 - MAY 31)

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 that summarizes steelhead trout counts at each project on a "fish year" basis: June 1 - May 31. Because all stocks of steelhead cross Bonneville Dam during the calendar year, those summary counts have not been modified.

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 the previous 'year passed the dams without being counted.**

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

TABLE 3

STEELHEAD OVER COLUMBIA AND SNAKE RIVER DAMS 1953 - 2003

BY RUN-YEAR (JUNE 1 - MAY 31)

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	9,256 *	
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	36,896	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	1,070	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
1997-98	164,657	159,442	129,772	104,220	85,959	74,845	86,617
1998-99	116,262	156,628	98,606	84,135	65,173	62,641	70,721
1999-00	157,062	165,239	84,413	84,253	73,135	65,505	73,811
2000-01	205,801	219,433	131,330	126,989	113,454	102,074	116,490
2001-02	504,704	489,215	401,881	286,874	298,042	270,031	269,281
2002-03	389,119	393,339	292,034	222,199	230,466	214,586	234,815
Total	6,869,580	4,763,550	5,281,159	3,239,006	2,478,187	1,510,206	2,210,343
10-Year Average	192,534	185,436	146,630	116,447	107,344	95,904	101,828

Extended 1996-2001 count seasons, using video counts November 1-December 15, at Ice Harbor and Lower Granite dams are included.
Extended 2001 video counts November 1 - December 31 at Lower Monumental and Little Goose are included
Extended 2002 video counts November 1 - December 15 at Ice Harbor are included.
Extended 2002 video counts January, February, and March at Lower Monumental and Little Goose are included.
Extended 2002 video counts for November and December at Lower Monumental, Little Goose, and Lower Granite are included.
Extended 2003 video counts January 1 - March 31 at Lower Monumental and Little Goose are included.

TABLE 4

STEELHEAD OVER MID COLUMBIA RIVER DAMS 1959 - 2003

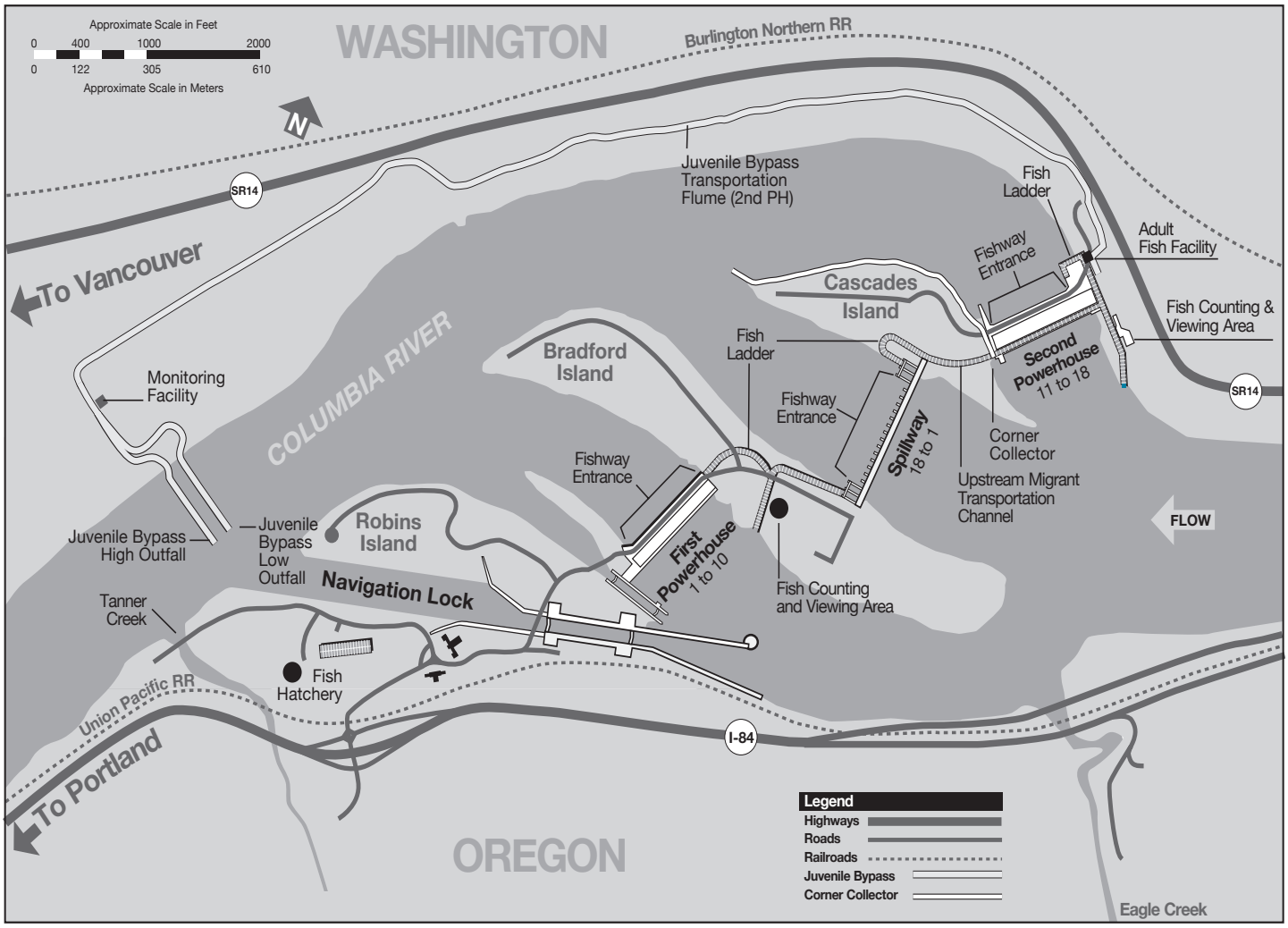
BY RUN-YEAR (JUNE 1 - MAY 31)

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
1985-86	34,007	31,813	22,621	19,712
1986-87	22,332	22,766	15,060	13,251
1987-88	14,054	12,887	7,243	5,565
1988-89	10,138	9,100	5,573	4,358
1989-90	10,720	9,244	5,991	4,577
1990-91	7,858	6,926	5,023	3,842
1991-92	14,047	11,125	7,788	7,823
1992-93	13,596	12,382	7,429	7,029
1993-94	5,395	4,689	2,738	2,359
1994-95	6,710	5,633	2,825	2,181
1995-96	4,357	4,168	1,777	951
1996-97	8,323	7,295	5,780	4,154
1997-98	8,942	7,718	6,756	4,074
1998-99	5,846	4,968	4,404	2,676
1999-00	8,267	6,346	4,848	3,514
2000-01	11,341	10,565	8,307	6,287
2001-02	30,102	28,614	22,114	18,519
2002-03	15,867	28,575	11,718	9,430
Total	**474,587**	**297,330**	**196,812**	**187,170**
10-Year Average	**10,515**	**10,857**	**7,127**	**5,415**

***Partial year**

Yearly totals for Priest Rapids 1992, 1993, 1994, 1995, 1996, and 1997 were updated through correspondence with Grant County Public Utility District.

Plate 2 Bonneville Lock and Dam



BONNEVILLE DAM

FISH COUNTING SCHEDULE

Jan 1 – Jan 31	Video counting daily 16 hours/day.
Feb 1 – Mar 31	Video counting daily 0400-2000 hours Pacific Standard Time.
Apr 1 – Oct 31	Visual counting daily 0400-2000 hours Pacific Standard Time.
Nov 1 – Dec 31	Video counting daily 0400-2000 hours Pacific Standard Time.

ADULT FISH FACILITIES OPERATING SCHEDULE

Bradford Island Fish Ladder:
01 Feb 03 – 26 Feb 03 Out of service (OOS) for winter maintenance.

Cascades Island Fish Ladder:
16 Dec 02 -- 28 Jan 03 OOS for winter maintenance.

Second Powerhouse Fish Ladder:
01 Dec 02—18 Jan 03 OOS for winter maintenance.
01 Dec 02 – 10 Mar 03 South Monolith OOS for B2CC construction.
09 Dec 03 – 31 Dec 03 OOS for winter maintenance.

Adult Fish Facility
25 Nov 02---04 Feb 03 OOS for winter maintenance and modifications.
14 May 03 – 14 May 03 OOS for brail pool modifications.

Fishway Auxiliary Water Supply Turbines:

Fish Unit 1:
01 Nov 02 – 15 Apr 03 OOS for overhaul and stator rewind.
21 Jul 03 – 21 Jul 03 OOS for to mid season fishway dives at PH2.

Fish Unit 2:
16 Dec 02 – 18 Jan 03 OOS for winter maintenance.
27 Jan 03 – 27 Jan 03 OOS for WA Shore collection channel inspection dive.
21 Jul 03 - 21 Jul 03 OOS for mid season fishway dives at PH2.

DOWNSTREAM MIGRANT FACILITIES OPERATING SCHEDULE

First Powerhouse:
29 Jul 02 – 24 Mar 03 turned south.
09 Apr 03 – 10 Apr 03 OOS for small screen sweep maintenance.
10 Nov 03 – present turned south.

Second Powerhouse:

18 Dec 02 – 06 Feb 03	OOS for winter maintenance.
02 Mar 03 – 10 Mar 03	OOS due to debris jam in the bypass flume.
27 Mar 03 -- 27 Mar 03	SMF OOS for three way gate repairs.

FISHWAY ACTIVITIES

Pacific Northwest National Laboratory and BAE Systems evaluated the variation in fish losses through gaps at the top of the submerged traveling screens at Powerhouse two using an acoustic camera. Data gathered from this study will be used to evaluate fish guidance efficiency in modified and unmodified gate well slots.

The Columbia River Inter-Tribal Fish Commission (CRITFC) again used the second powerhouse Adult Fish Facility (AFF) to collect salmonids. Fish scales were sampled (to determine age) and biological data collected. The work helps 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. All fish were immediately returned to the fish ladder.

The Oregon Department of Fish and Wildlife (ODFW) 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 immediately returned to the fish ladder.

The Washington Department of Fish and Wildlife (WDFW) jaw-tagged adult spring chinook at the AFF on the Washington Shore to use in the tooth net or tangle net studies in conjunction with the tangle tooth net fishery in Washington State.

The WDFW collected adult steelhead in the AFF. They trapped steelhead to determine the number and timing of ESA listed steelhead stocks passing Bonneville Dam. The study also assessed stock composition at Bonneville and in the treaty fishery. The study was required by the U.S. v. Oregon Technical Advisory Committee (TAC) which included NMFS and USFWS. All fish trapped were immediately returned to the fish ladder.

WDFW collected and tagged chum in the AFF. This study is to determine stock identification and to track the fish to the spawning groungs.

WDFW collected samples from pink salmon in the AFF. This study was to determine stock composition.

University of Idaho continued to radio tag and track chinook and steelhead at Bonneville. Data collected is used to assess fallback rates, passage times and routes and survival of salmonids through hydro-facilities as they continue to the Snake River.

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.

PSMFC continued to maintain adult PIT tag detection in all fishways.

NOAA Fisheries (formerly NMFS) tracked lamprey through the project this year. Lamprey were also marked for evaluation of a lamprey ladder in the AWS channel at Bradford Island. Different configurations were tested to determine the best method for encouraging lamprey to exit that channel.

Pacific States Marine Fisheries Commission (PSMFC) used the juvenile bypass system fish sampling facilities at Bonneville to monitor passage of downstream migrants. Sampling ceased at the PH1 JBS on 31 July because of low fish numbers. PH2 JBS work included pit tag sampling and smolt indexing. All PH2 sampling ended on 31 October.

The NMFS supplied a flat plate PIT tag detector at the sampling tank at the first powerhouse smolt monitoring facility for the fourth year. The device is intended to provide 100% monitoring for PIT tagged fish. PIT tag detection at the second powerhouse monitoring facility was through the use of detector coils instead of a flat plate. These coils are part of the various transport flumes at the monitoring facility. PIT tag detectors were operated by PSMFC. PSMFC maintains a PIT tag information system to monitor juvenile salmonids in the Columbia River Basin.

ICFWRU evaluated physiological changes in migrating and transported Chinook salmon and effects on performance and survival. The study hypothesis was that a prolonged migration, in concert with the energy costs associated with dam passage and poor feeding conditions in the reservoirs, could deplete the energy reserves of the fish and reduce viability.

The following agencies participated at Bonneville Dam in the BPA funded Northern Pikeminnow management and research program. Pikeminnows 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 pikeminnow populations in many areas in the Columbia River including areas within Bonneville's boat restricted zones. Pikeminnow were collected by electrofishing from boats. ODFW is evaluating effectiveness of population control measures.

- The Washington Department of Fish & Wildlife implemented the sport reward fishery.

The WDFW and ODFW cooperated in conducting special fish counting again this year to estimate passage for tule and bright stock fall chinook. The numbers are used for in-season predictions and to assess final run size. This program was implemented in 1979.

The WDFW 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.

Pelfrey Sturgeon Hatchery collected broodstock in Bonneville's tailwaters again this year. Their work is supported by ODFW.

Bonneville Historic Fish Count Schedule 1938-2002 (information based on previous Annual Fish Passage Reports)
16 hour counts occurred between the hours of 0400-2000 PST unless otherwise stated.
8 hour counts occurred between the hours of 0800-1600 PST unless otherwise stated.

Year	Months	Count Period	Notes
1938	May 7 - Dec 31		
1939-1946	Jan 1 - Dec 31	16 hour (0400-2000)	
1947			Began recording gillnet and injured fish.
1948			Apr - Aug are 24 hour counts. Gates closed at night unless otherwise stated.
1949			Shad observation occurred on July 14 and 15 for 24 hours
1950	Jan 1 – 12	Periodic check	New Washington and Oregon count stations
	Feb 20 – Mar 4	Periodic check	
	Mar 5 – 27	8 hour OR (0800-1600) /periodic check WA	
	Mar 28 – Apr 15	8 hour	
	Apr 16 – Sep 30	16 hour	
	Oct 1 – Nov 29	8 hour	
1951	Mar 14 – 18	4 hour	
	Mar 19 – Apr 2	8 hour	
	Apr 3 – Sep 29	16 hour	
	Sep 30 – Nov 29	8 hour	
1952	Mar 1 – 27	8 hour	
	Mar 28 – Sep 30	16 hour	
	Oct 1 – Nov 29	8 hour	
1953	Mar 1 – 28	8 hour	
	Mar 29 – Oct 3	16 hour	
	Oct 4 – Nov 28	8 hour	
1954	Feb 28 – Apr 3	8 hour	
	Apr 4 – Oct 2	16 hour	
	Oct 3 – Nov 27	8 hour	
1955	Feb 27 – Mar 26	8 hour	
	Mar 27 – Oct 1	16 hour	
	Oct 2 – Nov 29	8 hour	
1956	Mar 1- 30	8 hour	
	Mar 31 – Oct 6	16 hour	
	Oct 7 – Oct 16	8 hour	

Year	Months	Count Period	Notes
	Oct 17- Dec 1	Sample counting 4 hour	
1957	Mar 1 – 30	8 hour	
	Mar 31 – Aug 14	Sample counting 4 hour	15 minute break every hour
	Aug 15 – Oct 20	16 hour	From 1957 on, counters took a 10 minute break every hour. 1.2 factor applied unless Otherwise stated.
	Oct 21 – Nov 17	Sample counting 4 hour	
	Nov 18 – Nov 30	8 hour	
1958	Mar 2 – 8	Sample counting 4 hour	Gates left open at all times unless otherwise stated.
	Mar 9 – 29	8 hour	
	Mar 30 – Oct 4	16 hour	
	Oct 5 – Nov 29	8 hour	
1959	Mar 1 – Apr 11	Sample counting 4 hour	
	Apr 12 – Sep 3	Sample counting 8 hour	
	Sep 4 – 12	16 hour	
	Sep 13 – Oct 3	Sample counting 8 hour	
	Oct 4 – Nov 28	Sample counting 4 hour	
1960	Mar 1 – Apr 2	Sample counting 4 hour	
	Apr 3 – Oct 1	Sample counting 8 hour	
	Oct 2 – Nov 30	Sample counting 4 hour	
1961	Mar 1 – Apr 10	Sample counting 8 hour	
	Apr 11 – Sep 30	16 hour	
	Oct 1 – Nov 30	8 hour	
1962	Mar 1 – 31	8 hour	Counting gate closed at night unless otherwise stated
	Apr 1 – Sep 29	16 hour	
	Sep 30 – Nov 28	8 hour	Gates remained open at all times unless otherwise stated.
1963	Mar 1 – 31	8 hour	Gates closed at night unless otherwise stated.
	Apr 1 – Oct 26	16 hour	
	Oct 27 – Nov 17	8 hour	Gates opened at night.
	Nov 18 – 30	8 hour	Gates open at all times.
1964	Mar 1- 28	8 hour	Gates closed at night unless otherwise stated.
	Mar 29 – Oct 31	16 hour	
	Nov 1 – 28	8 hour	Gates remain opened at all times unless otherwise stated.
1965	Mar 1- 30	8 hour	
	Mar 31 – Oct 28	16 hour	Gates closed at night.
	Oct 29 – Nov 30	8 hour	Gates remain opened at all times.

Year	Months	Count Period	Notes
1966	Feb 25 – Mar 10	No counting	Both ladders closed during peaking tests.
	Mar 11 – 31	8 hour	Gates open at night.
	Apr 1 – Oct 27	16 hour	Gates closed at night.
	Oct 28 – Nov 26	8 hour	Gates open Nov. 27 to end of year.
1967	Mar 1 – 31	8 hour	1.2 daytime factor applied, but different nighttime factor according to species.
	Apr 1 – Oct 28	16 hour	Gates closed during breaks and at night.
	Oct 29 – Nov 25	8 hour	Gates open unless otherwise stated.
1968	Mar 4 – 31	8 hour	
	Apr 1 – Oct 26	16 hour	Gates closed at night and during breaks.
	Oct 27– Nov 23	8 hour	Gates open.
1969	Mar 2 – 29	8 hour	
	Mar 30 – Oct 25	16 hour	Gates closed at night and during breaks.
	Oct 26 – Nov 22	8 hour	Gates open.
1970	Mar 1- Apr 4	8 hour	1.26 factor applied.
	Apr 5 – Oct 24	16 hour	Gates closed at night and during breaks.
	Oct 25 – Nov 21	8 hour	Gates open.
1971	Mar 1 – 27	8 hour	1.26 factor used for night and rest periods.
	Mar 28 – Oct 23	16 hour	Gates closed at night and during breaks.
	Oct 24 – Nov 13	8 hour	Gates open.
1972	Mar 15 – 31	8 hour	1.26 factor used for nighttime and rest periods.
	Mar 28 – Oct 23	16 hour	1.2 factor used for rest periods
	Oct 24 – Nov 15	8 hour	1.26 factor applied towards daily totals.
1973	Mar 15 – 31	8 hour	
	Apr 1- Oct 31	18 hour (0400-2200ST)	Gates open. Tuesdays, fish counted 24 hours. 1.2 factor applied.
	Nov 1 – 15	8 hour	1.26 factor applied.
1974	Mar 15 – 31	8 hour	
	Apr 1 – Oct 31	16 hour	1.2 factor applied. 24-hour counts occurred on the following days: Apr 23, 24, 27-30; May 4-8, 11-14, 17, 18, 22-26;Jul 1-5, 8-12, 16-20, 23-27, 30, 31; Aug 1-4, 7-11, 14-19, 25, 26, 29-31; and Sep 1, 5-10, 13-17, 21-25, 28, 29.
	Nov 1- 15	8 hour	1.26 factor applied.
1975	Mar 15 – 31	8 hour	1.2 factor applied unless otherwise stated.
	Apr 1- Oct 31	16 hour (0500-2100)	
	Nov 1 – 15	8 hour	

Year	Months	Count Period	Notes
1976-1984	Mar 15 – 31	8 hour	
	Apr 1- Oct 31	16 hour (0400-2000)	
	Nov 1 – 15	8 hour	
1985	Mar 15 – 31	8 hour	
	Apr 1 – Oct 31	16 hour	
	Nov 1 – 30	8 hour	Counting hours missed: Nov 20 Washington 15-1600; Nov 21 Oregon 15-1600 Washington 13-1600; Nov 22 Oregon 0800-1600 Washington 0800-1600; Nov 30 Oregon 1230-1600 Washington 11-1600
1986	Mar 4 – 31	8 hour	Excavation for new navigation lock
	Apr 1 – Oct 31	16 hour	
	Nov 1 – 30	8 hour	
1987	Mar 1 – 31	8 hour	
	Apr 1 – Oct 31	16 hour	
	Nov 1 – 30	8 hour	
1988	Mar 15 – 31	8 hour	
	Apr 1 – Oct 31	16 hour	
	Nov 1 – 30	8 hour	
1989	Mar 1 – 31	8 hour	
	Apr 1 – Oct 31	16 hour	
	Nov 1 – 30	8 hour	
1990-1991	Mar 15 – 31	8 hour	
	Apr 1 – Oct 31	16 hour	
	Nov 1 – 15	8 hour	
1992	Mar 15 – 31	8 hour	
	Apr 1 – Oct 31	16 hour	24 hour counts during BB season (May 31 – 16 Aug)
	Nov 1 – 15	8 hour	
	Nov 16 – Dec 31	16 hour video	
1993	Mar 15 – 31	8 hour	
	Apr 1 – Oct 31	16 hour	
	Nov 1 – 15	8 hour	8 additional hours of monitoring steelhead
	Nov 16 – Dec 31	16 hour video	
1994	Jan 1 – Mar 14	16 hour video	
	Mar 15 – 31	8 hour + 8 hour video	
	Apr 1 – Jun 15	16 hour	

Year	Months	Count Period	Notes
	Jun 16 – Aug 16	16 hour + 8 hour video	
	Aug 17 – Oct 31	16 hour	
	Nov 1-5	8 hour + 8 hour video	
	Nov 6 – 15	8 hour + 16 hour video	
	Nov 16 – 30	24 hour video	
1995	Jan 1 – Mar 14	24 hour video	
	Mar 15 – 31	8 hour + 16 hour video	8 hour (2400-1800), 16 video (1600-2400)
	Apr 1 – Oct 31	16 hour + 8 hour video	16 hour (0500 – 2100), 8 video (2100-0400)
	Nov 1 – 15	8 hour + 16 hour video	
	Nov 16 – Dec 31	24 hour video	
1996-1997	Jan 1 – Mar 31	24 hour video	
	Apr 1 – Oct 31	16 hour + 8 hour video	
	Nov 1 –Dec 31	24 hour video	
1998	Jan 1- Mar 31	24 hour video	
	Apr 1 – Oct 31	16 hour + 8 hour video	16 hour (0500-2100), 8 video (2100-0500)
1999-2002	Jan 1- Mar 31	24 hour video	
	Apr 1 – Oct 31	16 hour + 8 hour video	16 hour (0400-2000) + 8 video (2000-0400)

TABLE 5

MONTHLY TOTALS OF SALMONID, SHAD AND LAMPREY COUNTED OVER BONNEVILLE DAM
YEAR 2003 COUNTS FROM JANUARY 1 THROUGH DECEMBER 31

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV**	DEC	TOTAL
CHINOOK*	6	93	19,283	120,626	70,020	81,333	46,833	90,884	533,913	30,440	2,827	402	996,660
STEELHEAD	724	1,728	2,264	1,474	1,714	10,966	95,185	139,612	95,759	12,467	3,115	813	365,821
SOCKEYE					2	26,432	12,714	139	4				39,291
COHO*	0						10	11,389	86,621	35,516	334	4	133,874
CHUM										7	319	85	411
PINK									600	37			637
TOTAL	730	1,821	21,547	122,100	71,736	118,731	154,742	242,024	716,897	78,467	6,595	1,304	1,536,694
SHAD					420,265	4,025,864	108,226	4,195					4,558,550
LAMPREY				6	2,874	50,875	45,863	13,230	3,843	336			117,027

***Jacks included**
****Counts were taken from 0400-2000 PST Jan 1 - Dec 31. Visual counting occurred Apr 1 - Oct 31.**
Video counting occurred Jan 1 - Mar 31 and Nov 1 - Dec 31.
Lamprey are not counted during video counts. Shad are not counted after September 1st.

TABLE 6

MONTHLY FISH PASSAGE SUMMARY REPORT | **BONNEVILLE PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND | **JANUARY 2003**

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Jan 1	0			0	0	0		20	-3			123.2	0.0	7.0	43.0
Jan 2	0			0	0	0		15	-2			112.5	0.0	7.0	42.0
Jan 3	0			0	0	0		19	4			121.2	0.0	7.0	42.0
Jan 4	0			0	-1	1		16	7			110.2	0.0	7.0	42.0
*Jan 5	0			0	0	0		-5	0			110.6	0.0	7.0	42.0
*Jan 6	0			0	0	0		-2	-1			117.1	0.0	5.0	42.0
Jan 7	0			0	0	0		14	0			117.3	0.0	7.0	42.0
Jan 8	0			0	0	0		5	0			133.3	0.0	7.0	41.0
Jan 9	0			0	0	0		30	6			140.4	0.0	7.0	41.0
Jan 10	0			0	0	0		9	2			122.4	0.0	6.0	41.0
Jan 11	0			0	0	0		14	0			125.9	0.0	7.0	40.0
Jan 12	0			0	0	0		15	-1			121.2	0.0	7.0	40.0
Jan 13	0			0	0	0		32	4			117.6	0.0	7.0	40.0
Jan 14	0			0	0	0		33	9			113.6	0.0	7.0	40.0
Jan 15	0			0	0	0		23	5			116.3	0.0	7.0	40.0
Jan 16	-1			0	0	0		44	12			118.0	0.0	6.9	40.0
Jan 17	0			0	0	0		28	7			125.5	0.0	6.0	40.0
Jan 18	1			0	0	0		48	19			125.0	0.0	6.0	40.0
Jan 19	0			0	0	0		24	9			118.8	0.0	6.0	40.0
*Jan 20	0			0	0	0		21	6			120.7	0.0	7.0	41.0
*Jan 21	0			0	0	0		14	-1			122.6	0.0	7.0	41.0
*Jan 22	2			0	0	0		8	-2			121.7	0.0	7.0	41.0
Jan 23	-1			0	0	0		10	-1			114.0	0.0	7.0	40.0
Jan 24	1			0	0	0		20	4			115.6	0.0	7.0	40.0
Jan 25	2			0	0	0		7	4			113.0	0.0	7.0	40.0
Jan 26	-1			0	0	0		54	9			107.7	0.0	3.5	40.0
*Jan 27	0			0	0	0		45	1			125.7	0.0	6.0	41.0
*Jan 28	0			0	0	0		46	4			152.6	0.0	5.0	41.0
Jan 29	2			0	0	0		39	14			165.6	0.0	6.4	41.0
*Jan 30	0			0	0	0		30	6			147.5	0.0	7.0	41.0
*Jan 31	1			0	0	0		48	6			176.6	0.0	5.0	41.0
TOTAL	6			0	-1	1		724	127						
AVG	0			0	0	0		23	4			124.9	0.0	6.5	40.8

Note: From January 1 to March 31, counts were from video tape. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST. Visual counting started April 1

Official Spring Chinook run started March 15. January, February, and March 1 -14 Chinook counts were not added to spring totals.

*Jan 5 OR video not working 0600-1400 during the day and from 1600-2000 at night.

*Jan 6 OR video not working from 0400-1700.

*Jan 19 WA camera off 0400-2000.

*Jan 20 WA camera off 0400-1700.

*Jan 22 WA camera off 0400-2000.

*Jan 27 WA power loss 0400-1400.

*Jan 28 WA power loss 0400-1700.

*Jan 30 WA power loss 1900-2000.

*Jan 31 OR missing data from 0400-0900 and 1700-2000.

TABLE 7

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT

FEBRUARY 2003

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	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
*Feb 1	4			0				3	-1			233.7	0.0	4.5	41.0
*Feb 2	0			0				0	0			219.2	0.0	1.4	41.0
*Feb 3	0			0				31	0			191.9	0.0	2.0	41.0
Feb 4	0			0				108	3			194.4	0.0	4.0	41.0
Feb 5	0			0				100	-6			146.3	0.0	7.0	41.0
Feb 6	0			0				90	5			139.8	0.4	4.0	41.0
Feb 7	0			0				61	1			160.0	0.8	5.0	40.0
Feb 8	0			0				56	0			143.5	0.8	6.0	40.0
Feb 9	0			0				58	0			124.1	0.9	7.0	40.0
Feb 10	0			0				51	1			129.1	0.9	6.0	40.0
Feb 11	0			0				39	1			133.1	0.9	5.5	40.0
Feb 12	0			0				59	-1			125.9	0.8	5.2	40.0
Feb 13	0			0				74	4			128.4	0.9	6.0	40.0
Feb 14	0			0				90	17			128.9	0.9	5.0	40.0
Feb 15	0			0				107	-6			122.4	0.9	4.0	40.0
Feb 16	0			0				114	6			112.3	0.9	4.0	40.0
Feb 17	0			0				61	0			114.6	0.9	5.0	41.0
Feb 18	2			0				50	2			113.0	0.9	4.0	41.0
Feb 19	4			0				28	-2			133.3	0.9	4.0	41.0
Feb 20	2			0				44	0			126.7	0.9	4.1	41.0
Feb 21	2			0				110	16			118.6	0.9	4.0	41.0
Feb 22	3			0				90	6			112.8	0.9	4.0	41.0
Feb 23	6			0				81	1			123.5	0.9	4.0	41.0
Feb 24	6			0				19	1			124.8	0.9	4.0	41.0
Feb 25	3			0				10	1			129.7	0.9	4.0	42.0
Feb 26	1			0				30	10			134.0	0.9	6.2	40.0
Feb 27	12			0				85	20			119.9	1.9	5.0	42.0
Feb 28	48			0				79	13			130.6	1.9	4.0	42.0
TOTAL	93			0				1,728	92						
AVG	3			0				62	3			139.8	0.8	4.6	40.7

Note: From January 1 to March 31, counts were from video tape. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST. Visual counting started April 1

Official Spring Chinook run started March 15. January, February, and March 1-14 Chinook counts were not added to spring totals.

***Feb 1 WA Power loss 0400-1900.**

***Feb 2 WA no video 0400-2000, OR bad video tape 0400-2000.**

***Feb 3 WA camera off 0400-1300.**

TABLE 8

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT

MARCH 2003

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Mar 1	66			0				131	45			128.7	2.0	5.5	42.0
Mar 2	88			0				93	18			125.3	1.9	5.0	40.0
Mar 3	121			0				64	6			137.3	1.9	5.2	40.0
Mar 4	102			0				35	-5			146.7	1.9	4.4	41.0
Mar 5	127			0				60	-9			160.2	1.9	5.0	41.0
Mar 6	140			0				58	0			147.8	1.7	3.2	42.0
Mar 7	213			0				102	16			148.1	1.8	5.0	42.0
Mar 8	266			0				100	22			176.1	1.8	4.6	42.0
Mar 9	371			0				118	35			169.2	1.8	3.0	41.0
Mar 10	394			0				119	24			147.5	14.8	3.3	42.0
Mar 11	627			0				65	7			163.3	52.0	4.0	42.0
Mar 12	516			0				66	11			129.4	14.7	4.0	42.0
Mar 13	307			0				57	20			148.1	1.6	5.6	42.0
Mar 14	323			0				76	15			152.9	1.6	5.0	42.0
Mar 15	595			0				110	7			148.0	1.6	4.5	43.0
Mar 16	942			0				54	0			161.0	1.6	4.5	43.0
Mar 17	416			1				21	-5			176.4	1.8	5.0	43.0
Mar 18	559			0				41	8			198.7	1.8	5.0	44.0
Mar 19	736			0				50	-2			190.8	1.8	4.5	44.0
Mar 20	426			0				40	2			180.8	1.2	5.0	44.0
Mar 21	332			0				50	5			166.6	1.2	4.0	44.0
Mar 22	343			0				69	6			157.8	1.9	4.0	44.0
Mar 23	150			0				46	4			142.4	1.7	4.5	44.0
Mar 24	99			0				33	-7			135.2	1.6	6.0	44.0
Mar 25	115			0				40	5			166.7	1.7	5.0	44.0
Mar 26	622			3				78	0			177.1	1.7	5.0	44.0
Mar 27	1973			2				79	19			228.1	1.9	5.0	44.0
Mar 28	2161			29				116	29			237.3	2.0	5.0	45.0
Mar 29	1690			2				75	7			208.3	1.9	5.0	45.0
Mar 30	1807			6				93	16			191.8	2.0	6.0	46.0
Mar 31	2580			33				125	3			194.2	1.9	5.2	46.0
TOTAL	19,207			76				2,264	302						
AVG	620			4				73	10			165.9	4.2	4.7	43.0

Note: From January 1 to March 31, counts were from video tape. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST. Visual counting started April 1.

Official Spring Chinook run started March 15. January, February, and March 1-14 Chinook counts were not added to spring totals.

TABLE 9

MONTHLY FISH PASSAGE SUMMARY REPORT | **BONNEVILLE PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND | **APRIL 2003**

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	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Apr 1	2,574			0				79	39	0	0	184.9	2.1	5.2	46.0
Apr 2	1,687			0				80	27	0	0	208.1	2.1	4.0	46.0
Apr 3	1,293			2				78	33	0	0	185.7	1.9	4.0	46.0
Apr 4	1,567			0				101	40	0	0	181.4	1.8	4.5	46.0
Apr 5	3,823			8				97	37	0	0	185.2	2.0	3.5	46.0
Apr 6	7,455			3				69	36	0	0	197.3	2.0	3.8	46.0
Apr 7	3,900			2				76	36	0	0	187.3	2.0	4.0	46.0
Apr 8	2,629			33				80	44	0	0	194.5	2.0	3.7	46.0
Apr 9	3,591			41				74	26	0	0	198.3	2.1	3.5	46.0
Apr 10	3,955			22				46	12	0	0	205.6	2.0	3.6	46.0
Apr 11	6,402			43				71	18	0	0	190.9	2.1	3.0	47.0
Apr 12	5,302			35				61	17	0	0	186.8	2.0	3.0	47.0
Apr 13	3,678			25				43	22	0	0	178.9	2.1	3.5	48.0
Apr 14	5,071			24				40	14	0	0	197.8	69.9	4.0	48.0
Apr 15	7,996			16				33	15	0	0	209.1	95.4	4.2	48.0
Apr 16	4,832			12				21	10	0	0	224.0	139.7	5.0	49.0
Apr 17	2,123			16				13	3	0	0	216.1	149.6	4.2	48.0
Apr 18	2,802			23				21	3	0	0	253.0	148.0	4.0	48.0
Apr 19	2,362			24				27	3	0	0	222.9	147.2	4.4	48.0
Apr 20	5,189			51				45	16	0	0	207.6	104.0	4.5	48.0
Apr 21	5,414			68				27	12	0	0	209.7	103.4	3.5	49.0
Apr 22	6,358			68				19	5	0	0	230.6	142.2	4.5	49.0
Apr 23	3,464			74				38	6	0	0	248.8	142.4	5.0	49.0
Apr 24	4,303			94				53	7	0	0	238.1	101.5	4.0	50.0
Apr 25	4,371			121				35	15	0	0	219.6	102.3	4.5	50.0
Apr 26	2,997			148				25	12	0	0	278.4	103.6	3.2	49.0
Apr 27	3,595			142				34	7	0	0	235.3	103.0	4.0	49.0
Apr 28	4,152			209				21	6	0	4	245.2	146.7	5.0	50.0
Apr 29	2,191			128				33	9	0	0	238.5	141.6	5.0	50.0
Apr 30	3,946			172				34	11	0	2	251.6	134.2	4.0	50.0
TOTAL	119,022			1,604				1,474	541	0	6				
AVG	3,967			53				49	18	0	0	213.7	70.0	4.1	47.8

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
SPRING	134,568	1,680	2,594	638	0	6

TABLE 10

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT

MAY 2003

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	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
May 1	3,289			262			0	38	17	0	2	255.6	128.4	5.3	50.0
May 2	4,031			376			0	45	12	0	6	232.5	92.5	5.0	50.0
May 3	3,132			429			0	38	2	0	10	227.9	87.1	4.0	50.0
May 4	2,013			264			0	19	1	0	11	219.6	101.8	4.0	51.0
May 5	1,764			272			0	25	2	0	2	225.0	111.2	5.7	50.0
May 6	1,412			420			0	31	5	0	0	258.1	94.2	5.0	50.0
May 7	1,877			512			0	50	17	0	8	273.1	97.5	3.0	50.0
May 8	1,962			611			0	37	7	0	12	226.8	100.0	3.8	51.0
May 9	2,288			812			0	29	6	2	20	257.5	103.1	3.0	51.0
May 10	1,219			359			0	27	10	0	14	230.9	155.8	4.0	51.0
May 11	1,664			488			0	29	7	0	13	212.9	148.5	4.0	51.0
May 12	2,063			751			0	50	10	0	10	217.2	95.6	4.5	51.0
May 13	2,053			801			0	45	12	6	24	218.0	99.4	6.0	52.0
May 14	2,378			702			0	58	13	37	6	259.0	143.8	4.3	52.0
May 15	1,221			352			0	47	4	12	25	254.6	142.2	4.0	52.0
May 16	807			245			0	57	11	0	20	261.5	146.3	5.1	52.0
May 17	1,266			532			0	93	18	8	12	245.6	148.7	3.5	52.0
May 18	1,748			651			0	66	8	37	14	254.9	100.2	4.0	52.0
May 19	2,330			697			0	47	14	890	24	257.4	101.1	4.0	52.0
May 20	2,394			482			0	55	19	3,036	36	226.6	153.1	5.0	52.0
May 21	1,480			383			0	51	18	4,573	86	245.8	146.6	5.0	52.0
May 22	1,781			352			0	67	14	15,040	71	259.8	97.4	4.2	53.0
May 23	1,578			282			0	63	18	12,876	50	268.4	96.3	5.0	54.0
May 24	1,403			274			0	73	14	11,104	49	272.4	137.7	4.5	54.0
May 25	1,113			190			0	67	17	9,239	98	251.3	134.5	4.5	54.0
May 26	2,047			321			0	94	25	30,148	152	276.6	94.9	4.2	55.0
May 27	1,491			159			1	101	27	37,670	77	310.8	102.1	4.5	55.0
May 28	1,345			156			0	98	24	42,914	193	338.9	130.5	2.5	55.0
May 29	974			153			0	72	23	61,417	350	282.0	103.3	5.0	55.0
May 30	1,393			119			1	53	20	65,687	534	343.4	139.6	3.5	55.0
May 31	1,926			171			0	89	12	125,569	945	350.5	140.6	2.2	55.0
TOTAL	57,442			12,578			2	1,714	407	420,265	2,874				
AVG	1,853			406			0	55	13	13,557	93	258.5	118.5	4.3	52.2

RUN YEAR TOTALS TO DATE		CHINOOK ADULT	CHINOOK JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
	SPRING	192,010	14,258	2	4,308	1,045	420,265	2,880

TABLE 11

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT

JUNE 2003

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	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Jun 1		1,879		213			3	128	32	185,667	455	352.9	130.7	3.2	56.0
Jun 2		1,953		194			10	111	30	94,367	588	325.3	107.8	3.8	57.0
Jun 3		1,993		190			7	97	24	66,446	323	316.4	144.7	4.8	57.0
Jun 4		1,812		211			18	124	45	112,135	303	302.6	142.7	4.8	57.0
Jun 5		2,128		247			24	95	41	504,724	486	304.5	91.7	4.5	57.0
Jun 6		1,653		231			69	146	38	520,664	2,228	295.2	90.1	4.0	57.0
Jun 7		1,578		234			65	127	37	324,718	2,662	280.9	134.1	6.5	59.0
Jun 8		4,081		263			117	161	59	171,420	1,974	289.2	129.6	4.0	59.0
Jun 9		3,883		255			168	151	39	285,277	1,361	277.7	88.6	4.0	59.0
Jun 10		2,386		208			212	157	56	165,828	2,080	290.9	89.2	3.2	59.0
Jun 11		1,840		213			192	147	45	72,234	2,406	313.7	141.3	3.1	59.0
Jun 12		2,340		215			225	186	40	73,944	3,609	308.2	144.3	3.5	59.0
Jun 13		2,621		256			336	205	54	211,217	2,198	281.9	95.4	5.0	59.0
Jun 14		2,206		194			395	199	59	209,300	2,558	294.6	96.4	5.0	60.0
Jun 15		1,378		176			408	225	53	68,079	1,681	260.1	154.3	4.2	60.0
Jun 16		1,390		246			553	242	84	64,106	3,054	244.1	152.0	5.5	60.0
Jun 17		3,024		282			842	301	104	227,962	2,696	281.8	92.9	4.0	60.0
Jun 18		2,894		272			930	318	111	190,434	2,748	275.9	93.3	3.0	61.0
Jun 19		2,055		232			909	290	87	40,164	2,282	268.1	146.4	3.0	61.0
Jun 20		1,544		147			900	328	87	26,457	1,182	208.0	150.3	4.0	61.0
Jun 21		3,247		266			1,290	438	145	57,402	1,197	198.4	94.1	4.5	60.0
Jun 22		2,814		234			1,530	499	168	36,334	1,162	203.4	95.9	4.0	60.0
Jun 23		1,777		229			1,474	515	168	31,821	1,006	199.8	151.9	5.0	60.0
Jun 24		2,793		365			1,986	548	162	35,285	735	193.5	144.0	5.0	60.0
Jun 25		2,770		392			2,459	589	201	43,276	1,371	209.3	141.2	5.0	60.0
Jun 26		2,532		381			2,591	620	196	39,250	2,348	249.7	143.6	6.0	61.0
Jun 27		3,814		464			3,258	933	368	56,562	1,720	232.6	93.2	5.0	61.0
Jun 28		3,110		320			1,867	828	305	46,272	2,166	199.2	93.8	6.0	62.0
Jun 29		3,146		293			1,935	1,061	424	42,351	1,102	205.3	94.4	5.0	62.0
Jun 30		2,959		310			1,659	1,197	443	22,168	1,194	188.9	94.4	5.0	62.0
TOTAL		73,600		7,733			26,432	10,966	3,705	4,025,864	50,875				
AVG		2,453		258			881	366	124	134,195	1,696	261.7	118.7	4.5	59.5

RUN YEAR TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	192,010	14,258
SUMMER	73,600	7,733
TOTAL	265,610	21,991

COHO ADULT	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
0	26,434	15,274	4,750	4,446,129	53,755

TABLE 12

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT

JULY 2003

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Jul 1		2,826		254	0	0	1,572	1,193	527	16,047	1146	188.0	94.9	5.0	62.0
Jul 2		2,198		252	0	0	1,400	1,090	463	11,788	992	188.9	94.0	5.0	62.0
Jul 3		2,317		233	0	0	1,127	1,106	486	9,475	888	144.6	87.9	4.8	63.0
Jul 4		1,803		246	0	0	1,048	1,180	495	8,155	787	149.9	83.4	5.0	63.0
Jul 5		2,100		213	0	0	1,054	1,106	434	5,808	1331	172.0	93.2	5.0	63.0
Jul 6		1,726		128	0	0	901	1,149	551	6,750	963	150.4	88.8	5.0	63.0
Jul 7		1,802		185	0	0	693	1,732	822	7,846	1097	141.5	84.6	6.2	64.0
Jul 8		1,554		195	4	0	674	1,880	910	5,676	1923	147.2	89.1	5.0	64.0
Jul 9		1,360		161	0	0	583	1,558	797	4,117	1102	184.5	89.3	7.4	64.0
Jul 10		1,631		201	0	0	491	1,782	874	5,760	1645	199.0	96.6	7.0	64.0
Jul 11		1,825		185	0	0	467	2,203	1,118	4,169	3204	185.7	96.7	4.7	64.0
Jul 12		1,956		212	0	0	457	2,746	1,390	3,502	3428	175.7	98.0	6.0	65.0
Jul 13		1,802		238	0	0	382	3,381	1,545	3,924	4124	156.6	93.0	5.0	65.0
Jul 14		1,055		154	0	0	314	3,363	1,750	2,242	3089	194.1	89.4	6.8	66.0
Jul 15		830		144	0	0	232	3,330	1,495	1,789	2206	171.6	92.8	5.0	67.0
Jul 16		1,368		194	0	0	240	3,541	1,583	1,218	1722	163.3	90.5	5.0	67.0
Jul 17		1,297		196	0	0	196	4,278	2,032	688	910	186.0	97.2	5.0	67.0
Jul 18		1,291		247	0	0	139	4,236	1,991	1,023	1209	169.2	92.8	5.9	67.0
Jul 19		1,484		210	0	0	124	6,219	2,973	863	1053	132.9	86.9	5.0	67.0
Jul 20		868		189	1	0	93	4,979	2,186	1,151	1952	149.5	84.8	7.0	67.0
Jul 21		746		157	0	0	64	3,665	1,583	578	1222	176.1	91.6	7.0	68.0
Jul 22		1,169		207	0	0	52	6,080	2,556	750	1928	160.0	91.1	7.0	69.0
Jul 23		836		136	0	0	129	5,153	2,173	665	1419	176.7	95.0	5.0	69.0
Jul 24		654		136	0	0	78	4,884	1,995	701	859	186.1	100.2	6.0	69.0
Jul 25		518		83	0	0	43	3,118	1,246	720	543	168.4	94.8	5.1	68.0
Jul 26		731		81	2	0	51	2,949	1,200	687	880	144.0	88.1	0.0	68.0
Jul 27		798		127	0	0	29	3,037	1,215	307	510	144.9	89.0	6.0	68.0
Jul 28		605		124	0	0	16	3,106	1,278	590	1087	157.5	87.5	7.0	68.0
Jul 29		582		174	1	0	26	3,289	1,128	361	1230	180.9	96.4	7.0	68.0
Jul 30		706		189	0	0	17	3,519	1,323	568	797	157.4	89.7	7.0	70.0
Jul 31		770		174	2	0	22	4,333	1,698	308	617	146.3	85.9	7.0	70.0
TOTAL		41,208		5,625	10	0	12,714	95,185	41,817	108,226	45,863				
AVG		1,329		181	0	0	410	3,070	1,349	3,491	1,479	166.1	91.4	5.6	66.1

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	192,010	14,258
SUMMER	114,808	13,358
TOTAL	306,818	27,616

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
10	0	39,148	110,459	46,567	4,554,355	99,618

TABLE 13

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT

AUGUST 2003

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
Aug 1			492	129	0	0	10	5,341	2,042	408	686
Aug 2			390	118	0	0	7	4,812	1,755	208	812
Aug 3			537	102	0	0	22	4,073	1,529	686	305
Aug 4			642	105	0	0	11	4,078	1,416	223	360
Aug 5			843	147	2	1	6	6,110	2,129	530	563
Aug 6			595	104	2	1	13	5,855	2,118	270	446
Aug 7			612	102	7	0	8	5,390	1,955	212	594
Aug 8			638	91	4	2	4	5,219	1,651	143	632
Aug 9			949	93	3	2	1	5,216	1,756	192	928
Aug 10			838	140	8	2	4	6,204	1,936	166	462
Aug 11			741	100	8	1	7	7,737	2,214	192	366
Aug 12			643	77	16	6	13	5,511	1,464	99	725
Aug 13			1,142	113	50	16	2	4,698	1,362	25	467
Aug 14			672	87	60	12	7	5,122	1,630	158	372
Aug 15			649	96	89	11	2	6,643	2,045	82	380
Aug 16			706	81	161	15	2	6,446	1,965	70	404
Aug 17			648	68	149	27	1	5,614	1,586	62	276
Aug 18			861	63	149	28	1	4,961	1,395	62	484
Aug 19			691	95	108	10	1	4,701	1,202	40	526
Aug 20			762	117	117	21	5	4,111	975	43	427
Aug 21			529	77	49	19	2	3,768	901	45	295
Aug 22			550	42	45	24	-1	2,588	586	97	368
Aug 23			1,019	73	48	6	2	1,350	362	45	126
Aug 24			1,022	111	83	13	1	1,118	306	16	334
Aug 25			1,502	96	79	8	0	996	268	17	408
Aug 26			4,460	203	337	18	1	1,080	272	19	440
Aug 27			8,293	482	866	59	1	1,570	484	14	257
Aug 28			11,976	564	1,210	57	1	2,900	799	13	88
Aug 29			9,837	564	1,417	103	1	4,412	1,119	29	138
Aug 30			15,048	739	2,208	117	0	5,747	1,485	18	368
Aug 31			16,796	822	3,350	185	4	6,241	1,549	11	193
TOTAL			85,083	5,801	10,625	764	139	139,612	42,256	4,195	13,230
AVG			2,745	187	343	25	4	4,504	1,363	135	427

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Aug 1	165.6	88.7	5.0	70.0
Aug 2	171.4	90.9	5.0	70.0
Aug 3	134.1	87.2	6.0	69.0
Aug 4	152.1	85.1	4.0	70.0
Aug 5	139.7	86.9	6.0	70.0
Aug 6	142.4	87.2	5.5	70.0
Aug 7	143.8	85.9	7.0	69.0
Aug 8	144.5	86.9	5.5	69.0
Aug 9	147.2	88.1	7.0	69.0
Aug 10	141.4	87.5	7.0	69.0
Aug 11	146.3	84.7	5.0	70.0
Aug 12	172.6	94.8	5.0	70.0
Aug 13	163.6	96.3	6.0	70.0
Aug 14	154.2	90.3	6.0	69.0
Aug 15	148.5	85.9	5.5	69.0
Aug 16	131.6	90.1	5.0	69.0
Aug 17	154.1	90.4	6.5	69.0
Aug 18	146.1	88.0	6.0	69.0
Aug 19	169.1	89.7	5.0	69.0
Aug 20	161.8	94.6	7.0	69.0
Aug 21	180.6	100.5	6.5	69.0
Aug 22	152.4	93.8	6.0	69.0
Aug 23	151.3	91.2	5.5	69.0
Aug 24	141.4	86.1	6.0	69.0
Aug 25	159.4	94.8	5.0	69.0
Aug 26	158.1	90.8	5.0	68.0
Aug 27	192.7	104.7	6.0	69.0
Aug 28	149.9	91.2	7.0	69.0
Aug 29	125.5	79.2	7.0	69.0
Aug 30	136.3	81.0	7.0	69.0
Aug 31	147.0	91.9	6.0	69.0
AVG	152.4	89.8	5.9	69.2

RUN YEAR TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	192,010	14,258
SUMMER	114,808	13,358
FALL	85,083	5,801
TOTAL	391,901	33,417

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
10,635	764	39,287	250,071	88,823	4,558,550	112,848

TABLE 14

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT

SEPTEMBER 2003

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	PINK	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Sep 1			13,225	926	4,588	162	0	7,647	1,817	9	200	116.1	3.4	6.0	69.0
Sep 2			17,850	911	4,611	101	0	7,605	1,623	8	287	99.9	1.7	6.5	68.0
Sep 3			21,757	1,331	4,000	176	0	5,934	1,148	28	318	100.1	1.8	6.0	68.0
Sep 4			22,104	1,323	2,469	79	0	4,217	867	14	193	99.6	2.1	7.0	68.0
Sep 5			23,526	1,518	1,767	95	0	3,067	690	20	243	93.9	2.3	7.4	69.0
Sep 6			22,632	1,319	1,878	73	2	2,960	638	17	342	93.8	2.3	6.0	69.0
Sep 7			12,737	872	838	47	1	1,965	412	21	243	86.4	2.6	7.0	69.0
Sep 8			9,080	652	623	27	0	1,474	285	19	254	79.7	2.5	6.0	69.0
Sep 9			11,160	455	439	30	0	748	155	13	148	93.7	2.4	7.0	68.0
Sep 10			26,189	928	1,192	66	0	1,332	358	14	120	87.4	2.5	5.2	68.0
Sep 11			45,884	1,253	2,729	94	1	3,056	826	11	88	73.6	2.5	5.0	67.0
Sep 12			45,579	1,790	5,882	92	0	6,044	1,208	39	81	78.3	2.4	4.0	66.0
Sep 13			41,564	1,736	7,694	153	0	8,045	1,612	42	101	85.7	2.6	7.0	66.0
Sep 14			39,642	2,000	8,028	141	0	7,059	1,193	38	117	80.7	2.5	7.0	66.0
Sep 15			28,862	1,929	7,875	201	0	6,593	1,036	54	117	81.3	2.4	7.0	66.0
Sep 16			17,991	1,534	4,729	141	0	4,485	775	25	106	94.0	2.4	5.3	65.0
Sep 17			12,578	1,377	4,041	148	0	3,285	573	22	70	100.7	2.4	6.0	65.0
Sep 18			11,975	1,146	3,066	120	0	2,968	573	30	55	91.5	2.5	7.0	64.0
Sep 19			11,668	1,325	2,055	153	0	2,798	496	25	36	90.0	2.6	7.0	65.0
Sep 20			11,463	1,314	2,112	114	0	2,590	518	17	49	81.0	2.2	7.0	65.0
Sep 21			7,874	1,116	1,365	119	0	1,669	382	24	60	84.3	2.4	7.5	64.0
Sep 22			8,285	1,654	1,150	100	0	1,598	395	21	32	105.7	2.5	7.0	64.0
Sep 23			7,417	1,572	1,353	129	0	1,510	297	11	92	121.7	2.4	7.0	64.0
Sep 24			6,746	1,194	1,649	112	0	1,660	320	20	66	107.4	2.4	7.0	64.0
Sep 25			5,139	1,053	1,625	125	0	1,513	268	21	108	101.2	2.5	7.0	64.0
Sep 26			3,903	1,019	1,328	113	0	1,024	207	5	104	116.5	2.5	7.0	64.0
Sep 27			3,890	921	1,372	74	0	895	169	13	60	127.3	2.5	0.0	64.0
Sep 28			2,235	713	737	218	0	671	143	2	57	102.1	2.5	7.0	64.0
Sep 29			2,587	716	901	85	0	776	190	11	50	91.2	2.4	5.5	65.0
Sep 30			2,063	711	1,087	150	0	571	110	6	46	100.0	2.5	7.0	65.0
TOTAL			497,605	36,308	83,183	3,438	4	95,759	19,284	600	3,843				
AVG			16,587	1,210	2,773	115	0	3,192	643	20	128	95.5	2.4	6.3	66.1

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	192,010	14,258
SUMMER	114,808	13,358
FALL	582,688	42,109
TOTAL	889,506	69,725

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK
93,818	4,202	39,291	345,830	108,107	4,558,550	116,691	600

TABLE 15

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT

OCTOBER 2003

FISH COUNTS / **RIVER CONDITIONS**

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	CHUM	STEELHEAD	WILD STEELHEAD	PINK	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Oct 1			1,759	471	1,052	128	0	546	128	7	38	83.2	2.3	6.5	64.0
Oct 2			2,243	397	736	86	0	493	133	13	37	121.8	2.4	7.0	64.0
Oct 3			1,162	310	661	61	0	567	129	0	44	100.6	2.4	6.0	64.0
Oct 4			1,509	411	1,142	111	0	685	134	0	8	83.1	2.5	7.0	64.0
Oct 5			1,122	346	1,064	109	0	573	126	1	14	77.2	2.3	6.0	64.0
Oct 6			1,465	280	927	96	0	415	106	1	19	77.5	2.4	7.0	64.0
Oct 7			2,351	416	1,360	180	0	410	98	3	5	102.0	2.3	7.0	64.0
Oct 8			1,116	270	1,249	201	0	433	113	9	7	107.0	2.5	7.0	63.0
Oct 9			1,025	410	1,894	304	0	637	206	2	9	111.7	2.4	7.0	63.0
Oct 10			1,058	339	1,243	216	0	528	127	0	11	107.1	2.4	7.0	63.0
Oct 11			640	209	1,441	236	0	410	148	0	5	109.8	2.4	7.0	62.0
Oct 12			643	267	1,596	219	0	378	124	0	10	80.4	2.3	7.0	62.0
Oct 13			1,069	188	1,763	240	0	407	166	0	5	94.3	2.3	7.0	61.0
Oct 14			722	117	2,072	229	0	494	122	0	6	102.3	2.4	7.0	61.0
Oct 15			720	84	2,336	229	0	704	190	0	9	112.4	2.4	7.0	60.0
Oct 16			891	125	1,363	155	0	560	166	0	10	115.9	2.4	7.0	60.0
Oct 17			634	71	1,347	166	0	341	100	0	0	111.4	2.4	6.5	60.0
Oct 18			400	49	985	64	0	360	104	0	11	87.6	2.4	7.0	60.0
Oct 19			478	93	1,167	136	0	370	135	0	5	81.1	2.4	7.0	60.0
Oct 20			343	94	1,277	160	0	306	88	0	4	96.7	2.4	7.0	60.0
Oct 21			492	74	1,172	195	0	225	96	0	1	102.2	2.3	7.0	60.0
Oct 22			307	51	785	90	0	144	57	0	2	103.6	2.4	7.0	60.0
Oct 23			393	41	569	51	0	163	82	0	11	106.6	2.4	7.0	61.0
Oct 24			290	25	396	27	0	294	66	0	-14	133.8	2.4	3.0	61.0
Oct 25			305	42	396	22	0	357	134	0	22	135.4	2.7	3.2	60.0
Oct 26			246	47	381	30	0	363	109	1	8	131.9	2.1	6.5	58.0
Oct 27			218	31	282	35	0	320	109	0	14	125.4	2.3	7.0	58.0
Oct 28			338	53	283	43	0	319	130	0	26	117.8	2.4	6.5	58.0
Oct 29			406	45	278	18	0	222	50	0	3	121.0	2.3	6.0	58.0
Oct 30			426	56	240	20	0	221	94	0	0	132.2	2.5	5.0	57.0
Oct 31			211	46	181	21	7	222	79	0	6	129.6	2.4	5.0	56.0
TOTAL			24,982	5,458	31,638	3,878	7	12,467	3,649	37	336				
AVG			806	176	1021	125	0	402	118	1	11	106.5	2.4	6.5	61.0

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	192,010	14,258
SUMMER	114,808	13,358
FALL	607,670	47,567
TOTAL	914,488	75,183

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK	CHUM
125,456	8,080	39,291	358,297	111,756	4,558,550	117,027	637	7

TABLE 16

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT

NOVEMBER 2003

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	CHUM	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Nov 1			206	24	151	13	6	202	65			126.7	2.5	7.0	55.0
Nov 2			232	5	102	19	5	186	62			120.3	2.3	7.0	54.0
Nov 3			207	12	57	8	-1	175	53			133.2	2.3	5.0	53.0
Nov 4			283	19	5	8	7	133	50			130.4	2.3	7.0	53.0
Nov 5			138	4	58	0	5	246	-4			135.0	2.4	7.0	52.0
Nov 6			125	20	12	0	5	227	0			139.6	2.3	5.5	52.0
Nov 7			128	24	-2	0	8	171	3			140.1	2.4	6.0	51.0
Nov 8			158	2	-2	0	5	80	21			128.3	2.3	5.0	51.0
*Nov 9			156	4	1	-1	2	21	27			122.9	2.5	7.0	50.0
Nov 10			181	5	-8	0	29	108	49			122.0	2.5	5.0	50.0
Nov 11			212	6	-17	0	19	95	39			119.8	2.4	5.0	50.0
Nov 12			95	16	-22	0	15	89	2			123.1	2.5	7.0	49.0
Nov 13			128	6	-16	0	27	77	-9			126.7	2.3	7.0	49.0
Nov 14			96	8	-4	0	29	70	1			126.4	2.4	7.0	49.0
*Nov 15			60	0	-2	0	9	57	22			125.8	2.3	7.5	49.0
Nov 16			96	4	1	0	42	108	51			122.3	2.3	7.0	48.0
Nov 17			-12	0	-3	0	24	76	0			118.8	2.3	7.0	48.0
Nov 18			-1	0	0	0	7	143	0			120.9	2.3	7.0	47.0
Nov 19			-3	1	-7	0	10	136	3			117.3	2.3	7.0	47.0
Nov 20			11	-2	-2	0	9	108	5			118.9	2.4	7.0	47.0
Nov 21			13	3	4	0	8	118	2			131.6	2.4	6.5	46.0
Nov 22			48	0	-6	0	14	90	36			148.0	2.7	5.0	46.0
Nov 23			25	0	-5	0	5	97	31			144.3	2.5	7.0	46.0
Nov 24			30	0	-4	0	6	49	18			117.9	2.4	7.0	46.0
Nov 25			30	0	-3	0	12	59	26			118.7	2.4	6.0	45.0
Nov 26			20	0	-1	0	3	40	17			114.5	2.4	7.0	45.0
Nov 27			26	0	0	0	4	52	17			122.3	2.4	7.0	45.0
Nov 28			-14	0	0	0	1	36	3			122.0	2.4	7.0	45.0
Nov 29			-33	0	0	0	1	42	-13			115.8	2.5	7.0	45.0
Nov 30			25	0	0	0	3	24	14			121.5	2.5	7.0	45.0
TOTAL			2,666	161	287	47	319	3,115	591						
AVG			160	10	21	3	11	129	25			125.8	2.4	6.6	48.6

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	192,010	14,258
SUMMER	114,808	13,358
FALL	610,075	47,722
TOTAL	916,893	75,338

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
125,743	8,127	39,291	361,412	112,347	4,558,550	117,027

PINK	CHUM
637	326

***Nov 9 video not working 1334 to 1550 for WA and OR.**
***Nov 15 video malfunction WA.**

Note: From November 1 to December 31, counts were from video tape. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST. Visual counting ended October 31.

Official Fall Chinook run ended November 15. November 16-30 and December Chinook counts were not added to fall totals.

TABLE 17

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT

DECEMBER 2003

FISH COUNTS / **RIVER CONDITIONS**

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	CHUM	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Dec 1			32	0	1	0	3	51	19			124.2	0.9	7.0	45.0
Dec 2			6	1	0	0	1	51	0			124.3	1.2	7.0	44.0
Dec 3			4	0	0	0	5	42	0			120.1	1.1	7.0	44.0
Dec 4			-4	0	0	0	-1	13	-11			128.5	1.0	7.0	44.0
Dec 5			4	0	0	0	0	1	-8			122.7	1.1	5.0	44.0
Dec 6			42	0	2	0	9	49	27			126.3	1.1	7.0	44.0
Dec 7			25	0	0	0	9	74	32			125.2	1.1	7.0	44.0
Dec 8			28	0	0	0	6	14	-7			136.0	0.9	7.0	44.0
Dec 9			19	0	0	0	9	43	13			151.8	0.6	7.0	44.0
Dec 10			18	0	0	0	7	23	10			143.3	0.8	6.0	43.0
Dec 11			21	0	0	0	3	31	4			148.2	0.7	6.2	43.0
Dec 12			13	2	0	0	3	22	10			149.4	0.7	7.0	43.0
Dec 13			20	0	0	0	8	22	1			150.9	0.7	5.8	43.0
Dec 14			30	0	0	0	16	-6	2			141.1	0.7	7.0	43.0
Dec 15			19	0	0	0	8	14	6			149.2	0.7	6.0	43.0
Dec 16			-1	0	0	0	0	-7	-60			156.4	0.7	7.0	43.0
Dec 17			-11	-1	0	0	0	5	-23			156.9	0.7	6.0	43.0
Dec 18			-1	0	0	0	0	-9	-37			172.3	0.8	5.0	43.0
Dec 19			3	0	0	0	0	-8	-28			159.8	0.8	0.0	43.0
Dec 20			13	0	2	0	0	34	6			149.0	0.8	5.0	42.0
Dec 21			48	0	0	0	-1	70	14			132.6	0.8	5.0	42.0
Dec 22			19	0	0	0	0	46	17			122.5	0.7	6.0	42.0
Dec 23			13	0	-1	0	0	51	20			142.1	0.7	5.8	42.0
Dec 24			12	0	0	0	0	29	6			133.2	0.8	7.0	41.0
Dec 25			8	0	0	0	0	38	7			120.6	0.8	7.0	41.0
Dec 26			9	0	0	0	0	33	8			118.5	0.7	7.0	41.0
Dec 27			4	0	0	0	0	21	10			115.4	0.7	7.0	41.0
Dec 28			4	0	0	0	0	35	9			132.1	0.7	7.0	41.0
Dec 29			3	0	0	0	0	22	8			144.6	0.8	7.0	41.0
Dec 30			0	0	0	0	0	9	-3			145.0	0.7	7.0	41.0
Dec 31			0	0	0	0	0	0	0			171	0.8	7.0	40.0
TOTAL			400	2	4	0	85	813	52						
AVG			18	0	0	0	6	30	7			138.1	0.8	6.3	42.7

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	192,010	14,258
SUMMER	114,808	13,358
FALL	610,075	47,722
TOTAL	916,893	75,338

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
125,743	8,127	39,291	361,412	112,347	4,558,550	117,027

PINK	CHUM
637	411

Note: From November 1 to December 31, counts were from video tape. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST. Visual counting ended October 31

Official Fall Chinook run ended November 15. November 16-30 and December Chinook counts were not added to fall totals.

Pink and Chum totals are totals for the entire calendar year.

TABLE 18

YEARLY TOTALS OF SALMONIDS COUNTED OVER BONNEVILLE DAM -- DAYTIME COUNTS

1938 - 2003

YEAR	CHINOOK*	STEELHEAD	SOCKEYE	COHO*	CHUM	PINK	TOTAL SALMONID
1938	271,799	107,003	75,040	15,185	2,117	0	471,144
1939	286,189	122,032	73,382	14,383	1,168	0	497,154
1940	391,587	185,174	148,807	11,917	1,729	0	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	0	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	0	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	0	679,348
1978	394,600	104,431	18,436	52,590	28	0	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	0	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	0	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	0	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
1998	280,944	185,094	13,218	49,920	21	13	529,210
1999	343,176	206,488	17,877	45,152	43	28	612,764
2000	491,905	275,178	93,398	97,032	17	0	957,530
2001	971,119	633,073	114,934	266,314	29	-4	1,985,465
2002	924,585	480,309	49,610	94,901	72	0	1,549,477
2003	992,231	361,412	39,291	133,870	411	637	1,527,852
Total	25,364,738	12,436,731	5,373,349	2,524,118	39,512	2,900	45,741,348
10-Year Average	517,118	296,958	42,704	76,803	72	78	933,733

*Jacks included

TABLE 19

MONTHLY COUNT OF CHINOOK SALMON

BONNEVILLE DAM - 1938 - 2003

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

(Continued)

MONTHLY COUNT OF CHINOOK SALMON

BONNEVILLE DAM - 1938-2003

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	9,743	10,458	47,787	145,801	9,669	296		244,320	20,566	20,201	203,553
1995			206	7,144	5,511	8,565	9,226	47,145	150,990	15,614	835	14	245,250	12,861	17,791	214,598
1996	4		110	20,923	35,571	11,136	7,768	58,909	154,420	10,451	647	23	299,962	56,608	18,904	224,450
1997			466	67,577	49,921	20,162	10,943	82,123	158,589	9,488	516	-1	399,784	117,964	31,105	250,715
1998	0	1	695	24,549	14,587	14,500	10,396	58,135	155,716	11,308	398	7	290,292	39,117	24,111	217,716
1999		2	251	19,016	28,831	14,830	16,121	66,546	186,880	14,624	378	7	347,486	48,098	30,951	268,428
2000		4	3,166	130,193	71,222	25,864	19,209	100,658	139,073	11,380	227	16	501,012	204,581	45,073	251,338
2001	0	25	16,653	324,800	98,080	53,860	45,825	116,981	351,892	25,875	3,379	70	1,037,440	439,533	99,685	498,127
2002	74	207	1,875	149,293	124,122	89,419	45,969	149,283	344,754	18,449	1,421	255	925,121	275,290	135,388	513,907
2003	6	93	19,283	120,626	70,020	81,333	46,833	90,884	533,913	30,440	2,827	402	996,660	210,028	128,166	658,466
TOTAL	124	377	97,213	3,857,310	2,669,383	1,995,853	1,513,427	2,930,616	11,811,734	572,717	30,790	1,148	25,480,692	6,623,380	3,508,495	15,338,809
10-Year Average			4,321	87,762	50,443	32,941	22,275	81,845	232,203	15,730	1,092		528,733	142,465	55,138	330,130

***Jacks included**

1994 counts include nighttime video counts during the hours of 2100-0500 PST June 1 through August 16.
1995 counts include nighttime video counts during the hours of 2000 and 0400 PST April 1 through November 15. 24 hour counts November 16 through December 31.
1996 - 2002 counts include 24 hour video counts January 1 through March 15 and November 16 through Dec 31.
From March 16 through November 15, video counts took place between 2000 and 0400 hours PST.
2003 counts include 16 hour video counts took place between 0400-2000 PST January 1 through March 31
and November 1 through December 31.

TABLE 20

MONTHLY COUNT OF SOCKEYE SALMON

BONNEVILLE DAM 1938 - 2003

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 20

(Continued)

MONTHLY COUNT OF SOCKEYE SALMON

BONNEVILLE DAM 1938 - 2003

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	9,835	3,306	11					13,154
1995					1	5,924	3,151	59					9,135
1996					3	23,005	8,044	41					31,093
1997					9	23,559	24,392	381	1				48,342
1998					1	7,796	5,723	93					13,613
1999						8,613	9,629	61	1				18,304
2000					146	83,479	13,847	69					97,541
2001					32	102,570	20,496	317	1				123,416
2002					3	32,760	18,349	85	3				51,200
2003					2	26,432	12,714	139	4				39,291
TOTAL			76	541	8,121	2,270,998	3,064,971	43,890	2,631	137	32	1	5,391,398
10-Year Average					22	32,397	11,965	126					44,509

1994 counts include nighttime video counts during the hours of 2100-0500 PST June 1 through August 16.

1995 counts include nighttime video counts during the hours of 2000 and 0400 PST April 1 through November 15.
24 hour counts November 16 through December 31.

1996 - 2002 counts include 24 hour video counts January 1 through March 15 and November 16 through Dec 31.
From March 16 through November 15, video counts took place between 2000 and 0400 hours PST.

2003 counts include 16 hour video counts took place between 0400-2000 PST January 1 through March 31
and November 1 through December 31.

TABLE 21

MONTHLY COUNT OF COHO SALMON

BONNEVILLE DAM 1938 - 2003

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 21

(Continued)

MONTHLY COUNT OF COHO SALMON

BONNEVILLE DAM 1938 - 2003

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							118	978	7,049	3,969	458		12,572	1,639
1996							66	431	10,413	7,775	392	0	19,077	3,010
1997							22	1,441	19,412	6,755	289		27,919	3,206
1998							13	896	35,245	13,047	282	5	49,488	3,630
1999		19				1	3	951	34,901	9,673	252	5	45,805	4,468
2000							3	13,348	55,550	29,698	949	112	99,660	11,383
2001	15					2	145	34,112	205,352	34,401	3,907		277,934	6,781
2002						0	6	4,742	54,917	38,184	2,803	183	100,835	6,817
2003	0	0	0	0	0	0	10	11,389	86,621	35,516	334	4	133,874	8,127
TOTAL	36	31	6	1	0	179	5,517	227,343	1,875,519	391,354	45,684	375	2,546,045	560,482
10 Year Average							39	6,990	52,198	18,726	1,009		78,996	5,156

***Jacks included**

1995 counts include nighttime video counts during the hours of 2000 and 0400 PST April 1 through November 15. 24 hour counts November 16 through December 31.

1996 - 2002 counts include 24 hour video counts January 1 through March 15 and November 16 through Dec 31. From March 16 through November 15, video counts took place between 2000 and 0400 hours PST.

2003 counts include 16 hour video counts took place between 0400-2000 PST January 1 through March 31 and November 1 through December 31.

TABLE 22

MONTHLY COUNT OF STEELHEAD
BONNEVILLE DAM; 1938 -2003

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 22

(Continued)

MONTHLY COUNT OF STEELHEAD
BONNEVILLE DAM - 1938 -2003

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	7,511	27,202	59,157	54,856	8,079	789		163,124	83,968	79,156
1995			333	863	1,257	6,419	29,305	112,812	48,781	6,691	1,104	1,506	209,071	126,537	82,534
1996	793	57	1,862	1,776	2,424	6,912	40,813	102,200	48,397	6,143	761	337	212,475	141,999	70,476
1997	342	426	1,966	1,950	2,485	'530+166	57,472	127,882	53,571	18,428	2,234	84	266,840	177,685	89,155
1998	161	239	984	883	1,655	7,236	36,437	60,403	76,293	12,136	489	585	197,501	87,422	97,672
1999	15	287	699	833	1,308	5,157	48,278	101,610	46,200	6,509	637	585	212,118	138,258	68,230
2000	340	420	1,495	1,235	2,006	13,594	80,259	106,918	68,407	7,306	510	175	282,665	185,066	90,112
2001	333	239	2,196	2,043	3,331	24,076	199,969	263,518	152,434	21,542	4,343	2,769	676,793	435,035	198,038
2002	1,311	833	1,770	2,918	2,752	19,918	119,923	180,381	151,807	24,004	4,140	923	510,680	285,229	195,080
2003	724	1,728	2,264	1,474	1,714	10,966	95,185	139,612	95,759	12,467	3,115	813	365,821	231,717	134,104
TOTAL	5,584	6,715	67,767	185,960	164,240	441,850	3,705,610	4,356,046	3,280,214	294,159	46,028	10,068	12,564,241	8,092,036	4,375,642
10-Year Average			1,399	1,595	2,206	11,310	73,484	125,449	79,651	12,331	1,812		309,709	189,292	110,456

1994 counts include nighttime video counts during the hours of 2100-0500 PST June 1 through August 16.
1995 counts include nighttime video counts during the hours of 2000 and 0400 PST April 1 through November 15.
24 hour counts November 16 through December 31.
1996 - 2002 counts include 24 hour video counts January 1 through March 15 and November 16 through Dec 31.
From March 16 through November 15, video counts took place between 2000 and 0400 hours PST.
2003 counts include 16 hour video counts took place between 0400-2000 PST January 1 through March 31
and November 1 through December 31.

TABLE 23

MONTHLY COUNT OF SHAD at
BONNEVILLE DAM 1938 - 2003

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 23

(Continued)

MONTHLY COUNT OF SHAD at BONNEVILLE DAM 1938 - 2002

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
1998				1	185,810	1,660,405	44,656	120					1,890,992
1999					132,782	1,374,822	129,625	1,043					1,638,272
2000				6	229,344	961,587	52,558	822					1,244,317
2001				9	704,104	1,550,639	41,596	1,611					2,297,959
2002				0	382,611	2,670,772	110,780	393					3,164,556
2003					420,265	4,025,864	108,226	4,195					4,558,550
TOTAL			14	401	5,260,398	38,456,386	7,125,702	119,941	4,136	593	36		46,409,057
10 Year Average					254,560	1,819,410	141,100	1,383					2,216,460

Shad are no longer counted past August.

MONTHLY COUNT OF LAMPREY at
BONNEVILLE DAM 1939[1] - 1969, 1997 - 2003

Information concerning the lamprey count table.

The counts in the following table can be considered an approximation of trends, only. Lamprey are difficult animals to count in that they move back and forth in front of the fish count window. They also spend long periods of time resting. Lamprey also are more likely to pass at night than are salmon and for most of the years, fish counting took place only in the daytime. Further, during the 1970s, the count station was changed from a flash board counting system in which the fish passed over a white board to a vertical slot system in which the fish pass through a lighted window. This change could have made a difference in the counts. In addition, it is known that lamprey do not always use the fish ladder and may pass over a dam through several routes including the navigation lock and the auxillary water supply.

Despite the lack of certainty in these counts, they can demonstrate approximate trends in migration patterns throughout the fish passage season and a rough estimate of population trends from year to year. Nevertheless, to determine present populations will require more study of these animals.

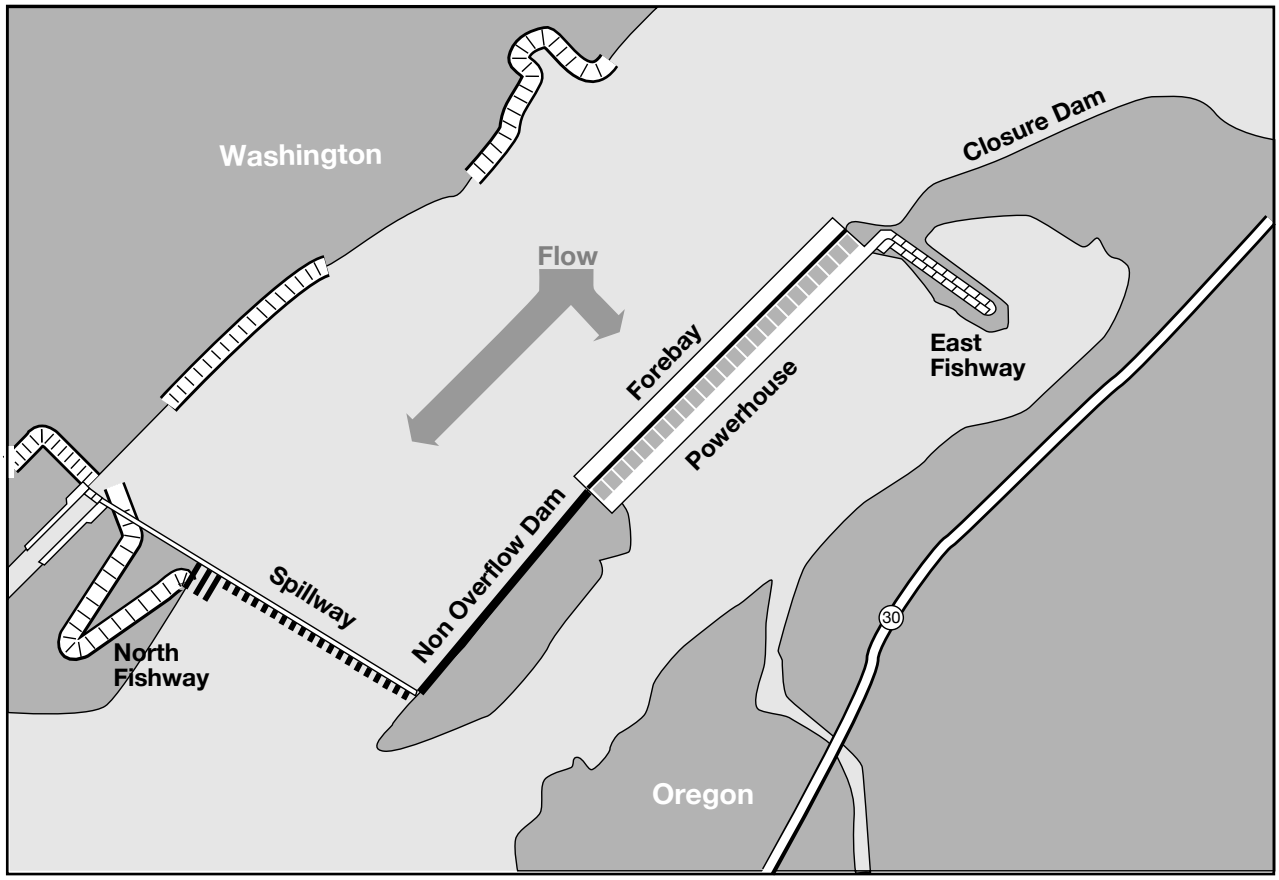
Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1939				732	9,027	95,814	103,726	14,403	3,349	71	0		227,122
1940				338	24,551	40,642	67,760	20,554	2,217	40	0		156,102
1941				1,428	7,449	6,960	34,952	12,801	1,305	57	2		64,954
1942				13	1,302	3,457	28,641	16,270	2,619	40	19		52,361
1943				0	1,684	3,539	14,332	26,508	5,017	14	2		51,096
1944				22	2,189	1,411	19,288	11,853	1,342	86	18		36,209
1945				56	1,676	4,365	16,395	11,533	2,407	56	0		36,488
1946				57	684	13,834	42,772	15,820	1,565	93	0		74,825
1947				158	9,183	7,563	54,032	17,680	3,566	2,141	3		94,326
1948			1	82	295	13,744	79,507	44,511	4,948	725	2		143,815
1949				5	1,105	5,678	41,438	8,264	1,372	40	7	19	57,928
[2]1950					207	1,073	6,702	22,128	2,436	140	7		32,693
1951				1	4	11,001	8,554	25,078	420	51	1		45,110
1952					8	3,674	13,854	7,462	1,194	11			26,203
1953				79	946	727	17,917	26,053	1,381	25	1		47,129
1954				33	201	1,001	10,303	26,535	2,824	89			40,986
1955					210	764	16,368	21,765	3,341	154	1		42,603
1956					24	657	36,987	10,181	1,949	113			49,911
1957				19	185	17,698	28,506	5,907	699	17			53,031
1958				132	877	8,092	79,548	7,448	1,036	171	1,115		98,419
1959				23	67	6,273	123,104	79,976	4,006	1,626	8		215,083
1960				8	1,521	12,185	125,962	30,751	7,329	142			177,898
1961				30	649	16,786	200,722	126,438	20,110	70			364,805
1962				1	441	13,573	49,868	30,253	7,103	166	21		101,426
1963				21	20,827	5,803	28,348	24,639	7,702	597			87,937
1964			2	8	2,575	17,796	39,223	41,214	3,167	347	5		104,337
1965				54	6,674	8,886	71,027	16,949	4,617	772	8		108,987
1966				168	6,562	11,772	25,813	20,543	2,207	844	5		67,914
1967				211	4,416	6,348	38,591	14,792	1,570	225	18		66,171
1968				92	14,698	18,389	57,011	17,611	949	275	4		109,029
1969				44	24,386	230,096	87,769	32,908	4,126	170	10		379,509
*** Counting lamprey was stopped after 1969. It was resumed again in 1997. ***													
1997				4	1,691	[3] #####	1,939	9,783	8,643	770	0		22,830
1998				103	2,213	12,851	14,548	5,304	2,211	285	0		37,515
1999				65	4,780	8,801	12,047	7,584	3,717	302	0		37,296
2000				91	2,204	7,953	4,184	3,408	1,038	123	1		19,002
2001				1	2,075	11,143	9,895	4,141	620	72			27,947
2002				0	1,280	34,070	39,405	17,380	7,977	364			100,476
2003				6	2,874	50,875	45,863	13,230	3,843	336			117,027
TOTAL			3	4,085	161,740	715,294	1,696,901	849,658	135,922	11,620	1,258		3,576,500
1997-2003 7-Year Average				39	2,445	20,949	18,269	8,690	4,007	322			51,728

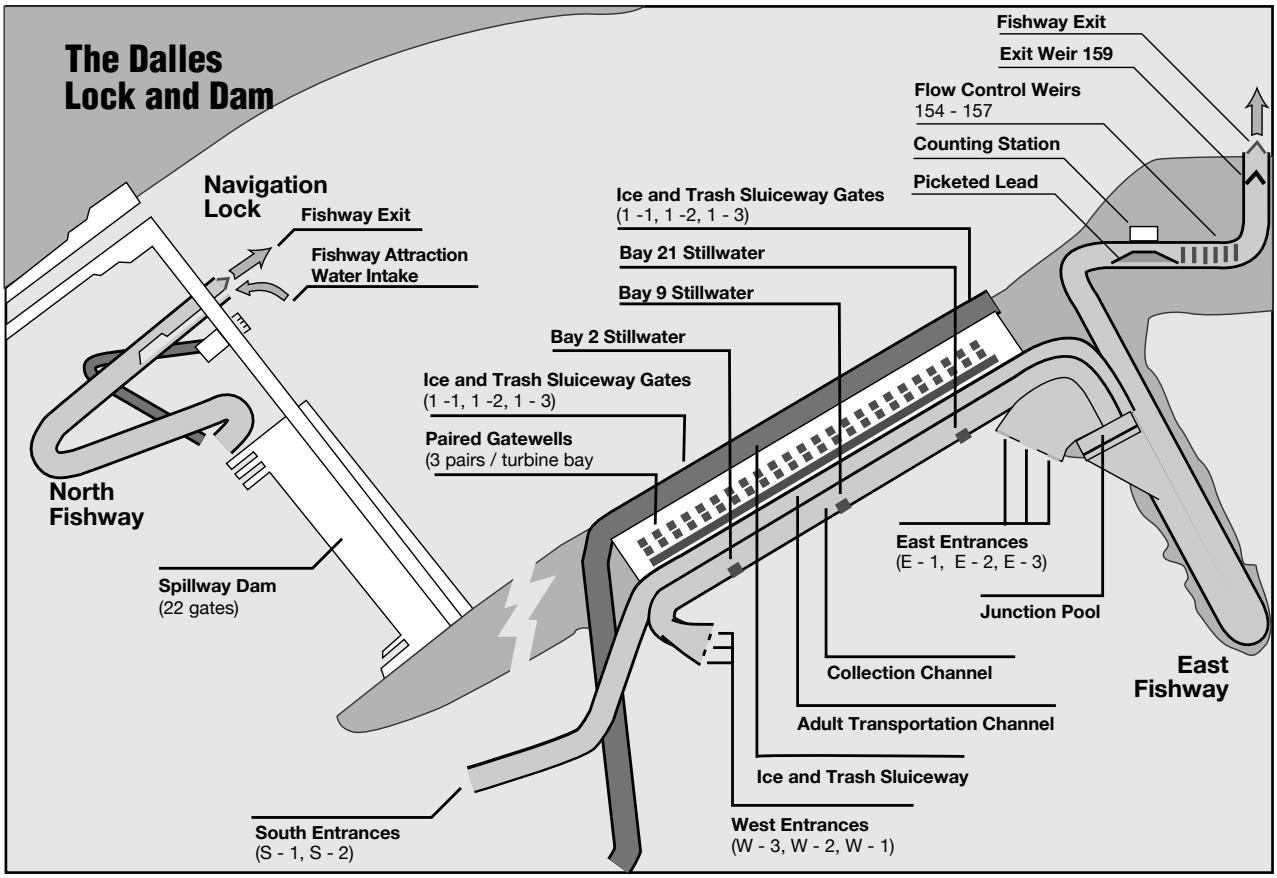
[1]No data are available for 1938.

[2]Because of changes in the Washington shore counting station, lamprey counts from 1938-1949 cannot be compared with counts from 1950 on.

[3]Because of the heavy shad run, fish counters were not asked to count lamprey from June 1 through July 27.

Plate 3 The Dalles Lock and Dam





THE DALLES DAM

FISH COUNTING SCHEDULE

Feb 20 – Mar 31	Video counting daily 0400-2000 hours Pacific Standard Time.
Apr 1 – Oct 31	Visual counting daily 0400-2000 hours Pacific Standard Time.
Nov 1 – Dec 15	Video counting daily 0400-2000 hours Pacific Standard Time.

ADULT FISHWAY OPERATING 2002 SCHEDULE

The following information includes fishway operation for calendar year 2003. Total length of time for annual fishway outages can be determined by referring to previous years' annual reports. "Out of service' indicates fish ladder dewatered and auxiliary water system off for routine annual maintenance. Dive inspections were conducted 8/4/03 and 8/7/03 at The Dalles, per Fish Passage Plan requirement, requiring a short period of fishway outage, with the auxiliary water system off.

ADULT FISH FACILITY OPERATING SCHEDULE

East Fishway

Jan. 1 – Feb. 26	out of service.
Feb. 26 - Dec. 31	in service.

North Fishway

Jan. 1 - Jan. 13	in service.
Jan. 13 – Jan. 21	out of service.
Jan. 21 - Dec. 1	in service.
Dec. 1 – Dec. 31	out of service.

Ice / Trash Sluiceway (Juvenile)

Jan. 1 - Apr. 1	orifice flow.
Apr. 1 - Nov. 13	in service.
Nov. 13 - Dec. 1	day operation only.
Dec. 1 - Dec. 31	no flow.

Spillway (Juvenile)

Jan. 1 - Apr. 15	closed.
Apr. 15 - Aug. 31	24 hour spill for fish.
Aug. 31 - Dec. 31	closed.

2002 FISH RELATED DEWATERINGS

Fishway Dewatering Procedures

Bulkheads are installed and drain valves open to dewater various areas of fishways. Fisheries personnel enter these areas to salvage fish that become entrapped. Minimal handling of fish is applied. Fish that are reluctant to vacate an area are captured and transported to the forebay or tailwater, depending on circumstances such as fish species, age class and stress levels. A follow up inspection is made to account for possible missed fish. Efforts are made to provide continual water supply during the entire operation to reduce fish stranding. Fishway areas not included on this list are inspected by divers to inspect equipment condition.

Fishway Dewaterings

South entrance (1/15) - Annual inspection and maintenance. Thirteen lamprey, 5 sucker and 23 juvenile salmonids removed and released to tailwater.

North fishway auxiliary water system PUD intake (12/4) – Annual inspection and maintenance. Four juvenile steelhead removed and released to tailwater.

North fish ladder (12/1) – Annual inspection and maintenance. Two juvenile steelhead and 15 lamprey removed and released to forebay.

North fishway entrance (12/3) – For grating installation. No fish

Fishway Dives

North and east fishway (1/16) – Annual inspection. Grating found in good conditon.

North and east fishway (8/4) – Annual mid season inspection. Damaged grating found in collection channel at unit bay 13.

Collection channel repair (8/7) – Grating damage found on 8/4 repaired by replacement with new grating.

Turbine Dewatering Procedures

Turbine dewatering for routine maintenance usually involves low numbers of fish, due to operational guidelines. If a turbine unit fails, operational guidelines cannot always be followed, which usually results in higher numbers of fish entrapment. Removal of fish from these areas has a greater fish stress risk due to handling. Procedures are continually analyzed to determine the best method for preventing fish stress or loss. Fish are removed from scroll case and draft tubes by fish bags. If numbers of fish are higher than two bags, transport tanks are placed in the draft tube gallery for transport by crane. Fish are released to tailwater either with bag and rope or tank and crane.

Turbine Dewaterings

Main turbine unit 17 (2/28) – Routine maintenance. One adult steelhead removed from scroll case. No fish found in draft tube.
Main turbine unit 7 (6/3) – Routine maintenance. One juvenile steelhead found in scroll case. Three catfish found in draft tube.
Fish turbine unit F2 (1/28) – Routine maintenance. No fish found in scroll case or draft tube.

Navigation Lock Dewatering Procedures

Navigation lock dewaterings for annual maintenance requires labor intensive fish removal efforts. It is impossible to remove fish from all areas of the navigation lock areas due to access limitations. Fish are removed from the supply conduits and the floor diffuser laterals. Fish are then removed by seine and dipnet and transported to a release site by tank.

Navigation Lock Dewaterings

Navlock dewater for annual inspection/maintenance (Mar.10-19) - Upstream gate area, no fish found.

2003, 2002, 2001- FISHWAY INSPECTION COMPARISON

Three adult fishway inspections are conducted per day during the adult fish passage season (March 1 to November 31). One adult fishway inspection is conducted per day during the non- passage season. Items shown in *italics* are inspected once per day. All other items are inspected during every fishway inspection. Guidelines are provided by the COE Fish Passage Plan. Weekly fishway status reports are provided throughout the year. Inspections of the John Day Smolt Monitor Facility are made once per two hours, 24 hours per day during the juvenile sampling season (April 1 to Mid Sept.) SMF status reports are included in the weekly fishway status report. Increased or continual problem areas indicated in red. Values are rounded to the nearest whole percent.

Fishway Inspection Results

	Percent out of Criteria		
Criteria Item	Year 2003	Year 2002	Year 2001
East Fishway			
Exit differential	0	0	-
Weir 158	2	3	0
Weirs 154 – 157	13	8	17
Count station differential	2	2	1
Weir crest depth	5	1	2
JP2 junction pool	22	20	0
JP4 junction pool	22	18	11
JP6 junction pool	40	21	9
East entrance differential	5	12	7
E1 entrance depth	1	closed	closed
E2 entrance depth	17	4	2
E3 entrance depth	1	4	2
Collection channel velocity	19	-	-
West entrance differential	4	18	12
W1 entrance depth	3	9	8
W2 entrance depth	1	8	7
W3 entrance depth	2	closed	closed
South entrance differential	4	14	17
S1 entrance depth	4	31	45
S2 entrance depth	3	2	22
North Fishway			
Exit differential	1	0	1
Count station differential	0	0	0
Weir crest depth	2	0	0
North entrance differential	1	1	5
N1 entrance depth	1	1	1
N2 entrance depth	closed	closed	0
PUD intake differential	1	1	1
Ice/Trash Sluice gate operation	0	0	0
Spill pattern	1	0	0

Turbine operation priority	4	-	-
Turbine 1% operation	2	-	-

Discussion

Weirs 154-157 decrease in criteria performance due to automation problems. Maintenance was notified for fine tuning as much as possible. Margin of out of criteria was minimal, usually within 0.2' of criteria. Junction pool weirs were manual adjusted throughout the passage season. JP2 and JP4 were pulled from the water due to low tailwater elevations on several occasions. In combination, this resulted in a substantial decrease in criteria performance. Automation upgrades are planned prior to '04 passage season in attempts to resolve the problem. Investigation continues to determine hydraulic affects of JP weirs to the system. HELCRABS hydraulic modeling may provide some answers as to whether these weirs are needed. Adult radio-telemetry from past several years has not revealed passage problems in this area.

The east entrance E2 weir had a substantial decrease in criteria due to cable failure mid October. E2 was left closed and E3 was opened to compensate. Prior to the cable failure, out of criteria averaged 1%. The cable system is to be repaired prior to '04 passage season. Additionally, hoist system improvements will be added to all east and west entrance weirs to prevent similar failures.

The south entrance weirs S1 and S2 showed substantial improvement due to a hoist system improvement installed prior to the '03 passage season.

Collection channel velocity continues to have frequent slow areas at eth east end of the powerhouse. Attempts were made to improve these velocities many years ago with limited results. There are about 6 diffusers in that area which are broke in a partial open position. If they can be repaired and closed, an improvement may be made in this area. HELCRABS hydraulic modeling may also reveal some solutions if implementation is successful.

The Dalles Historic Fish Count Schedule 1957-2002 (information based on previous Annual Fish Passage Reports)
16 hour counts occurred between the hours of 0400-2000 PST unless otherwise stated.
8 hour counts occurred between the hours of 0800-1600 PST unless otherwise stated.

Year	Months	Count Period	Notes
1957	Mar 17 – Apr 21	8 hour (0800-1600PST)	
	Apr 22 – Sep 27	16 hour	With 15 minute break every hour. 1.33 factor applied.
	Sep 28 – Oct 19	16 hour	With 10 minute break every hour. 1.2 factor applied unless otherwise stated.
	Oct 20- Nov 30	8 hour	
1958	Mar 9 – Apr 5	8 hour	
	Apr 6 – Oct 18	16 hour	
	Oct 19 - Nov 29	8 hour	
1959	Mar 31 – Oct 31	16 hour	
	Nov 1 – 28	8 hour	10 minute break every hour. Gates remained open at all times unless otherwise stated.
1960	Apr 5 – Oct 29	16 hour	
	Oct 30 – Nov 26	8 hour	
1961	Apr 4 – Oct 28	16 hour	
1962	Apr 1 – Oct 27	16 hour	Gates closed at night (no nighttime factor).
1963	Apr 1 – Oct 26	16 hour	
1964	Mar 29 – Oct 24	16 hour	Gates closed at night.
1965	Mar 28 – Oct 23	16 hour	Gates closed at night. Gates open Oct 24 to end of year.
1966	Feb 27 – Mar 6	8 hours	Gates closed at night.
	Mar 7 – 17	16 hour North only	
	Mar 18 – 20	8 hour	
	Mar 21 – 23	16 hour East only	
	Mar 24 – 26	8 hour	
	Mar 27 – Oct 22	16 hour	Gates open Oct 23 to end of year.
1967	Apr 2 – 22	8 hour	Gates closed at night and during breaks unless otherwise stated.
	Apr 23 – Oct 28	16 hour	
1968	Mar 31 – Nov 9	16 hour	
1969	Mar 30 – Oct 25	16 hour	
1970	Apr 5 – Oct 24	16 hour	
1971	Apr 1 – Oct 23	16 hour	
1972	Apr 1 – Oct 21	16 hour	Gates closed at night but open during breaks.

Year	Months	Count Period	Notes
1973	Apr 1 – Oct 31	18 hour	Gates open. 24 hour counts on Tuesdays. 1.2 factor applied.
1974	Apr 1 – Oct 31	16 hour	24 hour counts on the following dates: Apr 23, 24, 30; May 1, 7, 13, 14, 15, 21, 28, 29; Jun 4, 5, 11, 12, 18, 19; Jul 2, 3, 9, 10, 16, 17, 23, 24, 30; Aug 6, 7, 13, 14, 20, 21, 27, 28; Sep 3, 4, 10, 11, 17, 18, 24, 25
1975-78	Apr 1 – Oct 31	16 hour	Gates open unless otherwise stated.
1979	Apr 1 – Nov 9	16 hour	
1980-2	Apr 1 – Oct 31	16 hour	
1983	Apr 1 – Nov 21	16 hour (assumed)	
1984	Apr 1 – Oct 31	16 hour	The east fish ladder was modified to incorporate a submerged fish counting Station and water conservation type weirs.
1985	Apr 1 – Oct 31	16 hour	
	Nov 1 - 30	8 hour	
1986	Mar 4 – 31	8 hour	North fish ladder modified to include new vertical slot count station.
	Apr 1 – Oct 31	16 hour	
1987-8	Apr 1 – Oct 31	16 hour	
1989	Apr 1 – Oct 31	16 hour	
	Nov 1 – 30	8 hour	Construction of small generating facility near north ladder.
1990	Mar 1 – 31	8 hour	
	Apr 1 – Oct 31	16 hour	
1991-5	Apr 1 – Oct 31	16 hour	
1996-8	Apr 1 – Oct 31	16 hour (0500-2100 PST)	
1999-2002	Apr 1 – Oct 31	16 hour (0400-2000 PST)	

TABLE 25

MONTHLY TOTALS OF SALMONIDS, SHAD, AND LAMPREY COUNTED OVER THE DALLES DAM

2003

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*		11	7,227	84,312	54,173	70,347	43,926	42,146	280,091	33,070	3,085	84	618,472
STEELHEAD		485	2,389	801	271	4,882	36,960	35,275	158,525	36,458	6,004	524	282,574
SOCKEYE					8	21,233	12,862	70	3			4	34,180
COHO*								1,084	29,129	15,161	713	14	46,101
CHUM											28	1	29
PINK									109	18	1		128
TOTAL		496	9,616	85,113	54,452	96,462	93,748	78,575	467,857	84,707			981,484
SHAD				9	556,775	3,579,638	120,781	1,686					4,258,889
LAMPREY					6	2,281	16,814	7,493	2,205	196			28,995

*Jacks included
Counting occurred Feb 20 through Dec 15 from 0400-2000 PST. Visual counts occurred Apr 1 - Oct 31.
Video counting occurred during all other times.
Lamprey are not counted during video counts. Shad are not counted after September 1st.

TABLE 26

DISCHARGE AND WATER QUALITY DATA

THE DALLES PROJECT 2003

JANUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Jan 1	115.2	0.0	6.0	45.0
Jan 2	104.2	0.0	6.0	44.0
Jan 3	103.1	0.0	5.0	44.0
Jan 4	101.0	0.0	5.0	44.0
Jan 5	95.3	0.0	5.0	43.0
Jan 6	107.7	0.0	6.0	44.0
Jan 7	111.0	0.0	5.5	44.0
Jan 8	128.1	0.0	6.0	44.0
Jan 9	133.8	0.0	6.0	44.0
Jan 10	120.8	0.0	6.0	43.5
Jan 11	125.2	0.0	6.0	44.0
Jan 12	98.4	0.0	6.0	43.0
Jan 13	103.3	0.0	*	43.5
Jan 14	118.9	0.0	*	*
Jan 15	116.0	0.0	*	*
Jan 16	113.4	0.0	*	43.5
Jan 17	124.5	0.0	*	*
Jan 18	135.4	0.0	6.0	43.0
Jan 19	113.8	0.0	6.0	43.0
Jan 20	124.4	0.0	*	*
Jan 21	100.8	0.0	*	*
Jan 22	119.1	0.0	5.5	42.0
Jan 23	113.2	0.0	5.5	42.0
Jan 24	117.6	0.0	6.0	42.0
Jan 25	105.0	0.0	6.0	42.0
Jan 26	83.8	0.0	6.0	42.0
Jan 27	106.1	0.0	6.0	42.0
Jan 28	146.6	0.0	5.5	42.0
Jan 29	151.1	0.0	5.5	42.0
Jan 30	129.1	0.0	5.5	42.0
Jan 31	141.0	0.0	*	*
AVG.	116.4	0.0	5.7	43.1

***Data unavailable.**

TABLE 27

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

THE DALLES PROJECT
FEBRUARY 2003

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Feb 1	0			0				0	0			177.9	0.0	5.5	42.0
Feb 2	0			0				0	0			204.5	0.0	5.5	42.0
Feb 3	0			0				0	0			165.0	0.0	5.5	42.0
Feb 4	0			0				0	0			165.4	0.0	5.5	42.0
Feb 5	0			0				0	0			135.2	0.0	5.5	42.5
Feb 6	0			0				0	0			138.2	0.0	5.5	42.5
Feb 7	0			0				0	0			152.5	0.0	5.5	42.0
Feb 8	0			0				0	0			140.0	0.0	5.5	42.0
Feb 9	0			0				0	0			120.8	0.0	4.5	42.0
Feb 10	0			0				0	0			116.5	0.0	4.0	42.0
Feb 11	0			0				0	0			127.3	0.0	4.0	42.0
Feb 12	0			0				0	0			122.0	0.0	4.5	43.0
Feb 13	0			0				0	0			126.3	0.0	3.0	42.0
Feb 14	0			0				0	0			123.5	0.0	5.0	42.0
Feb 15	0			0				0	0			104.8	0.0	4.5	42.0
Feb 16	0			0				0	0			104.3	0.0	2.5	42.0
Feb 17	0			0				0	0			113.0	0.0	2.5	42.0
Feb 18	0			0				0	0			113.2	0.0	*	*
Feb 19	0			0				0	0			122.9	0.0	3.5	42.0
Feb 20	5			0				45	7			108.3	0.0	3.0	42.0
Feb 21	5			0				39	12			118.5	0.0	2.5	42.0
Feb 22	1			0				116	9			97.1	0.0	4.5	43.0
Feb 23	0			0				0	0			114.9	0.0	4.5	43.0
Feb 24	0			0				0	0			116.9	0.0	4.5	43.0
Feb 25	0			0				20	6			126.4	0.0	4.5	42.0
Feb 26	0			0				70	12			127.5	0.0	4.5	43.0
Feb 27	0			0				109	41			99.1	0.0	4.0	42.0
Feb 28	0			0				86	24			130.9	0.0	4.5	42.0
TOTAL	11			0				485	111						
AVG.	0			0				17	4			129.0	0.0	4.4	42.2

*Data unavailable.

Note: From February 20 to March 31, counts were from video tape. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.
Official Spring Chinook run started April 1. February and March Chinook counts were not added to spring totals.

TABLE 28

MONTHLY FISH PASSAGE SUMMARY REPORT

THE DALLES PROJECT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

MARCH 2003

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	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Mar 1	1			0				70	15			127.6	0.0	4.5	42.0
Mar 2	6			0				110	13			112.1	0.0	5.0	42.0
Mar 3	0			0				61	11			136.7	0.0	4.5	43.0
Mar 4	6			0				154	33			133.9	0.0	5.0	43.0
Mar 5	10			0				187	46			153.2	0.0	5.0	43.0
Mar 6	17			0				113	13			132.5	0.0	5.5	44.0
Mar 7	42			0				193	34			146.6	0.0	4.5	44.0
Mar 8	17			0				115	22			144.3	0.0	4.5	44.0
Mar 9	39			0				197	23			125.2	0.0	4.5	44.0
Mar 10	26			0				159	20			132.4	0.0	4.0	44.0
Mar 11	21			0				97	18			120.7	0.0	4.0	44.0
Mar 12	43			0				63	11			120.7	0.0	4.0	44.0
Mar 13	27			0				75	15			127.9	0.0	4.5	44.0
Mar 14	197			0				44	3			139.7	0.0	4.5	45.0
Mar 15	166			0				43	8			143.4	0.0	4.5	45.0
Mar 16	457			0				46	3			147.0	0.0	5.0	45.0
Mar 17	173			0				23	0			171.2	0.0	5.0	45.0
Mar 18	184			0				37	7			178.3	0.0	5.0	46.0
Mar 19	265			0				-7	-8			187.5	0.0	5.0	46.0
Mar 20	265			0				-22	-3			167.4	0.0	4.5	46.0
Mar 21	303			1				11	-7			149.0	0.0	5.0	46.0
Mar 22	525			0				20	-3			127.2	0.0	4.5	46.0
Mar 23	233			0				31	-4			111.0	0.0	4.5	46.0
Mar 24	125			1				45	1			126.1	0.0	4.5	46.0
Mar 25	782			0				100	10			155.1	0.1	5.0	47.0
Mar 26	317			3				102	4			173.3	0.0	4.5	46.0
Mar 27	55			1				83	9			215.5	0.0	4.0	47.0
Mar 28	105			0				72	10			222.3	0.0	4.5	45.0
Mar 29	548			5				53	2			192.3	0.0	4.8	45.0
Mar 30	1,093			3				59	5			188.1	0.0	5.0	46.0
Mar 31	1,162			3				55	3			183.0	0.0	4.0	48.0
TOTAL	7,210			17				2,389	314						
AVG.	202			0				78	10			151.3	0.0	4.6	44.9

Note: From February 20 to March 31, counts were from video tape. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST. Official Spring Chinook run started April 1. February and March Chinook counts were not added to spring totals.

TABLE 29

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

THE DALLES PROJECT

APRIL 2003

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Apr 1	1,017			8				53	13	0		175.1	0.0	4.0	48.0
Apr 2	2,320			1				55	25	0		192.1	0.0	4.5	48.0
Apr 3	3,057			1				81	44	0		173.6	0.0	4.0	48.0
Apr 4	1,680			0				55	25	0		168.4	0.0	4.5	48.0
Apr 5	699			0				48	29	0		184.6	0.0	4.0	48.0
Apr 6	782			0				69	42	0		189.1	0.0	3.5	48.0
Apr 7	1,807			5				49	26	0		181.0	0.0	2.5	48.0
Apr 8	3,649			4				33	18	0		180.8	0.0	3.0	48.0
Apr 9	3,639			4				45	25	0		195.4	0.0	3.5	49.0
Apr 10	1,730			2				31	20	0		189.9	0.0	3.0	49.0
Apr 11	2,320			3				29	23	0		183.9	0.0	4.0	49.0
Apr 12	4,070			5				21	13	0		178.9	0.0	5.0	50.0
Apr 13	5,147			9				29	17	0		179.9	0.0	4.5	52.0
Apr 14	4,238			13				23	15	0		182.3	21.5	4.0	50.0
Apr 15	3,569			8				31	18	0		197.7	77.1	4.0	50.0
Apr 16	4,186			12				16	10	0		190.4	72.8	4.2	50.0
Apr 17	4,591			9				17	14	0		218.4	85.8	4.0	53.0
Apr 18	3,911			9				11	6	0		232.1	90.9	4.0	51.0
Apr 19	2,329			5				11	7	0		208.8	82.5	3.5	51.0
Apr 20	2,562			8				5	3	0		184.9	73.8	3.5	51.0
Apr 21	2,637			9				11	8	0		177.3	69.4	2.5	52.0
Apr 22	3,504			31				13	7	0		216.3	84.6	4.0	52.0
Apr 23	2,434			36				8	6	1		239.5	93.5	3.0	52.0
Apr 24	3,866			51				17	6	0		211.9	84.6	3.0	52.0
Apr 25	1,812			46				2	1	0		195.6	76.9	4.0	52.0
Apr 26	1,034			49				7	7	1		254.9	99.8	5.0	49.0
Apr 27	3,181			109				10	5	0		193.6	76.7	5.3	50.0
Apr 28	1,606			99				1	0	0		230.7	90.0	4.5	51.0
Apr 29	3,272			115				10	4	1		216.7	85.4	5.0	52.0
Apr 30	2,845			167				10	9	6		222.4	84.0	5.0	52.0
TOTAL	83,494			818				801	446	9					
AVG.	2,783			27				27	15			198.2	45.0	4.0	50.1

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

TABLE 30

MONTHLY FISH PASSAGE SUMMARY REPORT — **THE DALLES PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND — **MAY 2003**

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
May 1	1,750			106			0	2	0	10	0	231.1	88.6	5.0	52.0
May 2	3,370			196			0	7	5	6	0	192.3	76.3	4.0	52.0
May 3	2,339			214			0	8	4	17	0	198.9	77.8	3.5	53.0
May 4	3,069			352			0	12	8	13	0	193.1	75.3	3.5	53.0
May 5	1,684			217			0	5	3	17	0	220.0	84.3	4.0	53.0
May 6	1,356			285			0	7	1	31	0	222.1	84.4	4.0	53.0
May 7	858			176			0	2	0	17	0	247.0	95.8	4.0	54.0
May 8	1,108			362			0	2	0	14	0	196.8	79.3	4.5	53.0
May 9	1,269			437			0	8	1	1	0	236.0	91.6	5.0	53.0
May 10	1,277			479			0	3	0	10	0	218.6	84.8	5.0	53.0
May 11	1,733			618			0	7	1	110	0	168.6	67.0	5.0	52.0
May 12	1,099			383			0	6	2	334	0	200.3	78.3	4.0	54.0
May 13	1,431			533			0	2	0	202	0	196.2	77.5	5.0	54.0
May 14	1,503			601			0	6	1	281	0	260.4	100.1	4.0	54.0
May 15	1,809			658			0	8	3	383	0	218.8	85.3	3.5	55.0
May 16	1,399			436			0	6	1	420	0	242.2	96.0	3.5	55.0
May 17	1,003			265			0	8	1	296	0	235.9	92.7	3.5	54.0
May 18	691			252			0	11	2	442	0	236.9	93.5	3.5	55.0
May 19	954			439			0	10	2	581	0	220.9	86.8	4.0	55.0
May 20	1,307			467			0	9	0	1,789	0	212.6	89.2	4.0	55.0
May 21	1,338			504			0	12	0	1,896	0	221.9	83.5	4.0	55.0
May 22	1,466			370			0	7	1	3,647	0	247.2	93.5	5.0	57.0
May 23	1,204			247			0	5	1	9,364	0	246.7	93.0	4.0	57.0
May 24	1,143			312			0	8	1	22,537	0	251.4	99.3	4.0	57.0
May 25	1,689			252			0	8	0	18,551	0	232.2	98.2	3.0	57.0
May 26	1,206			229			0	7	1	14,531	0	240.5	98.5	4.6	56.0
May 27	884			182			1	9	1	40,171	0	310.8	113.8	4.0	57.0
May 28	1,173			218			2	21	5	122,495	0	322.9	112.7	5.0	57.0
May 29	964			126			0	18	4	109,248	0	270.0	96.4	4.0	57.0
May 30	1,147			166			0	23	5	116,107	4	343.1	126.6	4.5	60.0
May 31	740			128			5	24	5	93,254	2	354.2	137.8	4.0	59.0
TOTAL	43,963			10,210			8	271	59	556,775	6				
AVG.	1418			329			0	9	2	17,960	0	238.4	92.2	4.1	54.9

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
SPRING	127,457	11,028	8	1,072	505	556,784	6

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

TABLE 31

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

THE DALLES PROJECT

JUNE 2003

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	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Jun 1	1095			128			2	31	11	150,537	4	321.0	124.0	4.0	58.0
Jun 2	1070			168			0	21	1	134,113	4	298.1	105.8	4.0	58.0
Jun 3	1585			198			6	26	6	138,744	13	291.2	107.5	4.5	59.0
Jun 4		1627		126			4	15	8	133,957	15	286.6	101.7	4.0	59.0
Jun 5		1583		135			13	26	2	155,682	31	281.8	98.5	4.0	59.0
Jun 6		1593		180			16	34	6	213,558	21	272.2	93.7	4.0	59.0
Jun 7		2063		214			42	46	6	234,218	30	265.8	94.0	5.0	61.0
Jun 8		1189		155			47	39	7	225,910	31	281.5	99.2	4.0	62.0
Jun 9		1889		214			102	52	14	174,615	49	258.9	91.6	4.0	61.0
Jun 10		3769		261			98	54	16	150,687	37	268.5	95.1	4.0	61.0
Jun 11		2526		183			139	78	17	168,372	42	296.0	110.2	4.0	61.0
Jun 12		2327		112			126	56	11	162,293	36	298.5	117.3	4.0	61.0
Jun 13		1922		169			171	73	15	111,560	34	260.7	100.2	4.5	60.0
Jun 14		2326		238			246	73	13	129,709	60	283.2	108.9	4.5	60.0
Jun 15		2309		184			341	89	22	165,299	32	219.4	87.3	4.5	60.0
Jun 16		1538		108			297	85	22	164,945	83	243.6	94.6	4.0	63.0
Jun 17		1367		162			473	96	36	104,455	65	258.1	101.7	4.0	64.0
Jun 18		2250		232			687	136	51	143,799	113	255.6	99.5	4.0	63.0
Jun 19		2391		218			692	145	40	156,345	67	237.6	93.9	4.5	62.0
Jun 20		2501		169			711	139	54	106,345	85	177.2	69.4	4.0	63.0
Jun 21		1755		184			844	178	63	57,248	46	189.3	74.5	4.0	63.0
Jun 22		2029		166			978	148	50	48,957	76	172.4	68.0	3.0	62.0
Jun 23		2858		141			1,090	178	66	39,525	99	175.9	69.8	3.5	59.0
Jun 24		2487		198			1,393	308	90	34,561	103	187.0	73.7	3.0	60.0
Jun 25		1868		134			1,413	237	76	37,139	74	200.8	78.3	3.5	60.0
Jun 26		2571		221			1,938	346	104	48,324	71	222.4	86.6	3.5	61.0
Jun 27		2537		258			2,464	370	136	43,595	125	218.8	85.9	3.5	61.0
Jun 28		2703		350			2,732	481	149	60,317	222	165.1	65.3	3.5	62.0
Jun 29		3376		308			2,201	580	212	45,193	264	185.5	70.8	3.5	64.0
Jun 30		3472		257			1,967	742	281	39,636	349	168.9	67.0	3.5	64.0
TOTAL	3,750	60,826		5,771			21,233	4,882	1,585	3,579,638	2,281				
AVG.	1,250	2253		192			708	315	102	230,944	147	241.4	91.1	3.9	61.0

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	131,207	11,522
SUMMER	60,826	5,277
TOTAL	192,033	16,799

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
21,241	5,954	2,090	4,136,422	2,287

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

TABLE 32

MONTHLY FISH PASSAGE SUMMARY REPORT — **THE DALLES PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND — **JULY 2003**

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Jul 1		2,778		189			1,584	804	301	28,681	261	170.1	67.2	3.0	64.0
Jul 2		2,665		198			1,289	709	289	17,682	179	164.5	64.6	3.0	63.0
Jul 3		2,179		231			1,420	838	328	16,183	197	109.3	43.6	3.5	65.0
Jul 4		2,163		198			1,007	892	406	11,773	138	132.7	52.9	3.0	65.0
Jul 5		2,163		201			980	869	376	8,784	181	153.8	60.4	3.5	65.0
Jul 6		1,509		155			932	814	324	7,236	301	107.8	39.0	3.5	55.0
Jul 7		1,788		150			799	714	298	6,058	328	130.3	48.3	4.5	65.0
Jul 8		1,602		150			676	873	395	2,029	447	113.1	45.2	4.5	66.0
Jul 9		1,507		165			579	1,074	520	1,957	311	182.3	72.3	3.0	66.0
Jul 10		1,290		123			436	957	475	2,500	535	170.9	68.0	4.5	68.0
Jul 11		1,628		134			566	1,294	623	3,297	823	153.9	61.3	3.5	67.0
Jul 12		1,652		134			406	1,207	606	3,036	360	161.1	63.5	3.5	68.0
Jul 13		1,784		154			389	1,646	829	1,723	789	135.3	54.2	4.0	68.0
Jul 14		1,541		190			392	1,461	740	1,625	615	169.1	65.9	4.0	68.0
Jul 15		1,087		206			275	1,550	761	1,603	563	145.6	58.2	4.5	68.0
Jul 16		634		152			181	2,036	1,024	1,374	828	140.3	54.8	4.5	68.0
Jul 17		925		114			164	1,896	936	601	758	164.9	63.5	4.5	69.0
Jul 18		1,192		159			148	1,832	811	510	889	133.8	51.5	3.5	68.0
Jul 19		1,227		185			116	1,784	884	427	830	99.3	38.2	3.0	68.0
Jul 20		1,238		152			106	1,628	833	483	688	140.1	55.3	3.5	69.0
Jul 21		1,083		164			89	1,435	760	405	589	144.3	56.0	3.5	69.0
Jul 22		407		161			55	1,066	508	548	671	139.6	55.3	5.0	72.0
Jul 23		516		154			53	850	384	408	1,148	154.3	60.7	5.5	70.0
Jul 24		677		134			51	1,155	599	289	669	156.3	61.6	5.0	71.0
Jul 25		642		149			39	1,707	829	341	626	144.5	57.2	4.5	71.0
Jul 26		564		90			31	1,908	906	248	778	120.5	44.6	4.5	71.0
Jul 27		571		88			30	1,325	579	265	447	107.5	39.8	4.5	71.0
Jul 28		625		87			25	921	415	209	534	141.6	52.0	4.5	71.0
Jul 29		569		125			17	601	257	148	425	158.6	59.7	4.5	71.0
Jul 30		486		108			14	614	312	187	328	128.7	47.7	5.0	72.0
Jul 31		487		147			13	500	221	171	578	118.4	42.2	4.5	73.0
TOTAL		39,179		4,747			12,862	36,960	17,529	120,781	16,814				
AVG		1,264		153			415	1,192	565	3,896	542	141.7	55.0	4.0	67.9

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	131,207	11,522
SUMMER	100,005	10,024
TOTAL	231,212	21,546

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
34,103	42,914	19,619	4,257,203	19,101

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

TABLE 33

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

FISH COUNTS

THE DALLES PROJECT

AUGUST 2003

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Aug 1		590		184	0	0	9	552	268	186	503	145.1	53.0	4.5	73.0
Aug 2		578		138	0	0	20	755	320	78	317	136.4	53.4	4.5	72.0
Aug 3		317		95	0	0	8	913	393	65	224	91.6	33.0	4.0	73.0
Aug 4			344	106	0	0	10	533	241	110	218	132.2	50.3	4.5	72.0
Aug 5			258	86	0	0	2	334	130	104	201	114.1	36.6	5.5	72.0
Aug 6			451	142	0	0	9	768	280	128	189	117.5	42.8	5.5	72.0
Aug 7			501	131	0	0	4	1,052	470	142	609	119.1	45.1	4.0	73.0
Aug 8			432	101	0	0	0	851	361	76	318	109.5	39.8	4.5	72.0
Aug 9			395	90	0	0	3	711	311	64	366	131.5	48.3	5.0	72.0
Aug 10			599	102	0	0	1	840	325	43	360	111.3	43.8	5.0	72.0
Aug 11			520	102	0	0	2	787	328	64	369	123.4	45.6	5.0	72.0
Aug 12			571	124	0	0	1	840	288	90	172	144.2	55.5	5.0	72.0
Aug 13			389	121	0	0	0	861	316	72	182	130.6	48.4	5.5	72.0
Aug 14			486	72	0	0	0	768	264	33	201	123.2	45.0	4.5	73.0
Aug 15			519	107	1	0	0	779	249	41	223	127.4	48.4	4.5	72.0
Aug 16			530	115	4	0	1	1,134	391	37	271	107.1	39.3	4.0	72.0
Aug 17			576	106	10	0	0	1,570	564	22	196	121.6	48.0	5.0	71.0
Aug 18			496	125	7	0	0	1,546	511	12	190	125.4	44.9	3.5	71.0
Aug 19			505	110	13	0	0	1,430	474	13	288	139.1	54.5	4.5	72.0
Aug 20			556	88	19	4	0	1,542	522	10	369	137.6	50.3	5.0	72.0
Aug 21			627	67	19	0	0	1,503	484	16	180	140.1	55.8	4.5	71.0
Aug 22			640	76	8	1	0	1,327	412	33	226	140.7	54.0	5.5	72.0
Aug 23			539	60	13	7	0	1,202	386	11	199	118.4	44.9	4.5	72.0
Aug 24			695	69	17	6	0	1,966	602	36	215	116.3	43.5	5.0	72.0
Aug 25			833	76	14	5	0	1,477	521	42	125	137.6	51.7	5.5	72.0
Aug 26			1,002	106	21	1	0	1,186	431	45	187	139.1	51.9	5.5	72.0
Aug 27			1,278	79	20	5	0	725	232	10	135	165.3	64.7	5.5	72.0
Aug 28			2,974	152	90	6	0	1,248	392	51	107	117.1	43.1	5.5	72.0
Aug 29			5,568	275	190	46	0	1,802	547	16	151	98.8	35.9	5.5	70.0
Aug 30			5,365	300	272	28	0	1,936	639	22	118	112.4	39.7	5.0	70.0
Aug 31			9,135	372	224	33	0	2,337	802	14	84	115.9	43.8	5.0	70.0
TOTAL		1,485	36,784	3,877	942	142	70	35,275	12,454	1,686	7,493				
AVG.		495	1,314	248	63	9	4	2,308	811	104	472	125.5	46.9	4.9	71.8

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	131,207	11,522
SUMMER	101,490	10,441
FALL	36,784	3,460
TOTAL	269,481	25,423

COHO ADULTS	COHO JACKS	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
942	142	34,173	78,189	32,073	4,258,889	26,594

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

TABLE 34

MONTHLY FISH PASSAGE SUMMARY REPORT — **THE DALLES PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND — **SEPTEMBER 2003**

FISH COUNTS — **RIVER CONDITIONS**

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	PINK	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Sep 1			8,754	372	544	38	0	3,172	1,004	0	109	113.4	0.0	5.5	70.0
Sep 2			10,000	428	723	74	0	5,357	1,336	2	76	92.6	0.0	5.5	70.0
Sep 3			3,459	424	342	25	0	3,401	1,096	1	94	94.2	0.0	5.0	71.0
Sep 4			4,129	491	246	36	0	2,407	689	2	85	100.0	0.0	5.5	70.0
Sep 5			7,244	698	300	30	2	3,794	1,144	1	129	88.6	0.0	5.5	70.0
Sep 6			12,143	689	291	60	0	3,563	926	0	116	92.2	0.0	5.5	70.0
Sep 7			10,619	817	403	37	0	4,192	1,252	1	109	73.7	0.0	5.5	71.0
Sep 8			11,857	658	431	108	1	4,715	1,351	0	117	78.8	0.0	4.5	71.0
Sep 9			9,304	962	615	51	0	6,485	1,913	1	115	96.0	0.0	6.0	71.0
Sep 10			7,383	438	270	63	0	4,008	1,141	0	95	83.1	0.0	4.5	71.0
Sep 11			7,913	531	356	45	0	4,728	1,368	1	86	63.6	0.0	5.5	70.0
Sep 12			11,588	693	614	24	0	4,965	1,452	3	100	75.7	0.0	5.5	70.0
Sep 13			15,289	848	940	52	0	7,639	2,105	0	44	80.3	0.0	5.5	71.0
Sep 14			14,678	1,156	1,367	30	0	10,425	2,876	6	53	77.1	0.0	5.5	70.0
Sep 15			14,741	1,173	1,717	62	0	7,965	2,030	6	32	76.4	0.0	3.5	67.0
Sep 16			15,026	1,736	2,410	67	0	10,138	2,493	10	52	96.0	0.0	4.5	68.0
Sep 17			12,638	1,726	2,034	87	0	7,850	1,787	6	57	94.8	0.0	4.5	68.0
Sep 18			9,311	1,265	1,691	168	0	8,171	1,845	2	93	88.1	0.0	5.5	68.0
Sep 19			8,810	1,371	1,772	90	0	7,765	1,837	10	127	81.9	0.0	5.5	68.0
Sep 20			8,163	1,286	1,950	92	0	6,762	1,625	5	67	76.3	0.0	6.0	67.0
Sep 21			7,896	1,257	1,441	81	0	6,782	1,636	9	51	79.3	0.0	6.0	66.0
Sep 22			6,016	820	888	41	0	5,165	1,312	3	26	106.1	0.0	6.0	67.0
Sep 23			7,719	996	1,156	76	0	5,566	1,268	7	40	115.8	0.0	6.0	66.0
Sep 24			4,944	1,388	713	77	0	4,030	1,063	7	43	100.4	0.0	5.5	65.0
Sep 25			4,610	1,092	563	80	0	2,507	641	3	97	99.7	0.0	5.5	66.0
Sep 26			4,035	1,396	852	86	0	3,468	913	8	57	109.8	0.0	5.0	67.0
Sep 27			3,860	1,214	617	69	0	3,344	824	3	43	123.3	0.0	5.5	67.0
Sep 28			3,305	1,284	696	98	0	3,226	858	6	34	70.4	0.0	5.0	68.0
Sep 29			3,067	1,093	566	97	0	3,232	878	2	33	83.7	0.0	5.5	68.0
Sep 30			2,425	863	595	82	0	3,703	1,176	4	25	104.0	0.0	5.5	68.0
TOTAL			250,926	29,165	27,103	2,026	3	158,525	41,839	109	2,205				
AVG.			8,364	972	903	68		5,284	1,395	4	74	90.5	0.0	5.3	68.7

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	131,207	11,522
SUMMER	101,490	10,441
FALL	287,710	32,625
TOTAL	520,407	54,588

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK
28,045	2,168	34,176	236,714	73,912	4,258,889	28,799	109

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

TABLE 35

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

FISH COUNTS

THE DALLES PROJECT

OCTOBER 2003

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	PINK	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Oct 1			1,961	755	438	70		3,358	1,131	5	23	99.8	0.0	5.5	65.0
Oct 2			1,639	489	253	40		2,040	582	2	20	117.2	0.0	6.0	67.0
Oct 3			1,507	512	282	31		1,705	487	2	25	90.2	0.0	4.5	67.0
Oct 4			1,187	250	143	21		1,092	342	0	12	81.4	0.0	5.5	66.0
Oct 5			1,315	453	154	29		1,279	333	3	7	68.8	0.0	5.5	66.0
Oct 6			1,256	389	203	23		1,158	369	2	5	78.5	0.0	6.0	67.0
Oct 7			1,318	469	149	50		1,211	381	1	17	96.3	0.0	5.5	66.0
Oct 8			1,367	351	139	14		1,349	374	2	13	104.1	0.0	6.0	66.0
Oct 9			1,401	322	148	17		933	275	0	8	107.3	0.0	6.0	66.0
Oct 10			966	291	309	13		1,153	346	0	10	96.5	0.0	5.5	66.0
Oct 11			946	371	308	21		1,416	395	0	0	106.7	0.0	6.0	65.0
Oct 12			1,088	330	200	29		1,001	310	1	5	78.8	0.0	6.0	65.0
Oct 13			1,077	280	826	12		1,811	518	0	3	86.0	0.0	6.0	65.0
Oct 14			974	327	1,404	25		1,885	574	0	10	102.1	0.0	6.0	65.0
Oct 15			688	235	756	23		1,217	369	0	2	105.7	0.0	5.5	64.0
Oct 16			1,011	179	317	24		1,025	332	0	4	109.3	0.0	6.0	65.0
Oct 17			529	120	193	4		756	215	0	2	102.0	0.0	6.0	63.0
Oct 18			647	180	605	17		1,051	312	0	7	87.7	0.0	5.5	63.0
Oct 19			590	169	1,807	21		1,221	402	0	0	70.9	0.0	5.5	63.0
Oct 20			462	97	294	14		788	278	0	4	92.6	0.0	6.0	63.0
Oct 21			391	80	194	6		674	249	0	1	91.4	0.0	6.0	62.0
Oct 22			551	116	1,644	67		1,433	489	0	3	95.9	0.0	6.0	63.0
Oct 23			549	56	2,374	42		1,064	383	0	1	119.0	0.0	6.0	62.0
Oct 24			392	44	581	2		1,409	521	0	1	132.5	1.3	6.0	61.0
Oct 25			469	17	214	7		765	240	0	1	132.6	0.0	6.0	60.0
Oct 26			432	32	140	4		772	250	0	0	124.0	0.0	6.0	60.0
Oct 27			335	27	104	5		563	206	0	4	111.6	0.0	6.0	61.0
Oct 28			199	47	91	6		667	205	0	1	111.7	0.0	5.5	61.0
Oct 29			155	32	94	2		641	175	0	1	127.6	0.0	6.0	60.0
Oct 30			243	30	76	2		574	176	0	6	128.2	0.0	5.5	60.0
Oct 31			342	33	78	2		447	156	0	0	129.2	0.0	6.0	58.0
TOTAL			25,987	7,083	14,518	643		36,458	11,375	18	196				
AVG.			838	228	468	21		1,176	367		6	102.8	0.0	5.8	63.6

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	131,207	11,522
SUMMER	101,490	10,441
FALL	313,697	39,708
TOTAL	546,394	61,671

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK	CHUM
42,563	2,811	34,176	273,172	85,287	4,258,889	28,995	127	0

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

TABLE 36

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

THE DALLES PROJECT

NOVEMBER 2003

FISH COUNTS / **RIVER CONDITIONS**

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	CHUM	STEELHEAD	WILD STEELHEAD	PINK	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Nov 1			318	36	41	2	1	398	90	0		121.7	0.0	6.0	57.0
Nov 2			292	47	33	0	1	365	82	0		117.3	0.0	6.0	57.0
Nov 3			179	50	21	3	0	354	58	0		126.0	0.0	6.0	57.0
Nov 4			159	33	34	-1	1	501	87	0		126.9	0.0	5.5	56.0
Nov 5			186	28	26	1	1	368	47	0		130.6	0.0	6.0	56.0
Nov 6			244	14	16	0	2	305	30	0		134.8	0.0	6.0	55.0
Nov 7			164	21	15	0	1	235	33	1		134.5	0.0	6.0	54.0
Nov 8			190	17	22	0	0	166	27	0		121.5	0.0	6.0	54.0
Nov 9			125	4	11	0	1	112	21	0		99.6	0.0	6.0	53.0
Nov 10			106	6	18	0	1	120	21	0		125.5	0.0	6.0	52.0
Nov 11			59	8	24	1	2	121	17	0		119.3	0.0	6.0	52.0
Nov 12			74	5	92	1	2	126	28	0		119.4	0.0	6.0	52.0
Nov 13			95	9	67	0	2	180	27	0		139.5	0.0	5.5	52.0
Nov 14			69	7	27	0	3	111	9	0		110.6	0.0	5.0	50.0
Nov 15			66	1	17	0	2	149	19	0		118.1	0.0	6.0	50.0
Nov 16			52	6	16	0	3	193	21	0		105.1	0.0	6.0	50.0
Nov 17			80	2	41	1	0	370	40	0		122.3	0.0	6.5	50.0
Nov 18			53	5	76	0	0	309	32	0		113.3	0.0	5.5	50.0
Nov 19			31	2	20	30	0	257	27	0		117.9	0.0	5.0	50.0
Nov 20			43	2	29	0	2	265	31	0		116.4	0.0	5.5	49.0
Nov 21			33	1	10	2	0	180	29	0		133.8	0.0	5.5	49.0
Nov 22			31	3	6	1	1	172	13	0		140.4	0.0	5.5	49.0
Nov 23			20	2	3	0	2	176	24	0		129.8	0.0	5.5	49.0
Nov 24			32	0	3	1	0	134	17	0		105.5	0.0	6.0	49.0
Nov 25			27	1	3	0	0	120	10	0		115.2	0.0	5.5	49.0
Nov 26			17	2	-1	0	0	76	12	0		108.0	0.0	5.5	48.0
Nov 27			8	3	1	0	0	77	8	0		112.0	0.0	5.5	48.0
Nov 28			18	-1	0	0	0	64	11	0		103.2	0.0	6.0	48.0
Nov 29			0	0	0	0	0	0	0	0		105.9	0.0	6.0	48.0
Nov 30			0	0	0	0	0	0	0	0		114.1	0.0	6.0	47.0
TOTAL			2,771	314	671	42	28	6,004	871	1					
AVG.			92	10	22	1	1	200	29	0		119.6	0.0	5.8	51.3

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	131,295	11,522
SUMMER	101,490	10,441
FALL	313,697	39,708
TOTAL	546,482	61,671

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK	CHUM
42,563	2,811	34,176	273,172	85,287	4,258,889	28,995	128	28

Note: Video counts occurred from November 1 through December 7. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST. Official Fall chinook run ended October 31st. November and December totals were not added to fall totals.

TABLE 37

MONTHLY FISH PASSAGE SUMMARY REPORT — **THE DALLES PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND — **DECEMBER 2003**

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	CHUM	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Dec 1			9	3	0	0	0	38	3	1		115.2	0.0	6.0	47.0
Dec 2			13	0	0	0	3	32	1	0		119.8	0.0	6.0	47.0
Dec 3			14	0	0	0	1	33	5	0		125.7	0.0	5.5	47.0
Dec 4			5	0	3	0	0	27	3	0		128.7	0.0	6.0	47.0
Dec 5			4	1	2	0	0	25	2	0		118.6	0.0	5.5	47.0
Dec 6			6	0	1	0	0	54	7	0		127.9	0.0	6.0	46.0
Dec 7			8	0	2	0	0	44	8	0		119.1	0.0	6.0	46.0
Dec 8			6	0	0	0	0	44	9	0		127.7	0.0	6.0	46.0
Dec 9			6	0	0	0	0	27	6	0		137.5	0.0	6.0	46.0
Dec 10			2	0	1	0	0	23	4	0		156.5	0.0	6.0	45.0
Dec 11			2	0	0	0	0	22	4	0		161.3	0.0	6.0	46.0
Dec 12			1	1	0	0	0	23	6	0		152.5	0.0	6.0	46.0
Dec 13			1	0	0	0	0	19	4	0		137.7	0.0	6.0	46.0
Dec 14			2	0	3	0	0	39	9	0		120.0	0.0	6.0	46.0
Dec 15			0	0	2	0	0	74	10	0		155.3	0.0	6.0	45.0
Dec 16												152.8	0.0	6.0	45.0
Dec 17												156.0	0.0	6.0	45.0
Dec 18												163.7	0.0	4.5	45.0
Dec 19												147.6	0.0	4.5	44.0
Dec 20												141.4	0.0	4.5	44.0
Dec 21												124.2	0.0	4.5	44.0
Dec 22												140.2	0.0	6.0	44.0
Dec 23												132.8	0.0	6.0	44.0
Dec 24												135.2	0.0	5.0	44.0
Dec 25												111.8	0.0	5.5	44.0
Dec 26												115.3	0.0	5.5	44.0
Dec 27												121.2	0.0	5.0	43.0
Dec 28												119.5	0.0	5.0	44.0
Dec 29												161.6	0.0	5.0	44.0
Dec 30												147.3	0.0	6.0	44.0
Dec 31												168.9	0.0	6.0	45.0
TOTAL			79	5	14	0	4	524	81	1					
AVG.			5	0	1	0	0	35	5	0		136.9	0.0	5.6	45.2

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	131,295	11,522
SUMMER	101,490	10,441
FALL	313,697	39,708
TOTAL	546,482	61,671

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK	CHUM
42,563	2,811	34,176	273,172	85,287	4,258,889	28,995	128	29

Note: Video counts occurred from November 1 through December 7. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST. Official Fall chinook run ended October 31st. November and December totals were not added to fall totals.

TABLE 38

YEARLY TOTALS OF SALMONIDS COUNTED OVER THE DALLES DAM
1957 - 2003

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
1998	154,132	116,682	8,826	8,970			288,610
1999	199,491	156,874	13,715	15,041		19	385,140
2000	316,836	205,241	73,383	29,536		1	624,997
2001	629,334	503,327	102,562	64,557			1,299,780
2002	583,155	387,920	40,554	12,786			1,024,415
2003	608,153	273,172	34,176	45,374	29	128	961,032
Totals	11,930,169	7,527,924	2,699,566	615,087	225	329	22,773,300
10-Year Average	318,636	222,853	34,722	19,322			595,551

*Jacks included

TABLE 39

MONTHLY COUNT OF CHINOOK SALMON
THE DALLES DAM 1957 - 2003

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL*	SPRING 1 JAN- 3 JUN	SUMMER 4 JUN- 3 AUG	FALL 4 AUG- 31 DEC	JACKS
1957			22	42,161	59,410	86,096	35,643	28,828	56,753	3,564	201		312,678	109,723	116,661	86,294	37,374
1958			114	8,268	47,862	59,955	24,381	17,211	141,262	2,788	119		301,960	61,747	80,139	160,074	19,747
1959			8	16,771	32,634	27,799	42,817	20,142	65,229	2,022	39		207,461	50,874	71,362	85,225	39,857
1960				17,073	40,091	52,577	22,549	15,225	46,453	2,720	274		196,962	58,406	75,315	63,241	30,847
1961				43,822	35,059	24,478	24,596	16,866	53,371	3,143			201,335	79,183	50,824	71,328	35,409
1962				33,069	35,629	34,488	21,515	13,461	46,135	2,835			187,132	69,139	57,007	60,986	17,835
1963				19,119	33,207	25,063	20,414	21,865	57,248	4,053			180,969	52,937	47,333	80,699	54,749
1964			340	35,551	24,447	16,801	37,697	17,452	49,811	1,743			183,842	60,691	56,360	66,791	30,900
1965			190	17,870	24,930	17,900	31,072	25,119	74,904	3,064			195,049	43,617	50,527	100,905	67,552
1966			1,068	72,267	22,837	25,530	33,712	14,978	65,380	4,899			240,671	96,628	61,062	82,981	36,482
1967				48,744	22,817	24,718	45,346	23,927	107,427	7,133			280,112	71,976	72,582	135,554	98,817
1968			100	52,144	45,057	32,827	33,272	22,361	72,209	4,800	205		262,975	98,742	67,391	96,842	64,644
1969			65	19,025	80,162	33,432	27,750	29,330	118,890	5,604			314,258	100,482	61,978	151,798	96,244
1970				53,370	29,670	22,903	23,318	34,906	93,633	3,657			261,457	83,549	48,115	129,793	85,471
1971				28,227	44,181	22,011	29,655	16,190	103,370	6,894			250,528	73,655	51,847	125,026	75,329
1972				68,955	33,508	17,354	29,756	21,828	91,666	5,561			268,628	103,107	48,660	116,861	81,668
1973				94,334	15,040	19,548	19,181	23,341	101,771	7,730			280,945	111,088	38,774	131,083	72,088
1974				13,415	41,902	7,141	22,709	13,964	103,804	14,246			217,181	56,397	30,273	130,511	79,840
1975				18,526	32,869	12,155	26,447	28,973	90,193	8,120			217,283	52,483	39,062	125,738	74,418
1976				20,266	35,434	17,828	20,129	17,278	90,933	14,295			216,163	56,570	38,733	120,860	74,275
1977				72,726	16,672	22,084	22,059	12,266	69,927	9,216			224,950	90,373	44,378	90,199	55,067
1978				52,425	30,472	19,477	15,978	11,251	57,786	11,839			199,228	84,924	34,396	79,908	32,503
1979				13,993	12,569	14,310	17,687	20,458	61,757	9,516	357		150,647	27,297	32,298	91,052	42,886
1980				12,434	15,441	7,948	12,832	12,881	43,675	8,740			113,951	28,237	21,133	64,581	20,016
1981				24,227	16,335	8,491	10,779	15,802	53,840	5,702			135,176	41,160	19,676	74,340	33,919
1982				10,569	33,296	10,058	9,554	17,466	79,487	12,252			172,682	44,750	19,342	108,590	60,165
1983				13,270	22,893	8,766	8,430	12,501	73,942	16,388			156,190	36,856	17,051	102,283	41,335
1984				9,326	23,784	9,992	12,332	23,495	105,786	19,205			203,920	33,848	22,472	147,600	70,798
1985				36,035	39,173	15,785	10,332	37,806	203,470	27,058	1,323		370,982	76,514	25,385	269,083	145,007
1986			175	48,892	36,928	14,175	10,452	22,684	264,091	45,616			443,013	87,004	24,826	331,183	176,461
1987				48,812	27,586	17,923	12,145	50,680	236,216	27,828			421,190	77,453	30,804	312,933	65,115
1988				51,680	20,756	16,644	13,494	66,509	193,490	15,507			378,080	73,663	29,892	274,525	69,631
1989				24,474	27,477	15,539	13,899	58,674	130,931	10,438	736		282,168	53,014	30,555	198,599	28,671
1990			115	36,062	20,749	13,390	9,099	22,152	96,538	9,451			207,556	57,424	22,615	127,517	32,794
1991				14,513	17,313	10,949	7,638	8,384	84,861	9,365			153,023	32,359	18,467	102,197	36,820
1992				38,141	19,414	9,595	5,797	14,589	71,281	9,690			168,507	58,451	14,976	95,080	27,160
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	21,134	132,704	16,249
1998				14,927	10,488	10,289	6,702	20,129	78,191	13,406			154,132	25,743	16,906	111,483	20,513
1999				5,396	17,579	10,972	13,864	30,830	107,411	13,439			199,491	23,743	24,937	150,811	28,412
2000				68,618	47,131	20,878	15,442	57,600	97,042	10,125			316,836	117,749	35,580	163,507	63,769
2001				228,568	79,627	50,030	35,889	38,452	172,871	23,897			629,334	313,865	80,249	233,081	72,644
2002				63,869	116,008	76,400	45,761	63,943	197,956	19,218			583,155	185,046	118,812	279,297	42,982
2003		11	7,227	84,312	54,173	70,347	43,926	42,146	280,091	33,070	3,085	84	618,472	149,967	111,931	356,574	62,007
Total			9,424	1,779,488	1,540,979	1,085,099	962,731	1,199,415	4,835,611	521,307	6,339	84	11,940,488	3,396,008	2,045,926	6,496,192	2,494,902
10-Year Average				50,654	39,755	27,520	19,178	34,928	130,670	15,923			319,668	93,233	45,359	180,840	37,071

***Jacks included**

TABLE 40

MONTHLY COUNT OF SOCKEYE SALMON
THE DALLES DAM 1957 - 2003

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
1998						4,777	3,978	65	6				8,826
1999						5,210	8,445	57	3				13,715
2000					69	61,980	11,242	88	4				73,383
2001					12	85,939	16,527	82	2				102,562
2002					1	22,714	17,746	93					40,554
2003					8	21,233	12,862	70	3			4	34,180
Total				1	1,496	1,145,097	1,529,370	22,541	1,034	26	1		2,699,570
10-Year Average					16	24,152	10,456	96	9				34,723

TABLE 41

MONTHLY COUNT OF COHO SALMON
THE DALLES DAM; 1957-2003

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
1998								7	3,520	5,443			8,970	774
1999								37	11,456	3,548			15,041	1,226
2000								2,248	20,526	6,762			29,536	4,570
2001								1,351	36,099	27,107			64,557	2,179
2002								275	8,286	4,225			12,786	3,021
2003								1,084	29,129	15,161	713	14	46,101	2,853
Total							1,568	26,349	461,722	125,123	1,038		615,814	189,655
10-Year Average								544	12,140	6,638			19,395	1,733

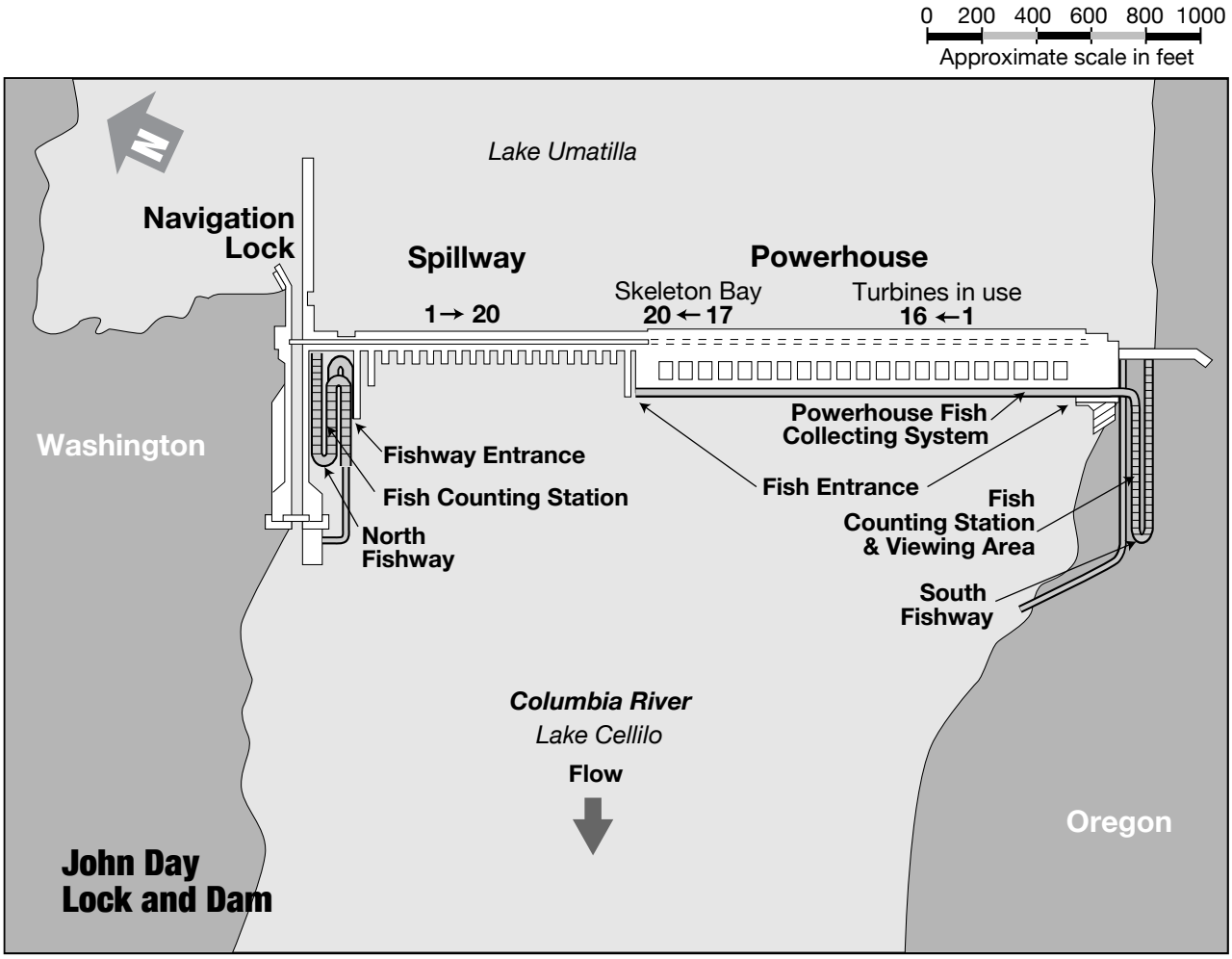
*Includes Jacks

TABLE 42

MONTHLY COUNT OF STEELHEAD
THE DALLES DAM 1957 - 2003

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
1998				609	433	2,433	9,911	12,180	62,331	28,785			116,682
1999				279	343	1,625	25,277	56,665	60,762	11,923			156,874
2000				491	319	6,467	37,760	48,697	96,040	15,467			205,241
2001				788	582	13,063	100,501	95,859	226,711	65,823			503,327
2002				2,308	439	7,027	67,132	84,140	170,382	56,492			387,920
2003		485	2,389	801	271	4,882	36,960	35,275	158,525	36,458	6,004	524	282,574
Total		510	7,630	43,849	31,749	139,788	1,555,456	1,741,523	3,307,028	696,627	12,643		7,537,327
10-Year Average				837	415	4,426	34,016	48,614	103,901	30,645			223,793

Plate 4 John Day Lock and Dam



JOHN DAY DAM

FISH COUNTING SCHEDULE

Jan 1 – Mar 3	No counting.
Mar 3 – Mar 31	Video counting daily 0400-2000 hours Pacific Standard Time.
Apr 1 – Oct 31	Visual counting daily 0400-2000 hours Pacific Standard Time.
Nov 1 – Dec 14	Video counting daily 0400-2000 hours Pacific Standard Time.

ADULT FISHWAY OPERATING 2003 SCHEDULE

The following information includes fishway operation for calendar year 2003. Total length of time for annual fishway outages can be determined by referring to previous years annual reports. "Out of service' indicates fish ladder dewatered and auxiliary water system off for routine annual maintenance. Dive inspection was conducted on 8/5/03, per Fish Passage Plan requirement, requiring a short period of fishway outage, with the auxiliary water system off.

ADULT FISH FACILITY OPERATING SCHEDULE

South Adult Fishway

Jan. 1 – Mar. 3	out of service.
Mar. 3 – Dec. 3	in service.
Dec. 3 – Dec. 31	out of service.

North Adult Fishway

Jan. 1 – Feb. 18	in service.
Feb. 18 – Mar. 6	out of service.
Mar. 6 – Dec. 31	in service.

Smolt Monitoring Facility

Jan. 1 – Mar. 31	out of service.
Mar. 31 – Sep. 16	in service.
Sep. 16 - Dec. 31	out of service.

Juvenile Bypass System

Jan. 1 – Jan. 23	in service.
Jan. 23 – Dec. 20	out of service.
Dec. 20 - Dec. 31	1/3 service.

Spillway (Juvenile)

Jan. 1 - Apr. 15	closed.
Apr. 15 - Aug. 31	intermittent spill for fish.
Aug. 31 - Dec. 31	closed.

2003 FISH RELATED DEWATERINGS

Fishway Dewatering Procedures

Bulkheads are installed and drain valves open to dewater various areas of fishways. Fisheries personnel enter these areas to salvage fish that become entrapped. Minimal handling of fish is applied. Fish that are reluctant to vacate an area are captured and transported to the forebay or tailwater, depending on circumstances such as fish species, age class and stress levels. A follow up inspection is made to account for possible missed fish. Efforts are made to provide continual water supply during the entire operation to reduce fish stranding. Fishway areas not included on this list are inspected by divers to inspect equipment condition.

Fishway Dewaterings

South fish ladder (12/3)- Annual inspection and maintenance. Two lamprey removed and released to tailwater.
Juvenile Bypass System (1/23) – Annual inspection and maintenance. One adult steelhead pushed to tailwater.
Collection channel bays 1-16 (2/6) – Annual inspection and maintenance. No fish found.
North fish ladder (2/18) – Annual inspection and maintenance. Approximately 600 adult steelhead and 12 juvenile steelhead pushed to tailwater. Removed 4 steelhead, 5 juvenile steelhead and 4 lamprey and released to forebay and tailwater. Umatilla tribes removed 238 lamprey for restocking efforts in Umatilla river. Approximately 1,000 lamprey removed from upper diffuser chamber and released to tailwater. Approximately 100 decomposed lamprey also found in diffuser chamber near count station.
Smolt Monitor Facility (6/26) – To evacuate adult fish from dewatering structure. Six sturgeon, 75 adult Chinook, 25 lamprey, 600 shad were pushed through the PDS fish drain to tailwater.
Smolt Monitor Facility (9/16) – Closed for winter. Approximately six sturgeon (~3’), 50 shad, 6 catfish, 500 lamprey, 100 adult steelhead and 150 adult chinook were pushed through the PDS fish drain to tailwater. One hundred forty one lamprey removed from flume and released to forebay the following day.

Fishway Dives

North fishway (1/15) – Annual inspection. Grating found in good condition.
South and north fishway (8/5) – Annual mid season inspection. Grating found in good condition.

Turbine Dewatering Procedures

Turbine dewatering for routine maintenance usually involves low numbers of fish, due to operational guidelines. If a turbine unit fails, operational guidelines cannot always be followed, which usually results in higher numbers of fish entrapment. Removal of fish from these areas has a greater fish stress risk due to handling. Procedures are continually analyzed to determine the best method for preventing fish stress or loss. Fish are removed from scroll case and draft tubes by fish bags. If numbers of fish are higher than two bags, transport tanks are placed in the draft tube gallery for transport by crane. Fish are released to tailwater either with bag and rope or tank and crane.

Turbine Dewaterings

Main turbine unit 4 (1/8) – Routine maintenance. No fish found in scroll case. Approximately 95 catfish, 6 sturgeon removed from draft tube and released to tailwater.
Main turbine unit 13 (3/31) – Routine maintenance. One steelhead found in scroll case. No fish found in draft tube.
Main turbine unit 5 (5/19) – No fish found in scroll case. Draft tube not dewatered.

Navigation Lock Dewatering Procedures

Navigation lock dewaterings for annual maintenance requires labor intensive fish removal efforts. It is impossible to remove fish from all areas of the navigation lock areas due to access limitations. Fish are removed from the supply conduits and the floor diffuser laterals. Fish are then removed by seine and dipnet and transported to a release site by tank.

Navigation Lock Dewaterings

Navlock (3/10-3/19) – No fish found in supply conduits. Five adult steelhead removed from laterals and released to tailwater.

2003, 2002, 2001 FISHWAY INSPECTION COMPARISON

Three adult fishway inspections are conducted per day during the adult fish passage season (March 1 to November 31). One adult fishway inspection is conducted per day during the non- passage season. Items shown in *italics* are inspected once per day. All other items are inspected during every fishway inspection. Guidelines are provided by the COE Fish Passage Plan. Weekly fishway status reports are provided throughout the year. Inspections of the John Day Smolt Monitor Facility are made once per two hours, 24 hours per day during the juvenile sampling season (April 1 to Mid Sept.) SMF status reports are included in the weekly fishway status report. Increased or continual problem areas indicated in red. Values are rounded to the nearest whole percent.

Fishway Inspection Results

	Percent out of Criteria		
Criteria Item	Year 2002	Year 2001	Year 2000
South Fishway			
Exit differential	0	0	0
Count station differential	0	0	0
Weir crest depth	0	0	0
SE1 differential	1	2	1
SE1 entrance depth	3	4	1
Collection channel velocity	20	-	-
NE1/NE2 differential	1	3	1
NE1 entrance depth	0	1	1
NE2 entrance depth	1	2	2
North Fishway			
Exit differential	0	0	0
Count station differential	0	0	0
Weir crest depth	4	0	0
EW1/EW2 differential	3	9	0
EW1 entrance depth	6	11	6
EW2 entrance depth	closed	closed	8
JBS Conduit differential	4	1	0
Spill Pattern	0	0	0
Turbine operation priority	6	-	-
Turbine 1% operation	1	-	-

Discussion

The north entrance showed an increase in criteria performance, similar to 2001. Collection channel velocity is frequently low at the location of the velocity meter. However, subjective observation of flow in the channel does not show obvious slow velocities. Possible causes for this value are: faulty velocity meter, higher surface velocities than at depth, diffuser turbulence influence… Investigation will continue.

John Day Historic Fish Count Schedule 1968-2002 (information based on previous Annual Fish Passage Reports)
16 hour counts occurred between the hours of 0400-2000 PST unless otherwise stated.
8 hour counts occurred between the hours of 0800-1600 PST unless otherwise stated.

Year	Months	Count Period	Notes
1968	Apr 20 – Nov 9	16 hour	Gates closed at night and during breaks. Gates open Nov 10 to end of year.
1969	Mar 30 – Oct 25	16 hour	
1970	Apr 5 – Oct 24	16 hour	Vertical-slot fish counting station installed at North ladder with picket leads.
1971	Apr 1 – Oct 23	16 hour	
1972	Apr 1 – Oct 31	16 hour	Gates closed at night but open during breaks. 1.2 factor applied.
1973	Apr 1 – Oct 31	18 hour (0400-2200)	Gates open. 1.2 factor applied. On Tuesdays, 3 8-hour shifts were conducted Thus fish were counted for 24 hours.
1974	Apr 1 – Oct 31	16 hour	24 hour counts on the following dates: May 7, 8, 14, 15, 21, 22, 28, 29; Jul 9, 10, 16, 17, 19, 23, 24, 30, 31; Aug 27, 28; Sep 10, 11, 17, 18, 24, 25; Oct 1, 2, 8, 9, 15, 16
1975-78	Apr 1 – Oct 31	16 hour	1.2 factor applied. Gates open unless otherwise stated.
1979	Apr 1 – Nov 13	16 hour	
1980-2	Apr 1 – Oct 31	16 hour	
1983	Apr 1 – Nov 1	16 hour (assumed)	
1984	Apr 1 – Oct 31	16 hour	
	Nov 1 – 10	8 hour	
1985	Apr 1 – Oct 31	16 hour	
	Nov 1 – 30	8 hour	
1986	Mar 4 - 31	8 hour	
	Apr 1 - Oct 31	16 hour	
1987-95	Apr 1 – Oct 31	16 hour	
1996-8	Apr 1 – Oct 31	16 hour (0500-2100 PST)	
1999-2002	Apr 1 – Oct 31	16 hour (0400-2000 PST)	

TABLE 43

MONTHLY TOTALS OF SALMONIDS, SHAD, AND LAMPREY COUNTED OVER JOHN DAY DAM

2003

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL*
CHINOOK*			3,951	61,184	45,880	62,159	45,782	22,222	201,192	28,666	1,238	66	472,340
STEELHEAD			9,792	1,327	222	4,888	28,019	23,687	177,058	50,975	7,666	1,408	305,042
SOCKEYE						19,260	16,004	151	2				35,417
COHO*								282	24,786	13,509	183	5	38,765
CHUM											2	2	4
PINK									15	3			18
TOTAL			13,743	62,511	46,102	86,307	89,805	46,342	403,053	93,153	9,089	1,481	851,586
SHAD					26,340	2,438,277	268,595	1,896					2,735,108
LAMPREY				-6	576	1,354	10,553	6,604	1,529	312			20,922

***Jacks Included**
Lamprey are not counted during video counts. Shad are not counted after September 1st.

TABLE 44

DISCHARGE AND WATER QUALITY DATA

JOHN DAY PROJECT 2003

JANUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Jan 1	109.5	0.0	6.0	44.0
Jan 2	100.5	0.0	5.0	44.0
Jan 3	98.4	0.0	5.5	44.0
Jan 4	94.1	0.0	5.0	44.0
Jan 5	90.5	0.0	5.5	44.0
Jan 6	104.4	0.0	44.0	6.0
Jan 7	104.8	0.0	44.0	6.0
Jan 8	122.5	0.0	6.0	44.0
Jan 9	132.7	0.0	6.0	44.0
Jan 10	117.4	0.0	6.0	44.0
Jan 11	117.3	0.0	6.0	44.0
Jan 12	94.5	0.0	6.0	44.0
Jan 13	98.1	0.0	NA	NA
Jan 14	113.1	0.0	6.0	44.0
Jan 15	114.2	0.0	6.0	43.0
Jan 16	108.8	0.0	6.0	43.0
Jan 17	120.6	0.0	6.0	43.0
Jan 18	131.6	0.0	5.0	43.0
Jan 19	108.3	0.0	6.0	43.0
Jan 20	119.2	0.0	6.0	42.0
Jan 21	97.3	0.0	6.0	42.0
Jan 22	119.1	0.0	6.0	42.0
Jan 23	108.5	0.0	6.0	42.0
Jan 24	118.3	0.0	6.0	42.0
Jan 25	98.8	0.0	6.0	42.0
Jan 26	80.1	0.0	6.0	42.0
Jan 27	97.1	0.0	6.0	42.0
Jan 28	144.8	0.0	5.5	42.0
Jan 29	145.8	0.0	5.5	42.0
Jan 30	122.4	0.0	5.0	42.0
Jan 31	135.8	0.0	5.5	42.0
AVG.	111.9	0.0	8.3	40.5

FEBRUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Feb 1	169.9	0.0	5.5	42.0
Feb 2	200.2	0.0	5.5	42.0
Feb 3	161.9	0.0	5.5	43.0
Feb 4	158.0	0.0	6.0	43.0
Feb 5	130.6	0.0	6.0	42.0
Feb 6	133.4	0.0	6.0	43.0
Feb 7	144.7	0.0	5.5	42.0
Feb 8	138.3	0.0	5.0	42.0
Feb 9	115.9	0.0	5.0	42.0
Feb 10	111.6	0.0	3.0	42.0
Feb 11	122.0	0.0	4.0	42.0
Feb 12	116.8	0.0	5.0	43.0
Feb 13	123.0	0.0	3.0	42.0
Feb 14	119.2	0.0	2.5	42.0
Feb 15	100.5	0.0	2.4	42.0
Feb 16	98.3	0.0	2.5	42.0
Feb 17	110.8	0.0	2.5	42.0
Feb 18	109.4	0.0	NA	NA
Feb 19	117.6	0.0	NA	NA
Feb 20	103.3	0.0	5.0	42.0
Feb 21	113.7	0.0	5.0	42.0
Feb 22	94.0	0.0	4.5	42.0
Feb 23	110.2	0.0	5.0	43.0
Feb 24	113.3	0.0	5.5	42.0
Feb 25	121.1	0.0	5.5	42.0
Feb 26	124.2	0.0	4.5	43.0
Feb 27	93.1	0.0	5.0	42.0
Feb 28	129.6	0.0	4.5	42.0
AVG.	124.5	0.0	4.6	42.2

TABLE 45

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

JOHN DAY PROJECT

MARCH 2003

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Mar 1	0			0				0	0			122.2	0.0	4.5	42.0
Mar 2	0			0				0	0			107.2	0.0	5.0	42.0
Mar 3	0			0				10	0			136.4	0.0	5.0	42.0
Mar 4	0			0				509	16			129.2	0.0	6.0	43.0
Mar 5	0			0				446	62			155.4	0.0	6.0	43.0
Mar 6	0			0				480	71			125.7	0.0	5.5	43.0
Mar 7	1			0				391	79			146.2	0.0	4.5	43.0
Mar 8	2			0				350	68			141.3	0.0	4.0	43.0
Mar 9	0			0				440	168			123.0	0.0	4.5	43.0
Mar 10	5			0				560	205			124.9	0.0	5.0	43.0
Mar 11	6			0				500	207			121.3	0.0	4.0	43.5
Mar 12	29			0				495	190			120.0	0.0	5.0	44.0
Mar 13	40			0				680	182			126.3	0.0	4.5	44.0
Mar 14	54			0				555	129			137.0	0.0	4.5	45.0
Mar 15	64			0				266	24			140.3	0.0	4.5	45.0
Mar 16	37			0				299	-24			143.5	0.0	5.0	45.0
Mar 17	63			0				257	10			168.8	0.0	5.0	45.0
Mar 18	192			0				274	81			173.8	0.0	5.0	46.0
Mar 19	172			0				377	156			185.1	0.0	5.0	47.0
Mar 20	165			0				404	91			165.1	0.0	5.0	46.0
Mar 21	105			0				175	15			146.5	0.0	4.5	46.0
Mar 22	198			0				201	-46			124.5	0.0	4.5	47.0
Mar 23	315			0				209	-10			105.6	0.0	4.5	47.0
Mar 24	338			0				359	172			120.4	0.0	5.0	46.0
Mar 25	232			0				281	73			149.8	0.0	4.5	47.0
Mar 26	186			0				295	48			169.5	0.0	4.5	48.0
Mar 27	225			0				273	76			217.5	0.0	5.0	47.0
Mar 28	255			0				303	78			219.2	0.0	5.0	47.0
Mar 29	201			0				124	40			190.3	0.0	4.7	46.0
Mar 30	191			0				146	67			187.8	0.0	4.8	47.0
Mar 31	875			0				133	69			177.8	0.0	4.5	48.0
TOTAL	3,951			0				9,792	2,297						
AVG.	103			0				322	74			148.4	0.0	4.8	45.0

Note: March counts were from video tape. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

TABLE 46

MONTHLY FISH PASSAGE SUMMARY REPORT

JOHN DAY PROJECT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

APRIL 2003

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCH	DEG F
Apr 1	425			0				74	34		0	170.4	0.0	4.0	48.0
Apr 2	539			0				175	127		0	186.7	0.0	4.5	48.0
Apr 3	763			2				53	48		0	163.9	0.0	4.0	48.0
Apr 4	2,120			2				122	79		0	170.2	0.0	4.5	48.0
Apr 5	1,129			1				59	25		0	182.0	0.0	3.5	48.0
Apr 6	833			0				64	25		-2	186.5	0.0	3.5	48.0
Apr 7	287			0				57	32		0	180.3	0.0	3.5	48.0
Apr 8	1,124			0				30	10		0	175.2	0.0	3.5	48.0
Apr 9	2,357			0				42	25		0	191.6	0.0	3.5	48.0
Apr 10	2,539			2				50	27		0	189.1	28.2	3.5	49.0
Apr 11	2,182			2				84	38		0	178.0	0.0	4.0	49.0
Apr 12	2,196			2				77	53		-2	175.2	0.0	5.0	51.0
Apr 13	3,466			0				74	49		0	179.3	0.0	4.2	52.0
Apr 14	4,060			8				26	22		0	178.8	23.6	4.0	50.0
Apr 15	3,937			8				63	39		0	194.3	46.2	4.0	50.0
Apr 16	2,878			10				51	19		-2	194.2	46.8	4.2	50.0
Apr 17	3,551			10				23	10		0	218.2	49.8	4.0	53.0
Apr 18	3,126			6				41	22		0	229.9	56.5	4.0	51.0
Apr 19	2,584			11				40	27		0	210.2	56.2	4.0	50.0
Apr 20	2,501			9				33	25		0	184.7	55.8	4.0	52.0
Apr 21	1,697			4				11	5		0	172.2	46.4	4.5	52.0
Apr 22	1,538			6				9	8		0	222.9	54.5	4.5	52.0
Apr 23	2,281			16				14	13		0	239.3	62.3	4.5	51.0
Apr 24	1,753			30				19	12		1	212.2	66.3	4.0	52.0
Apr 25	2,481			31				11	7		0	198.7	63.4	4.0	52.0
Apr 26	1,640			42				3	3		0	251.4	73.4	5.0	51.0
Apr 27	682			48				5	3		0	198.3	60.6	5.0	50.0
Apr 28	2,210			78				0	2		0	229.3	64.4	4.5	51.0
Apr 29	1,218			89				1	1		0	220.5	61.9	5.0	52.0
Apr 30	2,513			157				16	5		-1	221.7	57.3	5.0	52.0
TOTAL	60,610			574				1,327	795		-6				
AVG.	2,020			19				44	27		0	196.8	32.5	4.2	50.1

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

TABLE 47

MONTHLY FISH PASSAGE SUMMARY REPORT

JOHN DAY PROJECT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

MAY 2003

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	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
May 1	1,517			135			0	4	2	1	2	233.7	52.6	5.0	52.0
May 2	1,515			126			0	11	9	1	0	198.9	52.9	4.0	53.0
May 3	2,295			180			0	5	2	0	2	195.7	60.0	4.0	53.0
May 4	2,074			166			0	2	0	0	0	195.7	52.9	4.0	53.0
May 5	2,113			330			0	7	3	0	0	214.4	47.8	4.0	53.0
May 6	1,411			214			0	21	8	6	4	230.2	52.5	5.0	53.0
May 7	1,073			227			0	8	1	7	2	237.6	52.5	4.5	53.0
May 8	824			168			0	6	2	1	5	210.4	53.2	4.5	53.0
May 9	864			323			0	3	1	-3	-2	231.3	70.9	5.0	53.0
May 10	879			352			0	8	0	9	17	216.6	52.4	5.0	53.0
May 11	1,174			597			0	14	3	11	4	169.6	39.2	5.0	54.0
May 12	1,095			558			0	2	1	7	0	198.9	51.0	5.0	54.0
May 13	1,150			368			0	-4	1	41	61	201.3	66.4	5.0	54.0
May 14	1,078			387			0	3	0	21	14	265.0	72.3	4.5	54.0
May 15	1,524			544			0	4	3	8	-2	218.2	64.8	4.5	54.0
May 16	1,642			691			0	2	0	54	6	244.4	64.3	5.0	54.0
May 17	1,077			392			0	-1	1	79	1	237.9	56.6	5.1	54.0
May 18	770			221			0	5	-2	107	22	239.0	60.2	5.2	54.0
May 19	729			211			0	-3	0	289	8	222.6	61.4	4.5	54.0
May 20	838			328			0	4	-2	306	17	212.3	48.7	4.0	55.0
May 21	1,025			414			0	6	1	370	17	218.6	42.7	4.5	56.0
May 22	1,336			325			0	1	-5	364	14	248.8	58.3	5.0	57.0
May 23	1,356			308			0	5	1	412	42	249.8	63.1	4.0	57.0
May 24	1,210			292			0	0	-1	442	11	247.2	60.5	4.0	57.0
May 25	1,110			236			0	4	0	981	5	230.0	50.7	3.0	57.0
May 26	1,535			230			0	0	0	1,852	2	247.5	56.7	4.0	58.0
May 27	694			222			0	1	-1	1,903	12	317.4	66.2	5.0	57.0
May 28	1,140			217			0	19	2	2,064	2	310.0	70.6	5.0	57.0
May 29	468			58			0	39	0	1,264	250	269.2	55.8	4.5	57.0
May 30	794			127			0	13	1	9,027	48	349.1	87.4	4.5	60.0
May 31	529			94			0	33	2	6,716	12	356.9	86.5	58.0	4.0
TOTAL	36,839			9,041			0	222	33	26,340	576				
AVG.	1188			292			0	7	1	850	19	239.3	59.1	6.3	53.1

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
SPRING	97,449	9,615	0	1,549	828	26,340	570

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

TABLE 48

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

JOHN DAY PROJECT

JUNE 2003

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	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Jun 1	798			116			6	16	-5	20,518	23	321.9	70.8	4.0	57.0
Jun 2	666			114			0	21	1	41,598	35	295.5	73.9	4.5	58.0
Jun 3	553			120			10	22	3	76,975	28	288.5	67.7	4.5	59.0
Jun 4	627			83			2	30	7	69,960	35	304.8	73.3	4.5	60.0
Jun 5	1,343			158			30	24	5	77,097	43	276.4	59.0	4.5	59.0
Jun 6		1,492		80			18	15	-3	73,749	33	267.8	62.7	4.0	59.0
Jun 7		1,294		165			14	16	3	104,368	18	275.8	62.9	4.0	63.0
Jun 8		1,301		64			25	45	5	123,178	4	269.0	65.7	4.0	63.0
Jun 9		1,913		141			58	34	7	116,838	18	259.4	62.4	4.0	61.0
Jun 10		2,035		120			96	60	5	83,750	22	266.9	62.6	4.0	61.0
Jun 11		2,110		134			150	39	5	96,153	12	299.3	71.0	4.0	61.0
Jun 12		1,767		200			116	73	24	161,143	27	297.3	70.7	4.0	61.0
Jun 13		2,295		124			182	67	13	133,454	21	258.7	70.4	4.5	60.0
Jun 14		2,670		211			223	106	40	115,041	28	287.3	72.2	4.5	60.0
Jun 15		1,443		212			219	117	36	126,840	46	212.0	62.2	4.5	60.0
Jun 16		2,657		198			316	119	33	123,380	71	253.0	70.6	4.0	63.0
Jun 17		1,488		153			346	109	24	154,861	46	254.6	69.9	4.0	64.0
Jun 18		1,835		129			480	140	50	123,788	50	253.2	64.0	4.0	63.0
Jun 19		2,183		218			684	181	43	99,114	49	230.9	60.8	4.0	63.0
Jun 20		2,163		145			633	283	86	94,593	21	183.7	56.0	3.0	63.0
Jun 21		2,176		204			603	185	106	75,429	66	191.2	50.8	4.0	63.0
Jun 22		2,645		171			854	203	94	43,794	67	174.2	45.3	3.0	62.0
Jun 23		1,580		126			833	116	33	33,546	22	173.3	43.6	3.5	62.0
Jun 24		2,637		196			1,280	182	63	42,389	66	190.8	51.9	4.0	62.0
Jun 25		2,142		133			1,036	242	90	35,815	42	204.6	50.1	4.0	62.0
Jun 26		1,712		214			1,404	314	109	45,459	57	229.7	59.4	4.0	62.0
Jun 27		2,404		210			2,110	360	90	29,445	70	216.4	73.9	3.5	62.0
Jun 28		2,447		185			2,409	447	131	42,242	90	164.2	49.1	3.5	63.0
Jun 29		2,928		245			2,558	487	118	43,055	176	184.9	54.7	3.5	63.0
Jun 30		3,826		460			2,565	835	257	30,705	68	170.1	49.8	4.0	65.0
TOTAL	3,987	53,143		5,029			19,260	4,888	1,473	2,438,277	1,354				
AVG.	797	2,126		168			642	163	49	81,276	45	241.8	61.9	4.0	61.5

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	101,436	10,206
SUMMER	53,143	4,438
TOTAL	154,579	14,644

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
19,260	6,437	2,301	2,464,617	1,924

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

TABLE 49

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

JOHN DAY PROJECT

JULY 2003

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Jul 1		4,667		285			1,898	788	271	85,184	154	174.0	36.4	4.0	65.0
Jul 2		3,123		319			1,685	810	267	35,129	144	165.2	38.7	3.8	65.0
Jul 3		2,737		277			1,392	833	325	16,034	188	112.5	41.7	3.5	65.0
Jul 4		2,582		234			1,374	633	295	12,423	165	133.0	39.0	3.5	65.0
Jul 5		2,165		242			1,097	628	237	24,175	258	154.4	31.7	3.0	65.0
Jul 6		1,819		220			1,100	655	274	17,090	188	103.3	21.6	3.5	66.0
Jul 7		1,753		157			979	693	311	14,384	227	123.9	28.1	4.5	65.0
Jul 8		2,080		156			870	663	291	10,025	179	121.6	36.7	4.5	66.0
Jul 9		793		114			679	487	205	10,170	492	186.7	66.6	3.0	66.0
Jul 10		855		96			644	701	295	10,754	266	164.2	45.2	4.5	68.0
Jul 11		1,745		232			546	922	367	11,405	285	157.7	31.7	3.5	68.0
Jul 12		1,196		162			529	857	345	2,647	195	163.8	43.3	3.5	67.0
Jul 13		953		163			364	724	278	3,054	442	132.6	49.7	4.0	68.0
Jul 14		838		171			454	958	422	2,850	366	174.3	51.7	4.0	68.0
Jul 15		1,632		152			292	1,021	509	2,365	411	143.4	24.9	4.0	69.0
Jul 16		1,422		155			401	1,251	504	1,127	354	144.7	33.3	4.5	69.0
Jul 17		177		144			233	658	302	1,445	533	164.4	58.7	4.5	69.0
Jul 18		431		107			222	1,148	421	824	270	128.4	37.3	3.5	66.0
Jul 19		1,371		183			247	1,812	663	958	423	99.4	29.2	3.0	69.0
Jul 20		1,253		197			202	1,638	711	926	439	141.5	42.2	3.0	68.0
Jul 21		1,338		158			135	1,636	636	1,006	370	142.9	27.8	3.5	69.0
Jul 22		580		119			143	1,122	453	1,399	347	141.5	38.0	5.0	72.0
Jul 23		1,120		188			86	1,643	663	373	401	155.5	35.5	5.5	70.0
Jul 24		574		113			143	919	417	905	424	156.2	42.2	5.0	71.0
Jul 25		487		134			66	781	282	271	360	147.3	40.7	4.5	71.0
Jul 26		795		138			71	782	306	288	551	118.8	28.2	4.5	71.0
Jul 27		245		76			16	811	299	175	545	104.2	22.0	4.5	71.0
Jul 28		588		99			41	672	303	415	431	144.7	32.9	4.5	71.0
Jul 29		281		60			32	768	331	264	408	154.5	31.4	4.5	71.0
Jul 30		708		118			33	478	204	332	298	127.1	26.0	5.0	72.0
Jul 31		420		85			30	527	152	198	439	117.4	18.8	5.0	72.0
TOTAL		40,728		5,054			16,004	28,019	11,339	268,595	10,553				
AVG		1,314		163			516	904	366	8,664	340	141.9	36.5	4.1	68.3

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	101,436	10,206
SUMMER	93,871	9,492
TOTAL	195,307	19,698

COHO ADULT	COHO JACKS	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
0	0	35,264	34,456	13,640	2,733,212	12,477

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

TABLE 50

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

JOHN DAY PROJECT

AUGUST 2003

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Aug 1		697		178	0	0	16	349	145	174	379	148.2	30.2	4.5	72.0
Aug 2		385		153	0	0	29	346	145	72	441	137.9	34.9	4.5	72.0
Aug 3		304		63	0	0	13	316	144	62	442	89.5	21.4	4.0	73.0
Aug 4		112		78	0	0	13	443	192	73	335	129.0	28.2	4.5	72.0
Aug 5		173		109	0	0	11	354	160	136	322	112.5	22.8	4.5	73.0
Aug 6			143	56	0	0	4	182	82	24	272	120.4	30.1	4.5	73.0
Aug 7			269	135	0	0	33	420	138	121	306	116.2	27.7	4.0	72.0
Aug 8			448	111	0	0	5	455	219	101	246	114.5	30.8	5.0	71.0
Aug 9			442	90	0	0	1	629	238	134	169	128.2	31.7	5.0	72.0
Aug 10			520	101	0	0	2	751	291	101	155	109.9	27.5	5.0	71.0
Aug 11			411	86	0	0	2	460	147	271	103	125.5	28.0	5.0	72.0
Aug 12			271	86	0	0	8	421	189	88	125	143.9	34.3	5.0	71.0
Aug 13			235	119	0	0	6	408	197	114	152	128.8	28.2	5.5	72.0
Aug 14			509	103	0	0	0	362	162	70	175	123.3	28.8	4.5	73.0
Aug 15			177	80	0	0	0	416	148	24	192	121.2	25.4	4.5	72.0
Aug 16			614	108	0	0	5	647	244	25	104	108.9	30.2	4.0	72.0
Aug 17			308	133	0	0	1	758	264	34	174	116.4	28.3	5.0	74.0
Aug 18			188	76	0	0	0	761	224	36	108	122.4	27.5	3.5	71.0
Aug 19			389	101	4	0	0	1,063	385	48	141	133.3	28.3	4.5	72.0
Aug 20			327	81	1	0	0	1,057	348	5	276	136.1	32.2	4.5	71.0
Aug 21			241	61	15	0	0	1,248	476	23	104	141.3	35.5	4.5	71.0
Aug 22			385	97	0	0	0	594	184	25	171	140.0	30.4	4.5	72.0
Aug 23			369	92	0	0	0	578	194	25	173	117.8	27.5	4.5	71.0
Aug 24			204	64	0	0	0	606	171	10	154	116.7	26.3	4.5	71.0
Aug 25			492	87	7	0	0	966	368	30	222	131.9	29.0	5.0	71.0
Aug 26			579	114	1	0	0	1,128	315	33	138	141.9	26.1	4.5	72.0
Aug 27			449	64	3	0	1	1,255	384	12	107	159.9	43.2	4.5	71.0
Aug 28			752	91	9	0	1	1,080	345	9	288	113.0	22.6	5.5	72.0
Aug 29			1,744	85	30	1	0	1,477	465	8	270	99.0	16.5	5.5	70.0
Aug 30			2,846	169	70	14	0	1,743	565	4	199	111.6	24.8	5.0	70.0
Aug 31			4,059	209	123	4	0	2,414	782	4	161	111.0	26.3	5.0	71.0
TOTAL		1,671	17,371	3,180	263	19	151	23,687	8,311	1,896	6,604				
AVG.		334	668	103	8	1	5	764	268	61	213	124.2	28.5	4.7	71.7

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	101,436	10,206
SUMMER	95,542	10,073
FALL	17,371	2,599
TOTAL	214,349	22,878

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
263	19	35,415	58,143	21,951	2,735,108	19,081

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

TABLE 51

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

JOHN DAY PROJECT

SEPTEMBER 2003

FISH COUNTS | **RIVER CONDITIONS**

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	PINK	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Sep 1			5,842	360	221	16	0	2,865	982	0	100	105.3	0.0	5.5	70.0
Sep 2			6,426	288	355	2	0	2,887	852	0	68	89.1	0.0	5.5	70.0
Sep 3			3,799	318	350	38	0	3,088	1,046	0	73	88.1	0.0	5.0	71.0
Sep 4			2,623	211	391	27	0	4,117	1,080	0	44	99.0	0.0	5.5	70.0
Sep 5			3,473	600	265	65	0	6,286	1,739	0	47	88.4	0.0	5.5	70.0
Sep 6			5,097	538	342	36	0	4,801	1,335	0	84	83.5	0.0	5.5	70.0
Sep 7			8,176	644	352	51	0	5,078	1,351	0	37	66.2	0.0	5.5	71.0
Sep 8			5,663	383	319	231	0	4,496	1,127	0	85	79.0	0.0	4.5	71.0
Sep 9			6,342	727	329	19	0	5,308	1,372	0	78	92.2	0.0	6.0	71.0
Sep 10			2,443	347	308	16	0	5,233	1,221	0	94	77.0	0.0	4.5	71.0
Sep 11			4,440	701	414	12	0	6,408	1,608	0	78	60.1	0.0	6.0	70.0
Sep 12			6,168	660	403	47	0	4,786	1,397	0	42	69.4	0.0	5.5	71.0
Sep 13			6,000	388	360	114	0	5,062	1,369	0	47	76.9	0.0	5.5	71.0
Sep 14			10,608	924	715	19	0	9,198	2,394	0	37	73.0	0.0	5.5	70.0
Sep 15			9,849	908	890	25	0	10,177	2,805	0	29	67.7	0.0	4.5	70.0
Sep 16			11,239	1192	810	53	1	8,428	2,238	0	83	92.9	0.0	5.0	69.0
Sep 17			8,381	1059	783	53	0	7,185	1,804	0	59	89.2	0.0	4.5	68.0
Sep 18			10,484	1736	1,362	124	0	8,593	2,139	1	47	83.2	0.0	5.5	68.0
Sep 19			10,277	1437	1,344	134	0	8,210	2,234	0	43	78.0	0.0	5.0	68.0
Sep 20			6,990	972	1,407	784	0	9,100	2,404	0	29	70.2	0.0	5.0	68.0
Sep 21			7,590	1038	1,546	464	0	9,320	2,408	0	57	76.1	0.0	5.0	68.0
Sep 22			5,616	857	1,274	113	0	6,862	1,293	0	39	101.3	0.0	6.0	67.0
Sep 23			5,568	899	1,400	52	0	5,666	1,253	0	65	107.9	0.0	6.0	67.0
Sep 24			5,590	1195	1,042	111	0	6,882	1,692	2	38	96.5	0.0	6.0	67.0
Sep 25			5,947	1091	1,082	55	0	5,901	1,404	2	29	95.9	0.0	6.0	67.0
Sep 26			1,272	731	507	103	0	4,197	993	4	12	102.4	0.0	5.5	67.0
Sep 27			3,155	979	981	70	1	4,073	922	1	31	119.9	0.0	5.5	67.0
Sep 28			3,919	1294	864	113	0	4,898	1,243	3	12	57.6	0.0	5.5	68.0
Sep 29			1,826	645	480	38	0	3,286	927	0	13	82.9	0.0	6.0	68.0
Sep 30			2,153	1114	752	153	0	4,667	1,424	2	29	101.0	0.0	*	*
TOTAL			176,956	24,236	21,648	3,138	2	177,058	46,056	15	1,529				
AVG.			5,899	808	722	105	0	5,902	1,535	1	51	85.7	0.0	5.4	69.1

*Data unavailable.

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	101,436	10,206
SUMMER	95,542	10,073
FALL	194,327	26,835
TOTAL	391,305	47,114

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK
21,911	3,157	35,417	235,201	68,007	2,735,108	20,610	15

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

TABLE 52

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

JOHN DAY PROJECT

OCTOBER 2003

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	PINK	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Oct 1			2,666	1075	720	126	0	4,379	1,295	0	33	96.2	0.0	6.5	68.0
Oct 2			2,147	1006	565	108	0	4,343	1,418	1	36	111.8	0.0	7.0	67.0
Oct 3			1,680	645	495	38	0	3,457	1,048	0	38	85.7	0.0	6.5	67.0
Oct 4			971	398	292	51	0	2,258	630	0	19	76.2	0.0	6.0	67.0
Oct 5			1,230	529	283	35	0	2,312	682	2	11	64.9	0.0	6.0	66.0
Oct 6			990	273	184	1	0	1,599	431	0	12	74.4	0.0	5.5	66.0
Oct 7			1,338	435	292	32	0	1,561	448	0	8	89.8	0.0	6.0	67.0
Oct 8			638	198	140	30	0	1,095	261	0	17	96.2	0.0	6.0	66.0
Oct 9			760	354	123	17	0	1,561	463	0	-2	104.0	0.0	6.0	66.0
Oct 10			926	318	182	40	0	1,431	421	0	0	94.2	0.0	6.0	66.0
Oct 11			634	150	109	33	0	1,274	332	0	14	98.7	0.0	6.0	65.0
Oct 12			766	213	179	8	0	1,464	396	0	6	75.7	0.0	6.0	65.0
Oct 13			601	204	189	16	0	1,393	418	0	13	81.6	0.0	6.0	65.0
Oct 14			934	203	357	16	0	1,092	319	0	8	97.2	0.0	6.0	65.0
Oct 15			622	215	685	66	0	2,475	775	0	9	100.4	0.0	6.0	65.0
Oct 16			532	157	717	47	0	1,695	597	0	5	103.9	0.0	6.0	64.0
Oct 17			620	153	495	52	0	1,576	577	0	11	97.9	0.0	6.0	64.0
Oct 18			375	101	271	24	0	1,736	605	0	8	80.2	0.0	6.0	63.0
Oct 19			438	149	532	15	0	1,891	604	0	8	65.5	0.0	6.0	62.0
Oct 20			434	109	1,182	34	0	1,365	466	0	3	87.1	0.0	6.0	63.0
Oct 21			116	109	473	23	0	1,000	386	0	7	87.0	0.0	6.0	62.0
Oct 22			114	49	194	7	0	819	232	0	6	92.3	0.0	6.0	63.0
Oct 23			374	82	1,202	37	0	1,673	548	0	1	115.4	0.0	6.0	62.0
Oct 24			618	153	1,583	67	0	1,785	624	0	7	130.0	0.0	6.0	62.0
Oct 25			171	63	495	29	0	1,215	434	0	5	127.9	0.0	6.0	61.0
Oct 26			83	29	221	1	0	1,103	383	0	1	116.8	0.0	6.0	61.0
Oct 27			76	19	70	3	0	603	216	0	5	104.8	0.0	6.0	61.0
Oct 28			79	23	87	2	0	703	221	0	1	110.8	0.0	6.0	61.0
Oct 29			127	37	82	7	0	800	290	0	1	119.1	0.0	6.0	60.0
Oct 30			52	30	50	2	0	572	186	0	26	123.1	0.0	6.0	60.0
Oct 31			62	13	93	0	0	745	246	0	-5	122.8	0.0	6.0	59.0
TOTAL			21,174	7,492	12,542	967	0	50,975	15,952	3	312				
AVG.			683	242	405	31	0	1,644	515	0	10	97.8	0.0	6.0	63.8

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	101,436	10,206
SUMMER	95,542	10,073
FALL	215,501	34,327
TOTAL	412,479	54,606

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK
34,453	4,124	35,417	286,176	83,959	2,735,108	20,922	18

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

TABLE 53

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

JOHN DAY PROJECT

NOVEMBER 2003

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	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Nov 1			27	4	7	0	0	432	198	0		116.8	0.0	*	*
Nov 2			119	17	9	7	0	730	202	0		111.2	0.0	6.0	58.0
Nov 3			162	19	6	25	0	775	217	0		124.7	0.0	5.5	57.0
Nov 4			53	12	17	0	0	637	177	0		122.6	0.0	4.5	57.0
Nov 5			37	10	6	0	0	411	74	0		124.3	0.0	4.5	56.0
Nov 6			68	2	8	0	0	267	75	0		132.3	0.0	6.0	55.0
Nov 7			64	2	2	0	0	197	55	0		127.7	0.0	6.0	53.0
Nov 8			38	2	5	0	0	181	52	0		118.8	0.0	6.0	53.0
Nov 9			48	0	10	0	0	158	35	2		97.7	0.0	6.0	52.0
Nov 10			85	3	-2	0	0	302	95	0		117.9	0.0	5.5	52.0
Nov 11			81	0	10	0	0	491	176	0		112.5	0.0	6.0	52.0
Nov 12			33	0	12	0	0	79	17	0		117.5	0.0	6.0	51.0
Nov 13			62	1	15	0	0	292	84	0		136.3	0.0	6.0	51.0
Nov 14			82	-1	1	0	0	266	77	0		105.7	0.0	6.0	50.0
Nov 15			46	1	7	0	0	219	81	0		113.2	0.0	6.0	50.0
Nov 16			47	0	3	0	0	218	64	0		100.1	0.0	6.0	50.0
Nov 17			39	1	5	0	0	258	65	0		118.4	0.0	6.0	50.0
Nov 18			29	0	8	0	0	268	74	0		105.9	0.0	6.0	49.0
Nov 19			21	1	14	0	0	317	102	0		114.7	0.0	5.5	50.0
Nov 20			6	0	4	0	0	222	53	0		111.0	0.0	6.0	49.0
Nov 21			9	0	-1	0	0	230	80	0		133.5	0.0	6.0	49.0
Nov 22			5	0	2	0	0	186	30	0		137.1	0.0	6.0	49.0
Nov 23			4	0	2	0	0	192	26	0		125.8	0.0	6.0	49.0
Nov 24			0	0	0	0	0	88	18	0		98.4	0.0	6.0	49.0
Nov 25			0	0	1	0	0	147	25	0		110.8	0.0	6.0	49.0
Nov 26			0	-1	0	0	0	81	33	0		104.3	0.0	6.0	49.0
Nov 27			-2	0	0	0	0	6	0	0		108.4	0.0	6.0	48.0
Nov 28			1	0	0	0	0	8	0	0		96.7	0.0	6.0	48.0
Nov 29			0	0	-1	0	0	6	0	0		99.5	0.0	6.0	48.0
Nov 30			0	1	1	0	0	2	2	0		108.0	0.0	6.0	48.0
TOTAL			1,164	74	151	32	0	7,666	2,187	2					
AVG.			39	2	5	1	0	256	73	0		115.1	0.0	5.8	51.1

*Data unavailable.

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	101,467	10,206
SUMMER	95,542	10,073
FALL	215,501	34,327
TOTAL	412,510	54,606

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK	CHUM
34,453	4,124	35,417	286,176	83,959	2,735,108	20,922	18	2

Note: November counts were from video tape. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

Official Fall Chinook run ended October 31st. November and December counts were not added to fall totals.

TABLE 54

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

JOHN DAY PROJECT

DECEMBER 2003

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	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Dec 1			11	0	1	0	0	168	46	0		111.3	0.0	6.0	47.0
Dec 2			7	0	0	0	0	180	53	0		111.3	0.0	6.0	47.0
Dec 3			1	0	2	0	0	165	-31	0		121.2	0.0	6.0	48.0
Dec 4			6	0	1	0	0	159	-87	0		126.4	0.0	6.0	47.0
Dec 5			0	0	0	0	0	168	-46	0		112.3	0.0	6.0	47.0
Dec 6			6	0	0	0	0	68	-54	0		119.1	0.0	6.0	47.0
Dec 7			3	0	0	0	0	130	-30	0		116.2	0.0	6.0	47.0
Dec 8			21	0	1	0	0	66	-1	0		121.6	0.0	6.0	47.0
Dec 9			0	0	0	0	0	88	-14	2		130.0	0.0	6.0	46.0
Dec 10			2	0	0	0	0	153	-16	0		152.6	0.0	6.0	46.0
Dec 11			2	0	0	0	0	16	-64	0		155.5	0.0	6.0	46.0
Dec 12			3	0	0	0	0	-23	-77	0		145.8	0.0	6.0	46.0
Dec 13			2	0	0	0	0	50	-31	0		132.5	0.0	6.0	46.0
Dec 14			2	0	0	0	0	20	-13	0		111.4	0.0	6.0	46.0
Dec 15												153.2	0.0	6.0	46.0
Dec 16												145.3	0.0	6.0	45.0
Dec 17												151.2	0.0	6.0	45.0
Dec 18												154.6	0.0	6.0	45.0
Dec 19												144.8	0.0	6.0	45.0
Dec 20												135.5	0.0	4.5	44.0
Dec 21												115.8	0.0	5.0	44.0
Dec 22												135.3	0.0	6.0	44.0
Dec 23												132.5	0.0	6.0	44.0
Dec 24												128.3	0.0	6.0	44.0
Dec 25												107.7	0.0	5.5	44.0
Dec 26												109.9	0.0	6.0	44.0
Dec 27												116.0	0.0	5.0	44.0
Dec 28												117.8	0.0	6.0	44.0
Dec 29												152.0	0.0	5.5	44.0
Dec 30												147.3	0.0	6.0	43.0
Dec 31												162.6	0.0	5.5	43.0
TOTAL			66	0	5	0	0	1,408	-365	2					
AVG.			5	0	0	0	0	101	-26	0		131.5	0.0	5.8	45.3

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	101,467	10,206
SUMMER	95,542	10,073
FALL	215,501	34,327
TOTAL	412,510	54,606

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK	CHUM
34,453	4,124	35,417	286,176	83,959	2,735,108	20,922	18	4

Note: December counts were from video tape. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST. Official Fall Chinook run ended October 31st. November and December counts were not added to fall totals.

TABLE 55

YEARLY TOTALS OF SALMONIDS COUNTED OVER JOHN DAY DAM
1968 - 2003

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	69,731	2,633	399,583	
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	
1998	130,028	158,547	9,837	8,497	306,909	
1999	163,282	165,314	14,809	13,232	356,638	**
2000	269,371	220,328	88,372	23,969	602,040	
2001	510,987	483,409	107,869	51,181	1,153,446	
2002	447,729	390,300	41,915	9,272	889,216	
2003	467,116	286,176	35,417	38,577	827,286	
TOTALS	7,664,196	5,431,724	1,937,341	394,940	15,428,202	
10-Year Average	253,828	223,344	37,958	15,820	530,949	

***Jacks included**
****Includes 1 pink**

TABLE 56

MONTHLY COUNT OF CHINOOK SALMON
JOHN DAY DAM 1968 - 2003

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL*	SPRING Apr 1- Jun 5	SUMMER Jun 6- Aug 5	FALL Aug 6- Oct 31	JACKS
1968				29,973	46,272	30,702	42,212	16,726	62,709	4,851	209		233,654	77,482	75,494	80,678	67,284
1969			6	4,266	72,966	35,899	31,071	18,523	103,778	9,542			276,051	81,724	64,732	129,595	93,928
1970				35,750	35,248	20,439	21,542	24,784	80,969	3,774			222,506	72,555	43,093	106,858	74,090
1971				13,995	40,620	24,364	25,692	10,403	73,157	5,650			193,881	56,625	50,030	87,226	61,380
1972				28,535	41,882	15,833	27,484	14,208	90,181	7,508			225,631	71,569	44,542	109,520	82,646
1973				67,467	27,091	18,972	15,067	16,995	89,913	13,987			249,492	96,710	34,206	118,576	73,687
1974				5,174	38,058	8,115	18,985	8,112	77,296	12,148			167,888	46,191	25,865	95,832	61,669
1975				7,727	27,989	11,058	21,359	18,250	65,367	7,329			159,079	37,716	32,179	89,184	62,403
1976				10,428	32,985	17,836	18,506	10,114	72,467	13,575			175,911	45,419	36,037	94,455	62,793
1977				55,061	19,422	15,674	13,764	7,853	71,302	11,855			194,931	75,782	29,194	89,955	60,386
1978				34,735	35,206	15,104	16,764	8,149	52,975	11,919			174,852	72,723	30,371	71,758	36,289
1979				8,224	12,568	9,537	13,580	14,128	50,977	8,566	574		118,154	21,981	23,572	72,601	41,364
1980				7,995	18,311	7,125	12,522	9,063	37,023	8,625			100,664	27,202	19,664	53,798	25,877
1981				18,178	18,325	7,292	8,992	8,524	44,626	8,422			114,359	37,677	15,813	60,869	34,547
1982				3,396	30,444	11,031	7,359	10,881	67,271	13,700			144,082	36,530	16,360	91,192	56,966
1983				7,123	25,391	7,990	7,064	8,195	66,078	18,025			139,866	33,480	14,834	91,552	43,440
1984				4,329	26,561	9,706	12,892	15,422	96,399	22,255	809		188,373	32,035	22,795	133,543	69,874
1985				27,539	42,487	15,585	9,663	27,387	178,322	34,192	2,449		337,624	72,389	23,489	241,746	149,281
1986			21	38,075	37,959	13,227	9,703	10,797	194,928	41,990			346,700	77,884	22,051	246,765	133,827
1987				33,985	26,852	13,641	8,948	24,363	196,596	23,367			327,752	62,313	22,244	243,195	53,794
1988				33,323	20,170	14,731	9,648	37,002	147,553	14,824			277,251	55,195	23,569	198,487	51,330
1989				12,510	23,983	12,793	10,124	35,985	101,794	11,065			208,254	37,773	23,868	146,613	25,092
1990				23,689	18,854	11,209	9,199	13,542	71,508	8,312			156,313	43,127	20,532	92,654	22,195
1991				7,419	13,668	8,868	8,390	4,879	64,950	10,747			118,921	21,847	16,872	80,202	28,646
1992				27,538	16,623	9,452	5,263	7,677	58,140	7,332			132,025	45,457	13,910	72,658	22,084
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	1,588
1998				9,279	12,439	10,076	7,535	11,073	62,107	17,519			130,028	22,177	17,780	90,071	13,745
1999				3,008	16,517	10,206	14,226	20,201	86,380	12,744			163,282	20,498	24,714	118,070	19,611
2000				48,176	47,705	19,201	13,579	44,377	86,737	9,596			269,371	98,710	31,056	139,605	56,892
2001				187,104	74,233	46,449	33,904	20,506	128,230	20,561			510,987	270,385	74,235	166,367	57,877
2002				36,677	99,270	69,941	44,890	37,086	143,126	16,739			447,729	142,290	110,969	194,470	37,568
2003			3,951	61,184	45,880	62,159	45,782	22,222	201,192	28,666	1,238	66	472,340	111,642	105,615	249,828	54,680
TOTAL			3,978	940,080	1,146,522	632,762	579,374	605,074	3,265,766	490,519	5,279		7,669,420	2,160,932	1,187,377	4,315,856	1,801,584
10-Year Average				36,734	36,838	25,328	18,727	21,241	99,782	15,174			254,350	76,540	42,370	134,915	29,709

*Jacks included

TABLE 57

MONTHLY COUNT OF SOCKEYE SALMON
JOHN DAY DAM: 1968 - 2003

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	0	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	0				25,698
1997					10	11,605	23,604	603	4	4			35,830
1998						4,371	5,314	131	19	2			9,837
1999					1	4,803	9,910	88	2	5			14,809
2000					15	73,119	15,122	108	7	1			88,372
2001					7	86,624	21,062	100	75	1			107,869
2002					1	20,044	21,772	96	1	1			41,915
2003						19,260	16,004	151	2				35,417
TOTAL					46	826,144	1,095,190	15,357	538	65	1		1,937,341
10-Year Average						24,639	13,160	143	11				37,958

TABLE 58

MONTHLY COUNT OF COHO SALMON
JOHN DAY DAM 1968 - 2003

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
1998								18	2,806	5,673			8,497
1999								8	9,471	3,753			13,232
2000					2			921	15,355	7,691			23,969
2001							49	480	23,204	27,448			51,181
2002								66	5,101	4,105			9,272
2003								282	24,786	13,509	183	5	38,765
TOTAL					2	0	97	9,660	278,048	106,592	724		395,128
10-Year Average								201	9,011	6,602			15,838

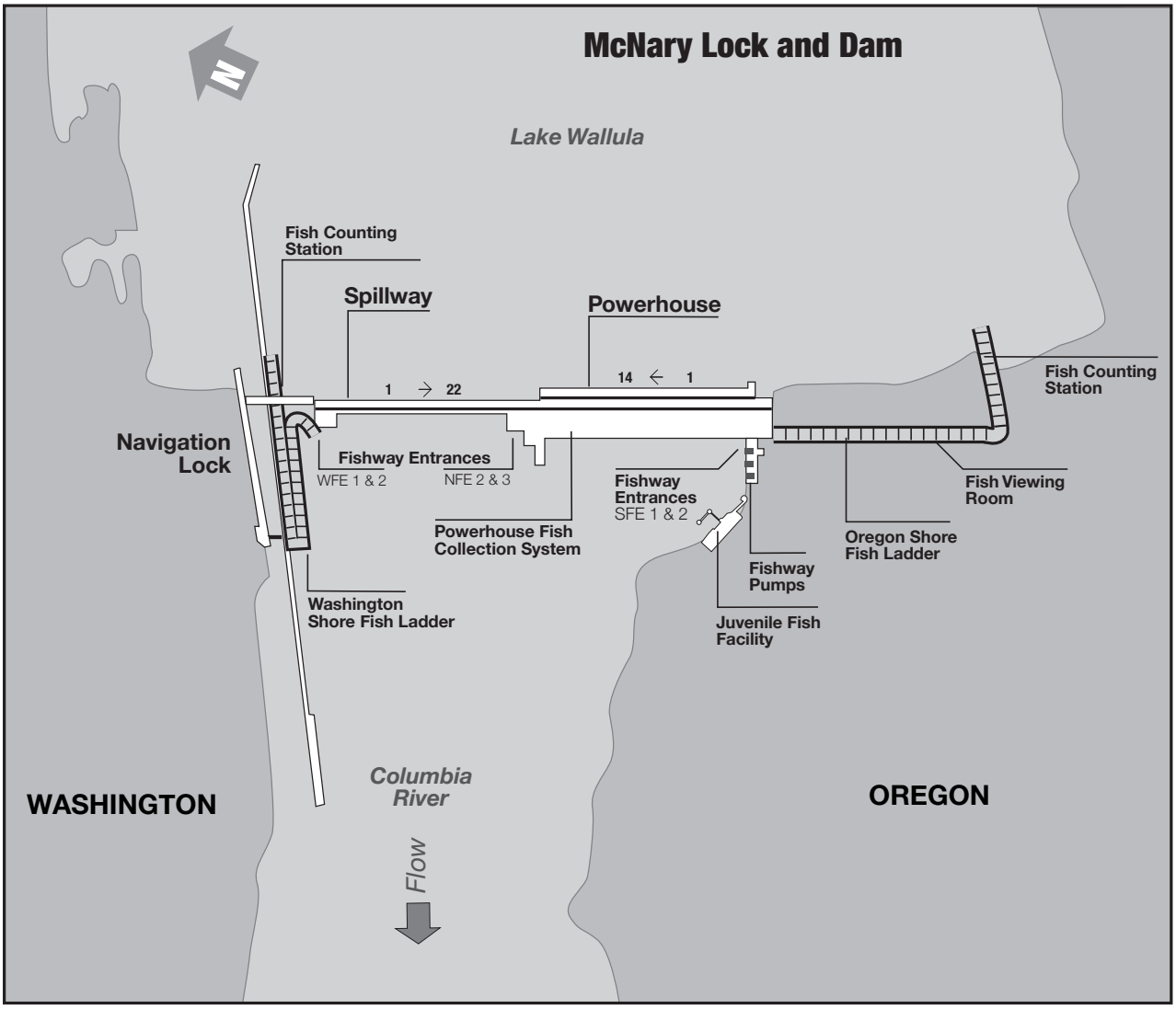
*Jacks included

TABLE 59

MONTHLY COUNT OF STEELHEAD
JOHN DAY DAM 1968 - 2003

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
1998				4,367	1,018	2,460	9,827	9,053	67,322	64,500			158,547
1999				2,702	764	1,975	17,083	42,160	72,719	27,911			165,314
2000				2,607	784	4,500	23,496	37,827	113,619	37,495			220,328
2001				1,946	550	11,031	52,946	50,723	230,803	135,410			483,409
2002				7,330	972	5,875	42,167	59,430	170,893	103,633			390,300
2003			9,792	1,327	222	4,888	28,019	23,687	177,058	50,975	7,666	1,408	305,042
TOTAL			13,717	99,904	36,823	75,104	571,839	838,399	2,643,954	1,148,514	20,928	1,408	5,450,590
10-YR Average				2,783	648	3,773	21,299	32,150	106,397	56,294			225,230

Plate 5 McNary Lock and Dam



McNARY DAM

FISH COUNTING SCHEDULE

1 Jan – 28 Feb	No counting.
1 Mar – 31 Mar	Video counting daily 0400-2000 hours PST.
1 Apr – 31 Oct	Visual counting daily 0400-2000 hours PST.
1 Nov – 31 Dec	Video counting daily 0400-2000 hours PST.

FISH LADDER OPERATING SCHEDULE

Washington Ladder

1 Jan – 5 Jan	Ladder in service.
6 Jan – 3 Feb	Ladder out of service for annual maintenance.
4 Feb – 31 Dec	Ladder in service.

Oregon Ladder

1 Jan – 2 Feb	Ladder in service.
3 Feb – 24 Feb	Ladder out of service for annual maintenance.
25 Feb – 31 Dec	Ladder in service.

FISHWAY ACTIVITIES

Adult chinook and steelhead were radio-tracked past the dam in 2003 as part of a broader, ongoing study to evaluate fish passage from below Bonneville Dam to above Lower Granite Dam.

Water temperatures were recorded hourly in eight locations within the adult fishways during the fish passage season. The purpose of this effort, ongoing since 1999, is to determine if thermal barriers exist and take corrective action if needed.

The control and electrical systems for the tilting weirs in the Washington shore fish ladder were upgraded during the winter outage. To ensure that the weirs operated properly after the new systems were installed, the forebay was briefly fluctuated through its full operating range (335 to 340 feet msl) in March. Similar work is scheduled for the Oregon shore ladder in 2004.

The juvenile fish facility was operated for juvenile fish transport/bypass and adult fallbacks from 18 March to 18 December.

McNary Historic Fish Count Schedule 1954-2002 (information based on previous Annual Fish Passage Reports)
16 hour counts occurred between the hours of 0400-2000 PST unless otherwise stated.
8 hour counts occurred between the hours of 0800-1600 PST unless otherwise stated.

Year	Months	Count Period	Notes
1954	Mar 15 – Apr 25	8 hour	Ladders closed during hours in which counters were off duty.
	Apr 26 – Nov 6	16 hour	
	Nov 7 – 30	8 hour	
	Dec 20 – 30	8 hour WA only	
1955	Jan 1 – Apr 16	8 hour	
	Apr 17 – Nov 12	16 hour	
	Nov 13 – Dec 4	8 hour	
	Dec 5 – 9	8 hour OR only	
	Dec 10 – 31	8 hour (5 days/week)	
1956	Jan 1 – 15	8 hour (5 days/week)	
	Jan 16 – Apr 14	8 hour (7 days/week)	
	Apr 15 – Oct 23	16 hour	
	Oct 24 – Nov 8	14 hour	
	Nov 9 – 14	12 hour	
	Nov 15 – 30	8 hour	
1957	Mar 17 – Apr 13	8 hour	Ladders were closed during non-counting periods
	Apr 14 – 27	Sample counting 8 hour	Counting performed in 4 four periods alternating between counting stations, 16 hours daily. Counting gates open at all times.
	Apr 28 – Sep 24	16 hour	Counting gates closed during non-counting times
	Sep 25 – Oct 19	Sample counting 8 hour	
	Dec 16 – 31	Spot counting	Counting alternately between counting stations at 2 hour intervals. Gates Left open at all times unless otherwise stated.
1958	Jan 1 – Mar 15	Spot counting	
	Mar 16 – Apr 26	Sample counting 8 hour	
	Apr 27 – Jul 5	16 hour	Counting gates closed during non-counting times unless otherwise stated.
	Jul 6 – 19	Sample counting 8 hour	
	Jul 20 – Oct 8	16 hour	
	Oct 9 – 31	Sample counting 8 hour	
1959	Apr 1 – Oct 31	Sample counting 8 hour	
1960	Apr 1 – Oct 31	Sample counting 8 hour	

Year	Months	Count Period	Notes
1961	Apr 1 – Jul 31	Sample counting 8 hour	
	Aug 1 – Oct 31	16 hour	
1962	Apr 1 – Jul 31	Sample counting 8 hour	Gates remained open at all times.
	Aug 1 – Oct 31	16 hour	Gates open during counter breaks, but closed at night.
1963	Apr 1 – Jul 31	Sample counting 8 hour	Gates closed at night.
1964	Apr 1 – Jul 31	Sample counting 8 hour	Gates closed at night.
	Aug 1 – Oct 31	16 hour (0400-2000)	
1965	Apr 1 – Jul 31	Sample counting 8 hour	Gates closed at night.
	Aug 1 – Oct 31	16 hour	Gates open from Nov 1 to end of year.
1966	Apr 1 – Oct 31	Sample counting 8 hour	Gates closed at night.
1967-71	Apr 1 – Oct 31	16 hour	Gates closed at night and during breaks.
1972	Apr 1 – Jun 30	16 hour	Two 8 hour shifts full count (0400-2000ST) daily. Gates closed at night But open during breaks.
	Jul 1 – Oct 31	18 hour	Two 9 hour shifts full count (0400-2200ST) daily except for Tuesdays. On Tuesdays, three 8 hour shifts were conducted (24 hour). Gates open.
1973	Apr 1 – Jul 31	18 hour	Same as above, except gates open.
	Aug 1 – Oct 31	16 hour	Same as 1972
1974	Apr 1 – Oct 31	16 hour	24-hour counts on the following dates: May 7-9, 12-16, 19-23, 31; Jun 1, 2, 23-27, 31; Jul 1-4, 7-11, 14-18, 21-25, 28-31; Aug 1, 4-8, 11-15, 18-22, 31; Sep 2-4, 8-12, 16, 17, 23, 24.
1975-77	Apr 1 – Oct 31	16 hour (two 8hour shifts)	Counting on closed circuit television.
1978	Apr 1 – Nov 30	16 hour	North shore mostly visual counting, south shore by remote television.
1979	Mar 1 – Nov 30	16 hour	Visual counting on Oregon ladder and on remote television from the Washington.
1980	Mar 1 – 31	8 hour	
	Apr 1 – Oct 31	16 hour	
	Nov 1 – 30	8 hour	
1981	Mar 2 - 31	8 hour	
	Apr 1 – Oct 31	16 hour	
	Nov 1 – 30	8 hour	South ladder counted by direct observation, north ladder by closed circuit television.
1982	Mar 1 – 31	8 hour	
	Apr 1 – Oct 31	16 hour	
1983-4	Apr 1 – Oct 31	16 hour	
1985	Mar 1 – 31	8 hour	
	Apr 1 – Oct 31	16 hour	Counted by direct observation.

Year	Months	Count Period	Notes
1986	Mar 15 – 31	8 hour	South ladder counted by direct observation, north ladder by closed circuit television.
	Apr 1 – Oct 31	16 hour	Counted by direct observation.
1987-90	Apr 1 – Oct 31	16 hour	
1991	Apr 1 – Oct 31	16 hour	
	Nov 1 – 5	13 hour (0500-1800 PST)	
	Nov 6 – 30	12 hour (0600-1800 PST)	
	Dec 1 – 15	10 hour (0700-1700 PST)	
1992-4	Apr 1 – Oct 31	16 hour	
1995	Apr 1 – Oct 31	16 hour	
	Nov 1 - 30	10 hour (0600-1600PST)	Special visual counting on the north ladder for blast monitoring (North Wasco County PUD began construction of a small hydroelectric facility adjacent to Washington shore fish ladder).
1996-2002	Apr 1 – Oct 31	16 hour	

TABLE 60

MONTHLY TOTALS OF SALMONIDS, SHAD AND LAMPREY COUNTED OVER McNARY DAM

2003

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL*
CHINOOK*			853	53,947	46,116	57,732	50,157	13,667	166,635	32,349	1,750	157	423,363
STEELHEAD			8,696	1,309	145	2,298	20,439	15,184	139,321	51,722	6,307	1,477	246,898
SOCKEYE					4	13,277	18,728	28					32,037
COHO*								25	11,788	8,017	401	0	20,231
CHUM										1			1
PINK									33	18			51
TOTAL				55,256	46,265	73,307	89,324	28,904	317,777	92,107	8,458	1,634	722,581
SHAD					1,441	788,036	282,828	5,365					1,077,670
LAMPREY					1	153	5,304	5,887	1,682	298			13,325

***Jacks Included**

Shad are not counted after September 1st.

TABLE 61

DISCHARGE AND WATER QUALITY DATA

MCNARY PROJECT 2003

JANUARY

DATE	DISCH KCFS	SPILL KCFS	[1]TURBIDITY SECCHI	[1]DEG F
Jan 1	103.2	0.0		
Jan 2	94.0	0.1		44.0
Jan 3	96.1	0.0	6.0	44.0
Jan 4	92.8	0.0	6.0	44.0
Jan 5	90.2	0.0	6.0	44.0
Jan 6	104.2	0.0	6.0	44.0
Jan 7	101.0	0.0	6.0	44.0
Jan 8	115.6	0.0	6.0	44.0
Jan 9	129.0	0.0	6.0	44.0
Jan 10	109.8	0.0	6.0	44.0
Jan 11	106.9	0.0	6.0	43.0
Jan 12	91.6	0.0	*	43.0
Jan 13	83.2	0.0	*	43.0
Jan 14	110.3	0.0	6.0	42.0
Jan 15	103.2	0.0	6.0	42.0
Jan 16	128.7	0.0	6.0	42.0
Jan 17	121.8	0.0	6.0	43.0
Jan 18	127.9	0.0	6.0	42.0
Jan 19	99.3	0.0	6.0	42.0
Jan 20	101.6	0.0	6.0	42.0
Jan 21	97.5	0.0	*	42.0
Jan 22	132.8	0.0	*	42.0
Jan 23	109.0	0.0	*	42.0
Jan 24	112.7	0.0	*	42.0
Jan 25	95.0	0.0	*	42.0
Jan 26	89.3	0.0	*	42.0
Jan 27	97.8	0.0	*	42.0
Jan 28	132.5	0.0	6.0	42.0
Jan 29	133.4	0.0	6.0	42.0
Jan 30	117.2	0.0	6.0	42.0
Jan 31	135.3	0.0	6.0	42.0
AVG.	108.5	0.0	6.0	42.7

FEBRUARY

DATE	DISCH KCFS	SPILL KCFS	[1]TURBIDITY SECCHI	[1]DEG F
Feb 1	155.8	0.0	6.0	43.0
Feb 2	177.1	0.0	*	43.0
Feb 3	154.3	0.0	*	43.0
Feb 4	144.0	0.0	*	42.0
Feb 5	120.5	1.0	5.0	42.0
Feb 6	121.2	0.7	4.0	42.0
Feb 7	139.8	0.0	4.0	42.0
Feb 8	133.2	0.0	1.7	42.0
Feb 9	114.0	0.0	4.0	42.0
Feb 10	100.4	0.0	4.0	42.0
Feb 11	121.3	0.0	*	42.0
Feb 12	110.0	0.0	3.0	41.0
Feb 13	119.8	0.0	2.8	41.0
Feb 14	116.9	0.0	3.1	41.0
Feb 15	97.7	0.0	4.4	41.0
Feb 16	101.1	0.0	5.2	41.0
Feb 17	102.4	0.0	*	41.0
Feb 18	109.5	0.0	4.0	42.0
Feb 19	105.4	0.0	4.0	42.0
Feb 20	98.7	0.0	*	42.0
Feb 21	110.8	0.0	5.2	42.0
Feb 22	90.3	0.0	*	42.0
Feb 23	100.7	0.0	4.8	42.0
Feb 24	118.7	0.0	*	42.0
Feb 25	118.7	0.0	*	43.0
Feb 26	115.1	0.0	*	42.0
Feb 27	89.4	0.0	*	42.0
Feb 28	129.9	0.0	*	43.0
AVG.	118.5	0.1	4.1	42.0

***Data unavailable.**

TABLE 62

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

MCNARY PROJECT
MARCH 2003

FISH COUNTS | **RIVER CONDITIONS**

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	TOTAL STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Mar 1	0			0				284	73			110.9	0.0	*	42.0
Mar 2	1			0				257	29			105.6	0.0	3.2	42.0
Mar 3	0			0				271	63			126.6	0.0	*	42.0
Mar 4	0			0				271	80			136.4	0.0	3.7	42.0
Mar 5	0			0				323	76			136.6	0.0	4.2	43.0
Mar 6	0			0				510	116			133.8	0.0	5.0	43.0
Mar 7	0			0				533	146			145.7	0.0	4.9	43.0
Mar 8	1			0				686	192			126.1	0.0	5.0	42.0
Mar 9	0			0				295	32			117.4	0.0	4.7	42.0
Mar 10	0			0				286	95			112.9	0.0	4.7	43.0
Mar 11	0			0				393	160			115.4	0.0	3.9	43.0
Mar 12	0			0				272	68			129.6	0.0	5.0	43.0
Mar 13	1			0				210	61			106.0	0.0	4.8	43.0
Mar 14	1			0				368	141			135.9	0.0	4.7	43.0
Mar 15	3			0				257	62			136.1	0.0	4.7	43.0
Mar 16	7			0				310	106			134.7	0.0	4.7	44.0
Mar 17	5			0				330	95			153.4	0.0	3.7	44.0
Mar 18	14			0				520	161			150.4	0.0	3.6	45.0
Mar 19	16			0				245	79			157.3	0.0	3.5	45.0
Mar 20	21			0				226	67			155.3	0.0	3.4	46.0
Mar 21	38			0				284	114			125.6	0.0	3.4	45.0
Mar 22	49			0				238	104			115.0	0.0	3.4	45.0
Mar 23	112			0				267	118			111.0	0.0	3.4	45.0
Mar 24	104			0				138	50			139.6	0.0	3.4	46.0
Mar 25	37			0				98	57			147.9	0.0	4.6	47.0
Mar 26	62			0				120	46			176.1	0.0	4.6	47.0
Mar 27	26			0				146	57			206.3	0.0	3.8	47.0
Mar 28	47			0				196	59			197.1	0.0	2.7	46.0
Mar 29	61			0				82	14			181.5	0.0	2.7	46.0
Mar 30	94			0				141	14			185.6	0.0	2.5	46.0
Mar 31	153			0				139	22			169.7	0.0	2.5	47.0
TOTAL	853			0				8,696	2,557						
AVG.	23			0				285	85			141.3	0.0	3.9	44.2

*Data unavailable.

Note: March counts were from video tape. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.
Official Spring Chinook run started April 1. March chinook counts were not added to spring totals.

TABLE 63

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

MCNARY PROJECT
APRIL 2003

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO		TOTAL	WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Apr 1	163			0				162	65			169.4	0.0	2.4	47.0
Apr 2	663			0				127	74			169.2	0.0	2.5	47.0
Apr 3	407			0				90	51			172.9	0.0	2.5	47.0
Apr 4	559			0				98	51			174.4	0.0	2.7	47.0
Apr 5	679			2				82	44			173.4	0.0	2.7	47.0
Apr 6	1,670			8				92	56			173.5	0.0	3.4	47.0
Apr 7	582			0				49	27			175.2	0.0	4.3	47.0
Apr 8	918			0				35	14			173.7	0.0	3.5	47.0
Apr 9	173			0				48	26			173.1	0.0	3.5	47.0
Apr 10	842			0				60	28			161.4	0.0	3.6	48.0
Apr 11	2,184			8				42	30			174.7	0.0	3.7	48.0
Apr 12	2,047			5				43	27			174.3	0.0	3.8	48.0
Apr 13	2,584			1				25	21			174.1	0.0	3.7	48.0
Apr 14	1,815			1				44	33			177.7	33.9	3.5	49.0
Apr 15	4,338			47				60	43			189.1	68.1	3.5	49.0
Apr 16	3,865			13				52	39			193.3	68.5	3.8	50.0
Apr 17	2,012			3				42	32			222.3	83.1	3.5	50.0
Apr 18	4,536			4				31	21			216.0	75.9	4.0	50.0
Apr 19	3,059			19				23	22			201.9	80.3	4.2	50.0
Apr 20	3,633			22				21	12			188.4	73.8	4.2	50.0
Apr 21	3,175			16				8	6			173.5	59.9	4.2	49.0
Apr 22	1,870			20				19	19			228.1	102.7	4.2	49.0
Apr 23	1,811			0				10	7			231.9	101.1	4.5	49.0
Apr 24	1,441			6				12	9			220.1	98.3	4.5	51.0
Apr 25	2,012			16				4	4			201.8	77.3	4.5	51.0
Apr 26	1,059			30				6	3			238.8	90.9	4.4	50.0
Apr 27	1,592			25				6	6			205.6	72.3	4.5	50.0
Apr 28	1,132			45				5	2			207.9	70.5	4.7	*
Apr 29	1,606			38				8	4			217.5	69.5	4.7	50.0
Apr 30	1,149			42				5	3			225.6	69.5	4.8	51.0
TOTAL	53,576			371				1,309	779						
AVG.	1786			12				44	26			192.6	43.2	3.8	48.7

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hou *Data unavailable.
Official Spring Chinook run started April 1. March chinook counts were not added to spring totals.

TABLE 64

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

MCNARY PROJECT

MAY 2003

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO		TOTAL	WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
May 1	1,980			108			0	6	5	0	0	222.6	70.7	4.7	51.0
May 2	2,420			115			0	2	1	0	0	192.8	69.6	4.7	52.0
May 3	1,873			139			0	10	5	0	0	201.2	68.8	4.8	52.0
May 4	1,784			158			0	9	8	0	0	203.0	67.7	4.8	52.0
May 5	1,560			153			0	5	4	0	0	220.9	68.8	4.7	52.0
May 6	1,764			189			0	6	2	1	0	218.3	76.6	5.0	52.0
May 7	2,375			328			0	1	0	0	0	230.8	76.1	5.2	52.0
May 8	823			245			0	6	2	0	0	224.6	84.2	4.8	52.0
May 9	1,379			251			0	4	1	0	0	224.1	73.9	4.5	52.0
May 10	816			204			0	7	4	4	0	201.0	68.2	5.4	48.0
May 11	803			304			0	8	7	7	0	180.2	65.1	5.8	50.0
May 12	776			336			0	4	2	2	0	189.8	69.1	5.6	52.0
May 13	679			560			0	3	1	2	0	218.0	79.9	5.3	52.0
May 14	772			468			0	2	0	4	0	256.5	102.7	5.4	52.0
May 15	1,156			380			0	4	0	2	0	226.4	73.3	5.8	53.0
May 16	1,137			495			0	6	2	0	0	242.7	72.7	5.9	53.0
May 17	1,062			510			0	6	0	1	0	241.3	71.4	5.1	53.0
May 18	1,438			633			0	5	1	1	0	224.9	71.2	5.1	53.0
May 19	947			432			0	1	0	5	0	217.8	71.8	4.9	53.0
May 20	584			287			0	4	0	7	0	215.6	72.6	4.9	53.0
May 21	815			279			0	2	0	17	0	217.0	71.7	4.7	53.0
May 22	859			362			0	6	1	17	0	245.2	82.4	4.8	54.0
May 23	1,145			442			0	5	1	42	0	249.2	80.0	4.9	54.0
May 24	756			280			0	2	1	92	0	259.7	90.1	5.8	54.0
May 25	1,193			431			0	1	1	169	0	221.2	65.8	6.0	54.0
May 26	1,020			400			2	3	0	238	0	248.3	76.8	6.0	54.0
May 27	621			284			0	5	0	104	0	291.9	117.8	6.0	54.0
May 28	1,331			271			1	7	0	73	0	298.8	124.9	6.0	55.0
May 29	869			220			0	2	1	188	0	329.0	153.0	5.8	56.0
May 30	1,305			210			0	5	2	163	0	352.5	176.3	5.4	56.0
May 31	476			124			1	8	4	302	1	352.4	176.8	5.4	57.0
TOTAL	36,518			9,598			4	145	56	1,441	1				
AVG.	1,178			310			0	5	2	46		239.3	86.8	5.3	52.9

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD
SPRING	90,094	9,969	4	1,454	835	1,441

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

TABLE 65

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

MCNARY PROJECT

JUNE 2003

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	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Jun 1	517			185			0	13	1	277	0	320.2	144.9	5.5	57.0
Jun 2	542			115			0	7	1	398	1	289.6	115.4	3.6	57.0
Jun 3	442			123			0	9	2	538	1	294.5	121.4	3.3	57.0
Jun 4	591			160			4	13	0	1,656	1	296.7	125.9	3.1	57.0
Jun 5	615			142			6	20	1	9,677	1	273.8	98.8	3.7	57.0
Jun 6	652			154			6	16	2	10,128	1	262.8	92.5	3.6	58.0
Jun 7	861			130			4	15	1	2,032	1	285.9	115.1	3.6	59.0
Jun 8	1,236			145			4	16	1	3,667	1	283.9	108.1	3.0	59.0
Jun 9		1,120		203			24	30	5	15,603	4	265.0	90.4	3.6	59.0
Jun 10		1,387		178			31	35	1	6,819	6	278.5	108.1	3.3	59.0
Jun 11		1,436		191			29	30	5	4,233	2	305.2	130.1	2.8	60.0
Jun 12		1,845		236			58	41	4	7,760	1	304.8	129.1	2.7	60.0
Jun 13		3,393		271			164	59	12	32,627	12	260.9	87.9	3.8	60.0
Jun 14		2,372		200			138	60	7	14,997	0	284.4	109.4	3.6	60.0
Jun 15		3,241		213			163	79	30	91,176	4	239.1	65.1	3.6	60.0
Jun 16		2,271		235			196	47	7	61,463	3	247.0	87.0	3.9	60.0
Jun 17		1,419		193			239	87	16	54,150	5	255.0	80.5	4.2	60.0
Jun 18		1,703		162			235	72	15	28,748	0	266.0	95.2	4.0	60.0
Jun 19		2,773		198			399	65	13	47,410	1	235.5	79.0	4.6	62.0
Jun 20		2,258		168			456	108	28	33,150	2	174.1	32.0	4.6	62.0
Jun 21		1,932		187			586	92	28	17,615	7	194.1	19.5	4.8	61.0
Jun 22		2,006		250			569	105	24	28,546	4	180.7	5.0	4.1	61.0
Jun 23		2,309		220			604	112	31	51,497	5	161.8	0.0	4.0	61.0
Jun 24		1,867		206			774	105	24	31,491	7	188.3	15.6	4.1	61.0
Jun 25		1,931		193			842	136	40	22,681	11	219.4	43.9	3.7	63.0
Jun 26		2,192		260			1,085	172	43	33,980	2	217.6	43.6	4.0	62.0
Jun 27		2,798		242			1,212	141	60	30,669	19	218.8	44.9	4.3	62.0
Jun 28		1,751		181			1,353	187	53	47,442	8	176.9	2.9	4.3	62.0
Jun 29		2,322		276			2,011	220	41	50,749	11	178.6	5.1	4.2	63.0
Jun 30		2,097		236			2,085	206	56	46,857	32	172.9	0.1	4.0	63.0
TOTAL	5,456	46,423		5,853			13,277	2,298	552	788,036	153				
AVG.	682	2110		195			443	77	18	26,268	5	244.4	73.2	3.9	60.1

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	95,550	11,123
SUMMER	46,423	4,699
TOTAL	141,973	15,822

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
13,281	3,752	1,387	789,477	153

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

TABLE 66

MONTHLY FISH PASSAGE SUMMARY

U.S. ARMY ENGINEER DISTRICT, PORTLAND
FISH COUNTS

MCNARY PROJECT

JULY 2003
RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Jul 1		3,014		284			2,176	319	85	58,410	33	170.3	0.0	4.0	65.0
Jul 2		3,942		365			2,050	411	122	32,403	34	170.2	0.0	4.0	65.0
Jul 3		3,818		291			1,817	448	147	26,426	42	113.3	0.0	4.2	65.0
Jul 4		2,898		284			1,743	452	139	31,099	23	144.9	0.0	3.8	68.0
Jul 5		2,612		281			1,284	452	128	20,346	35	145.7	0.0	3.8	68.0
Jul 6		2,603		292			1,455	637	159	23,993	81	100.4	0.0	4.6	68.0
Jul 7		1,940		238			1,009	478	154	24,542	41	131.8	0.0	4.7	68.0
Jul 8		2,895		345			1,335	750	263	9,464	55	138.4	0.0	4.5	68.0
Jul 9		1,452		234			1,002	776	275	10,959	69	167.7	0.0	4.5	68.0
Jul 10		1,432		171			660	492	178	8,708	67	159.0	0.0	4.7	69.0
Jul 11		1,352		161			702	497	203	6,191	82	170.1	0.0	4.8	70.0
Jul 12		874		120			575	381	131	6,036	83	163.4	0.0	4.1	70.0
Jul 13		1,648		174			511	681	272	3,649	98	144.0	0.0	4.2	70.0
Jul 14		1,142		122			407	745	292	3,528	132	155.9	0.0	4.9	69.0
Jul 15		999		147			297	603	258	1,761	105	151.5	0.0	5.1	70.0
Jul 16		810		185			337	592	209	1,931	188	156.9	0.0	5.1	70.0
Jul 17		594		149			303	798	324	1,662	204	150.8	0.0	3.9	70.0
Jul 18		1,737		187			252	1,341	544	1,261	210	125.8	0.0	4.0	68.0
Jul 19		613		127			181	718	300	1,191	300	125.6	0.0	4.0	70.0
Jul 20		419		92			165	591	199	851	169	138.9	0.0	3.9	71.0
Jul 21		987		178			116	803	334	918	504	134.9	0.0	4.1	71.0
Jul 22		1,088		171			94	1,063	382	970	423	149.1	0.2	5.0	71.0
Jul 23		721		140			62	734	297	665	416	160.5	0.2	5.0	73.0
Jul 24		803		171			62	978	419	613	346	155.2	0.0	5.0	71.0
Jul 25		1,227		162			29	1,140	541	284	194	132.9	0.1	5.2	72.0
Jul 26		585		137			32	971	432	252	212	144.2	0.1	5.2	72.0
Jul 27		631		113			27	712	303	470	280	103.6	0.0	5.1	71.0
Jul 28		670		114			14	505	221	411	223	144.2	0.0	4.8	71.0
Jul 29		264		33			9	339	126	1,608	175	140.8	0.0	5.0	73.0
Jul 30		410		89			15	581	256	1,346	206	138.3	0.0	4.8	74.0
Jul 31		359		61			7	451	188	880	274	135.6	0.0	5.0	74.0
TOTAL		44,539		5,618			18,728	20,439	7,881	282,828	5,304				
AVG.		1437		181			604	659	254	9,123	171	144.0	0.0	4.5	69.8

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	95,550	11,123
SUMMER	90,962	10,317
TOTAL	186,512	21,440

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
32,009	24,191	9,268	1,072,305	5,457

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

TABLE 67

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

MCNARY PROJECT

AUGUST 2003

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	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Aug 1		564		105	0	0	6	574	244	493	267	146.2	0.0	5.0	74.0
Aug 2		424		101	0	0	5	584	231	491	193	139.0	0.0	5.0	74.0
Aug 3		762		172	0	0	8	537	229	417	296	95.3	0.0	5.0	73.0
Aug 4		411		133	0	0	2	332	128	693	183	117.1	0.0	5.0	71.0
Aug 5		247		63	0	0	2	300	123	366	175	116.8	0.0	5.0	71.0
Aug 6		202		65	0	0	1	283	119	159	120	126.5	0.0	4.8	72.0
Aug 7		154		81	0	0	0	278	116	190	193	123.2	0.0	4.8	70.0
Aug 8		118		67	0	0	0	360	155	262	196	115.1	0.0	4.9	70.0
Aug 9			254	84	0	0	0	238	95	279	206	134.4	0.0	5.7	70.0
Aug 10			403	128	0	0	0	322	118	249	230	112.1	0.0	5.2	70.0
Aug 11			345	99	0	0	0	329	115	189	195	126.3	0.0	5.4	70.0
Aug 12			366	130	0	0	1	505	212	193	327	140.4	0.0	4.8	70.0
Aug 13			402	108	0	0	0	483	178	126	264	128.3	0.0	4.9	70.0
Aug 14			319	88	0	1	1	361	156	139	239	127.4	0.0	5.0	71.0
Aug 15			278	86	0	0	0	326	140	110	249	134.8	0.0	5.0	71.0
Aug 16			391	84	0	0	0	337	127	93	160	118.7	0.0	5.0	71.0
Aug 17			171	46	0	0	0	292	105	71	119	110.0	0.0	5.0	71.0
Aug 18			382	79	0	0	0	300	115	33	168	120.1	0.0	5.3	71.0
Aug 19			408	74	0	0	0	360	120	54	176	141.1	0.0	5.0	71.0
Aug 20			175	73	0	0	0	571	190	84	128	140.4	0.0	5.4	72.0
Aug 21			402	99	0	0	2	726	236	313	250	146.8	0.8	5.4	*
Aug 22			244	66	0	0	0	597	198	146	282	138.9	0.1	5.4	72.0
Aug 23			231	44	3	0	0	673	228	62	107	128.2	0.0	5.4	72.0
Aug 24			366	72	2	2	0	768	260	8	95	111.1	0.0	4.2	72.0
Aug 25			292	68	1	0	0	630	201	26	196	140.5	0.0	4.3	71.0
Aug 26			287	66	2	0	0	624	193	16	132	160.2	0.0	4.3	71.0
Aug 27			416	47	1	0	0	583	196	32	102	142.1	0.0	4.7	71.0
Aug 28			315	58	3	1	0	742	243	15	186	110.3	0.0	4.1	71.0
Aug 29			310	72	0	1	0	666	196	32	185	112.9	0.0	4.0	70.0
Aug 30			377	60	3	0	0	704	200	7	180	127.9	0.0	4.1	70.0
Aug 31			1,042	91	5	0	0	799	234	17	88	105.0	0.0	4.1	70.0
TOTAL		2,882	8,176	2,609	20	5	28	15,184	5,401	5,365	5,887				
AVG.		360	355	84	1	0	1	490	174	173	190	127.0	0.0	4.9	71.1

*Data unavailable.

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	95,550	11,123
SUMMER	93,844	11,104
FALL	8,176	1,822
TOTAL	197,570	24,049

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
20	5	32,037	39,375	14,669	1,077,670	11,344

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

TABLE 68

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND
FISH COUNTS

MCNARY PROJECT

SEPTEMBER 2003
RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	PINK	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Sep 1			2,424	130	6	2		828	240	0	139	95.5	0.0	4.1	70.0
Sep 2			4,014	228	38	3		1,548	520	0	98	88.7	0.0	5.4	70.0
Sep 3			4,986	213	22	3		1,285	441	0	72	98.0	0.0	5.1	71.0
Sep 4			3,555	235	38	13		1,342	414	0	60	108.7	0.5	4.8	72.0
Sep 5			2,976	268	72	22		1,896	577	0	38	105.7	0.0	6.0	72.0
Sep 6			1,945	222	87	20		1,799	586	1	107	87.6	0.0	*	70.0
Sep 7			4,473	442	177	27		3,516	1166	0	61	69.0	0.0	5.1	70.0
Sep 8			4,631	619	209	70		6,312	1918	0	32	80.8	0.0	6.0	70.0
Sep 9			8,230	809	203	42		5,032	1535	0	21	83.7	0.0	5.5	70.0
Sep 10			4,613	528	167	30		3,600	1068	0	35	86.7	0.0	5.5	70.0
Sep 11			4,523	1,047	242	42		5,817	1961	1	52	63.2	0.0	5.2	70.0
Sep 12			1,775	375	268	39		4,180	1178	0	89	66.3	0.0	5.2	70.0
Sep 13			2,574	499	180	25		2,975	865	0	72	84.3	0.0	5.0	69.0
Sep 14			6,076	533	184	32		4,376	1288	0	76	74.2	0.0	5.5	68.0
Sep 15			8,759	601	217	30		4,872	1367	0	88	65.5	0.0	5.0	68.0
Sep 16			9,582	740	439	71		7,900	2367	1	53	93.7	0.0	5.0	68.0
Sep 17			9,767	893	727	96		9,297	2712	0	45	89.6	0.0	5.0	68.0
Sep 18			4,916	707	601	59		6,104	1700	0	36	78.7	0.0	5.0	67.0
Sep 19			6,241	1,087	459	53		5,430	1318	1	53	83.8	0.0	5.4	67.0
Sep 20			7,167	1,513	652	64		7,898	1972	3	45	71.3	0.0	5.5	67.0
Sep 21			5,734	1,090	716	54		7,033	1685	2	60	78.1	0.0	5.4	66.0
Sep 22			6,673	927	598	52		6,291	1472	1	57	98.8	0.0	5.6	66.0
Sep 23			6,325	850	613	52		6,563	1497	0	20	109.4	0.0	5.6	67.0
Sep 24			5,879	780	590	53		6,241	1550	2	18	94.0	0.0	6.0	68.0
Sep 25			5,361	681	833	75		5,950	1368	5	29	99.2	0.0	5.6	66.0
Sep 26			3,079	755	736	55		6,106	1462	5	45	103.5	0.0	5.6	66.0
Sep 27			3,175	806	512	35		5,122	1213	4	44	115.5	0.0	5.6	67.0
Sep 28			2,495	807	410	23		3,532	827	2	31	68.7	0.0	7.0	66.0
Sep 29			2,482	785	296	34		3,375	829	3	55	90.7	0.0	6.5	*
Sep 30			2,415	620	298	22		3,101	650	2	51	102.3	0.0	5.0	66.0
TOTAL			146,845	19,790	10,590	1,198		139,321	37,746	33	1,682				
AVG.			4,895	660	353	40		4,644	1,258	1	56	87.8	0.0	5.4	68.4

*Data unavailable.

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK	COHO ADULTS	COHO JACKS	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK
SPRING	95,550	11,123	10,610	1,203	32,037	178,696	52,415	1,077,670	13,026	33
SUMMER	93,844	11,104								
FALL	155,021	21,612								
TOTAL	344,415	43,839								

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

TABLE 69

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

MCNARY PROJECT

OCTOBER 2003

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	CHUM	STEELHEAD	WILD STEELHEAD	PINK	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Oct 1			3.500	969	397	37	1	4.674	1,132	6	33	106.8	0.0	6.0	66.0
Oct 2			1,950	682	392	30	0	3,824	863	2	40	108.5	0.0	7.0	66.0
Oct 3			1.519	705	299	23	0	4.032	1,075	3	27	82.7	0.0	6.0	67.0
Oct 4			1,608	714	245	21	0	3,251	894	4	30	78.5	0.0	*	*
Oct 5			1,228	567	213	16	0	2,851	820	0	28	65.1	0.0	6.0	66.0
Oct 6			1.550	618	294	30	0	2.525	696	0	9	79.5	0.0	6.0	66.0
Oct 7			1,139	516	244	33	0	2,526	710	1	14	89.9	0.0	6.0	66.0
Oct 8			933	385	272	45	0	2,856	794	0	8	101.0	0.0	6.0	66.0
Oct 9			882	308	153	19	0	1,310	364	0	26	102.0	0.0	6.0	66.0
Oct 10			651	322	100	6	0	1,398	370	0	12	103.2	0.0	6.0	66.0
Oct 11			576	260	116	17	0	1,295	301	0	14	98.1	0.0	6.0	66.0
Oct 12			640	199	67	2	0	1.032	285	0	4	80.7	0.0	5.5	66.0
Oct 13			861	264	118	11	0	1,059	268	0	4	83.9	0.0	5.9	64.0
Oct 14			1,001	243	124	13	0	1,286	343	0	1	98.6	0.0	5.9	63.0
Oct 15			517	174	121	7	0	765	191	0	10	106.8	0.0	5.6	62.0
Oct 16			905	177	155	12	0	880	246	0	4	103.1	0.0	*	62.0
Oct 17			474	178	227	13	0	1,252	387	1	1	96.2	0.0	6.0	61.0
Oct 18			502	152	325	24	0	1,402	333	0	2	85.5	0.0	6.0	60.0
Oct 19			553	168	363	26	0	1,741	474	1	1	66.3	0.0	6.0	60.0
Oct 20			358	120	167	13	0	1,112	353	0	2	87.4	0.0	6.0	60.0
Oct 21			325	102	202	13	0	1,098	336	0	7	91.2	0.0	6.0	61.0
Oct 22			473	117	338	14	0	1,142	299	0	8	100.0	0.0	6.0	61.0
Oct 23			288	74	461	13	0	1.360	375	0	2	121.4	0.0	6.0	61.0
Oct 24			231	83	264	9	0	1,582	531	0	0	138.0	0.0	6.0	61.0
Oct 25			226	57	220	10	0	1.029	317	0	4	133.7	0.0	6.0	61.0
Oct 26			335	64	432	10	0	1,127	339	0	1	117.8	0.0	6.0	61.0
Oct 27			289	54	451	20	0	1.147	380	0	1	98.9	0.0	6.0	61.0
Oct 28			143	54	382	28	0	719	221	0	2	115.0	0.0	5.9	60.0
Oct 29			125	54	250	16	0	914	262	0	1	124.7	0.0	6.0	59.0
Oct 30			74	21	64	0	0	387	135	0	2	118.5	0.0	5.9	59.0
Oct 31			74	18	29	1	0	146	45	0	0	121.1	0.0	5.9	57.0
TOTAL			23,930	8,419	7,485	532	1	51,722	14,139	18	298				
AVG.			772	272	241	17	0	1,668	456	1	10	100.1	0.0	6.0	62.7

*Data unavailable.

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	95,550	11,123
SUMMER	93,844	11,104
FALL	178,951	30,031
TOTAL	368,345	52,258

COHO ADULTS	COHO JACKS	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK	CHUM
18,095	1,735	32,037	230,418	66,554	1,077,670	13,324	51	1

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.
Official Fall Chinook run ended October 31. November and December chinook counts were not added to fall totals.

TABLE 70

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

MCNARY PROJECT
NOVEMBER 2003

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	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Nov 1			93	17	27	9	0	177	79		0	115.5	0.0	6.0	57.0
Nov 2			111	18	35	5	0	157	66		0	136.6	0.0	5.9	57.0
Nov 3			54	17	24	4	0	144	56		0	114.4	0.0	*	55.0
Nov 4			61	17	15	3	0	210	105		0	124.1	0.0	6.0	54.0
Nov 5			136	26	19	1	0	319	135		0	124.8	0.0	6.0	52.0
Nov 6			151	30	15	3	0	381	167		0	134.2	0.0	6.0	52.0
Nov 7			107	14	20	3	0	430	188		0	131.0	0.0	6.0	*
Nov 8			78	17	8	1	0	347	139		0	124.8	0.0	6.0	52.0
Nov 9			49	10	9	0	0	193	71		0	92.2	0.0	*	51.0
Nov 10			54	15	13	0	0	176	68		0	103.2	0.0	6.0	52.0
Nov 11			37	12	7	0	0	330	129		0	116.0	0.0	6.0	51.0
Nov 12			48	7	13	0	0	292	114		0	120.3	0.0	6.0	51.0
Nov 13			19	4	0	0	0	244	90		0	138.4	0.0	6.0	51.0
Nov 14			31	5	4	0	0	207	72		0	128.0	0.0	6.0	51.0
Nov 15			41	2	16	1	0	163	59		0	115.9	0.0	6.0	51.0
Nov 16			34	1	21	0	0	148	62		0	101.7	0.0	6.0	51.0
Nov 17			25	5	19	0	0	394	145		0	115.5	0.0	6.0	51.0
Nov 18			33	4	28	0	0	354	130		0	102.4	0.0	6.0	51.0
Nov 19			17	1	14	0	0	181	59		0	123.0	0.0	6.0	51.0
Nov 20			29	2	3	0	0	224	76		0	119.9	0.0	6.0	51.0
Nov 21			43	4	20	0	0	157	54		0	140.8	0.0	6.0	51.0
Nov 22			36	4	15	2	0	196	69		0	138.7	0.0	6.0	50.0
Nov 23			20	0	5	1	0	218	70		0	112.5	0.0	6.0	50.0
Nov 24			20	0	5	2	0	201	81		0	104.0	0.0	5.9	50.0
Nov 25			12	0	7	2	0	113	54		0	113.3	0.0	5.9	50.0
Nov 26			21	2	3	0	0	110	52		0	117.0	0.0	5.9	49.0
Nov 27			34	1	1	0	0	87	34		0	111.9	0.0	5.9	49.0
Nov 28			48	1	-1	0	0	65	25		0	89.9	0.0	6.0	47.0
Nov 29			32	0	-1	0	0	48	25		0	95.3	0.0	5.6	47.0
Nov 30			39	1	0	0	0	41	17		0	93.9	0.0	6.0	47.0
TOTAL			1,513	237	364	37	0	6,307	2,491		0				
AVG.			50	8	12	1	0	210	83		0	116.6	0.0	6.0	51.1

*Data unavailable.

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	95,550	11,123
SUMMER	93,844	11,104
FALL	178,951	30,031
TOTAL	368,345	52,258

COHO ADULTS	COHO JACKS	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK	CHUM
18,095	1,735	32,037	230,418	66,554	1,077,670	13,324	51	1

Note: November counts were from video tape. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.
Official Fall Chinook run ended October 31. November and December chinook counts were not added to fall totals.

TABLE 71

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

MCNARY PROJECT

DECEMBER 2003

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	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Dec 1			20	0	0	0	0	17	6		0	112.2	0.0	6.0	47.0
Dec 2			12	1	-1	0	0	35	10		0	101.3	0.0	6.0	47.0
Dec 3			15	1	-1	0	0	11	4		0	126.6	0.0	6.0	48.0
Dec 4			4	0	0	0	0	30	11		0	149.4	0.0	6.0	47.0
Dec 5			6	0	1	0	0	57	21		0	124.0	0.0	*	47.0
Dec 6			6	0	0	0	0	80	23		0	124.0	0.0	*	47.0
Dec 7			3	1	0	0	0	35	16		0	121.8	0.0	6.0	47.0
Dec 8			5	0	0	0	0	33	15		0	120.8	0.0	6.0	47.0
Dec 9			5	0	0	0	0	42	19		0	124.1	0.0	6.0	47.0
Dec 10			6	0	0	0	0	15	4		0	158.3	0.0	6.0	47.0
Dec 11			6	0	0	0	0	43	19		0	148.9	0.0	5.0	47.0
Dec 12			7	0	0	0	0	36	14		0	148.2	0.0	6.0	47.0
Dec 13			0	0	0	0	0	28	11		0	130.0	0.0	6.0	46.0
Dec 14			8	0	0	1	0	60	27		0	122.6	0.0	6.0	46.0
Dec 15			1	0	0	0	0	119	33		0	154.9	0.0	6.0	46.0
Dec 16			2	0	0	0	0	63	25		0	150.3	0.0	6.0	45.0
Dec 17			6	0	0	0	0	51	24		0	151.1	0.0	6.0	45.0
Dec 18			5	0	0	0	0	38	17		0	154.4	0.0	6.0	45.0
Dec 19			4	0	0	0	0	57	24		0	137.3	0.0	6.0	44.0
Dec 20			3	0	0	0	0	68	26		0	131.4	0.0	6.0	44.0
Dec 21			4	0	0	0	0	70	20		0	118.3	0.0	6.0	44.0
Dec 22			3	0	0	0	0	50	19		0	117.4	0.0	6.0	44.0
Dec 23			2	0	0	0	0	63	26		0	141.4	0.0	6.0	44.0
Dec 24			3	0	0	0	0	41	15		0	126.6	0.0	5.0	44.0
Dec 25			1	0	0	0	0	97	37		0	117.2	0.0	6.0	44.0
Dec 26			4	0	0	0	0	69	23		0	102.5	0.0	6.0	43.0
Dec 27			4	0	0	0	0	53	13		0	117.2	0.0	6.0	43.0
Dec 28			2	0	0	0	0	49	18		0	121.3	0.0	6.0	42.0
Dec 29			3	0	0	0	0	48	14		0	150.9	0.0	6.0	42.0
Dec 30			2	0	0	0	0	15	4		0	149.0	0.0	6.0	42.0
*Dec 31			2	0	0	0	0	4	1		0	152.0	0.0	6.0	*
TOTAL			154	3	-1	1	0	1,477	539		0				
AVG.			5	0	0	0	0	48	17		0	132.4	0.0	5.9	45.3

*Data unavailable.

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	95,550	11,123
SUMMER	93,844	11,104
FALL	178,951	30,031
TOTAL	368,345	52,258

COHO ADULTS	COHO JACKS	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK	CHUM
18,095	1,735	32,037	230,418	66,554	1,077,670	13,324	51	1

Note: December counts were from video tape. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

*Dec 31 Picket leads pulled at 1030 and 1100.

Official Fall Chinook run ended October 31. November and December chinook counts were not added to fall totals.

TABLE 72

YEARLY TOTALS OF SALMONIDS COUNTED OVER McNARY DAM
1954 - 2003

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
1998	114,604	99,705	9,391	6,173	229,873
1999	121,946	84,088	11,884	4,934	222,852
2000	191,231	130,332	60,242	11,152	392,957
2001	489,784	398,784	97,188	24,730	1,010,486
2002	417,090	286,805	39,424	3,192	746,511
2003	420,603	230,418	32,037	19,830	702,888
Totals	9,069,846	5,793,191	2,844,022	466,347	18,173,406
10-Year Average	227,537	169,346	33,572	7,720	438,175

*Jacks included

TABLE 73

MONTHLY COUNT OF CHINOOK SALMON
McNARY DAM: 1954 - 2003

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

TABLE 73

(Continued)

MONTHLY COUNT OF CHINOOK SALMON

McNARY DAM: 1954 - 2003

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
1986			2	28,739	44,459	14,515	12,315	9,636	168,230	64,521			342,417	76,077	25,798	240,542
1987				26,258	32,171	12,889	11,219	19,123	151,410	33,568			286,638	60,396	25,353	200,889
1988				26,267	22,245	14,605	9,282	30,714	115,878	24,617			243,608	51,178	23,621	168,809
1989				9,625	24,281	12,484	11,112	23,034	80,089	15,782			176,407	35,954	24,708	115,745
1990				19,309	23,861	11,007	11,148	7,306	61,718	13,090			147,439	44,499	22,248	80,692
1991				4,942	15,838	9,289	9,409	4,328	56,251	13,674	1,074	36	114,841	22,631	17,588	74,622
1992				25,549	22,799	9,511	6,159	5,846	51,961	13,882			135,707	50,590	14,414	70,703
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	8,206	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	56,826	23,649	82,471
1998				6,645	11,964	9,965	8,249	5,652	50,987	21,142			114,604	19,752	17,634	77,218
1999				1,193	10,841	7,570	13,475	15,402	59,360	14,105			121,946	13,232	21,618	87,096
2000				25,136	46,396	16,096	13,641	27,931	50,138	11,893			191,231	75,644	27,696	87,891
2001				164,846	86,605	50,064	36,562	16,605	111,369	23,733			489,784	265,372	77,514	146,898
2002				14,867	108,862	65,935	56,149	26,798	123,089	21,390			417,090	133,229	116,747	167,114
2003			853	53,947	46,116	57,732	50,157	13,667	166,635	32,349	1,750	157	423,363	107,522	104,948	208,982
Total			915	861,783	1,661,645	1,055,326	1,122,301	620,290	3,083,257	659,290	7,611	193	9,072,611	2,714,606	2,143,049	4,213,045
10-Year Average				27,792	37,964	24,382	21,354	15,122	82,424	18,500			227,813	64,268	32,935	96,787

***Jacks included**

TABLE 74

MONTHLY COUNT OF SOCKEYE SALMON
McNARY DAM; 1954 - 2003

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

TABLE 74

(Continued)

MONTHLY COUNT OF SOCKEYE SALMON
McNARY DAM; 1954 - 2003

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
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
1998						3,585	5,754	45	7				9,391
1999						2,842	8,940	99	1	2			11,884
2000					4	44,379	15,752	106	1				60,242
2001					4	70,327	26,610	225	17	5			97,188
2002					1	12,518	26,745	156	2	2			39,424
2003					4	13,277	18,728	28					32,037
Total				1	194	573,066	2,172,044	85,517	9,396	3,798	5	1	2,844,022
10-Year Average						17,514	15,903	149	5				33,572

TABLE 75

MONTHLY COUNT OF COHO SALMON
McNARY DAM; 1954 - 2003

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

TABLE 75

(Continued)

MONTHLY COUNT OF COHO SALMON
McNARY DAM; 1954 - 2003

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS*
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
1998								6	687	5,480			6,173
1999								6	2,931	1,997			4,934
2000								309	6,947	3,896			11,152
2001								59	11,631	13,040			24,730
2002								10	1,765	1,417			3,192
2003								25	11,788	8,017	401		20,231
TOTAL				1	14	50	515	19,951	352,515	89,948	3,734	20	466,748
10-Year Average								46	3,986	3,688			7,760

*Jacks included

TABLE 76

MONTHLY COUNT OF STEELHEAD
McNARY DAM: 1954-2003

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

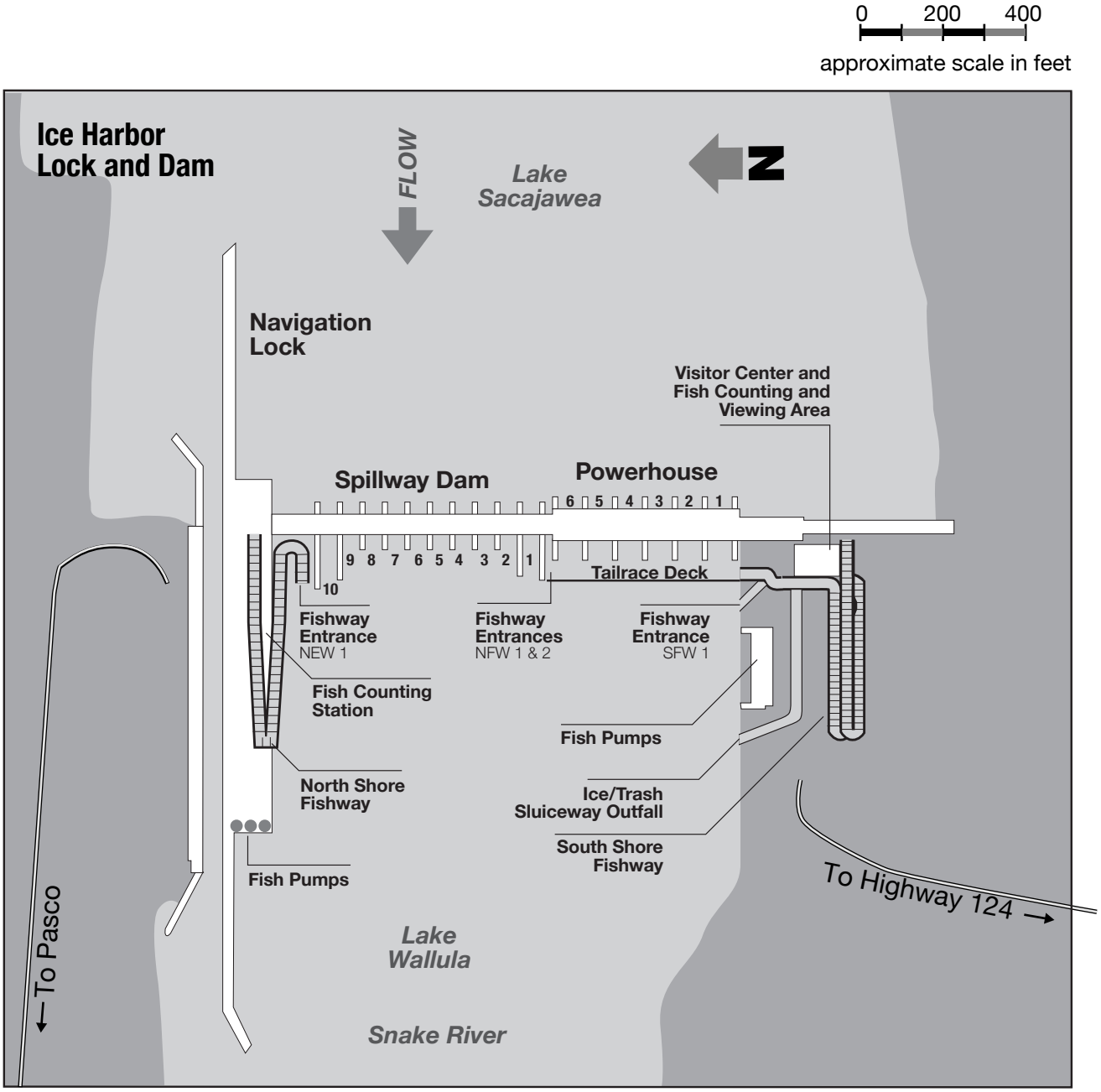
TABLE 76

(Continued)

MONTHLY COUNT OF STEELHEAD
McNARY DAM; 1954 - 2003

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS*
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
1998				1,236	364	1,391	6,372	4,040	38,324	47,978			99,705
1999				253	248	905	7,175	27,592	35,243	12,672			84,088
2000				588	238	1,901	16,311	23,148	59,803	28,343			130,332
2001				1,337	487	7,741	46,981	50,463	190,205	101,570			398,784
2002				4,650	271	2,957	29,979	48,226	120,936	79,786			286,805
2003			8,696	1,309	145	2,298	20,439	15,184	139,321	51,722	6,307	1,477	246,898
Total	1,059	925	19,593	101,072	38,860	60,327	528,826	1,026,920	2,706,970	1,283,588	35,071	6,730	5,809,941
10-Year Avg.				1,468	315	2,155	16,164	25,014	77,887	46,343			170,994

Plate 6 Ice Harbor Lock and Dam



ICE HARBOR DAM

FISH COUNTING SCHEDULE

1 Jan – 28 Feb	No counting.
1 Mar – 31 Mar	Video counting daily 0600-1600 hours PST.
1 Apr – 31 Oct	Visual counting daily 0400-2000 hours PST.
1 Nov – 31 Dec	No counting.

FISH LADDER OPERATING SCHEDULE

North Ladder

1 Jan – 28 Feb	Ladder out of service for annual maintenance and installation of new AWS pumps.
1 Mar – 31 Dec	Ladder in service.

South Ladder

1 Jan – 26 Jan	Ladder in service.
27 Jan – 18 Feb	Ladder out of service for annual maintenance.
19 Feb – 31 Dec	Ladder in service.

FISHWAY ACTIVITIES

Adult chinook and steelhead were radio-tracked past the dam in 2003 as part of a broader, ongoing study to evaluate fish passage from below Bonneville Dam to above Lower Granite Dam.

Water temperatures were recorded hourly in ten locations within the adult fishways during the fish passage season. The purpose of this effort, ongoing since 1999, is to determine if thermal barriers exist and take corrective action if needed.

Adult PIT tag detectors were installed around submerged orifices and vertical slots in both ladders during the winter outage.

The Walla Walla District continued a hydraulic evaluation of the adult fishways in 2003. The purpose was to analyze existing operating conditions and investigate alternatives to improve fish passage.

Three new AWS pumps and new diffusers were installed in the north shore ladder during the winter outage. The new pumps are 50% larger than the three old ones and only two pumps are needed to operate the fishway (one pump is a backup). The eight AWS pumps for the south shore ladder had their butterfly valves rehabbed and hydraulic systems upgraded.

The juvenile fish facility was operated for juvenile fish bypass and adult fallbacks from 17 March to 17 December.

Ice Harbor Historic Fish Count Schedule 1962-2002 (information based on previous Annual Fish Passage Reports)
16 hour counts occurred between the hours of 0400-2000 PST unless otherwise stated.
8 hour counts occurred between the hours of 0800-1600 PST unless otherwise stated.

Year	Months	Count Period	Notes
1962	Jan 24 – Mar 27	Spot checks	South shore ladder open.
	Mar 28 - 31		North shore ladder gate open.
	Apr 1 – Oct 31	16 hour	Gates open Nov. 1 to end of year.
1963	Apr 1 – Oct 31	16 hour	Gates closed at night, but opened during counter breaks.
	Nov 1 – 30	8 hour	
	Dec 1 - 30	4 hour	
1964	Jan 1 – Mar 31	8 hour (0800-1600)	Schedule alternated daily between 8 hours counted on each ladder and a Split-shift four hours per day on each ladder.
	Apr 1 – Oct 31	16 hour	Gates closed at night unless otherwise stated.
	Nov 1 – 30	8 hour	
	Dec 1 – 31	8 hour	Schedule alternated daily between 8 hours counted on each ladder and a Split-shift four hours per day on each ladder.
1965	Jan 1- Mar 31	8 hour	Schedule alternated daily on a 3-day cycle. Counted 8 hours one ladder First day, 4 hours each ladder second day, and 8 hours other ladder third Day. Gates closed at night.
	Apr 1- Oct 31	16 hour	Gates closed at night.
	Nov 1 – 30	8 hour	Gates open Dec. 1 to end of year.
1966	Apr 1 – Oct 31	Sample counting 8 hour	Gates closed at night.
1967	Apr 1 – Oct 31	16 hour	Gates closed at night and during breaks unless otherwise stated.
1968	Apr 1 – Oct 31	16 hour	
	Nov 1 – Dec 31	8 hour	
1969	Jan 1 – Mar 31	8 hour	
	Apr 1 – Oct 31	16 hour	
	Nov 1 – Dec 6	8 hour	
1970	Apr 1 – Oct 31	16 hour	
	Nov 1 – Dec 5	8 hour	
1971	Jan 2 – Mar 31	8 hour	
	Apr 1 – Oct 31	16 hour (0400-2000 ST)	
1972	Apr 1 – Jun 30	16 hour	Two 8 hour shifts full count (0800-2000ST). Gates closed at night but Open during breaks. Three 8-hour shifts on Tuesday (24 hour counts).
	Jul 1 – Oct 31	18 hour	Two 9 hour shifts full count (0800-2200ST) daily. Gates open unless

			Otherwise stated.
Year	Months	Count Period	Notes
1973	Apr 1 – Jul 31	18 hour (0400-2200ST)	Three 8-hour shifts on Tuesday (24 hour counts).
	Aug 1 – Oct 31	16 hour	
1974	Apr 1 – Oct 31	16 hour	24-hour counts on the following dates: May 9-16, 18, 20-23, 26-30; Jun 2-6
1975	Apr 1 – Oct 31	16 hour (two 8-hour shifts)	
1976	Apr 1 – Jun 5	16 hour	
	Jun 6 – 17		North ladder counted by closed circuit, south ladder by manual counting. Two counters used per shift for evaluation.
	Jun 18 – Oct 30	16 hour	
1977	Apr 1- Oct 31	16 hour	
1978	Apr 1 – Nov 30	16 hour	
1979	Apr 1 – Nov 28	16 hour	
1980-1	Mar 1 – 31	8 hour	
	Apr 1 – Oct 31	16 hour	
	Nov 1 - 30	8 hour	
1982	Mar 1 – 31	8 hour	
	Apr 1 – Oct 31	16 hour	
1983-4	Apr 1 – Oct 31	16 hour	
1985	Mar 1 – 31	8 hour	
	Apr 1 – Oct 31	16 hour	
1986	Mar 15 – 31	8 hour	
	Apr 1 – Oct 31	16 hour	South ladder by direct observation, north ladder by closed circuit television.
1987-92	Apr 1 – Oct 31	16 hour	
1993	Apr 1 – 30	16 hour	
	May 1 – Dec 15	24 hour	May 1 – Oct 31, fish counted by direct observation 0400-2000, video taped From 2000-0400. Fish passage was video taped 24 hours Nov 1 – Dec 15.
1994-2002	Apr 1 – Oct 31	16 hour + 8 hour video	
	Nov 1 – Dec 15	24 hour video	

TABLE 77

MONTHLY TOTALS OF SALMONIDS, SHAD, AND LAMPREY COUNTED OVER ICE HARBOR DAM
COUNTS FROM MARCH 1 THROUGH OCTOBER 31, 2003

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*			132	42,343	34,581	28,636	5,732	1,286	23,445	7,174			143,329
STEELHEAD			5,201	1,548	74	1,128	11,558	12,267	109,101	50,798			191,675
SOCKEYE						24	13						37
COHO*									436	995			1,431
PINK									6	6			12
TOTAL			5,333	43,891	34,655	29,788	17,303	13,553	132,988	58,973			336,484
SHAD					13	130,107	114,436	1,249					245,805
LAMPREY					4	35	728	695	228	12			1,702

***Jacks included**

These counts include the extended season videotaped counts that were made between 0600 and 1600 hours in March.
Shad are not counted after September 1st.

TABLE 78

DISCHARGE AND WATER QUALITY DATA
ICE HARBOR PROJECT 2003

JANUARY				
DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI*	DEG F*
Jan 1	12.3	0.0	7.0	44.0
Jan 2	17.2	0.0	7.0	43.0
Jan 3	20.4	0.0	7.0	43.0
Jan 4	20.0	0.0	7.0	43.0
Jan 5	17.0	0.0	7.0	43.0
Jan 6	21.5	0.0	7.0	43.0
Jan 7	19.5	0.0	7.0	43.0
Jan 8	17.4	0.0	7.0	43.0
Jan 9	19.8	0.0	7.0	43.0
Jan 10	19.3	0.0	7.0	42.0
Jan 11	18.3	0.0	7.0	42.0
Jan 12	13.8	0.0	8.0	42.0
Jan 13	15.8	0.0	8.0	42.0
Jan 14	20.4	0.0	8.0	42.0
Jan 15	20.2	0.0	10.0	42.0
Jan 16	21.7	0.0	10.0	42.0
Jan 17	23.5	0.0	10.0	42.0
Jan 18	24.0	0.0	10.0	42.0
Jan 19	17.8	0.0	10.0	42.0
Jan 20	20.2	0.0	10.0	42.0
Jan 21	21.5	0.0	10.0	41.0
Jan 22	20.0	0.0	10.0	41.0
Jan 23	24.0	0.0	10.0	41.0
Jan 24	26.9	0.0	10.0	41.0
Jan 25	24.2	0.0	10.0	41.0
Jan 26	16.9	0.0	10.0	41.0
Jan 27	25.2	0.0	10.0	41.0
Jan 28	50.0	0.0	10.0	41.0
Jan 29	48.1	0.0	10.0	41.0
Jan 30	36.0	0.0	10.0	41.0
Jan 31	58.1	0.0	10.0	41.0
AVG.	23.6	0.0	8.7	42.0

FEBRUARY				
DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI*	DEG F*
Feb 1	74.3	0.0	10.0	41.0
Feb 2	77.6	0.0	10.0	41.0
Feb 3	57.5	0.0	10.0	41.0
Feb 4	51.2	0.0	10.0	41.0
Feb 5	42.8	0.0	10.0	41.0
Feb 6	42.7	0.0	6.6	41.0
Feb 7	36.8	0.0	6.6	41.0
Feb 8	39.0	0.0	6.6	41.0
Feb 9	31.6	0.0	6.6	41.0
Feb 10	24.0	0.0	6.6	41.0
Feb 11	37.1	0.0	1.8	41.0
Feb 12	29.7	0.0	1.8	41.0
Feb 13	26.6	0.0	1.8	41.0
Feb 14	25.0	0.0	2.0	41.0
Feb 15	25.8	0.0	4.0	41.0
Feb 16	24.0	0.0	2.0	41.0
Feb 17	28.0	0.0	4.8	41.0
Feb 18	27.0	0.0	3.0	42.0
Feb 19	32.5	0.0	3.0	42.0
Feb 20	23.8	0.0	3.0	42.0
Feb 21	32.9	0.0	3.0	42.0
Feb 22	33.6	0.0	3.0	42.0
Feb 23	34.3	0.0	3.0	42.0
Feb 24	40.0	0.0	3.0	42.0
Feb 25	32.4	0.0	2.0	42.0
Feb 26	24.4	0.0	2.8	42.0
Feb 27	23.8	0.0	2.8	42.0
Feb 28	33.3	0.0	3.8	42.0
AVG.	36.1	0.0	4.8	41.4

TABLE 79

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ICE HARBOR PROJECT

MARCH 2003

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG
Mar 1	0			0				167	41			27.5	0.0	3.8	42.0
Mar 2	0			0				282	61			20.3	0.0	3.8	42.0
*Mar 3	0			0				181	67			27.2	0.0	3.8	42.0
Mar 4	0			0				100	23			29.6	0.0	3.8	42.0
Mar 5	0			0				170	57			25.6	0.0	3.8	42.0
Mar 6	0			0				124	31			26.0	0.0	3.8	42.0
Mar 7	0			0				208	78			37.2	0.0	3.8	42.0
Mar 8	0			0				266	69			29.5	0.0	3.8	42.0
Mar 9	0			0				286	77			37.5	0.0	3.8	42.0
Mar 10	0			0				375	119			37.7	0.0	3.8	42.0
Mar 11	0			0				293	69			37.7	0.0	3.8	42.0
Mar 12	0			0				190	50			54.5	0.0	3.8	42.0
Mar 13	0			0				179	51			75.7	0.0	3.8	42.0
Mar 14	0			0				138	48			64.4	0.0	3.8	42.0
Mar 15	0			0				152	41			58.7	0.0	3.8	42.0
Mar 16	0			0				176	61			61.4	0.0	3.0	42.0
Mar 17	0			0				130	34			61.8	0.0	3.0	42.0
Mar 18	0			0				150	27			63.4	0.0	3.3	43.0
Mar 19	1			0				180	36			57.2	0.0	3.0	43.0
Mar 20	1			0				190	52			52.3	0.0	3.0	44.0
Mar 21	3			0				246	103			35.3	0.0	3.0	44.0
Mar 22	6			0				208	69			43.1	0.0	3.0	44.0
Mar 23	4			0				168	52			46.6	0.0	4.2	44.0
Mar 24	14			0				153	10			62.5	0.0	4.2	44.0
*Mar 25	10			0				159	0			52.8	0.0	2.6	45.0
*Mar 26	16			0				59	2			57.0	0.0	2.6	45.0
*Mar 27	13			0				54	1			68.6	0.0	1.5	46.0
*Mar 28	18			0				70	-1			56.5	0.2	1.5	46.0
*Mar 29	16			0				55	0			47.9	0.0	1.4	46.0
*Mar 30	23			0				55	0			49.3	0.0	1.4	46.0
*Mar 31	7			0				37	0			52.9	0.0	1.4	46.0
TOTAL	132			0				5,201	1,328						
AVG.	4			0				172	44			47.0	0.0	3.2	43.

Note: March counts were from video tape. The counts are 10-hour counts and occurred between the hours of 0600-1600 PST.
*March 3 Missed counts from 0600 to 1000 hours at the North and South Shores due to an incorrectly programmed VCR.
*March 25, 27-31 The turbidity level was very high; therefore, it was extremely difficult to observe fish passing the window.
*March 26, missed counts from 0600 to 800 hours at the South Shore station due to a power failure that subsequently turned off the lights for the count windo

TABLE 80

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ICE HARBOR PROJECT

APRIL 2003

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG
Apr 1	19			0				123	31			54.9	0.0	1.5	47.0
Apr 2	12			0				136	53			82.8	0.0	1.4	47.0
Apr 3	80			0				130	57			47.3	0.0	2.2	47.0
Apr 4	368			0				129	51			62.6	0.1	2.2	47.0
Apr 5	100			0				114	35			84.9	0.0	2.7	47.0
Apr 6	589			0				112	47			80.9	0.0	2.7	48.0
Apr 7	1,082			0				104	36			63.2	0.0	2.4	48.0
Apr 8	405			0				63	21			58.3	0.0	2.4	48.0
Apr 9	617			0				49	28			49.7	8.5	2.5	48.0
Apr 10	883			0				53	29			65.7	49.7	2.5	48.0
Apr 11	192			0				58	38			64.0	49.8	2.5	48.0
Apr 12	1,419			0				65	49			72.3	55.7	2.5	48.0
Apr 13	1,953			1				53	46			77.1	52.7	3.5	48.0
Apr 14	1,436			0				38	23			81.7	56.4	2.5	48.0
Apr 15	1,929			2				28	16			87.1	62.5	2.5	48.0
Apr 16	3,449			14				46	31			80.7	53.7	2.5	48.0
Apr 17	3,058			7				35	27			76.3	56.0	2.5	48.0
Apr 18	3,125			5				25	13			72.8	53.9	3.0	48.0
Apr 19	3,156			16				18	9			69.7	52.1	3.0	48.0
Apr 20	4,416			7				23	13			65.6	51.5	4.2	49.0
Apr 21	2,201			5				20	16			66.0	51.1	4.2	49.0
Apr 22	1,544			5				21	13			76.5	60.9	4.6	49.0
Apr 23	2,477			8				15	12			74.6	52.8	4.6	49.0
Apr 24	1,250			4				16	14			84.7	54.5	4.6	49.0
Apr 25	1,107			16				30	18			81.9	54.7	4.6	49.0
Apr 26	1,226			5				13	6			84.7	56.9	4.6	49.0
Apr 27	995			14				10	6			83.7	53.5	4.6	50.0
Apr 28	785			20				5	2			81.7	50.8	4.6	50.0
Apr 29	900			35				12	7			74.6	55.3	4.1	50.0
Apr 30	1,386			20				4	2			78.0	46.3	4.1	50.0
TOTAL	42,159			184				1,548	749						
AVG.	1405			6				52	25			72.8	38.0	3.2	48.3

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.
South shore ladder was counted by direct observation while the north shore ladder was by closed circuit TV.

TABLE 81

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ICE HARBOR PROJECT

MAY 2003

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG
May 1	499			22				0	0	0	0	76.0	37.6	4.1	51.0
May 2	816			60				6	5	0	0	66.7	48.9	4.1	51.0
May 3	1,462			100				6	6	0	0	67.3	54.8	5.6	51.0
May 4	2,082			143				12	7	0	0	66.6	40.9	5.6	52.0
May 5	1,092			104				1	1	0	0	65.8	32.3	5.6	52.0
May 6	927			130				7	6	0	0	77.8	48.1	5.6	52.0
May 7	1,057			113				4	1	0	0	72.0	49.7	5.6	52.0
May 8	1,811			237				0	1	0	0	74.1	44.1	5.6	52.0
May 9	814			163				1	1	0	0	69.9	34.0	4.8	52.0
May 10	865			191				2	2	0	0	67.9	44.5	4.7	52.0
May 11	1,610			253				2	1	0	0	68.1	49.2	4.7	52.0
May 12	632			216				3	3	0	0	66.7	42.3	4.2	52.0
May 13	411			152				2	1	0	0	73.7	36.2	4.2	52.0
May 14	350			269				2	1	0	0	79.2	48.4	4.2	52.0
May 15	543			304				0	0	0	0	83.1	61.3	4.2	52.0
May 16	964			308				4	0	0	0	88.9	52.7	4.2	53.0
May 17	411			233				2	1	0	0	94.3	46.9	4.1	53.0
May 18	1,480			540				1	0	0	0	84.0	48.1	4.1	53.0
May 19	1,100			450				1	0	0	0	88.5	60.3	4.1	53.0
May 20	993			287				1	0	0	0	75.5	43.9	4.1	53.0
May 21	628			216				2	2	0	0	78.8	39.2	4.1	53.0
May 22	512			158				3	2	5	0	70.4	44.9	5.6	53.0
May 23	893			266				2	1	1	0	81.3	57.6	5.6	54.0
May 24	877			237				1	0	0	0	97.5	54.8	5.6	54.0
May 25	677			263				2	1	1	0	122.6	60.7	5.6	54.0
May 26	1,164			240				0	0	0	1	142.4	67.0	5.6	54.0
May 27	625			191				0	0	0	0	158.7	91.8	5.6	54.0
May 28	713			180				2	2	6	0	154.5	84.0	5.6	54.0
May 29	1,030			200				1	0	0	1	170.3	86.9	5.6	54.0
May 30	839			147				4	0	0	0	182.0	92.1	5.0	54.0
May 31	293			38				0	0	0	2	202.6	113.2	3.5	54.0
TOTAL	28,170			6,411				74	45	13	4				
AVG.	909			207				2	1	0	0	95.7	55.4	4.9	52.7

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
SPRING	70,329	6,595	1,622	794	13	4

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST. South shore ladder was counted by direct observation while the north shore ladder was by closed circuit TV.

TABLE 82

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

ICE HARBOR PROJECT
JUNE 2003

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG
Jun 1	144			23			0	0	0	0	0	195.1	106.2	2.2	56.0
Jun 2	322			84			0	0	0	0	6	169.2	84.6	1.8	56.0
Jun 3	305			96			0	1	0	0	0	146.4	73.3	1.8	56.0
Jun 4	158			58			0	0	0	0	0	140.1	82.4	1.8	56.0
Jun 5	765			138			0	7	1	0	0	117.6	67.1	1.8	56.0
Jun 6	780			136			0	4	0	0	1	119.5	59.5	1.8	56.0
Jun 7	1,272			195			0	5	0	0	0	108.7	59.2	1.8	56.0
Jun 8	944			158			0	2	0	0	1	109.6	62.8	1.8	56.0
Jun 9	1,072			135			0	3	0	29	1	112.9	60.2	1.8	57.0
Jun 10	1,269			263			0	4	0	89	2	110.3	54.8	1.8	57.0
Jun 11	810			139			0	19	0	169	1	110.8	58.1	2.5	57.0
Jun 12		1,329		151			0	12	0	156	0	107.3	68.1	2.5	58.0
Jun 13		1,208		210			0	25	3	332	0	98.9	58.2	2.5	58.0
Jun 14		1,102		177			0	44	4	556	1	92.3	46.0	2.5	58.0
Jun 15		1,114		127			1	39	3	1,327	1	82.7	52.4	2.5	58.0
Jun 16		1,895		147			4	28	1	2,526	1	83.2	61.1	3.7	59.0
Jun 17		1,554		222			1	41	3	4,392	2	87.2	53.3	4.0	59.0
Jun 18		668		151			0	39	1	3,298	0	81.5	41.1	4.0	59.0
Jun 19		447		121			0	26	1	3,821	0	76.4	50.2	4.0	60.0
Jun 20		1,032		113			0	26	4	1,168	1	73.8	51.7	4.0	60.0
Jun 21		1,012		127			2	40	8	2,646	0	74.0	44.9	4.0	61.0
Jun 22		780		112			0	74	16	3,860	1	61.7	30.8	3.4	61.0
Jun 23		556		133			0	39	5	2,456	0	63.9	42.5	3.4	61.0
Jun 24		614		117			0	65	13	6,960	5	67.7	46.5	3.4	62.0
Jun 25		547		158			1	79	25	9,417	0	47.0	38.3	4.0	62.0
Jun 26		516		135			5	59	0	23,323	2	50.1	12.2	4.0	62.0
Jun 27		537		213			4	96	0	20,483	2	38.2	0.0	4.0	62.0
Jun 28		364		161			4	104	8	11,765	2	44.8	29.3	4.0	62.0
Jun 29		488		175			1	113	28	12,521	4	38.9	30.3	4.0	63.0
Jun 30		668		189			1	134	29	18,813	1	39.2	5.8	4.0	63.0
TOTAL	7,841	16,431		4,364			24	1,128	153	130,107	35				
AVG.	713	865		145			1	38	5	4337	1	91.6	51.0	3.0	58.9

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	78,170	8,020
SUMMER	16,431	2,939
TOTAL	94,601	10,959

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
24	2,750	947	130,120	39

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.
South shore ladder was counted by direct observation while the north shore ladder was by closed circuit TV.

TABLE 83

MONTHLY FISH PASSAGE SUMMARY REPORT | **ICE HARBOR PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND | **JULY 2003**

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	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG
Jul 1		304		109			2	80	21	21,354	1	39.6	0.0	4.0	64.0
Jul 2		353		120			1	133	34	12,807	6	34.8	22.3	4.0	64.0
Jul 3		395		134			2	173	48	7,903	1	35.7	28.4	5.2	64.0
Jul 4		704		256			2	237	54	11,702	1	37.0	8.0	6.0	64.0
Jul 5		264		95			1	260	66	8,115	9	33.2	21.6	5.6	64.0
Jul 6		242		83			4	348	87	5,595	6	32.2	25.1	5.6	64.0
Jul 7		283		93			0	398	108	9,495	3	32.6	4.5	5.6	64.0
Jul 8		238		96			1	536	114	7,058	17	36.5	0.0	5.6	64.0
Jul 9		160		86			0	325	82	4,398	15	38.9	26.2	5.6	64.0
Jul 10		171		48			0	430	102	4,192	3	28.9	2.5	5.6	65.0
Jul 11		92		43			0	273	78	2,209	3	38.5	23.4	5.6	65.0
Jul 12		127		60			0	490	154	4,095	5	37.6	15.2	5.6	65.0
Jul 13		76		45			0	494	168	1,636	28	29.0	14.9	5.6	66.0
Jul 14		106		43			0	274	114	767	8	33.0	25.9	5.0	66.0
Jul 15		62		26			0	308	103	1,509	14	32.8	25.5	5.0	66.0
Jul 16		92		50			0	479	134	1,227	28	43.1	0.0	6.4	66.0
Jul 17		36		41			0	480	156	3,019	65	28.9	4.3	6.4	68.0
Jul 18		54		57			0	407	86	1,612	32	33.8	10.7	6.4	68.0
Jul 19		56		26			0	448	78	678	28	30.6	13.0	7.2	69.0
Jul 20		34		16			0	357	61	754	32	34.3	13.3	7.2	70.0
Jul 21		17		16			0	415	118	711	25	31.3	8.0	7.2	70.0
Jul 22		18		17			0	394	85	606	13	35.4	12.0	7.2	70.0
Jul 23		42		19			0	460	100	411	33	29.9	12.6	5.2	70.0
Jul 24		16		10			0	514	100	423	52	31.8	8.0	5.2	70.0
Jul 25		31		13			0	652	193	506	76	29.3	13.0	5.2	70.0
Jul 26		41		7			0	411	125	273	65	24.1	11.1	5.2	70.0
Jul 27		23		5			0	331	107	335	22	32.4	16.4	5.2	70.0
Jul 28		16		4			0	209	67	467	43	27.6	13.4	5.2	71.0
Jul 29		20		4			0	323	124	330	27	28.5	10.9	5.2	71.0
Jul 30		13		1			0	345	84	114	31	28.2	9.0	5.2	71.0
Jul 31		17		6			0	574	131	135	36	30.6	12.6	5.2	71.0
TOTAL		4,103		1,629			13	11,558	3,082	114,436	728				
AVG.		132		53			0	373	99	3,691	23	32.9	13.3	5.6	67.2

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	78,170	8,020
SUMMER	20,534	4,568
TOTAL	98,704	12,588

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
37	14,308	4,029	244,556	767

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST. South shore ladder was counted by direct observation while the north shore ladder was by closed circuit TV.

TABLE 84

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT. PORTLAND

FISH COUNTS

ICE HARBOR PROJECT

AUGUST 2003

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG
Aug 1		18		4			0	599	124	136	38	30.3	12.2	5.2	71.0
Aug 2		10		0			0	320	61	74	12	29.5	16.6	5.2	71.0
Aug 3		34		2			0	641	152	72	30	27.3	15.5	5.2	71.0
Aug 4		30		11			0	374	97	44	39	22.6	11.3	6.0	71.0
Aug 5		20		4			0	348	87	67	24	29.7	11.6	6.0	71.0
Aug 6		30		3			0	423	96	188	53	28.8	10.8	6.0	71.0
Aug 7		14		2			0	371	103	96	18	30.0	11.9	6.0	71.0
Aug 8		8		3			0	321	106	43	41	32.0	12.3	6.0	71.0
Aug 9		19		0			0	213	39	144	22	30.8	12.0	6.0	69.0
Aug 10		22		4			0	215	35	91	29	30.8	9.6	6.0	70.0
Aug 11		3		0			0	274	50	73	19	30.8	11.5	6.0	70.0
Aug 12			12	1			0	231	54	36	24	30.4	10.1	6.0	70.0
Aug 13			18	3			0	204	47	10	10	23.9	8.5	6.0	70.0
Aug 14			17	1			0	271	53	16	18	31.4	10.2	6.0	70.0
Aug 15			35	6			0	380	106	21	22	24.2	10.4	6.5	70.0
Aug 16			36	4			0	420	105	28	20	27.1	12.9	6.5	70.0
Aug 17			30	2			0	309	91	16	15	19.8	9.9	6.5	70.0
Aug 18			33	6			0	162	43	11	24	27.9	12.2	6.5	70.0
Aug 19			59	6			0	242	65	23	41	27.3	10.7	6.5	70.0
Aug 20			43	10			0	275	70	5	18	25.2	8.7	6.5	70.0
Aug 21			26	6			0	311	80	14	21	21.7	9.7	7.7	69.0
Aug 22			58	4			0	470	99	8	12	21.4	11.5	7.7	69.0
Aug 23			56	4			0	717	134	10	36	20.5	11.2	7.7	69.0
Aug 24			48	12			0	500	90	13	23	20.5	6.0	7.7	69.0
Aug 25			43	8			0	353	61	0	21	22.2	8.7	7.7	68.0
Aug 26			47	11			0	581	137	0	9	32.8	10.7	7.7	68.0
Aug 27			46	8			0	573	150	0	13	30.2	11.3	7.7	68.0
Aug 28			55	5			0	495	128	4	7	17.3	6.8	6.8	68.0
Aug 29			95	13			0	423	93	4	13	18.2	10.3	6.8	68.0
Aug 30			77	17			0	708	151	2	11	35.2	14.2	6.8	68.0
Aug 31			65	19			0	543	99	0	12	16.8	8.0	6.8	68.0
TOTAL		208	899	179			0	12,267	2,806	1,249	695				
AVG.		19	45	6			0	396	91	40	22	26.3	10.9	6.5	69.6

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	78,170	8,020
SUMMER	20,742	4,601
FALL	899	146
TOTAL	99,811	12,767

COHO ADULTS	COHO JACKS	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
0	0	37	26,575	6,835	245,805	1,462

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST. South shore ladder was counted by direct observation while the north shore ladder was by closed circuit TV.

TABLE 85

MONTHLY FISH PASSAGE SUMMARY REPORT | **ICE HARBOR PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND | **SEPTEMBER 2003**

FISH COUNTS | **RIVER CONDITIONS**

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	PINK	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG I
Sep 1			93	8	0	0		401	105	0	14	16.1	0.0	6.8	68.0
Sep 2			311	38	0	0		523	108	0	16	21.5	0.0	6.8	68.0
Sep 3			496	56	1	0		706	178	0	29	26.7	0.0	6.8	68.0
Sep 4			499	58	0	0		759	172	0	18	24.9	0.0	6.8	68.0
Sep 5			297	54	0	0		1,025	275	0	20	32.5	0.0	6.8	68.0
Sep 6			228	43	0	0		947	266	0	15	13.7	0.0	6.0	68.0
Sep 7			451	111	0	0		1,501	448	0	14	18.0	0.0	6.0	68.0
Sep 8			444	89	0	0		1,587	459	0	6	25.7	0.0	6.0	68.0
Sep 9			742	179	0	0		2,546	703	0	11	15.7	0.0	6.0	68.0
Sep 10			1041	177	0	0		2,957	679	0	8	21.9	0.0	5.2	68.0
Sep 11			616	180	0	0		2,625	662	0	7	18.4	0.0	5.2	68.0
Sep 12			602	187	0	0		1,976	509	0	9	17.1	0.0	5.2	68.0
Sep 13			389	208	0	0		2,361	590	0	1	21.2	0.0	5.2	68.0
Sep 14			576	197	5	0		3,519	779	0	0	20.9	0.0	5.2	68.0
Sep 15			490	154	0	0		2,178	451	0	2	20.8	0.0	5.2	68.0
Sep 16			861	281	2	0		4,993	1,344	0	0	19.2	0.0	5.2	68.0
Sep 17			945	246	5	1		4,771	1,452	1	2	20.2	0.0	5.2	68.0
Sep 18			899	246	4	0		5,010	1,425	0	6	16.8	0.0	5.5	68.0
Sep 19			618	251	19	0		4,490	1,248	0	10	18.9	0.0	5.5	68.0
Sep 20			1159	482	47	8		8,247	2,175	1	10	17.7	0.0	5.5	68.0
Sep 21			657	359	26	2		4,248	986	0	5	18.2	0.0	5.5	68.0
Sep 22			668	441	42	1		6,838	1,737	0	4	21.9	0.0	5.5	65.0
Sep 23			807	341	68	5		6,985	1,571	1	7	20.6	0.0	5.5	65.0
Sep 24			452	250	46	1		6,307	1,428	1	7	22.3	0.0	7.2	65.0
Sep 25			606	435	12	12		8,514	1,707	0	2	20.3	0.0	7.2	65.0
Sep 26			454	294	21	1		5,915	1,469	0	1	20.7	0.0	7.2	65.0
Sep 27			307	322	20	0		4,444	893	1	1	25.5	0.0	7.2	65.0
Sep 28			342	364	29	0		4,545	1,108	1	1	10.6	0.0	7.2	65.0
Sep 29			328	363	31	1		4,037	933	0	2	13.8	0.0	7.2	65.0
Sep 30			298	355	26	0		4,146	957	0	0	16.1	0.0	7.2	65.0
								0							
TOTAL			16,676	6,769	404	32		109,101	26,817	6	228				
AVG.			556	226	13	1		3,637	894	0	8	19.9	0.0	6.1	67.1

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	78,170	8,020
SUMMER	20,742	4,601
FALL	17,575	6,915
TOTAL	116,487	19,536

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK
404	32	37	135,676	33,652	245,805	1,690	6

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST. South shore ladder was counted by direct observation while the north shore ladder was by closed circuit TV.

TABLE 86

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ICE HARBOR PROJECT

OCTOBER 2003

FISH COUNTS | **RIVER CONDITIONS**

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	PINK	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG
Oct 1			390	384	37	1		4,550	1127	1	4	16.9	0.0	7.2	65.0
Oct 2			398	505	52	4		4,683	1162	0	0	18.5	0.0	7.0	65.0
Oct 3			215	210	44	5		3,969	836	2	0	13.8	0.0	7.0	65.0
Oct 4			276	230	39	2		3,901	815	0	2	19.4	0.0	7.0	65.0
Oct 5			266	256	23	0		3,537	796	1	0	12.5	0.0	7.0	65.0
Oct 6			224	180	25	0		2,122	485	0	1	15.1	0.0	7.0	64.0
Oct 7			177	237	50	5		2,712	719	0	1	15.5	0.0	7.0	64.0
Oct 8			176	285	39	2		2,793	781	0	1	15.3	0.0	7.0	64.0
Oct 9			135	210	37	2		2,494	725	0	1	13.6	0.0	7.0	64.0
Oct 10			151	96	31	0		1,368	347	0	0	16.7	0.0	7.0	64.0
Oct 11			147	129	30	1		1,349	299	0	0	16.8	0.0	7.0	63.0
Oct 12			59	99	8	0		1,084	215	1	0	13.3	0.0	7.0	62.0
Oct 13			41	29	5	0		546	109	1	0	13.2	0.0	7.0	62.0
Oct 14			47	60	6	0		665	130	0	0	12.7	0.0	6.0	62.0
Oct 15			72	85	10	0		780	164	0	0	15.1	0.0	6.0	62.0
Oct 16			29	92	9	0		901	194	0	0	15.4	0.0	6.0	62.0
Oct 17			79	93	32	2		1,037	231	0	0	14.9	0.0	6.0	62.0
Oct 18			76	86	19	0		909	235	0	1	14.7	0.0	6.0	62.0
Oct 19			55	101	43	0		1,475	396	0	0	12.6	0.0	6.0	62.0
Oct 20			54	66	18	0		1,139	290	0	0	17.8	0.0	6.0	62.0
Oct 21			32	42	21	0		1,168	349	0	0	15.7	0.0	6.0	62.0
Oct 22			22	41	12	1		525	147	0	1	17.7	0.0	6.0	62.0
Oct 23			10	38	32	1		907	240	0	0	14.5	0.0	6.0	60.0
Oct 24			36	39	39	0		913	244	0	0	17.0	0.0	6.0	60.0
Oct 25			51	30	41	0		995	247	0	0	12.5	0.0	6.0	60.0
Oct 26			40	29	44	0		1,240	284	0	0	14.9	0.0	7.0	60.0
Oct 27			39	31	44	0		1,098	220	0	0	14.4	0.0	7.0	60.0
Oct 28			25	23	48	4		846	265	0	0	12.7	0.0	7.0	60.0
Oct 29			37	19	36	1		333	108	0	0	15.9	0.0	7.0	59.0
Oct 30			26	7	21	0		272	75	0	0	14.3	0.0	5.0	59.0
Oct 31			38	19	63	6		487	114	0	0	17.7	0.0	5.0	59.0
TOTAL			3,423	3,751	958	37		50,798	12,349	6	12				
AVG.			110	121	31			1,639	398	0	0	15.2	0.0	6.5	62.2

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	78,170	8,020
SUMMER	20,742	4,601
FALL	20,998	10,666
TOTAL	119,910	23,287

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK
1,362	69	37	186,474	46,001	245,805	1,702	12

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST. South shore ladder was counted by direct observation while the north shore ladder was by closed circuit TV.

TABLE 87

DISCHARGE AND WATER QUALITY DATA

ICE HARBOR PROJECT - 2003

NOVEMBER					DECEMBER				
DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI*	DEG F*	DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI*	DEG F*
Nov 1	18.6	0.0	5.0	58.0	Dec 1	16.1	0	8	47
Nov 2	11.8	0.0	5.0	57.0	Dec 2	23.5	0	8	47
Nov 3	14.3	0.0	5.0	57.0	Dec 3	16.3	0	8	47
Nov 4	16.1	0.0	5.0	57.0	Dec 4	15.8	0	8	47
Nov 5	13.4	0.0	5.0	56.0	Dec 5	15.7	0	8	47
Nov 6	14.8	0.0	5.0	54.0	Dec 6	15.6	0	8	47
Nov 7	12.6	0.0	5.0	54.0	Dec 7	18.1	0	8	46
Nov 8	15.8	0.0	6.0	54.0	Dec 8	21.9	0	8	46
Nov 9	12.6	0.0	6.0	54.0	Dec 9	17	0	8	46
Nov 10	14.0	0.0	6.0	52.0	Dec 10	24.7	0	8	46
Nov 11	17.3	0.0	6.0	52.0	Dec 11	20.4	0	8	46
Nov 12	17.4	0.0	6.0	52.0	Dec 12	20.3	0	8	46
Nov 13	34.0	0.0	6.5	52.0	Dec 13	17.2	0	8	45
Nov 14	25.5	0.0	6.5	52.0	Dec 14	11.2	0	8	45
Nov 15	13.2	0.0	6.5	50.0	Dec 15	20.4	0	7	45
Nov 16	10.2	0.0	6.5	50.0	Dec 16	22.5	0	7	45
Nov 17	10.5	0.0	6.5	50.0	Dec 17	19.7	0	7	45
Nov 18	16.6	0.0	6.5	50.0	Dec 18	16.7	0	7	44
Nov 19	15.3	0.0	6.5	50.0	Dec 19	12.2	0	11	44
Nov 20	10.7	0.0	6.8	51.0	Dec 20	18.2	0	11	43
Nov 21	14.0	0.0	6.8	51.0	Dec 21	11.1	0	11	43
Nov 22	20.1	0.0	6.8	50.0	Dec 22	21.5	0	11	43
Nov 23	12.4	0.0	6.8	50.0	Dec 23	19.8	0	11	43
Nov 24	19.3	0.0	6.8	50.0	Dec 24	14.8	0	11	42
Nov 25	13.0	0.0	6.8	50.0	Dec 25	18.5	0	11	42
Nov 26	13.5	0.0	6.8	48.0	Dec 26	16.4	0	11	42
Nov 27	12.9	0.0	6.8	48.0	Dec 27	18.9	0	11	42
Nov 28	13.5	0.0	8.0	48.0	Dec 28	12.4	0	10	42
Nov 29	14.8	0.0	8.0	48.0	Dec 29	29.1	0	10	42
Nov 30	11.5	0.0	8.0	48.0	Dec 30	23.9	0	10	42
					Dec 31	12.9		10.0	41.0
AVG.	15.3	0.0	6.3	51.8	AVG.	18.0	0.0	9.0	44.5

*Water temperature and turbibity data are unavailable.

TABLE 88

YEARLY TOTALS OF SALMONIDS COUNTED OVER ICE HARBOR DAM 1962 - 2003

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	0	196,927
1987	47,477	74,491	13	0	121,981
1988	48,066	99,714	22	0	147,802
1989	27,234	151,101	4	0	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	0	196,668
1993	34,991	73,107	17	0	108,115
1994	7,577	51,704	0	1	59,282
1995	7,990	92,026	5	4	100,025
1996	16,419	100,805	1	0	117,225
1997	55,412	103,830	15	128	159,385
1998	26,117	85,122	3	15	111,257
1999	23,331	84,163	8	144	107,646
2000	72,154	126,424	215	1,224	200,017
2001	215,697	283,694	38	1,595	501,024
2002	137,404	202,173	61	231	339,869
2003	143,197	186,474	37	1,431	331,139
Totals	2,311,878	3,623,012	10,694	48,547	5,994,131
10-Year Average	70,530	131,642	38	477	202,687

***Jacks included**

These counts include the extended season videotaped counts that were made between 0600 and 1600 hours in November and December for the count seasons, 1996-2000.

TABLE 89

MONTHLY COUNT OF CHINOOK SALMON
ICE HARBOR DAM; 1962 - 2003

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL*	SPRING 1 APR-11 JUN	SUMMER 12 JUN-11 AUG	FALL 12 AUG-31 OCT
1962				2,579	28,951	23,250	8,315	3,547	20,578	7,081			94,301	33,613	30,639	30,049
1963				3,434	21,790	14,001	7,591	1,415	9,342	2,918	677	22	61,190	26,778	20,875	13,537
1964		1	2	4,048	19,611	5,409	18,832	2,161	8,159	1,701	156	17	60,097	24,304	24,696	11,097
1965			4	1,677	9,649	5,072	10,209	803	9,318	2,152	349		39,233	12,178	14,701	12,354
1966				23,382	19,294	10,611	7,166	1,933	10,756	2,740			75,882	43,881	16,983	15,018
1967				15,973	18,137	9,020	22,218	820	11,947	6,815			84,930	35,593	30,315	19,022
1968				1,595	41,398	12,119	17,751	3,433	16,588	5,275	493	29	98,681	44,773	29,531	24,377
1969			195	697	43,181	24,918	12,861	2,369	12,027	3,555	708	3	100,514	52,090	30,917	17,507
1970				12,167	33,881	12,338	8,185	1,747	7,702	1,456	219	3	77,698	47,931	19,382	10,385
1971				1,104	25,089	19,265	13,364	873	8,960	1,593			70,248	32,638	26,606	11,004
1972				14,535	34,734	7,544	15,177	1,869	6,089	2,684			82,632	50,350	22,846	9,436
1973				34,277	23,627	10,925	4,254	840	6,657	1,241			81,821	60,639	12,829	8,353
1974				842	16,670	5,315	6,494	483	2,066	574			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	22,025	8,299	1,672	169	3,664	2,021			52,615	39,087	7,745	5,783
1987				11,141	18,821	6,550	2,437	329	6,089	2,110			47,477	32,083	6,982	8,412
1988				14,274	17,196	8,609	1,904	702	3,621	1,760			48,066	34,394	7,790	5,882
1989				3,307	11,724	4,946	1,143	776	3,917	1,421			27,234	17,029	4,215	5,990
1990				7,578	12,166	5,353	1,337	320	3,315	1,773			31,842	20,730	5,794	5,317
1991				1,639	7,953	5,367	2,101	155	4,053	1,907			23,175	11,288	5,861	6,026
1992				11,462	12,001	5,791	1,189	228	3,716	1,634			36,021	26,114	4,377	5,530
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	0	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
1998				3,850	7,285	6,001	1,165	421	4,324	3,006	64	1	26,117	12,564	5,777	7,776
1999				260	5,717	5,659	1,461	917	6,283	2,943	89	2	23,331	8,008	5,211	10,112
2000				13,749	29,916	9,877	2,076	1,928	9,763	4,738	105	2	72,154	48,278	7,420	16,456
2001				104,883	55,788	26,709	4,268	1,327	18,315	4,262	140	5	215,697	174,199	17,667	23,831
2002				5,016	71,511	33,555	5,750	2,752	15,874	2,946			137,404	87,033	29,044	21,327
2003			132	42,343	34,581	28,636	5,732	1,286	23,445	7,174			143,329	86,190	25,344	31,663
TOTAL		1	338	430,020	851,684	406,570	218,680	39,954	269,960	91,464	3,256	84	2,312,011	1,405,725	515,360	390,793
10-Year Avg.				17,461	24,491	13,118	2,465	1,039	8,810	3,087			70,543	47,076	10,579	12,875

*Jacks included

The 1996 through 2000 count seasons were extended to include video counts made between 0600 and 1600 hours daily from November 1 through December 15.

TABLE 90

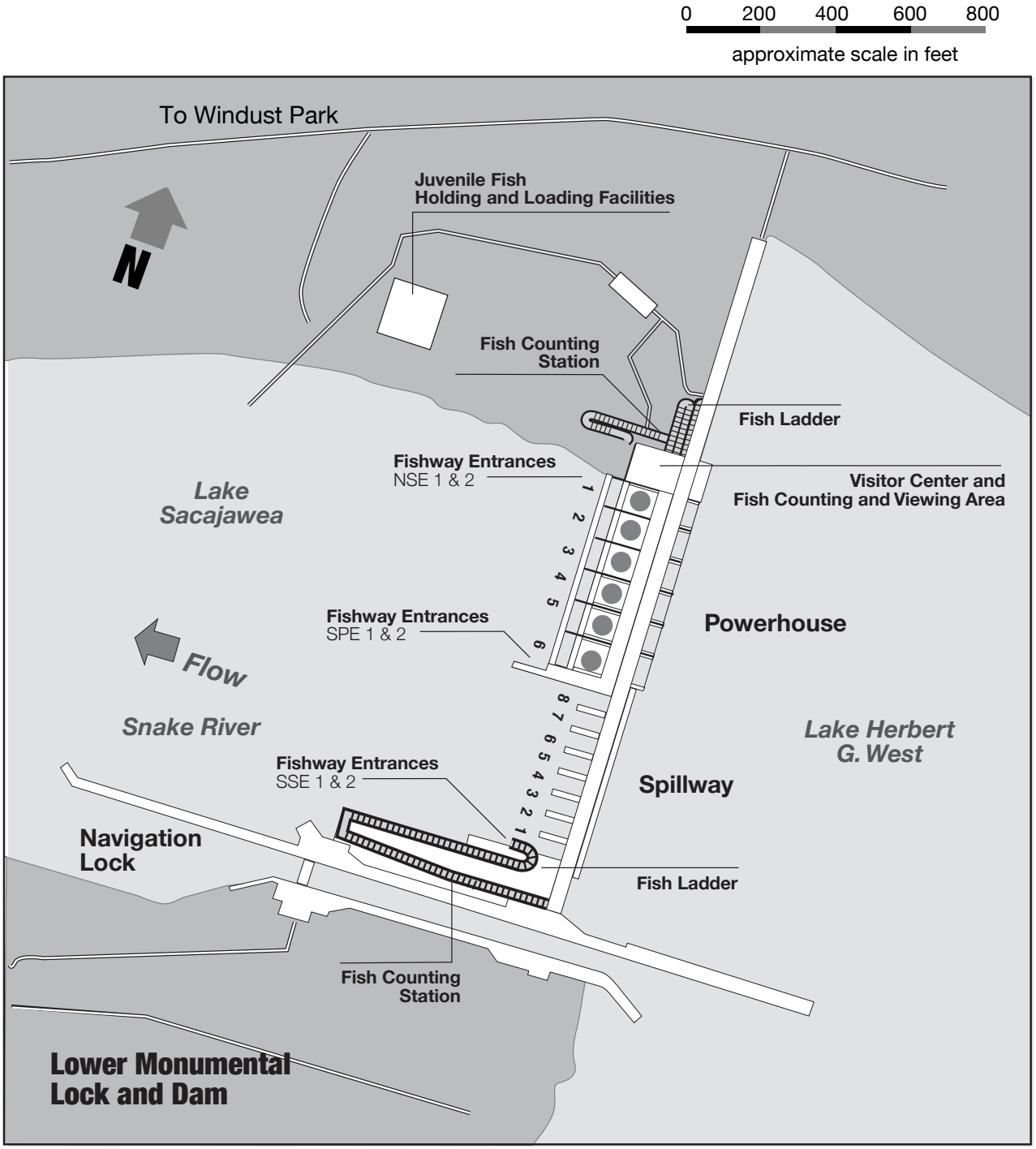
MONTHLY COUNT OF STEELHEAD

ICE HARBOR DAM
1962 -2003

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	8,484	544	103,830
1998				1,719	74	259	3,226	3,114	25,408	43,844	5,400	2,078	85,122
1999				713	93	246	3,784	16,120	40,424	18,887	2,809	1,087	84,163
2000				805	91	870	7,202	11,684	65,713	33,899	5,510	650	126,424
2001				1,322	139	3,682	17,607	27,925	136,208	68,837	22,449	5,525	283,694
2002				4,507	134	943	12,760	30,321	87,357	66,151			202,173
2003			5,201	1,548	74	1,128	11,558	12,267	109,101	50,798			191,675
Totals	268	287	16,530	95,788	20,978	16,553	163,950	321,547	1,771,300	1,135,029	72,759	13,224	3,628,213
10-Year Average				1,641	111	822	7,188	14,603	60,937	40,530			132,162

The 1996 through 2000 count seasons were extended to include video counts made between 0600 and 1600 hours dai November 1 to December 15.

Plate 7 Lower Monumental Lock and Dam



LOWER MONUMENTAL DAM

FISH COUNTING SCHEDULE

1 Jan – 31 Mar	Video counting daily 0800-1600 hours PST.
1 Apr – 31 Oct	Visual counting daily 0400-2000 hours PST.
1 Nov – 31 Dec	Video counting daily 0600-1600 hours PST.

FISH LADDER OPERATING SCHEDULE

North Ladder

1 Jan – 5 Jan	Ladder in service.
6 Jan – 27 Jan	Ladder out of service for annual maintenance.
28 Jan – 31 Dec	Ladder in service.

South Ladder

1 Jan – 26 Jan	Ladder in service.
27 Jan – 12 Feb	Ladder out of service for annual maintenance.
13 Feb – 31 Dec	Ladder in service.

FISHWAY ACTIVITIES

Adult chinook and steelhead were radio-tracked past the dam in 2003 as part of a broader, ongoing study to evaluate fish passage from below Bonneville Dam to above Lower Granite Dam.

Water temperatures were recorded hourly in nine locations within the adult fishways during the fish passage season. The purpose of this effort, ongoing since 1999, is to determine if thermal barriers exist and take corrective action if needed.

The Walla Walla District continued a hydraulic evaluation of the adult fishways in 2003. The purpose was to analyze existing operating conditions and investigate alternatives to improve fish passage.

AWS pump 2 was rehabbed (turbine, gearbox, and the pump itself) during the winter outage. Pump 3 was rehabbed in 2002 and pump 1 will be done in 2004.

The juvenile fish facility was operated for juvenile fish transport/bypass and adult fallbacks from 24 March to 16 December.

Lower Monumental Historical Fish Count Schedule 1969-2002 (information based on previous Annual Fish Passage Reports)
16 hour counts occurred between the hours of 0400-2000 PST unless otherwise stated.
8 hour counts occurred between the hours of 0800-1600 PST unless otherwise stated.

Year	Months	Count Period	Notes
1969	Feb 28 – Mar 31	8 hour (0800-1600)	
	Apr 1 – Oct 31	16 hour (0400-2000)	
	Nov 1- Dec 31	8 hour	
1970	Jan 2- Mar 31	8 hour	
	Apr 1 – Oct 31	16 hour (0500-2100)	
	Nov 1 – Dec 31	8 hour	
1971	Jan 2- Mar 31	8 hour	
	Apr 1 – Oct 31	16 hour (0400-2000ST)	
1972	Apr 1 – Jun 30	16 hour	Two 8 hour shifts full count (0400-2000ST) daily. Gates closed at night but open during breaks. Submerged counting window was installed in the North shore counting station.
	Jul 1 – Oct 31	18 hour	Two 9 hour shifts full count (0400-2200ST) daily, except for Tuesdays. Tuesdays beginning at 0400, three 8-hour shifts were conducted.
1973	Apr 1- Jul 31	18 hour	Gates open unless otherwise stated. Three 8-hour shifts on Tuesday
	Aug 1 – Oct 31	16 hours	Walla Walla district started experimenting with time-lapse video recording and closed circuit remote video viewing. A submerged window was installed in the South shore counting station.
1974	Apr 1 – Oct 31	16 hour	24-hour counts on following dates: May 10-16, 19-23, 26-30; Jun 2-6. One counter was used to count passage at both ladders by the use of closed circuit color television throughout the season.
1975	Apr 1 – Oct 31	16 hour (two 8-hour shifts)	Counting on closed circuit television.
1976	Apr 1 – 5	16 hour	Manual counting on North shore, South ladder by remote closed circuit.
	Apr 6 – 8	16 hour	South ladder manual counting.
	Apr 9 – Oct 31	16 hour	
1977-85	Apr 1 – Oct 31	16 hour	Manual counting North shore, remote closed circuit south ladder.
1986	Apr 1 – Oct 31	16 hour	South ladder by direct observation, north ladder by closed circuit television.
1987-8	Apr 1 – Oct 31	16 hour	South ladder by closed circuit television, north ladder by direct observation.
1989	Apr 1 – Oct 31	16 hour	South ladder by direct observation between Apr 1 – 28. Otherwise, north ladder by direct observation, south ladder by closed circuit television.
1990-2	Apr 1 – Oct 31	16 hour	North ladder by direct observation, south ladder by closed circuit television.
1993	Apr 1 – Oct 31	16 hour	
	Nov 1 – 30	10 hour (0600-1600PST)	
1994-6	Apr 1 - Oct 31	16 hour	

Year	Months	Count Period	Notes
1997-2000	Apr 1 - Oct 31	16 hour video	
2001	Apr 1 - Oct 31	16 hour	
	Nov 1 – Dec 31	10 hour video (0600-1600 PST)	
2002	Jan 1 – Mar 31	8 hour video	
	Apr 1 – Oct 31	16 hour	
	Nov 1 – Dec 31	10 hour (0600-1600 PST) video	

TABLE 91

MONTHLY TOTALS OF SALMONIDS, SHAD, AND LAMPREY COUNTED OVER LOWER MONUMENTAL DAM
2003

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*			50	33,435	31,906	28,381	6,247	951	15,255	6,642	288	3	123,158
STEELHEAD	775	3,686	5,325	1,872	45	850	7,704	8,122	93,190	60,813	3945	1,011	187,338
SOCKEYE						7	7						14
COHO*									181	846	77	2	1,106
PINK										3			3
TOTAL	775	3,686	5,375	35,307	31,951	29,238	13,958	9,073	108,626	68,304	4,310	1,016	311,619
SHAD					3	62,239	96,876	1,177					160,295
LAMPREY					8	27	216	178	47	0			476

***Jacks included**
Shad are not counted after September 1st.

TABLE 92

MONTHLY FISH PASSAGE SUMMARY REPORT — **LOWER MONUMENTAL PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND — **JANUARY 2003**

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCH	DEG F
Jan 1	0			0	0	0		77	0			13.7	0.0	4.5	42.0
Jan 2	0			0	0	0		191	1			15.6	0.0	4.5	42.0
Jan 3	0			0	0	0		57	0			21.2	0.0	4.5	42.0
Jan 4	0			0	0	0		178	0			19.9	0.0	4.5	42.0
Jan 5	0			0	0	0		33	1			17.7	0.0	4.5	42.0
Jan 6	0			0	0	0		0	0			22.9	0.0	4.5	42.0
Jan 7	0			0	0	0		0	0			20.2	0.0	4.5	42.0
Jan 8	0			0	0	0		1	0			18.9	0.0	4.5	41.0
Jan 9	0			0	0	0		1	0			19.7	0.0	4.5	41.0
Jan 10	0			0	0	0		7	2			19.7	0.0	4.5	41.0
Jan 11	0			0	0	0		4	0			19.2	0.0	4.5	41.0
Jan 12	0			0	0	0		2	1			15.2	0.0	4.5	40.0
Jan 13	0			0	0	0		0	0			16.4	0.0	4.5	40.0
Jan 14	0			0	0	0		2	1			19.7	0.0	4.5	40.0
Jan 15	0			0	0	0		1	0			21.1	0.0	4.5	40.0
Jan 16	0			0	0	0		4	0			22.1	0.0	4.5	40.0
Jan 17	0			0	0	0		5	1			24.6	0.0	4.5	40.0
Jan 18	0			0	0	0		5	2			25.7	0.0	4.5	40.0
Jan 19	0			0	0	0		28	5			20.2	0.0	4.5	40.0
Jan 20	0			0	0	0		10	2			19.2	0.0	4.5	40.0
Jan 21	0			0	0	0		0	0			21.7	0.0	4.5	40.0
Jan 22	0			0	0	0		0	0			22.3	0.0	4.5	40.0
Jan 23	0			0	0	0		0	0			24.0	0.0	4.5	40.0
Jan 24	0			0	0	0		0	1			27.8	0.0	4.5	40.0
Jan 25	0			0	0	0		0	0			24.1	0.0	4.5	40.0
Jan 26	0			0	0	0		0	0			18.3	0.0	4.5	40.0
Jan 27	0			0	0	0		0	0			28.4	0.0	4.5	40.0
Jan 28	0			0	0	0		0	0			50.3	0.0	4.5	40.0
Jan 29	0			0	0	0		129	0			50.1	0.0	4.2	40.0
Jan 30	0			0	0	0		17	0			38.8	0.0	4.2	41.0
Jan 31	0			0	0	0		23	0			59.0	0.0	4.2	40.0
TOTAL	0			0	0	0		775	17						
AVG	0			0	0	0		25	1			24.4	0.0	4.5	40.6

Note: From January 1 to March 31, counts were from video tape. The counts are 8-hour counts and occurred between the hours of 0800-1600 PST. Visual counting started April 1.
Official Spring Chinook run started April 1. January, February, and March Chinook counts were not added to spring totals.

TABLE 93

MONTHLY FISH PASSAGE SUMMARY REPORT — **LOWER MONUMENTAL PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND — **FEBRUARY 2003**

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCH	DEG F
Feb 1	0			0				143	38			79.4	0.0	4.2	40.0
Feb 2	0			0				199	53			80.3	0.0	4.2	40.0
Feb 3	0			0				94	18			61.1	0.0	4.2	40.0
Feb 4	0			0				37	2			53.7	0.0	3.0	40.0
Feb 5	0			0				38	0			44.8	0.0	3.0	40.0
Feb 6	0			0				18	0			44.6	0.0	3.0	40.0
Feb 7	0			0				37	-1			38.4	0.0	3.0	41.0
Feb 8	0			0				101	18			39.9	0.0	3.0	41.0
Feb 9	0			0				113	33			33.8	0.0	3.0	41.0
Feb 10	0			0				45	10			25.3	0.0	3.0	41.0
Feb 11	0			0				28	9			38.9	0.0	3.0	41.0
Feb 12	0			0				49	13			30.9	0.0	3.0	41.0
Feb 13	0			0				80	12			29.2	0.0	3.0	41.0
Feb 14	0			0				106	5			26.3	0.0	2.5	41.0
Feb 15	0			0				43	3			26.9	0.0	2.5	41.0
Feb 16	0			0				39	2			25.9	0.0	2.5	41.0
Feb 17	0			0				32	0			29.5	0.0	2.5	41.0
Feb 18	0			0				34	3			27.7	0.0	2.5	41.0
Feb 19	0			0				273	13			31.0	0.0	2.5	41.0
Feb 20	0			0				343	27			27.2	0.0	3.0	41.0
Feb 21	0			0				253	35			33.9	0.0	3.0	41.0
Feb 22	0			0				328	72			34.7	0.0	1.5	41.0
Feb 23	0			0				326	67			36.5	0.0	1.5	41.0
Feb 24	0			0				149	34			39.7	0.0	1.5	41.0
Feb 25	0			0				197	61			33.8	0.0	1.5	41.0
Feb 26	0			0				182	54			24.4	0.0	1.5	40.0
Feb 27	0			0				176	53			27.5	0.0	1.5	40.0
Feb 28	0			0				223	68			30.4	0.0	1.5	40.0
TOTAL	0			0				3,686	702						
AVG	0			0				132	25			37.7	0.0	2.6	40.7

Note: From January 1 to March 31, counts were from video tape. The counts are 8-hour counts and occurred between the hours of 0800-1600 PST. Visual counting started April 1.

Official Spring Chinook run started April 1. January, February, and March Chinook counts were not added to spring totals.

***February 5 to 20 video tapes were difficult to read because of muddy water conditions.**

TABLE 94

MONTHLY FISH PASSAGE SUMMARY REPORT — **LOWER MONUMENTAL PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND — **MARCH 2003**

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCH	DEG F
Mar 1	0			0				226	71			31.5	0.0	1.5	40.0
Mar 2	0			0				300	83			21.1	0.0	1.5	40.0
Mar 3	0			0				121	29			28.0	0.0	1.5	40.0
Mar 4	0			0				128	25			29.9	0.0	1.5	40.0
Mar 5	0			0				151	27			27.8	0.0	1.5	40.0
Mar 6	0			0				238	49			27.2	0.0	1.5	40.0
Mar 7	0			0				166	39			38.5	0.0	1.5	40.0
Mar 8	0			0				221	41			31.0	0.0	1.5	40.0
Mar 9	0			0				132	25			36.4	0.0	1.5	40.0
Mar 10	0			0				414	100			39.1	0.0	1.5	40.0
Mar 11	0			0				416	80			46.1	0.0	1.5	41.0
Mar 12	0			0				297	68			57.3	0.0	1.5	42.0
Mar 13	0			0				170	43			78.7	0.0	1.5	42.0
Mar 14	0			0				185	32			67.5	0.0	1.5	42.0
Mar 15	0			0				203	20			61.7	0.0	2.0	42.0
Mar 16	0			0				85	13			67.2	0.0	1.5	42.0
Mar 17	0			0				203	63			64.1	0.0	2.5	42.0
Mar 18	0			0				141	43			65.1	0.0	3.0	43.0
Mar 19	0			0				155	44			60.1	0.0	3.0	43.0
Mar 20	0			0				160	14			53.9	0.0	3.0	43.0
Mar 21	0			0				195	12			40.5	0.0	3.0	43.0
Mar 22	0			0				97	4			43.9	0.0	3.0	43.0
Mar 23	0			0				143	11			50.4	0.0	1.0	44.0
Mar 24	0			0				132	11			66.6	0.0	1.0	44.0
Mar 25	0			0				113	6			55.7	0.0	1.0	45.0
Mar 26	0			0				117	2			60.3	0.0	1.0	45.0
Mar 27	0			0				119	5			71.6	0.0	1.0	45.0
Mar 28	14			0				92	15			58.1	0.0	1.0	45.0
Mar 29	10			0				84	22			51.0	0.0	1.0	45.0
Mar 30	17			0				85	19			49.8	0.0	1.0	46.0
Mar 31	9			0				36	17			56.4	0.0	1.0	46.0
TOTAL	50			0				5,325	1,033						
AVG	2			0				172	33			49.6	0.0	1.6	42.4

Note: From January 1 to March 31, counts were from video tape. The counts are 8-hour counts and occurred between the hours of 0800-1600 PST. Visual counting started April 1.

Official Spring Chinook run started April 1. January, February, and March Chinook counts were not added to spring totals.

*March 21 to 30 video tapes were difficult to read because of muddy water conditions.

TABLE 95

MONTHLY FISH PASSAGE SUMMARY REPORT — **LOWER MONUMENTAL PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND — **APRIL 2003**

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Apr 1	11			0				149	58			59.1	0.0	1.0	46.0
Apr 2	8			0				218	104			85.6	0.0	1.0	46.0
Apr 3	22			0				181	87			53.5	0.0	1.0	46.0
Apr 4	18			0				183	96			69.1	0.0	1.0	46.0
Apr 5	103			0				120	64			82.5	0.0	1.0	46.0
Apr 6	186			0				125	79			85.7	0.0	1.0	46.0
Apr 7	160			0				119	66			63.6	6.4	1.0	46.0
Apr 8	191			0				71	47			60.1	29.6	1.0	47.0
Apr 9	756			2				122	77			53.8	26.3	1.5	47.0
Apr 10	559			1				42	27			60.6	29.7	1.5	47.0
Apr 11	363			1				45	29			60.3	31.4	1.5	47.0
Apr 12	535			1				44	26			66.2	30.1	1.5	47.0
Apr 13	626			1				45	37			73.2	28.6	1.5	47.0
Apr 14	1,172			0				43	32			77.8	27.4	1.5	47.0
Apr 15	1,429			1				43	34			83.7	29.1	1.5	47.0
Apr 16	1,911			2				57	47			74.5	29.4	1.5	47.0
Apr 17	1,306			3				27	23			70.6	31.8	1.5	47.0
Apr 18	3,993			4				35	27			68.1	31.9	2.0	48.0
Apr 19	2,742			2				43	31			64.0	31.5	2.0	48.0
Apr 20	2,448			4				10	9			60.3	28.2	2.5	50.0
Apr 21	1,207			7				17	15			62.8	30.0	2.5	50.0
Apr 22	2,232			8				6	5			69.5	31.0	2.5	50.0
Apr 23	2,317			10				15	13			71.4	31.9	2.5	50.0
Apr 24	2,414			2				17	14			80.1	33.2	2.5	49.0
Apr 25	1,130			6				15	14			78.7	34.0	2.5	49.0
Apr 26	1,518			1				31	19			81.2	36.2	2.0	49.0
Apr 27	1,244			3				27	25			79.1	35.8	2.5	50.0
Apr 28	1,133			8				13	11			78.5	34.8	2.5	50.0
Apr 29	663			9				6	5			71.1	31.3	2.5	50.0
Apr 30	939			23				3	3			72.6	32.2	2.5	51.0
TOTAL	33,336			99				1,872	1,124						
AVG.	1,111			3				62	37			70.6	24.1	1.8	47.9

Note: From January 1 to March 31, counts were from video tape. The counts are 8-hour counts and occurred between the hours of 0800-1600 PST. Visual counting started April 1.

TABLE 96

MONTHLY FISH PASSAGE SUMMARY REPORT — **LOWER MONUMENTAL PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND — **MAY 2003**

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
May 1	1,492			31				5	4	0	0	70.9	33.2	2.5	51.0
May 2	720			27				1	0	0	0	64.4	30.8	3.0	51.0
May 3	676			41				1	1	0	0	63.5	30.9	3.0	51.0
May 4	1,182			73				0	0	0	0	58.7	29.1	3.0	51.0
May 5	643			72				1	1	0	0	62.6	29.4	3.0	51.0
May 6	1,579			85				14	11	0	0	72.8	32.9	3.5	51.0
May 7	1,790			84				4	4	0	0	66.4	30.4	3.5	50.0
May 8	1,379			106				1	1	0	0	67.5	31.6	3.5	50.0
May 9	925			129				1	1	0	0	66.4	30.8	3.5	50.0
May 10	906			185				0	0	0	0	61.5	30.2	3.5	51.0
May 11	708			241				0	0	0	0	59.9	30.0	3.5	51.0
May 12	724			194				1	1	0	0	62.4	29.6	3.5	51.0
May 13	558			168				1	1	0	0	69.5	32.5	3.5	51.0
May 14	485			172				1	0	0	0	74.5	32.4	3.5	51.0
May 15	490			253				1	1	0	0	77.5	32.5	3.5	51.0
May 16	625			277				1	0	0	0	84.1	34.3	3.5	51.0
May 17	685			274				1	1	0	0	88.7	34.5	3.5	52.0
May 18	838			258				1	0	0	0	78.8	35.0	3.5	52.0
May 19	1,092			425				1	1	0	0	82.7	36.9	3.5	52.0
May 20	644			382				3	2	0	0	67.8	31.9	3.5	52.0
May 21	666			265				1	1	0	0	72.6	32.0	3.5	52.0
May 22	821			266				0	0	0	0	62.7	28.9	3.5	52.0
May 23	530			206				1	1	0	0	75.6	29.1	3.5	53.0
May 24	1,631			275				0	0	0	0	91.2	26.0	3.5	53.0
May 25	1,035			202				0	0	0	0	118.1	23.5	3.5	53.0
May 26	788			241				0	0	0	0	139.7	25.5	3.5	53.0
May 27	990			186				1	1	0	0	153.0	30.5	3.5	54.0
May 28	759			164				0	0	3	4	150.9	32.5	3.5	56.0
May 29	539			124				1	0	0	4	166.6	47.8	2.0	55.0
May 30	345			104				2	1	0	0	180.9	59.2	2.0	55.0
May 31	107			44				0	0	0	0	203.4	83.2	1.5	55.0
TOTAL	26,352			5,554				45	34	3	8				
AVG.	850			179				1	1	0	0	90.8	34.1	3.2	52.0

Note: From January 1 to March 31, counts were from video tape. The counts are 8-hour counts and occurred between the hours of 0800-1600 PST. Visual counting started April 1.

*Data unavailable.

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
SPRING	59,688	5,653	1,917	1,158	3	8

TABLE 97

MONTHLY FISH PASSAGE SUMMARY REPORT — **LOWER MONUMENTAL PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND — **JUNE 2003**

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Jun 1	144			69			0	1	0	0	0	189.2	70.0	1.5	55.0
Jun 2	322			41			0	0	0	0	0	164.6	43.8	1.5	55.0
Jun 3	276			43			0	0	0	0	0	140.7	29.7	1.5	55.0
Jun 4	420			70			0	0	0	0	0	134.6	27.8	1.2	56.0
Jun 5	478			97			0	0	0	0	0	113.5	26.0	1.2	56.0
Jun 6	609			82			0	0	0	0	0	112.5	22.6	1.2	56.0
Jun 7	1,169			176			0	4	1	0	0	103.2	19.4	1.0	56.0
Jun 8	1,196			180			0	6	0	0	0	106.7	17.1	1.0	57.0
Jun 9	1,290			226			0	1	0	5	1	108.8	14.1	1.0	57.0
Jun 10	1,366			197			0	3	0	6	1	109.4	18.6	1.0	57.0
Jun 11	1,536			192			0	5	0	50	1	108.1	21.1	1.0	58.0
Jun 12	876			180			0	15	1	34	1	103.2	25.5	1.0	59.0
Jun 13	1,233			138			0	24	1	30	4	97.4	29.5	1.5	60.0
Jun 14		1,291		124			1	23	1	132	1	87.2	32.6	1.5	60.0
Jun 15		1,059		138			0	24	2	90	2	80.7	36.1	2.0	60.0
Jun 16		1,098		111			1	33	7	424	1	80.3	35.9	2.0	60.0
Jun 17		1,640		108			2	33	2	666	2	83.1	36.2	2.0	61.0
Jun 18		1,564		124			0	45	7	1,508	0	78.7	35.5	2.5	61.0
Jun 19		853		86			0	45	4	1,294	1	72.4	33.1	2.5	61.0
Jun 20		517		106			0	27	4	3,682	3	73.8	6.4	2.5	61.0
Jun 21		1,022		81			1	39	10	2,715	2	71.6	0.0	2.5	61.0
Jun 22		836		162			0	42	8	1,137	0	59.8	0.0	2.5	61.0
Jun 23		588		132			0	48	14	2,932	1	61.9	0.0	2.5	61.0
Jun 24		421		123			0	37	8	2,324	1	66.8	0.0	2.5	61.0
Jun 25		581		114			0	59	8	2,684	1	47.7	0.0	2.5	61.0
Jun 26		563		97			0	53	17	5,858	0	53.6	0.0	2.5	62.0
Jun 27		543		145			2	64	19	8,166	0	39.1	0.0	2.5	62.0
Jun 28		423		138			0	71	16	11,362	0	45.7	0.0	3.0	64.0
Jun 29		230		65			0	64	19	12,117	2	40.1	0.0	3.0	65.0
Jun 30		492		200			0	84	18	5,023	2	40.4	0.0	3.0	65.0
TOTAL	10,915	13,721		3,745			7	850	167	62,239	27				
AVG.	840	807		125			0	28	6	2,075	1	89.2	19.4	1.9	59.5

Note: From January 1 to March 31, counts were from video tape. The counts are 8-hour counts and occurred between the hours of 0800-1600 PST. Visual counting started April 1.

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	70,603	7,344
SUMMER	13,721	2,054
TOTAL	84,324	9,398

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
7	2,767	1,325	62,242	35

TABLE 98

MONTHLY FISH PASSAGE SUMMARY REPORT — **LOWER MONUMENTAL PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND — **JULY 2003**

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Jul 1		571		198			0	169	54	8,928	5	42.5	0.0	3.0	65.0
Jul 2		365		151			1	110	25	7,762	0	36.2	0.0	3.0	65.0
Jul 3		316		160			0	120	26	5,241	2	38.0	0.0	3.0	65.0
Jul 4		423		93			0	150	43	6,770	1	35.9	0.0	2.5	65.0
Jul 5		661		111			0	198	47	9,454	0	37.1	0.0	2.5	66.0
Jul 6		360		46			1	190	42	7,400	0	30.1	0.0	2.5	66.0
Jul 7		238		38			5	168	51	6,645	2	34.8	0.0	2.5	66.0
Jul 8		318		78			0	278	67	3,288	3	37.8	0.0	2.5	66.0
Jul 9		257		64			0	482	124	7,866	1	37.9	0.0	2.5	66.0
Jul 10		149		50			0	306	69	6,726	2	33.5	0.0	2.5	66.0
Jul 11		155		46			0	270	86	3,601	0	38.9	0.0	2.5	66.0
Jul 12		135		47			0	282	65	4,838	1	38.6	0.0	2.5	68.0
Jul 13		142		38			0	289	77	2,655	2	28.9	0.0	2.5	68.0
Jul 14		80		23			0	398	106	2,194	1	31.7	0.0	3.0	69.0
Jul 15		72		39			0	260	71	2,887	7	34.0	0.0	3.0	69.0
Jul 16		91		31			0	318	101	1,734	4	43.5	0.0	3.0	69.0
Jul 17		96		35			0	367	121	1,637	2	30.8	0.0	3.0	70.0
Jul 18		37		24			0	292	88	1,362	3	37.5	0.0	3.0	70.0
Jul 19		43		29			0	355	116	739	12	32.1	0.0	3.0	70.0
Jul 20		58		15			0	233	64	801	8	33.3	0.0	3.6	70.0
Jul 21		25		17			0	212	60	860	22	33.3	0.0	3.6	70.0
Jul 22		19		11			0	210	77	536	6	37.9	0.0	3.6	70.0
Jul 23		23		25			0	294	95	712	14	30.5	0.0	3.5	71.0
Jul 24		32		27			0	213	55	325	13	33.6	0.0	3.5	71.0
Jul 25		35		7			0	284	110	377	33	30.6	0.0	3.5	71.0
Jul 26		28		10			0	247	74	342	11	25.7	0.0	3.5	70.0
Jul 27		20		11			0	305	100	422	23	33.0	0.0	3.5	71.0
Jul 28		12		8			0	215	54	268	9	29.1	0.0	3.5	71.0
Jul 29		13		2			0	143	42	217	9	30.5	0.0	3.5	71.0
Jul 30		10		8			0	97	39	128	10	28.0	0.0	3.5	71.0
Jul 31		18		3			0	249	68	161	10	33.7	0.0	4.0	71.0
TOTAL		4,802		1,445			7	7,704	2,217	96,876	216				
AVG.		155		47			0	249	72	3,125	7	34.2	0.0	3.1	68.5

Note: From January 1 to March 31, counts were from video tape. The counts are 8-hour counts and occurred between the hours of 0800-1600 PST. Visual counting started April 1.

*Data unavailable.

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	70,603	7,344
SUMMER	18,523	3,499
TOTAL	89,126	10,843

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
14	10,471	3,542	159,118	251

TABLE 99

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

LOWER MONUMENTAL PROJECT
AUGUST 2003

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	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Aug 1		31		7	0		0	250	72	94	7	30.1	0.0	4.0	70.0
Aug 2		14		5	0		0	234	65	68	5	31.9	0.0	4.0	70.0
Aug 3		10		1	0		0	191	57	79	14	27.5	0.0	4.0	71.0
Aug 4		6		0	0		0	106	35	74	14	24.3	0.0	4.0	71.0
Aug 5		21		7	0		0	270	70	222	8	30.6	0.0	4.0	70.0
Aug 6		18		1	0		0	360	97	119	14	29.0	0.0	4.0	70.0
Aug 7		12		3	0		0	280	64	179	13	31.5	0.0	4.0	70.0
Aug 8		20		2	0		0	317	87	56	2	32.3	0.0	4.0	71.0
Aug 9		8		18	0		0	282	86	61	10	31.1	0.0	4.0	71.0
Aug 10		15		12	0		0	196	52	25	2	31.9	0.0	4.0	70.0
Aug 11		11		9	0		0	219	60	25	6	30.3	0.0	4.0	70.0
Aug 12		11		14	0		0	215	51	32	8	31.5	0.0	4.0	70.0
Aug 13		18		11	0		0	210	61	16	4	25.2	0.0	3.5	70.0
Aug 14			7	1	0		0	143	43	25	8	31.1	0.0	3.5	70.0
Aug 15			19	3	0		0	213	56	6	4	25.8	0.0	3.5	70.0
Aug 16			30	5	0		0	346	70	13	8	27.6	0.0	3.5	69.0
Aug 17			27	7	0		0	314	76	2	5	21.7	0.0	3.5	69.0
Aug 18			26	2	0		0	224	58	11	5	27.4	0.0	3.5	69.0
Aug 19			35	8	0		0	183	45	11	5	29.6	0.0	3.5	69.0
Aug 20			19	14	0		0	212	54	4	1	25.8	0.0	3.5	69.0
Aug 21			42	8	0		0	166	49	10	6	21.6	0.0	3.5	70.0
Aug 22			22	9	0		0	138	39	10	2	22.4	0.0	3.5	70.0
Aug 23			26	5	0		0	155	46	12	0	19.8	0.0	3.5	70.0
Aug 24			25	8	0		0	289	74	6	2	20.7	0.0	3.5	69.0
Aug 25			51	8	0		0	404	108	6	4	23.7	0.0	3.5	70.0
Aug 26			22	5	0		0	302	78	1	1	31.4	0.0	3.5	70.0
Aug 27			54	5	0		0	434	96	0	5	32.4	0.0	3.8	70.0
Aug 28			40	6	0		0	442	122	5	2	18.1	0.0	3.8	70.0
Aug 29			22	3	0		0	297	62	1	5	20.7	0.0	3.8	70.0
Aug 30			45	6	0		0	364	104	2	4	33.3	0.0	3.8	70.0
Aug 31			45	6	0		0	366	78	2	4	17.1	0.0	3.8	70.0
TOTAL		195	557	199	0		0	8,122	2,115	1,177	178				
AVG.		15	31	6	0		0	262	68	38	6	27.0	0.0	3.7	69.9

Note: From January 1 to March 31, counts were from video tape. The counts are 8-hour counts and occurred between the hours of 0800-1600 PST. Visual counting started April 1.

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	70,603	7,344
SUMMER	18,718	3,589
FALL	557	109
TOTAL	89,878	11,042

COHO ADULT	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
0	14	18,593	5,657	160,295	429

TABLE 100

MONTHLY FISH PASSAGE SUMMARY REPORT — **LOWER MONUMENTAL PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND — **SEPTEMBER 2003**

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Sep 1			40	21	0	0		372	87		0	17.0	0.0	3.8	70.0
Sep 2			57	15	0	0		273	65		1	23.2	0.0	3.8	70.0
Sep 3			101	26	0	0		311	83		2	27.4	0.0	3.8	69.0
Sep 4			207	34	1	0		513	122		2	27.6	0.0	3.8	69.0
Sep 5			277	21	0	0		505	127		6	33.9	0.0	3.8	69.0
Sep 6			226	17	0	0		469	140		1	18.0	0.0	3.8	69.0
Sep 7			331	55	0	0		1,050	279		5	20.5	0.0	3.8	69.0
Sep 8			300	67	0	0		1,614	433		2	26.0	0.0	3.8	69.0
Sep 9			324	88	1	0		1,819	520		0	18.2	0.0	4.0	69.0
Sep 10			132	60	0	0		1,379	388		4	19.9	0.0	4.0	68.0
Sep 11			333	156	1	0		3,355	884		3	22.5	0.0	4.0	68.0
Sep 12			495	151	0	0		2,779	770		4	17.4	0.0	4.0	68.0
Sep 13			126	62	0	0		1,211	325		2	23.9	0.0	4.0	68.0
Sep 14			605	273	0	0		2,211	626		6	19.6	0.0	4.0	68.0
Sep 15			413	138	0	0		2,188	554		0	21.6	0.0	4.0	67.0
Sep 16			510	157	0	0		3,528	840		0	20.1	0.0	4.0	67.0
Sep 17			635	185	2	0		3,695	960		0	18.6	0.0	4.0	66.0
Sep 18			674	161	0	0		4,110	1,179		1	17.4	0.0	4.0	66.0
Sep 19			584	234	6	0		3,943	1,022		-1	21.3	0.0	4.0	66.0
Sep 20			446	260	4	0		5,297	1,350		0	21.3	0.0	4.0	66.0
Sep 21			359	190	1	0		3,124	873		1	19.1	0.0	4.0	66.0
Sep 22			468	285	24	1		4,832	1,322		2	22.3	0.0	4.0	65.0
Sep 23			285	326	1	0		3,839	918		0	21.3	0.0	4.0	65.0
Sep 24			391	349	7	2		5,250	1,362		2	24.8	0.0	4.0	65.0
Sep 25			341	441	27	12		7,386	1,786		2	21.5	0.0	4.0	65.0
Sep 26			311	167	14	1		5,753	1,303		0	21.5	0.0	4.0	65.0
Sep 27			455	288	21	5		7,238	1,705		0	24.4	0.0	4.0	65.0
Sep 28			336	185	15	2		5,641	1,300		1	13.9	0.0	4.0	65.0
Sep 29			218	210	12	3		3,632	823		1	14.3	0.0	4.0	65.0
Sep 30			364	289	16	2		5,873	1,261		0	17.1	0.0	4.0	65.0
TOTAL			10,344	4,911	153	28		93,190	23,407		47				
AVG.			435	164	5	1		3,106	780		2	21.2	0.0	3.9	67.1

Note: From January 1 to March 31, counts were from video tape. The counts are 8-hour counts and occurred between the hours of 0800-1600 PST. Visual counting started April 1.

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	70,603	7,344
SUMMER	18,718	3,589
FALL	10,901	5,020
TOTAL	100,222	15,953

COHO ADULT	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
153	14	111,783	29,064	160,295	476

TABLE 101

MONTHLY FISH PASSAGE SUMMARY REPORT — **LOWER MONUMENTAL PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND — **OCTOBER 2003**

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	PINK	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Oct 1			113	205	8	4		2,076	460	0	-1	16.2	0.0	4.0	65.0
Oct 2			120	286	31	1		3,566	784	0	0	19.3	0.0	4.0	65.0
Oct 3			252	310	14	0		3,927	942	0	0	16.6	0.0	4.0	65.0
Oct 4			189	269	26	0		4,742	992	1	0	17.7	0.0	4.0	65.0
Oct 5			186	353	19	3		4,734	1,093	0	1	15.4	0.0	4.0	65.0
Oct 6			158	279	13	2		3,642	880	0	2	15.5	0.0	4.0	65.0
Oct 7			194	224	25	2		3,996	941	1	0	17.0	0.0	4.0	64.0
Oct 8			233	194	36	2		3,455	858	0	0	16.1	0.0	4.0	64.0
Oct 9			191	172	34	8		4,086	1,034	0	1	15.4	0.0	4.0	64.0
Oct 10			126	238	31	4		3,075	768	0	0	17.7	0.0	4.0	64.0
Oct 11			89	120	13	1		1,624	439	0	-1	16.9	0.0	4.0	63.0
Oct 12			104	146	22	6		1,734	447	0	0	14.7	0.0	4.0	62.0
Oct 13			137	243	33	5		2,841	753	1	0	14.5	0.0	4.0	62.0
Oct 14			35	54	16	1		778	221	0	0	14.7	0.0	4.0	62.0
Oct 15			17	53	5	1		642	168	0	0	16.2	0.0	4.0	62.0
Oct 16			40	112	8	2		886	227	0	-1	16.3	0.0	4.0	61.0
Oct 17			84	95	22	2		1,230	321	0	-1	15.3	0.0	4.0	61.0
Oct 18			51	72	16	2		1,068	223	0	0	15.9	0.0	4.0	61.0
Oct 19			66	70	18	0		954	234	0	0	14.2	0.0	4.0	61.0
Oct 20			20	22	24	1		709	169	0	0	16.2	0.0	4.0	61.0
Oct 21			28	68	24	4		1,192	300	0	0	16.5	0.0	4.0	61.0
Oct 22			26	47	31	2		1,202	305	0	0	18.4	0.0	4.0	61.0
Oct 23			40	84	44	5		1,683	448	0	0	15.9	0.0	4.0	61.0
Oct 24			28	31	19	2		694	210	0	-1	18.0	0.0	4.0	61.0
Oct 25			14	24	24	1		889	260	0	0	14.1	0.0	4.0	60.0
Oct 26			22	23	13	1		835	223	0	0	15.6	0.0	4.0	60.0
Oct 27			45	33	20	1		1,083	359	0	1	13.9	0.0	4.0	60.0
Oct 28			33	19	19	6		1,027	294	0	0	14.8	0.0	4.0	60.0
Oct 29			50	33	48	5		1,253	386	0	0	15.2	0.0	4.0	59.0
Oct 30			29	8	50	1		516	200	0	0	15.7	0.0	4.0	58.0
Oct 31			20	15	65	0		674	227	0	0	18.4	0.0	4.0	57.0
TOTAL			2,740	3,902	771	75		60,813	15,166	3	0				
AVG.			88	126	25	2		1,962	489	0	0	16.1	0.0	4.0	61.9

Note: From January 1 to March 31, counts were from video tape. The counts are 8-hour counts and occurred between the hours of 0800-1600 PST. Visual counting started April 1.

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	70,603	7,344
SUMMER	18,718	3,589
FALL	13,641	8,922
TOTAL	102,962	19,855

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
924	75	14	172,596	44,230	160,295	476

*Data unavailable.

PINK
3

TABLE 102

MONTHLY FISH PASSAGE SUMMARY REPORT — **LOWER MONUMENTAL PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND — **NOVEMBER 2003**

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCH	DEG F
Nov 1			7	12	9	0		282	75			19.2	0.0	4.0	57.0
Nov 2			13	16	5	0		275	72			13.9	0.0	4.0	56.0
Nov 3			10	15	7	2		301	69			14.5	0.0	4.0	56.0
Nov 4			10	7	3	1		164	46			16.6	0.0	4.0	55.0
Nov 5			11	10	5	1		251	62			15.2	0.0	4.5	54.0
Nov 6			7	10	4	0		216	44			14.9	0.0	4.5	54.0
Nov 7			10	3	1	0		131	32			14.5	0.0	4.5	54.0
Nov 8			9	9	3	0		126	31			15.0	0.0	4.5	54.0
Nov 9			9	6	2	0		161	44			13.8	0.0	4.5	53.0
Nov 10			6	4	2	0		141	36			13.9	0.0	4.5	53.0
Nov 11			11	6	5	1		272	82			17.3	0.0	4.5	53.0
Nov 12			7	6	3	2		131	34			19.0	0.0	4.5	53.0
Nov 13			1	5	6	1		164	38			33.7	0.0	4.5	53.0
Nov 14			9	11	2	1		125	25			28.7	0.0	4.5	53.0
*Nov 15			1	0	0	0		17	5			13.6	0.0	4.5	52.0
*Nov 16			0	0	0	0		0	0			10.6	5.7	4.5	51.0
*Nov 17			2	2	2	0		76	10			12.7	4.6	4.5	50.0
Nov 18			10	2	2	1		145	39			20.9	7.8	4.5	50.0
Nov 19			6	2	0	0		91	35			17.4	4.6	4.5	50.0
Nov 20			4	4	0	0		81	22			16.3	3.4	4.5	49.0
Nov 21			2	0	1	0		101	22			17.8	4.9	4.5	49.0
Nov 22			2	1	2	0		156	41			16.4	3.6	4.5	49.0
Nov 23			4	1	1	0		130	38			17.4	4.5	4.5	49.0
Nov 24			3	0	0	0		86	33			22.3	11.1	4.5	48.0
Nov 25			1	1	2	0		123	37			18.1	1.3	4.5	47.0
*Nov 26			0	0	0	0		5	2			14.1	0.0	4.5	47.0
*Nov 27			0	0	0	0		23	11			14.0	0.0	4.5	47.0
*Nov 28			0	0	0	0		29	8			13.9	0.0	4.5	47.0
Nov 29			0	0	0	0		127	43			13.9	0.0	4.5	47.0
*Nov 30			0	0	0	0		15	2			13.8	0.0	4.5	47.0
TOTAL			155	133	67	10		3,945	1,038						
AVG			8	8	4	1		184	46			16.8	1.7	4.4	51.2

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	70,603	7,344
SUMMER	18,718	3,589
FALL	13,641	8,922
TOTAL	102,962	19,855

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK
924	75	14	172,596	44,230	160,295	476	3

Note: From November 1 - Dec 31, counts were from video tape. The counts are 10-hour counts and occurred between the hours of 0600-1600 PST. Visual counting ended October 31.

Official Fall Chinook run ended October 31. November and December Chinook counts were not added to fall totals.

* Nov 15 power outage from 0702 to 1600; Nov 16 power outage from 0600-1600 hours, Nov 17 power outage from 0600 to 0700 hours.

* There are no North ladder counts from 0600-1600 on November 26, 27, 28, and 30 due to a VCR malfunction .

TABLE 103

MONTHLY FISH PASSAGE SUMMARY REPORT — **LOWER MONUMENTAL PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND — **DECEMBER 2003**

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCH	DEG F
Dec 1			0	0	1	0		33	11			16.5	0.0	4.5	47.0
Dec 2			0	0	0	0		34	9			23.8	0.0	4.5	46.0
Dec 3			0	0	0	0		31	8			17.7	0.0	4.5	46.0
Dec 4			1	0	0	0		51	17			17.4	0.0	4.5	46.0
Dec 5			0	0	0	0		31	12			15.7	0.0	4.5	46.0
Dec 6			0	0	0	0		29	11			16.2	0.0	4.5	45.0
Dec 7			0	0	0	0		32	9			19.7	0.0	4.5	45.0
Dec 8			0	0	0	0		21	7			22.7	0.0	4.8	45.0
Dec 9			1	0	1	0		34	5			18.9	0.0	4.8	44.0
Dec 10			0	0	0	0		29	5			23.2	0.0	4.8	44.0
Dec 11			0	0	0	0		31	9			19.7	0.0	4.8	44.0
Dec 12			0	0	0	0		21	6			24.0	0.0	4.8	43.0
Dec 13			0	0	0	0		24	9			15.7	0.0	4.8	43.0
Dec 14			0	0	0	0		32	13			12.5	0.0	4.8	43.0
Dec 15			0	1	0	0		17	4			20.2	0.0	4.8	43.0
Dec 16			0	0	0	0		39	9			24.8	0.0	4.8	43.0
Dec 17			0	0	0	0		59	16			20.5	0.0	4.8	43.0
Dec 18			0	0	0	0		38	10			17.6	0.0	4.8	42.0
Dec 19			0	0	0	0		27	4			14.2	0.0	4.8	42.0
Dec 20			0	0	0	0		38	7			16.9	0.0	4.8	42.0
Dec 21			0	0	0	0		40	16			10.7	0.0	4.8	42.0
Dec 22			0	0	0	0		19	4			23.8	0.0	4.8	42.0
Dec 23			0	0	0	0		22	2			19.6	0.0	4.8	42.0
Dec 24			0	0	0	0		41	6			17.3	0.0	4.8	42.0
Dec 25			0	0	0	0		38	12			18.9	0.0	4.8	42.0
Dec 26			0	0	0	0		33	7			16.0	0.0	4.8	42.0
Dec 27			0	0	0	0		24	3			21.6	0.0	4.8	41.0
Dec 28			0	0	0	0		51	9			12.3	0.0	4.8	41.0
Dec 29			0	0	0	0		20	3			27.6	0.0	4.8	41.0
Dec 30			0	0	0	0		41	10			23.9	0.0	4.8	41.0
Dec 31			0	0	0	0		31	6			15.3	0.0	4.8	41.0
TOTAL			2	1	2	0		1,011	259						
AVG			0	0	0	0		33	8			19.0	0.0	4.7	43.2

RUN YEAR TOTALS TO DAT	CHINOOK ADULT	CHINOOK JACK
SPRING	70,603	7,344
SUMMER	18,718	3,589
FALL	13,641	8,922
TOTAL	102,962	19,855

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK
924	75	14	172,596	44,230	160,292	468	3

Note: From November 1 - Dec 31, counts were from video tape. The counts are 10-hour counts and occurred between the hours of 0600-1600 PST. Visual counting ended October 31.

Official Fall Chinook run ended October 31. November and December Chinook counts were not added to fall totals.

YEARLY TOTALS OF SALMONIDS COUNTED OVER LOWER MONUMENTAL DAM 1969 - 2003

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	0	160,589
1993	34,195	70,992	18	0	105,205
1994	7,219	49,917	7	0	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
1998	21,537	66,118	2	0	87,657
1999	20,271	72,842	15	88	93,216
2000	68,961	112,616	291	750	182,618
2001	225,667	285,745	32	1,210	512,654
2002	124,897	232,809	46	158	357,910
2003	122,817	172,596	14	999	296,426
Total	1,672,507	2,848,877	4,982	19,625	4,545,991
10-Year Average	66,641	126,501	43	325	193,510

*Jacks included

Includes 2001 extended season counts for November and December 0600-1600 PST.
Includes 2002 extended season counts for February and March 0800-1600 PST and November and December 0600-1600 PST.
Includes 2003 extended season counts for January, February, and March 0800-1600 PST and November and December 0600-1600 PST.

TABLE 105

MONTHLY COUNT OF CHINOOK SALMON

LOWER MONUMENTAL DAM; 1969 - 2003

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
1998				2,325	6,626	5,095	1,222	272	3,418	2,579			21,537
1999				124	4,551	4,951	1,630	623	5,499	2,893			20,271
2000				10,018	30,132	11,068	2,469	1,367	8,950	4,957			68,961
2001				104,119	60,247	32,422	6,261	1,472	16,390	4,411	334	11	225,667
2002	1		7	3,881	60,767	31,795	6,496	2,367	15,707	3,660	214	2	124,897
2003			50	33,435	31,906	28,381	6,247	951	15,255	6,642	288	3	123,158
Total	2		59	303,556	685,862	337,889	136,087	21,525	132,170	53,332	1,342	24	1,671,848
10-Year Average				15,624	23,091	13,737	2,901	819	7,343	3,069			66,676

***Jacks included**

Includes 2001 extended season counts for November and December 0600-1600 PST.

Includes 2002 extended season counts for February and March 0800-1600 PST and November and December 0600-1600 PST.

Includes 2003 extended season counts for January, February, and March 0800-1600 PST and November and December 0600-1600 PST.

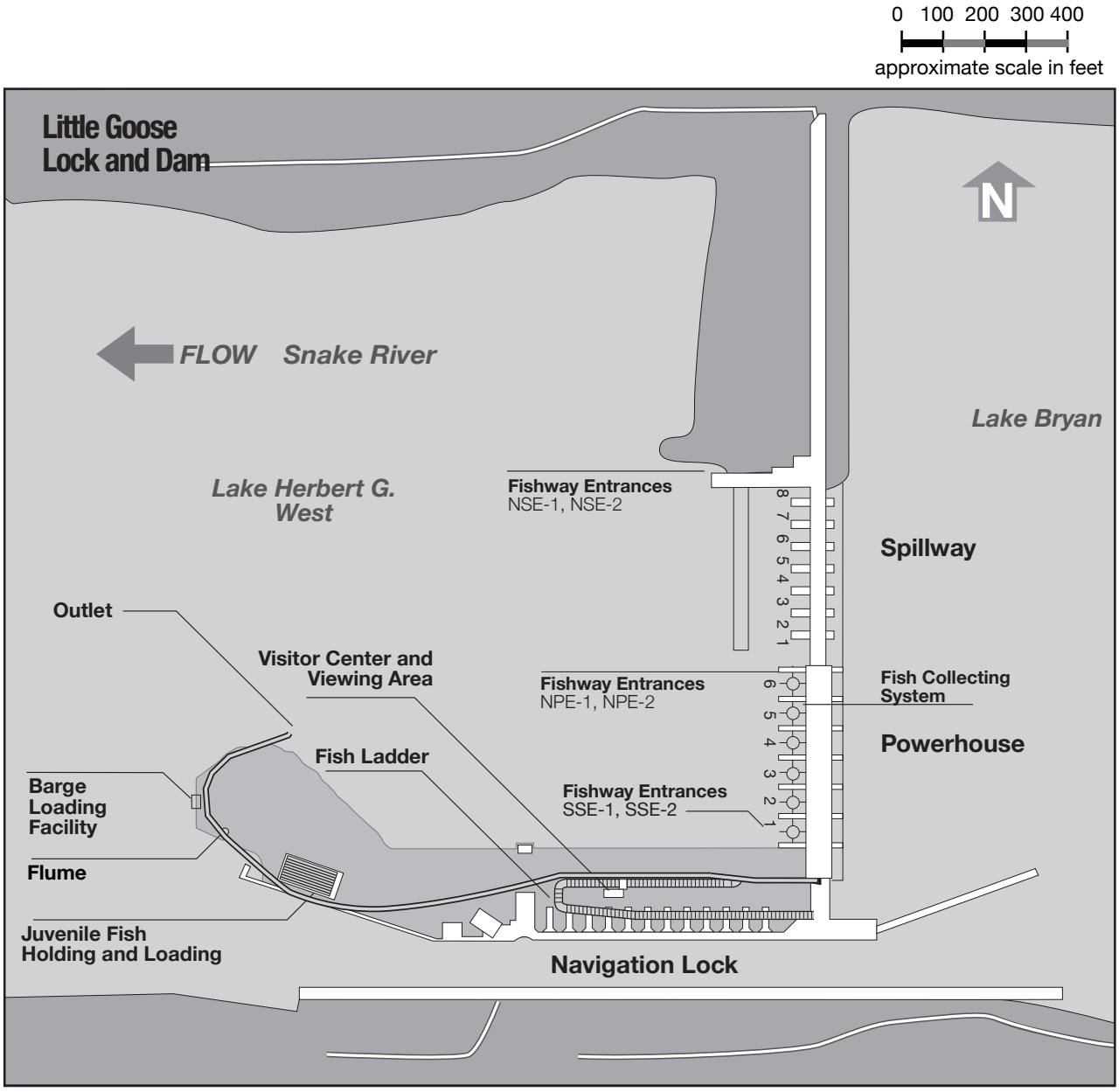
TABLE 106

MONTHLY COUNT OF STEELHEAD
LOWER MONUMENTAL DAM
1969 - 2003

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
1998				1,501	62	198	2,361	1,835	19,892	40,269			66,118
1999				559	59	98	2,652	11,170	37,899	20,405			72,842
2000				937	-26	546	5,741	9,045	61,072	35,301			112,616
2001				1,636	113	2,874	19,045	26,264	126,517	76,474	23,900	8,922	285,745
2002	3,687	1,858	3,429	4,876	196	688	10,901	25,998	94,310	75,670	9,028	2,168	232,809
2003	775	3,686	5,325	1,872	45	850	7,704	8,122	93,190	60,813	3,945	1,011	187,338
Total	4,714	6,574	12,220	81,798	18,444	9,518	121,349	247,238	1,284,692	1,039,720	45,138	12,883	2,884,288
10-Yr. Average				1,728	95	589	6,169	11,760	56,843	44,019			127,975

Includes 2001 extended season counts for November and December 0600-1600 PST.
Includes 2002 extended season counts for February and March 0800-1600 PST and November and December 0600-1600 PST.
Includes 2003 extended season counts for January, February, and March 0800-1600 PST and November and December 0600-1600 PST.

Plate 8 Little Goose Lock and Dam



LITTLE GOOSE DAM

FISH COUNTING SCHEDULE

1 Jan – 31 Mar	Video counting daily 0800-1600 hours PST.
1 Apr – 31 Oct	Visual counting daily 0400-2000 hours PST.
1 Nov – 31 Dec	Video counting daily 0600-1600 hours PST.

FISH LADDER OPERATING SCHEDULE

Project Ladder

1 Jan – 6 Jan	Ladder in service.
7 Jan – 18 Feb	Ladder out of service for annual maintenance.
19 Feb – 4 Mar	Ladder in service.
5 Mar – 7 Mar	Ladder out of service to repair window leaks.
8 Mar – 31 Dec	Ladder in service.

FISHWAY ACTIVITIES

Adult chinook and steelhead were radio-tracked past the dam in 2003 as part of a broader, ongoing study to evaluate fish passage from below Bonneville Dam to above Lower Granite Dam.

Water temperatures were recorded hourly in six locations within the adult fishway during the fish passage season. The purpose of this effort, ongoing since 1999, is to determine if thermal barriers exist and take corrective action if needed.

The Walla Walla District continued a hydraulic evaluation of the adult fishway in 2003. The purpose was to analyze existing operating conditions and investigate alternatives to improve fish passage.

A turbine for one of the three AWS pumps was replaced during the winter outage. The windows in the fish ladder viewing room and fish counting slot were also replaced.

The juvenile fish facility was operated for juvenile fish transport/bypass and adult fallbacks from 18 March to 18 December.

Little Goose Fish Count Schedule 1970-2003 (information based on previous Annual Fish Passage Reports)
16 hour counts occurred between the hours of 0400-2000 PST unless otherwise stated.
8 hour counts occurred between the hours of 0800-1600 PST unless otherwise stated.

Year	Months	Count Period	Notes
1970	Mar 1 – Oct 31	16 hour (0500-2100)	
	Nov 1 – 30	8 hour (0800-1600)	
1971	Jan 2- Mar 31	8 hour	
	Apr 1 – Oct 31	16 hour (0400-2000ST)	
	Nov 1 – Dec 31	8 hour	
1972	Jan 1 – Mar 31	8 hour	
	Apr 1 – Jun 14	16 hour	Gates closed at night but left open during breaks.
	Jun 15 – Oct 31	9 hour (0800-2200ST)	On June 15, counting on Tuesdays changed. Beginning at 0400, three 8-hour shifts were conducted. Gates open unless otherwise stated.
	Nov 1 – Dec 31	8 hour	
1973	Jan 1- Mar 31	8 hour	Single shift count
	Apr 1 – Jul 31	18 hour (0400-2200ST)	Two 9-hour shifts except on Tuesday when three 8-hour shifts were conducted.
	Aug 1- Oct 31	16 hour	Two 8 hour shifts
	Nov 1 – Dec 31	8 hour	Single shift count
1974	Jan 1- Mar 31	8 hour	
	Apr 1 – Oct 31	16 hour	24-hour count on following dates: May 21-24, 28-31
	Nov 1 – Dec 31	8 hour	
1975	Jan 1 – Mar 31	8 hour Single shift	
	Apr 1 – Oct 31	16 hour (two 8-hour shifts)	
1976-81	Apr 1 – Oct 31	16 hour (two 8-hour shifts)	
1982-90	Apr 1 – Oct 31	16 hour (two 8-hour shifts)	A video motion detection system was installed to count fish as they moved Past the counting window to give an estimate of total project passage.
1991-4	Apr 15 – Oct 31	16 hour	
	Nov 1 – 30	10 hour (0700-1700 PST)	
1995-6	Apr 1 – Oct 31	16 hour	
1997-2000	Apr 1 – Oct 31	16 hour video	
2001	Apr 1 – Oct 31	16 hour	
	Nov 1 – Dec 31	10 hour video (0600-1600 PST)	
2002	Feb 1 – Mar 31	8 hour video	
	Apr 1 – Oct 31	16 hour	
	Nov 1 – Dec 31	10 hour video	

TABLE 107

MONTHLY TOTALS OF SALMONIDS, SHAD, AND LAMPREY COUNTED OVER LITTLE GOOSE DAM

2003

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*			2	32,082	29,615	26,129	5,838	829	14,048	5,917	433	9	114,902
STEELHEAD	310	2,067	6,744	2,001	109	586	4,741	6,701	81,173	65,715	5020	1026	176,193
SOCKEYE						10	12		1				23
COHO								1	163	643	57	1	865
PINK									3	1			4
TOTAL	310	2,067	6,746	34,083	29,724	26,725	10,591	7,531	95,388	72,276	5,510	1,036	291,987
SHAD					16	12,655	43,661	502					56,834
LAMPREY					2	51	212	297	80	18			660

***Jacks included**

Shad are not counted after September 1st.

TABLE 108

MONTHLY FISH PASSAGE SUMMARY REPORT | **LITTLE GOOSE PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND | **JANUARY 2003**

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Jan 1								56	12			13.9	0.0		
Jan 2								14	2			14.9	0.0		
Jan 3								68	16			18.9	0.0		
Jan 4								78	19			21.8	0.0		
Jan 5								82	19			15.5	0.0		
Jan 6								12	4			22.2	0.0		
Jan 7								0	0			19.4	0.0		
Jan 8												16.3	0.0		
Jan 9												19.5	0.0		
Jan 10												19.3	0.0		
Jan 11												17.9	0.0		
Jan 12												15.1	0.0		
Jan 13												16.3	0.0		
Jan 14												18.6	0.0		
Jan 15												20.2	0.0		
Jan 16												20.9	0.0		
Jan 17												25.6	0.0		
Jan 18												23.6	0.0		
Jan 19												20.2	0.0		
Jan 20												19.2	0.0		
Jan 21												20.6	0.0		
Jan 22												22.0	0.0		
Jan 23												23.8	0.0		
Jan 24												26.0	0.0		
Jan 25												22.8	0.0		
Jan 26												19.7	0.0		
Jan 27												27.2	0.0		
Jan 28												48.5	0.0		
Jan 29												47.0	0.0		
Jan 30												37.7	0.0		
Jan 31												57.2	0.0		
TOTAL	0			0				310	72						
AVG.								44	10			22.5	0.0		

Note: From January 1 to March 31, counts were from video tape. The counts are 8-hour counts and occurred between the hours of 0800-1600 PST. Visual counting started April 1.

Official Spring Chinook run started April 1. January, February, and March Chinook counts were not added to spring totals.

TABLE 109

MONTHLY FISH PASSAGE SUMMARY REPORT | **LITTLE GOOSE PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND | **FEBRUARY 2003**

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	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Feb 1												73.8	0.0		
Feb 2												69.6	0.0		
Feb 3												56.8	0.0		
Feb 4												50.7	0.0		
Feb 5												41.6	0.0		
Feb 6												40.5	0.0		
Feb 7												36.9	0.0		
Feb 8												38.3	0.0		
Feb 9												33.0	0.0		
Feb 10												24.2	0.0		
Feb 11												35.6	0.0		
Feb 12												28.4	0.0		
Feb 13												28.6	0.0		
Feb 14												26.8	0.0		
Feb 15												26.1	0.0		
Feb 16												24.3	0.0		
Feb 17												28.3	0.0		
Feb 18								135	29			26.4	0.0		
Feb 19								229	14			29.5	0.0		
Feb 20								110	8			25.6	0.0		
Feb 21								703	151			32.9	0.0		
Feb 22								382	76			32.5	0.0		
Feb 23								369	90			34.3	0.0		
Feb 24								95	20			36.3	0.0		
*Feb 25								*	*			32.9	0.0		
Feb 26								2	-1			23.3	0.0		
Feb 27								34	9			25.1	0.0		
Feb 28								8	9			29.5	0.0		
TOTAL	0			0				2,067	405	0	0				
AVG.								207	41			35.4	0.0		

Note: From January 1 to March 31, counts were from video tape. The counts are 8-hour counts and occurred between the hours of 0800-1600 PST. Visual counting started April 1.

Official Spring Chinook run started April 1. January, February, and March Chinook counts were not added to spring totals.

***There are no counts from 0800 to 1600 on February 25 due to tape failure.**

TABLE 110

MONTHLY FISH PASSAGE SUMMARY REPORT | **LITTLE GOOSE PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND | **MARCH 2003**

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	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCH	TURBIDITY DEG F
Mar 1	0							113	27			29.8	0.0		
Mar 2	0							182	33			20.6	0.0		
Mar 3	0							60	11			25.8	0.0		
Mar 4	0							378	104			29.1	0.0		
Mar 5	*							*	*			27.1	0.0		
Mar 6	*							*	*			27.4	0.0		
Mar 7	1							775	210			35.9	0.0		
Mar 8	0							414	139			28.6	0.0		
Mar 9	0							248	72			34.2	0.0		
Mar 10	0							190	57			38.1	0.0		
Mar 11	0							394	118			43.2	0.0		
Mar 12	0							265	77			54.9	0.0		
Mar 13	0							154	48			72.6	0.0		
Mar 14	0							870	277			61.7	0.0		
Mar 15	0							533	173			58.2	0.0		
Mar 16	0							431	126			62.6	0.0		
Mar 17	0							206	51			58.6	0.0		
Mar 18	0							158	42			58.3	0.0		
Mar 19	0							129	0			55.7	0.0		
Mar 20	0							147	1			48.7	0.0		
Mar 21	0							52	2			38.9	0.0		
Mar 22	0							73	4			39.1	0.0		
Mar 23	0							93	9			48.3	0.0		
Mar 24	0							160	23			59.3	0.0		
Mar 25	0							89	14			52.1	0.0		
Mar 26	1							167	37			55.9	0.0		
Mar 27	0							141	37			64.9	0.0		
Mar 28	0							92	29			51.7	0.0		
Mar 29	0							78	29			48.1	0.0		
Mar 30	0							58	22			46.0	0.0		
Mar 31	0							94	42			48.5	0.0		
TOTAL	2							6,744	1,814						
AVG.	0							238	63			45.8	0.0		

Note: From January 1 to March 31, counts were from video tape. The counts are 8-hour counts and occurred between the hours of 0800-1600 PST. Visual counting started April 1.

Official Spring Chinook run started April 1. January, February, and March Chinook counts were not added to spring totals.

TABLE 111

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

LITTLE GOOSE PROJECT
APRIL 2003

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD		DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Apr 1	8			0				119	56			59.3	0.0	2.1	46.0
Apr 2	4			0				130	62			76.8	0.0	2.1	46.0
Apr 3	7			0				130	68			56.8	0.0	2.1	46.0
Apr 4	2			0				139	64			68.5	0.0	2.1	46.0
Apr 5	13			0				186	84			77.8	9.9	2.1	46.0
Apr 6	35			0				101	54			75.6	18.5	2.1	46.0
Apr 7	186			0				119	76			60.5	19.2	2.5	47.0
Apr 8	52			0				76	38			58.2	20.6	2.5	47.0
Apr 9	76			0				86	49			53.4	18.4	2.5	47.0
Apr 10	29			0				65	35			61.1	18.5	2.5	48.0
Apr 11	856			0				83	59			62.2	21.0	2.5	47.0
Apr 12	394			0				95	62			67.1	20.9	2.5	47.0
Apr 13	239			0				64	42			74.0	20.9	3.5	47.0
Apr 14	466			0				74	54			79.6	20.0	3.5	47.0
Apr 15	1,597			1				71	53			82.8	18.8	3.5	47.0
Apr 16	1,122			0				36	26			75.8	18.5	3.5	48.0
Apr 17	2,185			6				35	22			70.8	18.6	3.5	48.0
Apr 18	1,279			2				36	26			68.9	18.5	3.5	48.0
Apr 19	4,069			12				56	46			65.3	18.7	3.5	49.0
Apr 20	2,633			7				46	38			61.5	18.5	3.6	49.0
Apr 21	1,344			10				36	28			63.3	17.8	3.6	49.0
Apr 22	1,174			8				20	18			69.1	17.6	3.6	49.0
Apr 23	2,909			23				47	41			72.2	17.7	3.6	49.0
Apr 24	2,191			13				28	26			80.3	17.6	3.2	50.0
Apr 25	3,010			13				20	20			79.9	17.9	3.2	50.0
Apr 26	1,038			8				20	17			80.1	18.2	3.2	50.0
Apr 27	2,100			25				26	23			79.6	18.9	3.2	50.0
Apr 28	1,219			11				25	17			78.3	19.2	3.2	50.0
Apr 29	844			10				14	11			70.9	19.0	3.4	50.0
Apr 30	833			19				18	16			73.4	18.4	3.4	51.0
TOTAL	31,914			168				2,001	1,231						
AVG.	1,064			6				67	41			70.1	16.1	3.0	48.0

TABLE 112

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

LITTLE GOOSE PROJECT

MAY 2003

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	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
May 1	619			18				10	7	0	0	71.3	19.0	3.5	51.0
May 2	1,132			26				10	6	0	0	65.2	19.6	3.5	51.0
May 3	886			31				5	5	0	0	65.5	19.0	3.5	51.0
May 4	817			26				6	6	0	0	62.2	17.8	3.5	51.0
May 5	1,229			62				2	1	0	0	63.3	17.7	3.5	51.0
May 6	976			61				5	4	0	0	75.2	18.4	3.5	50.0
May 7	956			92				7	4	0	0	68.9	19.0	3.5	51.0
May 8	1,318			101				8	6	0	0	68.9	20.5	3.5	51.0
May 9	1,580			114				7	5	0	0	68.9	20.3	3.5	51.0
May 10	1,354			121				10	8	0	0	63.5	19.2	4.0	51.0
May 11	930			143				6	5	0	0	63.5	18.5	4.0	51.0
May 12	832			160				4	4	0	0	65.7	19.7	4.2	51.0
May 13	491			192				7	7	0	0	70.5	18.7	4.2	51.0
May 14	271			131				5	5	0	0	75.9	18.1	4.6	52.0
May 15	895			194				2	2	0	0	79.9	18.3	4.6	52.0
May 16	634			259				1	0	0	0	85.7	17.9	4.5	52.0
May 17	613			296				2	2	0	0	89.1	18.5	4.5	52.0
May 18	474			194				1	1	0	0	81.6	19.9	4.3	52.0
May 19	482			210				0	0	5	0	84.1	20.4	4.5	52.0
May 20	1,098			365				2	2	0	0	72.0	20.4	4.5	53.0
May 21	640			292				1	1	4	0	75.5	20.4	4.5	53.0
May 22	559			250				0	0	1	0	66.9	18.9	4.0	53.0
May 23	881			251				2	1	2	0	78.4	18.0	4.0	53.0
May 24	469			148				2	2	2	1	94.3	17.0	4.1	53.0
May 25	1,079			202				0	0	1	0	120.8	19.8	4.1	53.0
May 26	1,182			238				1	1	0	0	141.2	25.5	4.0	53.0
May 27	746			263				0	0	1	0	153.8	36.7	4.0	53.0
May 28	666			190				0	0	0	1	151.9	38.7	2.8	53.0
May 29	442			127				2	1	0	0	169.7	53.6	1.6	54.0
May 30	251			84				0	0	0	0	181.2	65.1	1.0	55.0
May 31	160			112				1	1	0	0	206.4	90.8	1.0	55.0
TOTAL	24,662			4,953				109	87	16	2				
AVG.	796			160				4	3	1	0	92.9	25.3	3.7	52.1

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
SPRING	56,576	5,121	2,110	1,318	16	2

TABLE 113

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

LITTLE GOOSE PROJECT

JUNE 2003

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	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Jun 1	103			68			0	0	0	0	0	187.7	73.5	0.5	54.0
Jun 2	118			49			0	0	0	0	0	165.9	52.6	1.0	54.0
Jun 3	434			102			0	1	0	0	0	144.8	37.3	1.0	54.0
Jun 4	241			34			0	0	0	0	0	133.5	28.9	1.1	55.0
Jun 5	595			114			0	0	0	0	0	116.0	18.1	1.1	55.0
Jun 6	820			109			2	2	0	0	2	114.3	17.6	1.2	55.0
Jun 7	599			96			0	4	0	14	1	105.2	16.2	1.4	55.0
Jun 8	1,106			172			1	1	1	48	2	108.6	14.8	1.7	55.0
Jun 9	1,501			200			0	2	2	53	0	106.9	19.9	2.2	57.0
Jun 10	1,679			252			0	7	5	13	1	109.8	28.7	2.6	58.0
Jun 11	1,192			158			0	0	0	26	0	108.5	28.8	2.8	58.0
Jun 12	1,280			170			0	8	1	29	4	103.1	22.5	2.8	59.0
Jun 13	768			140			0	7	0	54	0	97.1	18.6	2.8	59.0
Jun 14	913			119			1	25	2	40	1	85.3	18.6	2.8	60.0
Jun 15	1,092			175			0	16	0	109	0	79.4	19.6	2.8	60.0
Jun 16		899		142			0	13	1	72	5	80.8	19.7	3.0	60.0
Jun 17		797		102			0	10	2	196	2	83.3	19.6	3.8	60.0
Jun 18		1555		115			1	18	1	232	5	79.4	19.3	4.3	60.0
Jun 19		882		112			1	31	8	214	1	73.0	20.1	4.5	60.0
Jun 20		779		151			1	31	11	204	2	72.3	8.8	4.6	60.0
Jun 21		613		97			0	24	2	428	7	70.2	0.0	4.7	60.0
Jun 22		965		132			1	28	6	373	2	56.0	0.0	4.0	61.0
Jun 23		642		89			0	46	13	476	0	56.3	0.0	3.0	62.0
Jun 24		474		112			0	40	8	893	1	61.2	0.0	4.6	62.0
Jun 25		343		133			0	43	22	1,104	7	47.4	0.0	4.3	63.0
Jun 26		564		112			0	43	14	1,188	0	47.3	0.0	4.3	63.0
Jun 27		578		118			0	44	11	882	0	38.1	0.0	4.4	63.0
Jun 28		362		109			2	42	15	1,603	4	42.3	0.0	4.8	63.0
Jun 29		239		77			0	42	14	2,837	2	36.8	0.0	4.9	64.0
Jun 30		330		107			0	58	26	1,567	2	38.2	0.0	5.0	64.0
TOTAL	12,441	10,022		3,666			10	586	165	12,655	51				
AVG.	829	668		122			0	20	6	422	2	88.3	16.8	3.1	59.1

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	69,017	7,079
SUMMER	10,022	1708
TOTALS	79,039	8,787

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
10	2,696	1,483	12,671	53

TABLE 114

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

LITTLE GOOSE PROJECT
JULY 2003

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	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Jul 1		452		149			0	103	23	2,585	4	40.2	0.0	5.0	64.0
Jul 2		480		127			0	126	25	1,481	4	35.4	0.0	5.0	64.0
Jul 3		349		168			1	74	28	3,751	4	35.9	0.0	5.0	64.0
Jul 4		188		136			0	88	30	2,900	4	35.1	0.0	5.1	65.0
Jul 5		272		121			0	108	35	2,574	4	35.5	0.0	5.1	65.0
Jul 6		383		157			1	116	22	3,264	2	28.4	0.0	5.1	65.0
Jul 7		240		85			0	73	23	5,224	6	33.3	0.0	5.1	65.0
Jul 8		176		90			5	144	41	3,940	5	36.3	0.0	5.1	66.0
Jul 9		275		106			0	214	91	3,803	4	36.1	0.0	5.3	66.0
Jul 10		140		84			0	250	90	2,404	5	33.8	0.0	5.4	66.0
Jul 11		169		77			0	216	92	1,946	1	37.5	0.0	5.5	66.0
Jul 12		117		38			0	134	48	1,123	4	36.1	0.0	5.5	68.0
Jul 13		136		53			1	319	106	839	5	28.7	0.0	5.5	69.0
Jul 14		134		61			0	260	82	989	8	29.0	0.0	5.5	69.0
Jul 15		65		37			0	163	54	976	4	33.5	0.0	5.6	69.0
Jul 16		59		38			0	125	52	1,136	4	41.5	0.0	5.8	69.0
Jul 17		71		23			0	188	69	893	4	29.7	0.0	5.8	69.0
Jul 18		65		32			0	162	48	718	6	34.3	0.0	5.6	69.0
Jul 19		22		18			0	143	59	330	4	32.0	0.0	5.6	69.0
Jul 20		26		31			0	175	71	230	5	30.7	0.0	5.6	69.0
Jul 21		38		22			0	167	73	422	16	31.6	0.0	6.0	68.0
Jul 22		26		8			0	194	61	777	8	36.1	0.0	6.0	68.0
Jul 23		31		22			0	155	43	292	11	30.3	0.0	6.0	69.0
Jul 24		22		23			0	136	49	208	12	32.3	0.0	6.0	69.0
Jul 25		31		18			0	149	66	353	8	28.8	0.0	6.0	69.0
Jul 26		25		12			0	184	82	204	14	26.3	0.0	6.0	69.0
Jul 27		22		12			0	125	59	154	16	30.5	0.0	6.0	69.0
Jul 28		18		7			0	121	52	25	12	28.3	0.0	6.0	69.0
Jul 29		8		7			4	80	28	66	10	27.3	0.0	6.0	69.0
Jul 30		8		6			0	116	44	34	10	28.0	0.0	6.0	69.0
Jul 31		20		2			0	133	50	20	8	31.0	0.0	6.0	69.0
TOTAL		4,068		1,770			12	4,741	1,696	43,661	212				
AVG.		131		57			0	153	55	1,408	7	32.7	0.0	5.6	67.5

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	69,017	7,079
SUMMER	14,090	3478
TOTAL	83,107	10,557

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
22	7,437	3,179	56,332	265

TABLE 115

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

LITTLE GOOSE PROJECT
AUGUST 2003

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
Aug 1		25		7	0			126	58	49	31
Aug 2		24		2	0			121	48	50	22
Aug 3		18		2	0			89	38	26	11
Aug 4		5		6	0			90	30	14	8
Aug 5		7		6	0			84	24	71	13
Aug 6		23		6	0			143	54	44	12
Aug 7		8		5	0			145	55	25	11
Aug 8		22		2	0			217	82	26	7
Aug 9		16		2	0			188	74	8	14
Aug 10		25		12	0			226	83	8	19
Aug 11		16		5	1			320	86	13	16
Aug 12		24		4	0			328	61	37	18
Aug 13		16		0	0			182	48	24	5
Aug 14		7		0	0			136	25	23	8
Aug 15		14		0	0			176	48	18	8
Aug 16			18	0	0			269	79	13	12
Aug 17			26	1	0			188	48	12	6
Aug 18			24	1	0			223	74	10	12
Aug 19			24	1	0			164	43	10	11
Aug 20			36	2	0			181	67	10	2
Aug 21			13	0	0			152	30	1	5
Aug 22			17	1	0			192	50	0	5
Aug 23			53	0	0			288	77	0	16
Aug 24			41	1	0			287	78	4	10
Aug 25			28	4	0			299	79	0	4
Aug 26			46	12	0			425	133	2	1
Aug 27			28	2	0			335	103	0	1
Aug 28			31	5	0			344	92	0	4
Aug 29			31	1	0			270	67	1	2
Aug 30			28	11	0			254	67	1	1
Aug 31			30	4	0			259	58	2	2
TOTAL		250	474	105	1			6,701	1,959	502	297
AVG.		17	30	3	0			216	63	16	10

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Aug 1	29.1	0.0	6.0	69.0
Aug 2	30.2	0.0	6.0	69.0
Aug 3	24.9	0.0	6.0	69.0
Aug 4	24.6	0.0	6.0	70.0
Aug 5	28.1	0.0	6.0	70.0
Aug 6	28.0	0.0	6.0	70.0
Aug 7	29.5	0.0	6.0	70.0
Aug 8	31.3	0.0	6.0	70.0
Aug 9	30.0	0.0	6.0	70.0
Aug 10	30.0	0.0	6.0	70.0
Aug 11	29.3	0.0	6.0	69.0
Aug 12	30.5	0.0	6.0	69.0
Aug 13	25.1	0.0	6.0	69.0
Aug 14	29.0	0.0	6.0	69.0
Aug 15	24.5	0.0	6.0	69.0
Aug 16	26.1	0.0	6.0	69.0
Aug 17	21.6	0.0	6.0	69.0
Aug 18	25.8	0.0	6.0	69.0
Aug 19	28.8	0.0	6.0	69.0
Aug 20	24.9	0.0	6.0	69.0
Aug 21	20.5	0.0	6.0	69.0
Aug 22	21.1	0.0	6.0	69.0
Aug 23	19.7	0.0	6.0	69.0
Aug 24	20.2	0.0	6.0	69.0
Aug 25	22.8	0.0	6.0	69.0
Aug 26	29.4	0.0	6.0	69.0
Aug 27	30.1	0.0	5.0	69.0
Aug 28	17.2	0.0	5.1	69.0
Aug 29	21.6	0.0	5.3	68.0
Aug 30	30.7	0.0	6.0	68.0
Aug 31	18.0	0.0	6.0	68.0
AVG.	25.9	0.0	5.9	69.1

RUN YEAR TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK	COHO ADULT	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
SPRING	69,017	7,079	1	22	14,138	5,138	56,834	562
SUMMER	14,340	3,537						
FALL	474	46						
TOTALS	83,831	10,662						

TABLE 116

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

LITTLE GOOSE PROJECT
SEPTEMBER 2003

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	PINK	LAMPREY
Sep 1			32	0	0	0	0	216	65	0	4
Sep 2			26	1	0	0	0	144	34	0	4
Sep 3			70	10	0	0	0	277	52	0	8
Sep 4			78	10	0	0	0	210	53	0	7
Sep 5			97	10	0	0	0	223	67	0	1
Sep 6			157	22	0	0	0	289	89	0	1
Sep 7			318	30	0	0	0	464	131	0	4
Sep 8			344	31	0	0	0	824	251	0	4
Sep 9			329	56	0	0	0	1,670	524	0	4
Sep 10			292	56	0	0	0	1,788	560	0	4
Sep 11			168	50	0	0	0	1,872	592	0	0
Sep 12			480	182	1	0	0	3,353	926	0	6
Sep 13			461	140	0	0	0	2,112	640	0	2
Sep 14			178	65	1	0	0	1,384	343	0	4
Sep 15			742	173	0	0	0	2,166	580	0	1
Sep 16			415	130	0	0	0	2,680	732	0	1
Sep 17			388	110	4	0	0	3,108	733	0	0
Sep 18			506	151	0	0	0	3,077	779	0	4
Sep 19			835	211	7	1	0	4,814	1262	0	2
Sep 20			660	148	8	4	0	3,949	1116	0	4
Sep 21			451	122	5	0	0	3,697	1002	0	0
Sep 22			422	180	14	4	1	3,353	1068	1	5
Sep 23			535	240	11	1	0	4,370	1240	0	1
Sep 24			382	227	8	0	0	3,290	847	0	2
Sep 25			534	371	14	0	0	4,753	1240	0	5
Sep 26			362	160	29	4	0	5,903	1475	0	0
Sep 27			224	154	13	0	0	4,397	1022	1	0
Sep 28			396	210	10	0	0	5,641	1301	0	2
Sep 29			251	185	5	2	0	4,974	1172	1	0
Sep 30			246	234	17	0	0	6,175	1426	0	0
TOTAL			10,379	3,669	147	16	1	81,173	21,322	3	80
AVG.			346	122	5	1	0	2,706	711	0	3

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Sep 1	15.8	0.0	5.8	68.0
Sep 2	22.3	0.0	5.8	68.0
Sep 3	26.3	0.0	5.8	68.0
Sep 4	26.4	0.0	5.8	68.0
Sep 5	32.1	0.0	6.0	69.0
Sep 6	18.3	0.0	6.0	69.0
Sep 7	22.0	0.0	5.7	69.0
Sep 8	26.7	0.0	5.8	69.0
Sep 9	17.4	0.0	5.0	69.0
Sep 10	20.5	0.0	5.0	69.0
Sep 11	20.4	0.0	4.5	68.0
Sep 12	19.6	0.0	4.5	68.0
Sep 13	22.3	0.0	4.5	68.0
Sep 14	17.7	0.0	4.8	68.0
Sep 15	21.4	0.0	4.5	68.0
Sep 16	18.9	0.0	4.8	67.0
Sep 17	17.3	0.0	4.8	67.0
Sep 18	17.8	0.0	4.8	66.0
Sep 19	20.1	0.0	4.8	66.0
Sep 20	20.9	0.0	5.2	66.0
Sep 21	18.2	0.0	5.2	66.0
Sep 22	21.8	0.0	5.2	66.0
Sep 23	20.3	0.0	5.2	66.0
Sep 24	23.8	0.0	5.6	66.0
Sep 25	19.2	0.0	5.7	65.0
Sep 26	21.5	0.0	5.8	65.0
Sep 27	21.5	0.0	5.8	65.0
Sep 28	13.7	0.0	5.8	65.0
Sep 29	13.4	0.0	5.8	65.0
Sep 30	17.3	0.0	5.8	65.0
AVG.	20.5	0.0	5.3	67.1

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	69,017	7,079
SUMMER	14,340	3,537
FALL	10,853	3,715
TOTALS	94,210	14,331

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK
148	16	23	95,311	26,460	56,834	642	3

TABLE 117

MONTHLY FISH PASSAGE SUMMARY REPORT | **LITTLE GOOSE PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND | **OCTOBER 2003**

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	CHUM	STEELHEAD	STEELHEAD	PINK	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Oct 1			408	239	8	0	0	5,098	1256	0	0	16.7	0.0	6.0	65.0
Oct 2			246	172	23	0	0	3,991	914	0	0	18.4	0.0	6.0	65.0
Oct 3			148	150	18	1	0	3,461	727	0	0	17.0	0.0	6.0	65.0
Oct 4			275	204	12	0	0	3,841	1037	0	1	17.9	0.0	6.0	65.0
Oct 5			187	155	13	0	0	4,127	1018	0	1	14.5	0.0	6.0	65.0
Oct 6			161	174	11	0	0	4,212	1054	0	0	15.5	0.0	6.0	66.0
Oct 7			119	136	28	1	0	3,986	920	0	-1	15.8	0.0	6.0	65.0
Oct 8			155	144	16	2	0	4,232	971	0	0	16.1	0.0	6.0	65.0
Oct 9			209	164	34	4	0	4,356	1134	0	0	14.6	0.0	6.0	65.0
Oct 10			136	148	43	4	0	3,380	833	0	0	16.7	0.0	6.0	65.0
Oct 11			144	132	16	13	0	2,675	652	0	4	15.5	0.0	6.0	64.0
Oct 12			124	107	11	2	0	2,716	731	0	1	14.0	0.0	5.8	64.0
Oct 13			106	110	18	4	0	1,940	518	0	1	14.5	0.0	5.8	64.0
Oct 14			79	79	19	1	0	1,052	239	0	0	14.6	0.0	5.8	64.0
Oct 15			80	74	8	0	0	1,171	300	0	-1	15.4	0.0	5.8	64.0
Oct 16			36	54	7	2	0	859	187	0	1	15.5	0.0	5.5	64.0
Oct 17			55	72	17	7	0	1,206	323	0	0	15.0	0.0	5.4	64.0
Oct 18			62	90	17	5	0	1,190	323	1	1	14.7	0.0	6.0	63.0
Oct 19			58	64	23	4	0	1,186	312	0	1	13.7	0.0	6.0	63.0
Oct 20			24	11	12	1	0	710	168	0	2	16.0	0.0	6.0	62.0
Oct 21			30	40	17	0	0	773	190	0	2	16.4	0.0	6.0	62.0
Oct 22			40	46	22	2	0	1,373	342	0	0	15.6	0.0	6.0	62.0
Oct 23			35	32	34	0	0	1,232	314	0	2	15.4	0.0	6.0	62.0
Oct 24			35	30	11	1	0	967	238	0	0	17.7	0.0	6.0	61.0
Oct 25			24	35	32	0	0	733	190	0	0	14.5	0.0	6.0	61.0
Oct 26			16	17	16	1	0	763	203	0	0	14.6	0.0	6.0	61.0
Oct 27			17	24	12	0	0	726	193	0	1	13.5	0.0	6.0	61.0
Oct 28			12	23	7	1	1	671	193	0	2	14.6	0.0	6.0	61.0
Oct 29			43	34	20	0	0	1,057	284	0	0	14.2	0.0	6.0	61.0
Oct 30			10	25	37	1	0	1,028	282	0	0	15.0	0.0	6.0	60.0
Oct 31			23	35	24	0	0	1,003	274	0	0	17.3	0.0	6.0	60.0
TOTAL			3,097	2,820	586	57	1	65,715	16,320	1	18				
AVG.			100	91	19	2	0	2,120	526	0	1	15.5	0.0	5.9	63.2

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	69,017	7,079
SUMMER	14,340	3,537
FALL	13,950	6,535
TOTALS	97,307	17,151

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK	CHUM
734	73	23	161,026	42,780	56,834	660	4	1

TABLE 118

MONTHLY FISH PASSAGE SUMMARY REPORT — **LITTLE GOOSE PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND — **NOVEMBER 2003**

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Nov 1			32	11	1	0		522	137			17.2	0.0		
Nov 2			54	9	2	0		507	142			14.0	0.0		
Nov 3			39	14	1	0		258	76			14.6	0.0		
Nov 4			32	23	3	0		219	96			14.9	0.0		
Nov 5			11	6	2	0		147	57			15.2	0.0		
Nov 6			14	9	4	0		319	37			14.4	0.0		
Nov 7			11	9	7	0		168	91			14.2	0.0		
Nov 8			3	3	6	1		146	47			14.1	0.0		
Nov 9			5	2	3	2		113	39			13.3	0.0		
Nov 10			4	3	3	1		261	34			13.4	0.0		
Nov 11			4	2	6	1		135	72			16.3	0.0		
Nov 12			12	6	2	1		157	38			18.8	0.0		
Nov 13			15	4	1	0		187	105			28.7	0.0		
Nov 14			10	4	1	0		157	47			23.0	0.0		
Nov 15			7	6	2	0		187	24			14.0	0.0		
Nov 16			3	3	1	0		76	16			13.3	0.0		
Nov 17			5	2	0	0		55	52			13.2	0.0		
Nov 18			1	0	1	1		136	30			16.3	0.0		
Nov 19			1	0	0	0		173	43			13.6	0.0		
Nov 20			6	1	1	0		74	25			13.7	0.0		
Nov 21			6	0	0	0		114	32			13.4	0.0		
Nov 22			6	1	1	0		122	30			13.2	0.0		
Nov 23			2	3	0	0		95	28			14.3	0.0		
Nov 24			2	1	1	0		124	36			15.9	0.0		
Nov 25			4	1	0	0		98	33			13.3	0.0		
Nov 26			5	0	0	0		89	25			17.1	0.0		
Nov 27			8	0	0	0		120	34			13.6	0.0		
Nov 28			6	0	0	0		89	25			13.5	0.0		
Nov 29			2	0	0	0		83	22			13.7	0.0		
Nov 30			0	0	1	0		89	31			13.5	0.0		
TOTAL			310	123	50	7		5,020	1,504						
AVG.			10	4	2	0		167	50			15.3	0.0		

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	69,017	7,079
SUMMER	14,340	3,537
FALL	13,950	6,535
TOTALS	97,307	17,151

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK	CHUM
734	73	23	161,026	42,780	56,834	660	4	1

Note: From November 1 - Dec 31, counts were from video tape. The counts are 10-hour counts and occurred between the hours of 0600-1600 PST. Visual counting ended October 31.

Official Fall Chinook run ended October 31. November and December Chinook counts were not added to fall totals.

TABLE 119

MONTHLY FISH PASSAGE SUMMARY REPORT | **LITTLE GOOSE PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND | **DECEMBER 2003**

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Dec 1			0	0	0			56	12			16.3	0.0		
Dec 2			0	0	0			63	16			21.6	0.0		
Dec 3			1	0	1			58	17			14.5	0.0		
Dec 4			0	0	0			28	7			18.0	0.0		
Dec 5			0	1	0			68	16			14.2	0.0		
Dec 6			1	2	0			43	10			16.0	0.0		
Dec 7			0	0	0			27	13			18.2	0.0		
Dec 8			0	1	0			34	25			19.9	0.0		
Dec 9			0	0	0			42	11			19.8	0.0		
Dec 10			0	0	0			28	11			19.9	0.0		
Dec 11			0	0	0			7	4			18.0	0.0		
Dec 12			0	0	0			20	7			20.7	0.0		
Dec 13			0	0	0			26	7			15.7	0.0		
Dec 14			0	0	0			36	12			12.1	0.0		
Dec 15			0	0	0			40	8			18.2	0.0		
Dec 16			0	0	0			44	17			21.7	0.0		
Dec 17			0	0	0			37	8			19.6	0.0		
Dec 18			0	0	0			14	4			16.3	0.0		
Dec 19			0	0	0			26	7			14.0	0.0		
Dec 20			1	0	0			30	9			16.6	0.0		
Dec 21			0	0	0			20	6			10.2	0.0		
Dec 22			0	0	0			19	3			21.1	0.0		
Dec 23			0	0	0			26	4			18.8	0.0		
Dec 24			0	0	0			24	8			14.7	0.0		
Dec 25			0	0	0			31	12			17.0	0.0		
Dec 26			0	0	0			46	13			16.1	0.0		
Dec 27			0	1	0			39	10			19.9	0.0		
Dec 28			0	1	0			26	8			13.3	0.0		
Dec 29			0	0	0			23	5			24.4	0.0		
Dec 30			0	0	0			21	5			23.1	0.0		
Dec 31			0	0	0			24	7			15.1	0.0		
TOTAL			3	6	1			1,026	302						
AVG.			0	0	0			33	10			17.6	0.0		

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	69,017	7,079
SUMMER	14,340	3,537
FALL	13,950	6,535
TOTALS	97,307	17,151

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK	CHUM
734	73	23	161,026	42,780	56,834	660	4	1

Note: From November 1 - Dec 31, counts were from video tape. The counts are 10-hour counts and occurred between the hours of 0600-1600 PST. Visual counting ended October 31.

Official Fall Chinook run ended October 31. November and December Chinook counts were not added to fall totals.

TABLE 120

YEARLY TOTALS OF SALMONIDS COUNTED COUNTED OVER LITTLE GOOSE DAM
1970 - 1981, 1991 - 2003

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	0	144,456
1993	32,384	59,740	16	0	92,140
1994	5,457	45,815	44	0	51,316
1995	5,061	77,744	17	9	82,831
1996	13,538	82,203	1	0	95,742
1997	49,664	74,219	10	59	123,952
1998	19,798	63,753	5	1	83,557
1999	17,235	65,471	16	89	82,811
2000	62,886	101,030	296	313	164,525
2001	214,726	261,132	72	768	476,698
2002	119,429	215,251	38	133	334,851
2003	114,458	161,026	23	807	276,314
Total	1,197,865	1,875,597	4,257	12,658	3,090,377
1972-1981 10-Yr Avg	36,837	32,403	264	530	70,035
1994-2003 10-yr Avg	62,225	114,764	52	218	177,260

***Jacks included**
****1981 was the last year visual counts were made at Little Goose Project until 1991.**
Includes 2001 extended season counts for November and December 0600-1600 PST.
Includes 2002 extended season counts for February and March 0800-1600 PST and November and December 0600-1600 PST.
Includes 2003 extended season counts for January, February, and March 0800-1600 PS and November and December 0600-1600 PST.

TABLE 121

MONTHLY COUNT OF CHINOOK SALMON
LITTLE GOOSE DAM; 1970-1981, 1991-2003

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
1998				1,327	6,787	5,655	1,422	207	2,020	2,380			19,798
1999				73	3,990	4,878	1,937	432	3,787	2,138			17,235
2000				7,510	31,034	11,091	2,680	749	5,148	4,674			62,886
2001				96,386	61,247	31,686	6,792	1,082	12,222	4,953	356	2	214,726
2002			1	1,807	60,391	32,782	6,846	1,493	12,631	3,374	96	8	119,429
2003			2	32,082	29,615	26,129	5,838	829	14,048	5,917	433	9	114,902
Total			3	207,568	495,917	259,530	110,509	13,252	76,747	33,288	1,468	27	1,198,309
**1972-1981 10-Year Average				5,003	18,657	6,421	4,851	498	981	421			36,837
**1994-2003 10-Year Average				14,014	22,834	13,601	3,074	561	5,445	2,646			62,270

**1981 was the last year visual counts were made at Little Goose Project until 1991.
*Jacks included
Includes 2001 extended season counts for November and December 0600-1600 PST.
Includes 2002 extended season counts for February and March 0800-1600 PST and November and December 0600-1600 PST.
Includes 2003 extended season counts for January, February, and March 0800-1600 PST and November and December 0600-1600 PST.

TABLE 122

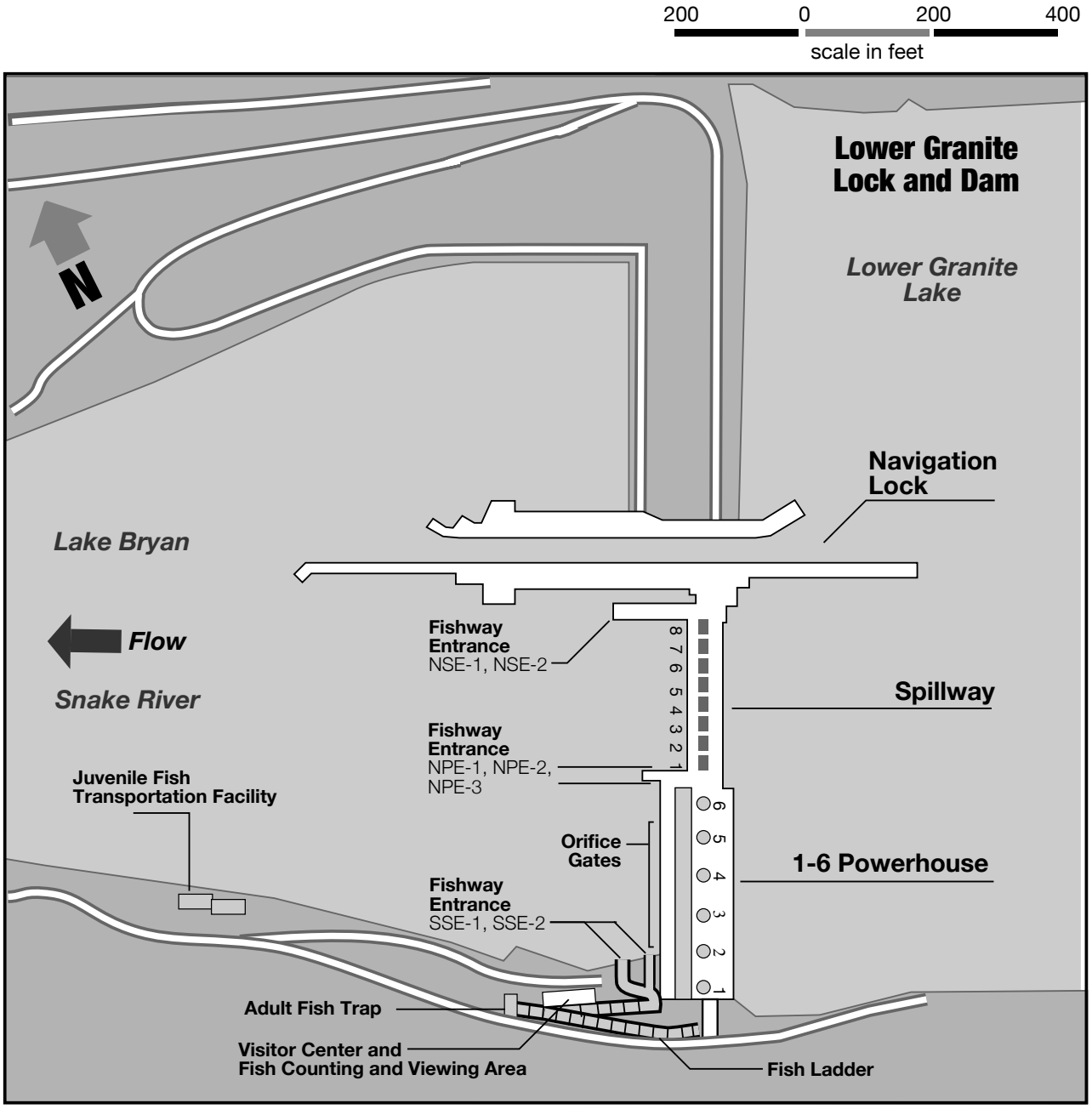
MONTHLY COUNT OF STEELHEAD
LITTLE GOOSE DAM

1970 - 1981, 1991 - 2003

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
1998				1,924	107	139	1,090	912	12,939	46,642			63,753
1999				841	78	61	1,796	7,444	33,818	21,433			65,471
2000				841	112	384	3,355	5,361	54,244	36,733			101,030
2001				1,818	179	1,505	9,814	17,590	111,452	90,311	20,313	8150	261,132
2002		1,387	3,342	5,873	294	455	5,853	21,066	86,596	83,357	5,483	1545	215,251
2003	310	2,067	6,744	2,001	109	586	4,741	6,701	81,173	65,715	5,020	1026	176,193
Total	978	4,154	16,603	41,939	9,880	5,036	53,200	133,419	776,322	772,798	63,990	12,435	1,890,754
1972-1981 10-Yr Avg				1,564	445	63	1,097	3,225	12,337	12,898			32,402
1994-2003 Average 10-Yr Avg				1,734	156	360	3,322	8,125	48,689	47,725			116,281

** 1981 was the last year visual counts were made at Little Goose Project until 1991.
Includes 2001 extended season counts for November and December 0600-1600 PST.
Includes 2002 extended season counts for February and March 0800-1600 PST and November and December 0600-1600 PST.
Includes 2003 extended season counts for January, February, and March 0800-1600 PST and November and December 0600-1600 PST.

Plate 9 Lower Granite Lock and Dam



LOWER GRANITE DAM

FISH COUNTING SCHEDULE

1 Jan – 28 Feb	No counting.
1 Mar – 31 Mar	Video counting daily 0600-1600 hours PST.
1 Apr – 31 Oct	Visual counting daily 0400-2000 hours PST.
15 Jun – 31 Aug	Video counting 24 hours per day.
1 Nov – 15 Dec	Video counting daily 0600-1600 hours PST.
16 Dec – 31 Dec	No counting.

FISH LADDER OPERATING SCHEDULE

Project Ladder

1 Jan – 5 Jan	Ladder in service.
6 Jan – 18 Feb	Ladder out of service for annual maintenance.
19 Feb	Ladder in service
20 Feb – 3 Mar	Ladder out of service to repair window leaks.
4 Mar – 31 Dec	Ladder in service.

FISHWAY ACTIVITIES

Adult chinook and steelhead were radio-tracked past the dam in 2003 as part of a broader, ongoing study to evaluate fish passage from below Bonneville Dam to above Lower Granite Dam.

Water temperatures were recorded hourly in seven locations within the adult fishway during the fish passage season. The purpose of this effort, ongoing since 1999, is to determine if thermal barriers exist and take corrective action if needed.

Adult PIT tag detectors were installed around submerged orifices and vertical slots in the ladder during the winter outage.

The Walla Walla District continued a hydraulic evaluation of the adult fishway in 2003 to analyze existing operating conditions and investigate alternatives to improve fish passage.

NOAA Fisheries operated the adult fish trap from March 3 to August 1 and September 9 to November 20. The trap was shut down during the warmer part of the summer due to high water temperatures. The trap was used for coded wire tag detection, sort-by-code, reconstructing the fall chinook run, radio tagging coho and steelhead, evaluation of fish transportation, sampling for headburns, and recapturing radiotagged chinook and steelhead.

The gearbox for AWS pump 1 was replaced and various modifications were made to pumps 2 and 3 during the winter outage. The windows in the fish ladder viewing room and fish counting slot were also replaced.

The juvenile fish facility was operated for juvenile fish transport/bypass and adult fallbacks from 19 March to 18 December.

Lower Granite Fish Count Schedule 1975-2003 (informed based on previous Annual Fish Passage Reports)
16 hour counts occurred between the hours of 0400-2000 PST unless otherwise stated.
8 hour counts occurred between the hours of 0800-1600 PST unless otherwise stated.

Year	Months	Count Period	Notes
1975	Feb 19 – Mar 30	8 hour (0800-1600 ST)	50 min counts. 1.2 factor applied unless otherwise stated.
	Apr 1 – Oct 31	16 hour (0400-2000 ST)	Additional counts, 16 hour, were conducted at a temporary counting Station from Jul 11 – Oct 31.
	Nov 1 – Dec 31	8 hour	
1976	Jan 1 – Mar 31	8 hour	
	Apr 1 – Oct 31	16 hour	
	Nov 1 – Dec 14	8 hour	
1977	Feb 1 – Mar 31	8 hour	
	Apr 1 – Oct 31	16 hour	
	Nov 1 – Dec 31	8 hour	
1978	Jan 1 – Mar 31	8 hour	
	Apr 1 – Oct 31	16 hour	
	Nov 1 – Dec 31	8 hour	
1979	Apr 1 – Oct 31	16 hour	
	Nov 1 – Dec 15	8 hour	
1980	Mar 1 - 31	8 hour	
	Apr 1 – Oct 31	16 hour	
	Nov 1 – 30	8 hour	
1981	Mar 3 – 31	8 hour	
	Apr 1 – Oct 31	16 hour	
	Nov 1 – Dec 31	8 hour	
1982-88	Mar 1 – 31	8 hour	
	Apr 1 – Oct 31	16 hour	
	Nov 1 – Dec 15	8 hour	
1989 - 91	Mar 1 – 31	8 hour	
	Apr 1 – Oct 31	16 hour	
	Nov 1 – Dec 15	10 hour (0600-1600 PST)	
1992	Mar 1 –12, 31	8 hour	
	Mar 13 – 30	No counting	
	Apr 1 – Oct 31	16 hour	

Year	Months	Count Period	Notes
	Nov 1 – Dec 15	10 hour (0600-1600PST)	
1993	Mar 1 – 31	8 hour	
	Apr 1 – Oct 31	16 hour	
	Nov 1 – Dec 15	10 hour (0600-1600PST)	
1994	Mar 1 – 31	8 hour	
	Apr 1 – Oct 31	16 hour + 8 hour video	
	Jun 15 – Aug 31	24 hour video for BB	
	Nov 1 – Dec 15	10 hour + 14 hour video	
1995	Mar 1 – 31	8 hour	
	Apr 1 – Oct 31	16 hour + 8 hour video	
	Nov 1 – Dec 15	10 hour + 14 hour video	
1996	Mar 1 – 31	8 hour video	
	Apr 1 – Oct 31	16 hour + 8 hour video	
	Nov 1 – Dec 15	24 hour video	
1997-2002	Mar 1 – 31	8 hour video	
	Apr 1 – Oct 31	16 hour	
	Apr 1 – Jun 14	8 hour video	
	Jun 15 – Aug 31	24 hour video	
	Sep 1 – Oct 31	8 hour video	
	Nov 1 – Dec 15	24 hour video	

TABLE 123

MONTHLY TOTALS OF SALMONIDS, SHAD, AND LAMPREY COUNTED OVER LOWER GRANITE DAM
MARCH 1 THROUGH DECEMBER 31, 2003

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*			10	29,379	30,358	31,808	7,467	817	12,616	6,990	228	3	119,676
STEELHEAD			13,038	2,583	182	398	3,169	5,108	71,337	77,100	7,157	600	180,672
SOCKEYE						2	8	1					11
COHO*									173	904	188		1,265
PINK									1				1
TOTAL			13,048	31,962	30,540	32,208	10,644	5,926	84,126	84,994	7,573	603	301,625
SHAD					6	2,631	14,797	111					17,545
LAMPREY						9	52	197	22	2			282

***Jacks included**

These counts include the extended season videotaped counts that were made between 0600 and 1600 hours in November and December. Shad are not counted after September 1st.

TABLE 124

DISCHARGE AND WATER QUALITY DATA

LOWER GRANITE PROJECT 2003

JANUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI*	TURBIDITY DEG F*
Jan 1	17.1	0.0		
Jan 2	14.6	0.0		
Jan 3	16.6	0.0		
Jan 4	20.7	0.0		
Jan 5	16.3	0.0		
Jan 6	21.2	0.0		
Jan 7	19.5	0.0		
Jan 8	18.0	0.0		
Jan 9	18.7	0.0		
Jan 10	19.1	0.0		
Jan 11	18.4	0.0		
Jan 12	14.8	0.0		
Jan 13	16.0	0.0		
Jan 14	17.2	0.0		
Jan 15	20.2	0.0		
Jan 16	20.9	0.0		
Jan 17	24.4	0.0		
Jan 18	21.5	0.0		
Jan 19	18.6	0.0		
Jan 20	19.1	0.0		
Jan 21	16.3	0.0		
Jan 22	25.7	2.0		
Jan 23	22.2	0.0		
Jan 24	23.5	0.0		
Jan 25	22.5	0.0		
Jan 26	20.2	0.0		
Jan 27	27.3	0.0		
Jan 28	42.9	0.0		
Jan 29	44.9	0.0		
Jan 30	40.7	0.0		
Jan 31	54.6	0.0		
AVG.	23.0	0.1		

FEBRUARY

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI*	TURBIDITY DEG F*
Feb 1	72.5	7.7		
Feb 2	69.0	4.3		
Feb 3	58.5	0.0		
Feb 4	51.1	0.0		
Feb 5	38.7	0.0		
Feb 6	40.4	0.0		
Feb 7	35.7	0.0		
Feb 8	36.6	0.0		
Feb 9	33.3	0.0		
Feb 10	23.8	0.0		
Feb 11	33.6	0.0		
Feb 12	27.1	0.0		
Feb 13	30.0	0.0		
Feb 14	26.6	0.0		
Feb 15	25.1	0.0		
Feb 16	24.7	0.0		
Feb 17	27.8	0.0		
Feb 18	24.1	0.0		
Feb 19	26.5	0.0		
Feb 20	27.0	0.0		
Feb 21	34.1	0.0		
Feb 22	32.7	0.0		
Feb 23	34.2	0.0		
Feb 24	36.5	0.0		
Feb 25	32.3	0.0		
Feb 26	25.3	0.0		
Feb 27	22.1	0.0		
Feb 28	30.6	0.0		
AVG.	35.0	0.4		

***All water temperature and turbidity data unavailable.**

TABLE 125

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER GRANITE PROJECT

MARCH 2003

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	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Mar 1	0							171	22			28.5	0.0	6.0	37.0
Mar 2	0							56	6			20.8	0.0	6.0	37.0
Mar 3	0							35	9			23.4	0.0	*	*
Mar 4	0							30	6			28.9	0.0	*	*
Mar 5	0							10	0			30.5	0.0	6.0	37.0
Mar 6	0							0	0			26.6	0.0	6.0	37.0
Mar 7	0							153	31			32.3	0.0	6.0	37.0
Mar 8	0							229	46			30.0	0.0	6.0	33.0
Mar 9	0							1204	194			36.4	0.0	6.0	33.0
Mar 10	0							610	108			38.0	0.0	6.0	39.0
Mar 11	0							1255	232			46.7	0.0	6.0	39.0
Mar 12	0							940	176			54.2	0.0	4.2	40.0
Mar 13	0							1580	226			69.8	0.0	4.7	40.0
Mar 14	0							1100	131			60.4	0.0	4.9	41.0
Mar 15	0							696	74			58.6	0.0	4.9	43.0
Mar 16	0							755	76			60.7	0.0	4.9	43.0
Mar 17	0							703	71			56.9	0.0	1.2	43.0
Mar 18	0							578	61			57.3	0.0	1.2	43.0
Mar 19	0							328	34			55.4	0.0	1.2	43.0
Mar 20	0							328	38			47.6	0.0	1.2	43.0
Mar 21	0							262	23			38.3	0.0	1.9	43.0
Mar 22	0							164	14			38.2	0.0	2.6	43.0
Mar 23	1							316	53			49.4	0.0	2.6	44.0
Mar 24	0							241	53			57.7	0.0	2.6	44.0
Mar 25	0							201	57			51.2	0.0	2.6	44.0
Mar 26	0							280	60			55.5	0.0	2.1	43.0
Mar 27	3							274	57			61.4	0.0	2.1	43.0
Mar 28	0							156	45			52.6	0.0	2.5	44.0
Mar 29	0							190	69			42.3	0.0	2.5	44.0
Mar 30	6							172	61			40.2	0.0	2.5	44.0
Mar 31	0							21	1			42.5	0.0	2.5	44.0
TOTAL	10							13,038	2,034						
AVG.	0							421	66			44.9	0.0	3.8	41.0

*Data unavailable

Note: March counts were from video tape. The counts are 10-hour counts and occurred between the hours of 0600-1600 PST.

TABLE 126

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER GRANITE PROJECT

APRIL 2003

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Apr 1	0			0				158	64			61.7	0.0	3.2	44.0
Apr 2	4			0				221	90			69.8	0.0	3.4	45.0
Apr 3	4			0				194	107			76.3	10.2	3.4	46.0
Apr 4	11			0				236	116			70.8	20.4	2.2	46.0
Apr 5	4			0				173	86			68.7	20.1	2.2	43.0
Apr 6	10			0				163	84			66.8	19.4	3.0	43.0
Apr 7	0			0				97	44			62.5	20.0	3.5	43.0
Apr 8	1			0				124	58			61.3	20.7	3.2	44.0
Apr 9	16			0				126	80			61.3	20.7	3.7	44.0
Apr 10	84			0				97	59			60.0	26.3	4.0	44.0
Apr 11	53			0				64	37			64.6	19.8	3.4	45.0
Apr 12	56			0				106	70			68.5	20.2	4.0	46.0
Apr 13	510			0				103	71			73.9	20.2	4.4	47.0
Apr 14	252			0				82	56			82.3	25.5	4.0	48.0
Apr 15	304			0				72	47			82.2	20.5	4.5	48.0
Apr 16	233			0				60	41			75.4	15.0	4.3	48.0
Apr 17	880			0				46	38			73.8	20.3	3.5	47.0
Apr 18	2,056			0				66	48			70.4	20.3	4.0	47.0
Apr 19	1,637			0				37	26			65.0	20.0	3.9	46.0
Apr 20	4,798			7				55	46			63.6	25.4	4.0	47.0
Apr 21	1,859			4				53	47			65.2	20.5	4.6	47.0
Apr 22	1,043			5				44	38			67.6	15.3	4.3	47.0
Apr 23	677			0				30	23			74.3	20.4	4.4	48.0
Apr 24	3,932			6				42	41			80.7	25.5	4.0	49.0
Apr 25	2,518			20				28	24			81.0	20.5	3.5	49.0
Apr 26	2,657			10				28	22			82.1	15.4	4.1	49.0
Apr 27	1,843			6				24	22			81.3	20.8	4.0	49.0
Apr 28	1,927			10				19	19			79.3	26.1	4.0	49.0
Apr 29	1,148			4				24	17			72.6	20.5	4.2	49.0
Apr 30	786			4				11	11			73.1	20.5	4.5	48.0
TOTAL	29,303			76				2,583	1,532						
AVG.	977			3				86	51			71.2	19.0	3.8	46.5

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	STEELHEAD	WILD STEELHEAD
	29,313	76	15,621	3,566

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST

TABLE 127

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

LOWER GRANITE PROJECT
MAY 2003

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
May 1	930			7				20	19	0	0	70.8	20.5	4.2	49.0
May 2	1,147			19				17	16	0	0	67.5	15.8	4.5	49.0
May 3	406			13				17	14	0	0	65.8	20.7	4.0	49.0
May 4	1,811			29				17	13	0	0	63.4	25.5	4.0	49.0
May 5	994			34				10	6	0	0	65.7	20.5	4.5	49.0
May 6	307			43				2	2	0	0	73.3	15.2	4.0	49.0
May 7	449			59				6	5	0	0	69.7	20.3	3.8	49.0
May 8	1,476			131				6	5	0	0	70.4	20.4	3.8	47.0
May 9	1,169			100				8	6	0	0	68.0	20.5	4.8	48.0
May 10	2,588			120				14	14	0	0	66.1	25.6	5.0	48.0
May 11	1,349			131				8	7	0	0	64.0	20.5	5.5	50.0
May 12	503			119				8	6	0	0	65.2	15.7	*	*
May 13	536			139				5	5	0	0	72.4	20.8	5.8	50.0
May 14	1,079			222				4	4	0	0	78.2	25.5	6.0	50.0
May 15	662			199				5	4	0	0	79.2	20.5	5.2	51.0
May 16	965			228				7	6	0	0	87.0	15.3	6.0	52.0
May 17	690			253				8	7	0	0	89.7	20.4	5.3	51.0
May 18	791			312				4	4	0	0	83.8	25.6	5.0	51.0
May 19	488			244				5	4	0	0	83.8	20.5	5.4	50.0
May 20	214			166				4	4	0	0	72.1	15.4	4.6	49.0
May 21	320			311				2	1	0	0	74.4	20.4	4.8	48.0
May 22	1,477			521				2	1	0	0	72.0	25.6	4.1	49.0
May 23	845			296				1	1	0	0	79.7	20.5	4.5	50.0
May 24	954			343				0	0	0	0	95.7	20.5	4.9	50.0
May 25	844			307				2	2	5	0	122.7	30.6	4.4	50.0
May 26	442			107				0	0	1	0	146.7	53.8	3.2	50.0
May 27	704			216				1	0	0	0	155.2	61.4	2.3	50.0
May 28	218			130				0	0	0	0	156.8	63.0	1.5	50.0
May 29	526			228				0	0	0	0	172.1	77.9	1.0	50.0
May 30	138			169				-1	-1	0	0	186.2	91.9	1.2	50.0
May 31	66			74				0	0	0	0	208.2	114.3	1.5	50.0
TOTAL	25,088			5,270				182	155	6	0				
AVG.	809			170				6	5	0	0	94.4	31.8	4.2	49.6

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
SPRING	54,401	5,346	15,803	3,721	6	0

*Data unavailable.

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

TABLE 128

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

LOWER GRANITE PROJECT
JUNE 2003

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Jun 1	35			35			0	0	0	0	0	190.8	96.5	0.9	53.0
Jun 2	46			70			0	0	0	0	0	165.9	72.2	1.0	53.0
Jun 3	490			252			0	0	0	0	0	149.1	55.6	1.2	54.0
Jun 4	1,290			265			0	2	0	0	1	133.0	43.2	1.4	54.0
Jun 5	955			198			0	0	0	2	0	118.1	30.1	1.5	54.0
Jun 6	719			173			0	1	1	18	0	114.7	27.0	1.9	55.0
Jun 7	866			131			0	0	0	20	0	108.7	24.5	2.3	56.0
Jun 8	684			107			0	2	1	23	0	111.0	26.0	2.5	56.0
Jun 9	949			161			0	1	1	64	1	109.0	31.3	2.2	58.0
Jun 10	1,506			194			0	1	0	25	0	110.5	31.0	2.7	58.0
Jun 11	1,522			264			1	5	4	30	0	109.7	25.8	2.7	58.0
Jun 12	782			175			0	7	0	10	0	101.8	20.8	2.9	58.0
Jun 13	1,933			217			0	8	2	43	1	97.3	20.1	3.1	59.0
Jun 14	1,223			230			0	10	1	28	0	86.0	20.3	3.3	59.0
Jun 15	1,206			126			0	10	0	44	1	80.9	20.8	4.0	60.0
Jun 16	947			184			1	8	1	59	0	82.2	20.8	4.2	60.0
Jun 17	1,055			167			0	10	2	28	0	83.0	20.4	4.2	61.0
Jun 18		979		152			0	7	0	23	1	80.2	20.3	4.6	62.0
Jun 19		958		118			0	17	4	48	0	73.3	20.4	4.2	62.0
Jun 20		2306		216			0	40	7	49	1	74.2	10.1	4.2	63.0
Jun 21		749		160			0	28	4	80	0	70.1	0.0	4.5	63.0
Jun 22		761		100			0	22	4	77	1	55.7	0.0	4.9	63.0
Jun 23		752		149			0	14	4	110	0	59.6	0.0	3.7	61.0
Jun 24		461		113			0	19	4	60	0	58.9	0.0	3.7	61.0
Jun 25		778		124			0	34	2	125	0	50.8	0.0	4.7	61.0
Jun 26		726		145			0	31	6	252	0	47.4	0.0	5.4	61.0
Jun 27		696		163			0	26	7	146	0	41.6	0.0	6.0	62.0
Jun 28		640		130			0	35	8	206	0	42.1	0.0	6.0	62.0
Jun 29		354		108			0	22	12	383	0	38.2	0.0	5.8	63.0
Jun 30		662		151			0	38	7	678	2	39.3	0.0	5.8	64.0
TOTAL	16,208	10,822		4,778			2	398	82	2,631	9				
AVG.	953	832		159			0	13	3	88	0	89.4	21.2	3.5	59.1

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	70,609	8,295
SUMMER	10,822	1829
TOTAL	81,431	10,124

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
2	16,201	3,803	2,637	9

Note: Visual counts occurred April 1 through October 31 from 0400-2000 PST (16 hour counts). Video counts were taken June 15 to August 31 from 2000 to 0400 PST (8 hour counts) Video counts were taken for the hourly 10 minute breaks during visual counting 0400-2000 PST. Therefore, 24 hour counts were made June 15 to August 31.

TABLE 129

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

LOWER GRANITE PROJECT
JULY 2003

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Jul 1		445		132			1	56	22	835	4	39.1	0.0	6.0	64.0
Jul 2		694		164			1	77	22	688	5	36.2	0.0	6.0	66.0
Jul 3		480		144			0	70	17	1,032	5	36.5	0.0	6.0	67.0
Jul 4		408		155			0	96	29	628	0	35.1	0.0	6.0	68.0
Jul 5		364		176			0	139	35	1,074	0	34.8	0.0	6.0	68.0
Jul 6		319		187			0	86	25	848	1	28.7	0.0	6.0	68.0
Jul 7		347		196			0	76	26	876	1	33.1	0.0	6.0	68.0
Jul 8		269		89			1	98	32	724	0	36.5	0.0	6.0	68.0
Jul 9		343		95			4	136	30	1,375	0	35.5	0.0	6.0	68.0
Jul 10		220		95			0	92	32	959	1	35.8	0.0	6.0	69.0
Jul 11		194		85			0	173	52	1,403	0	36.0	0.0	6.0	69.0
Jul 12		191		121			0	152	47	647	4	37.7	0.0	6.0	67.0
Jul 13		218		83			0	259	101	670	5	35.1	0.0	6.0	67.0
Jul 14		126		61			0	154	47	462	4	33.5	0.0	6.0	69.0
Jul 15		13		26			0	96	28	202	1	23.1	3.6	6.0	68.0
Jul 16		138		73			0	226	76	547	2	40.2	0.0	6.0	68.0
Jul 17		115		62			0	214	64	324	1	31.7	0.0	6.0	66.0
Jul 18		60		29			0	88	35	247	2	33.0	0.0	6.0	65.0
Jul 19		50		31			1	101	46	91	0	31.5	0.0	6.0	64.0
Jul 20		42		47			0	100	29	121	0	30.3	0.0	6.0	66.0
Jul 21		46		34			0	109	36	340	-1	31.8	0.0	6.0	66.0
Jul 22		28		12			0	62	29	118	1	34.6	0.0	6.0	64.0
Jul 23		16		7			0	25	11	70	-1	32.7	0.0	6.0	66.0
Jul 24		32		22			0	132	37	199	6	32.8	0.0	6.0	66.0
Jul 25		65		36			0	160	61	144	5	28.8	0.0	6.5	66.0
Jul 26		24		29			0	110	40	74	2	27.8	0.0	6.0	66.0
Jul 27		1		7			0	19	7	36	2	28.7	0.0	6.0	67.0
Jul 28		4		1			0	18	7	24	0	28.8	0.0	6.0	66.0
Jul 29		5		4			0	24	11	19	2	27.8	0.0	6.0	66.0
Jul 30		5		-1			0	11	11	14	0	28.9	1.9	6.0	65.0
Jul 31		2		1			0	10	8	6	0	30.7	0.0	6.0	64.0
TOTAL		5,264		2,203			8	3,169	1,053	14,797	52				
AVG.		170		71			0	102	34	477	2	32.8	0.2	6.0	66.6

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	70,609	8,295
SUMMER	16,086	4,032
TOTAL	86,695	12,327

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
10	19,370	4,856	17,434	61

Note: Visual counts occurred April 1 through October 31 from 0400-2000 PST (16 hour counts). Video counts were taken June 15 to August 31 from 2000 to 0400 PST (8 hour counts). Video counts were taken for the hourly 10 minute breaks during visual counting 0400-2000 PST. Therefore, 24 hour counts were made June 15 to August 31.

TABLE 130

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

LOWER GRANITE PROJECT
AUGUST 2003

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Aug 1		-1		0			0	20	7	4	2	29.5	0.0	6.0	64.0
Aug 2		16		6			0	85	31	5	2	30.9	0.0	6.0	65.0
Aug 3		10		5			0	46	20	-6	4	26.0	0.0	6.0	65.0
Aug 4		7		4			0	50	26	2	23	26.0	0.0	6.0	65.0
Aug 5		10		1			0	78	34	19	30	26.9	0.0	6.0	65.0
Aug 6		7		5			0	90	38	18	16	27.7	0.0	6.0	65.0
Aug 7		37		31			0	235	72	25	20	30.9	0.0	5.0	63.0
Aug 8		42		4			0	124	50	14	11	31.4	0.0	5.5	63.0
Aug 9		2		4			0	89	31	4	7	29.5	0.0	6.0	64.0
Aug 10		32		2			0	214	83	0	5	30.2	0.0	6.0	65.0
Aug 11		58		8			0	175	65	5	7	29.7	0.0	6.0	65.0
Aug 12		29		10			0	233	82	4	5	30.2	0.0	6.0	66.0
Aug 13		14		2			0	148	40	-1	8	24.0	0.0	6.0	66.0
Aug 14		17		1			0	119	49	4	1	22.4	0.0	6.0	66.0
Aug 15		10		0			0	82	35	5	7	26.1	0.0	5.2	66.0
Aug 16		34		17			0	239	80	-1	6	27.8	0.0	6.0	66.0
Aug 17		12		5			0	270	77	2	7	21.9	0.0	6.0	65.0
Aug 18			-1	6			0	186	52	1	4	25.2	0.0	6.0	65.0
Aug 19			7	0			0	114	38	1	1	27.8	0.0	6.0	65.0
Aug 20			12	4			1	197	53	2	1	24.7	0.0	6.0	65.0
Aug 21			20	4			0	128	36	0	5	21.7	0.0	6.0	65.0
Aug 22			10	0			0	89	28	0	2	19.7	0.0	6.0	65.0
Aug 23			19	1			0	115	32	0	1	21.4	0.0	6.0	64.0
Aug 24			14	1			0	234	82	0	11	20.2	0.0	6.0	65.0
Aug 25			30	5			0	179	66	2	2	23.2	0.0	6.0	65.0
Aug 26			31	7			0	149	49	1	1	29.8	0.0	6.0	65.0
Aug 27			40	16			0	517	142	0	0	28.9	0.0	6.0	65.0
Aug 28			18	6			0	198	60	0	1	16.4	5.2	6.0	65.0
Aug 29			59	5			0	318	98	0	4	24.7	5.6	6.0	66.0
Aug 30			24	4			0	251	62	0	1	29.5	0.0	6.0	66.0
Aug 31			30	4			0	136	32	1	2	21.0	0.0	6.0	67.0
TOTAL		336	313	168			1	5,108	1,650	111	197				
AVG		20	22	5			0	165	53	4	6	26.0	0.3	5.9	65.1

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	70,609	8,295
SUMMER	16,422	4,137
FALL	313	63
TOTAL	87,344	12,495

SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
11	24,478	6,506	17,545	258

Note: Visual counts occurred April 1 through October 31 from 0400-2000 PST (16 hour counts). Video counts were taken June 15 to August 31 from 2000 to 0400 PST (8 hour counts) Video counts were taken for the hourly 10 minute breaks during visual counting 0400-2000 PST. Therefore, 24 hour counts were made June 15 to August 31.

TABLE 131

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

LOWER GRANITE PROJECT
SEPTEMBER 2003

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	PINK	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Sep 1			22	4	0	0		116	32	0	2	22.6	0.0	6.0	67.0
Sep 2			37	8	0	0		91	28	0	1	22.8	0.0	5.0	67.0
Sep 3			14	0	0	0		66	22	0	-1	26.5	0.0	5.7	66.0
Sep 4			41	7	0	0		115	43	0	1	25.8	0.0	4.8	65.0
Sep 5			25	10	0	0		67	17	0	0	23.9	0.0	5.5	65.0
Sep 6			30	8	0	0		97	31	0	1	27.3	0.0	5.0	65.0
Sep 7			82	14	0	0		187	48	0	2	23.5	0.0	5.2	65.0
Sep 8			307	66	0	0		575	167	0	4	24.7	0.0	5.7	65.0
Sep 9			181	23	0	0		493	143	0	2	23.2	0.0	5.5	65.0
Sep 10			186	32	0	0		602	181	0	2	22.5	0.0	6.0	66.0
Sep 11			502	178	0	0		2,129	646	0	1	21.8	0.0	6.0	65.0
Sep 12			251	83	0	0		2,210	601	0	0	20.8	0.0	6.0	65.0
Sep 13			299	134	0	0		2,036	588	0	1	21.1	0.0	6.0	64.0
Sep 14			337	142	2	1		2,034	587	0	1	18.4	0.0	6.0	63.0
Sep 15			264	124	0	0		2,132	648	0	0	19.4	0.0	6.0	63.0
Sep 16			528	227	1	0		2,648	767	0	1	19.2	0.0	6.0	63.0
Sep 17			280	151	0	0		2,568	704	0	1	18.1	0.0	6.0	63.0
Sep 18			319	143	0	0		2,371	660	0	4	18.6	0.0	6.0	63.0
Sep 19			499	197	5	0		2,812	724	0	-1	19.7	0.0	6.0	64.0
Sep 20			838	294	4	1		5,161	1,325	0	0	21.9	0.0	6.0	64.0
Sep 21			388	138	2	1		3,630	923	0	0	18.1	0.0	6.0	65.0
Sep 22			368	172	2	0		2,736	748	0	0	21.4	0.0	5.5	65.0
Sep 23			428	208	13	1		3,892	1,081	0	0	21.1	0.0	5.8	65.0
Sep 24			437	236	7	0		3,745	1,003	1	0	21.9	0.0	6.0	65.0
Sep 25			385	222	20	0		3,818	1,007	0	0	19.3	0.0	5.5	65.0
Sep 26			341	322	17	1		3,998	1,036	0	0	20.5	0.0	5.5	66.0
Sep 27			228	247	28	1		4,256	1,103	0	0	19.6	0.0	5.4	66.0
Sep 28			268	281	19	4		6,020	1,582	0	0	14.7	0.0	5.1	66.0
Sep 29			221	266	12	1		4,430	1,160	0	0	15.1	0.0	5.5	66.0
Sep 30			284	289	28	2		6,302	1,523	0	0	18.1	0.0	5.0	66.0
TOTAL			8,390	4,226	160	13		71,337	19,128	1	22				
AVG.			280	141	5	0		2,378	638	0	1	21.1	0.0	5.7	64.9

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	70,609	8,295
SUMMER	16,422	4,137
FALL	8,703	4,289
TOTAL	95,734	16,721

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK
160	13	11	95,815	25,634	17,545	280	1

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

TABLE 132

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

LOWER GRANITE PROJECT
OCTOBER 2003

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
Oct 1			170	272	12	1		6,179	1,463		1
Oct 2			263	314	24	0		4,562	1,034		0
Oct 3			203	215	26	4		5,395	1,285		0
Oct 4			155	194	13	0		3,985	872		0
Oct 5			199	265	32	4		3,662	766		0
Oct 6			136	245	26	2		2,832	594		0
Oct 7			157	324	25	6		3,721	882		0
Oct 8			125	264	31	4		4,901	1,094		0
Oct 9			80	192	23	2		3,358	758		0
Oct 10			203	282	58	7		6,779	1,534		1
Oct 11			184	178	53	6		4,501	1,130		0
Oct 12			150	216	40	2		3,391	814		0
Oct 13			161	154	43	6		4,112	984		0
Oct 14			83	70	11	4		1,451	300		0
Oct 15			85	101	19	2		1,405	336		0
Oct 16			52	73	24	4		1,116	282		0
Oct 17			31	37	22	4		842	220		0
Oct 18			66	73	25	0		1,555	419		0
Oct 19			53	98	20	8		1,195	280		0
Oct 20			32	82	13	4		853	188		0
Oct 21			25	44	11	1		720	152		0
Oct 22			29	52	13	0		934	224		0
Oct 23			49	59	20	0		1,447	313		0
Oct 24			31	59	31	6		1,320	314		0
Oct 25			28	47	29	6		1,308	342		0
Oct 26			44	50	30	10		1,135	269		0
Oct 27			14	44	32	2		791	163		0
Oct 28			13	42	18	0		590	134		0
Oct 29			30	13	16	2		1,178	313		0
Oct 30			22	26	23	1		776	204		0
Oct 31			19	13	41	2		1,106	313		0
TOTAL			2,892	4,098	804	100		77,100	17,976		2
AVG.			93	132	26	3		2,487	580		0

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Oct 1	16.5	0.0	5.8	66.0
Oct 2	18.3	0.0	5.8	66.0
Oct 3	17.2	0.0	5.8	66.0
Oct 4	18.6	0.0	5.8	66.0
Oct 5	15.5	0.0	5.7	66.0
Oct 6	15.5	0.0	6.0	66.0
Oct 7	17.3	0.0	5.4	66.0
Oct 8	15.3	0.0	5.5	66.0
Oct 9	16.2	3.5	4.6	66.0
Oct 10	16.9	2.7	4.8	66.0
Oct 11	14.7	0.0	5.0	65.0
Oct 12	14.3	0.0	4.8	65.0
Oct 13	15.0	0.0	5.0	65.0
Oct 14	14.8	0.0	5.0	64.0
Oct 15	16.8	0.0	4.5	64.0
Oct 16	14.9	0.0	4.2	63.0
Oct 17	15.8	3.3	4.5	63.0
Oct 18	14.4	0.0	4.5	63.0
Oct 19	14.5	0.0	6.0	60.0
Oct 20	16.3	0.0	5.5	59.0
Oct 21	15.1	0.0	5.0	59.0
Oct 22	15.8	0.0	5.0	58.0
Oct 23	14.8	0.0	5.2	58.0
Oct 24	15.1	0.0	5.2	58.0
Oct 25	13.6	0.0	5.8	57.0
Oct 26	15.1	0.0	5.5	58.0
Oct 27	14.3	0.0	6.0	57.0
Oct 28	14.9	0.0	6.0	57.0
Oct 29	14.7	0.0	6.0	57.0
Oct 30	14.9	0.0	6.0	56.0
Oct 31	18.5	0.0	6.0	55.0
AVG.	15.7	0.3	5.4	62.0

RUN YEAR TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	70,609	8,295
SUMMER	16,422	4,137
FALL	11,595	8,387
TOTAL	98,626	20,819

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK
964	113	11	172,915	43,610	17,545	282	1

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST

TABLE 133

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER GRANITE PROJECT

NOVEMBER 2003

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	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Nov 1			4	1	20	3		745	140			17.3	0.0	6.0	53.0
Nov 2			18	27	19	3		753	177			14.1	0.0	6.0	53.0
Nov 3			7	7	18	1		443	80			16.4	0.0	6.0	53.0
Nov 4			4	4	28	0		410	85			15.8	0.0	6.0	53.0
Nov 5			5	10	9	2		310	77			15.2	0.0	6.0	52.0
Nov 6			16	5	13	1		412	90			14.8	0.0	6.0	51.0
Nov 7			4	1	18	1		397	90			14.4	0.0	6.0	51.0
Nov 8			4	4	3	1		216	51			14.1	0.0	6.0	51.0
Nov 9			5	4	7	0		223	47			13.3	0.0	6.0	51.0
Nov 10			1	0	5	2		116	30			13.8	0.0	6.0	45.0
Nov 11			5	3	4	0		288	59			17.2	0.0	6.0	45.0
Nov 12			3	5	2	0		176	49			15.5	0.0	6.0	45.0
Nov 13			10	4	3	0		212	50			16.6	0.0	6.0	46.0
Nov 14			8	2	1	0		199	51			19.0	0.0	6.0	46.0
Nov 15			4	1	6	1		161	41			14.0	0.0	6.0	46.0
Nov 16			5	4	1	0		106	20			15.0	0.0	6.0	44.0
Nov 17			8	3	4	0		87	21			15.6	0.0	*	*
Nov 18			2	3	2	0		112	25			17.9	0.0	*	*
Nov 19			1	1	1	0		132	28			14.0	0.0	6.0	44.0
Nov 20			3	0	0	0		187	45			16.8	0.0	6.0	44.0
Nov 21			5	0	3	0		174	40			16.1	0.0	6.0	44.0
Nov 22			4	1	1	0		184	36			15.9	0.0	6.0	44.0
Nov 23			4	1	2	1		185	43			16.0	0.0	*	*
Nov 24			2	0	0	1		86	24			15.4	0.0	*	*
Nov 25			2	0	0	0		82	12			14.7	0.0	6.0	43.0
Nov 26			1	0	0	0		80	20			16.3	0.0	6.0	43.0
Nov 27			1	-1	1	0		327	106			11.7	0.0	6.0	43.0
Nov 28			0	0	0	0		137	38			13.9	0.0	6.0	43.0
Nov 29			-1	0	0	0		74	13			14.1	0.0	6.0	43.0
Nov 30			1	2	0	0		143	33			14.1	0.0	*	*
TOTAL			136	92	171	17		7,157	1,621						
AVG.			5	3	6	1		239	54			15.3	0.0	6.0	47.0

*Data unavailable.

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	70,609	8,295
SUMMER	16,422	4,137
FALL	11,731	8,479
TOTAL	98,762	20,911

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY	PINK
1,135	130	11	180,072	45,231	17,545	282	1

Note: November counts were from video tape. The counts are 10-hour counts and occurred between the hours of 0600-1600 PST.

TABLE 134

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER GRANITE PROJECT

DECEMBER 2003

	FISH COUNTS											RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD			DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Dec 1			0	0				63	24			16.5	0.0	6.0	42.0
Dec 2			1	0				45	12			18.4	0.0	6.0	42.0
Dec 3			0	0				49	16			14.0	0.0	6.0	42.0
Dec 4			0	0				50	20			17.3	0.0	6.0	41.0
Dec 5			0	1				154	34			17.5	0.0	6.0	41.0
Dec 6			0	0				0	0			16.0	0.0	6.0	41.0
Dec 7			0	0				0	0			17.0	0.0	6.0	41.0
Dec 8			0	1				19	3			20.0	0.0	*	*
Dec 9			0	0				0	0			20.3	0.0	*	*
Dec 10			0	0				27	7			18.7	0.0	*	*
Dec 11			0	0				0	0			20.2	0.0	*	*
Dec 12			0	0				45	11			24.0	0.0	*	*
Dec 13			0	0				65	16			16.0	0.0	*	*
Dec 14			0	0				60	10			15.5	0.0	*	*
Dec 15			0	0				23	7			16.6	0.0	*	*
Dec 16												22.2	0.0	*	*
Dec 17												19.4	0.0	*	*
Dec 18												17.1	0.0	*	*
Dec 19												16.6	0.0	*	*
Dec 20												17.5	0.0	*	*
Dec 21												12.0	0.0	*	*
Dec 22												21.2	0.0	*	*
Dec 23												19.5	0.0	*	*
Dec 24												14.0	0.0	*	*
Dec 25												18.0	0.0	*	*
Dec 26												18.6	0.0	*	*
Dec 27												18.2	0.0	*	*
Dec 28												15.3	0.0	*	*
Dec 29												23.0	0.0	*	*
Dec 30												24.2	0.0	*	*
Dec 31												15.7	0.0	*	*
TOTAL			1	2				600	160						
AVG.								40	11			18.1	0.0	6.0	41.4

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	70,609	8,295
SUMMER	16,422	4,137
FALL	11,732	8,481
TOTAL	98,763	20,913

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	SHAD	LAMPREY
1,135	130	11	180,072	45,231	17,545	282

PINK
1

*Data unavailable.

Note: December counts were from video tape. The counts are 10-hour counts and occurred between the hours of 0600-1600 PST.
Official Fall Chinook run ended December 15. December 16 - 31 chinook counts were not added to fall totals.

TABLE 135

YEARLY TOTALS OF SALMONIDS COUNTED OVER LOWER GRANITE DAM 1975 - 2003

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	0	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	0	107,857
1988	37,882	87,040	23	0	124,945
1989	19,557	132,579	2	0	152,138
1990	23,345	56,859	0	0	80,204
1991	13,618	100,381	8	0	114,007
1992	26,193	121,459	15	0	147,667
1993	30,446	66,699	12	0	97,157
1994	5,077	47,550	5	0	52,632
1995	3,702	80,853	3	0	84,558
1996	11,129	86,072	3	0	97,204
1997	46,727	85,917	11	92	132,747
1998	18,557	72,017	2	12	90,588
1999	15,884	74,370	14	262	90,530
2000	62,659	113,211	299	925	177,094
2001	210,381	262,568	36	1,087	474,072
2002	119,304	218,718	55	395	338,472
2003	119,676	180,072	11	1,265	301,024
Total	1,139,825	2,596,662	2,620	6,610	3,745,717
10-Year Average	61,310	122,135	44	404	183,892

*Jacks included

TABLE 136

MONTHLY COUNT OF CHINOOK SALMON
LOWER GRANITE DAM
1975 -2003

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
1998			1	942	6,330	5,398	1,877	175	1,495	2,200	138	1	18,557
1999				36	3,358	4,886	2,214	396	3,017	1,832	143	2	15,884
2000				5,984	30,609	12,074	3,032	564	5,719	4,435	240	2	62,659
2001				90,165	63,007	31,721	7,392	760	11,596	5,319	414	7	210,381
2002			1	1,050	56,456	35,129	8,223	1,102	12,774	4,336	229	4	119,304
2003			10	29,379	30,358	31,808	7,467	817	12,616	6,990	228	3	119,676
Total			13	171,559	485,732	269,287	96,829	10,585	65,906	37,009	2,860	45	1,139,825
10-Year Average				12,794	21,901	14,577	3,633	448	5,069	2,729	156		61,310

*Jacks included

TABLE 137

MONTHLY COUNT OF STEELHEAD

LOWER GRANITE DAM
1975 - 2003

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
1998			2,390	1,837	107	94	1,001	731	10,295	46,326	7,071	2,165	72,017
1999			2,091	855	92	35	1,333	5,577	35,954	23,694	4,044	695	74,370
2000			1,453	932	94	275	2,907	5,081	57,412	39,501	5,217	339	113,211
2001			3,200	2,365	193	1,087	6,772	11,315	101,289	105,685	24,287	6,375	262,568
2002			4,064	7,992	415	272	4,866	14,234	83,239	93,223	9,360	1,053	218,718
2003			13,038	2,583	182	398	3,169	5,108	71,337	77,100	7,157	600	180,672
Total	539	790	76,384	84,869	11,767	3,831	46,916	122,884	897,907	1,145,221	182,644	23,510	2,597,262
10-Yr Average			3,482	2,316	166	241	2,464	5,747	45,473	52,551	8,300	1,454	122,195

PRIEST RAPIDS AND WANAPUM DAMS

FISH COUNTING SCHEDULE – PRIEST RAPIDS DAM

Jan 1 – Apr 14	No adult fish counting.
Apr 14	Fish Counter orientation and training
Apr 15 – Nov 15	Counting daily 0000-2400 hours PST.
Nov 16 – Dec 31	No adult fish counting.

FISH COUNTING SCHEDULE – WANAPUM DAM

Jan 1 – Dec 31	No adult fish counting.

FISH LADDER OPERATING AND MAINTENANCE SCHEDULE – PRIEST RAPIDS DAM

Left Bank Ladder

01 Jan – 03 Mar	Out of criteria for annual inspection, maintenance, installation adult PIT tag detector and video count systems, rehab fish pump and trash rack, and remove Priest Rapids Hatchery adult trap.
04 Mar – 12 Mar	In service.
13 Mar – 31 Mar	Out of criteria to complete installation adult PIT tag detector and video count systems.
01 Apr – 25 Nov	In service.
26 Nov – 31 Dec	Out of criteria for annual inspection, maintenance, and repairs. Begin pump bushing replacement, minor modification to adult video count box.

Right Bank Ladder

01 Jan – 17 Nov	In service.
18 Nov – 20 Nov	Out of criteria for annual inspection, maintenance and repairs. Began installation of adult PIT tag detector and video count systems.
21 Nov – 18 Feb	In service.
19 Feb – 31 Mar	Out of criteria to complete installation of adult PIT tag detector and video count systems.
01 Apr – 31 Dec	In service.

FISH LADDER OPERATING AND MAINTENANCE SCHEDULE – WANAPUM DAM

Left Bank Ladder

01 Jan – 14 Jan	Out of criteria for annual inspection, maintenance and control system repairs.
15 Jan – 04 Dec	In service.
05 Dec – 31 Dec	Out of criteria for annual inspection, maintenance and repairs.

Right Bank Ladder

01 Jan – 15 Jan	Out of criteria for annual inspection, maintenance and repairs.
16 Jan – 31 Dec	In service.

Note: Out of criteria dates provided above reflect those periods of time when the adult fishway was out of operational flow and/or head differential criteria. Upstream passage is possible for one to several days before and after the indicated dates.

FISHWAY ACTIVITIES

The Public Utility District No. 2 of Grant County conducted 24-hour fish counts at Priest Rapids Dam, using three 8-hour shifts from 15 April through 15 November 2003. Counts were made at both ladders using visual observations at the count boards each day of the week. No adult counts are taken at Wanapum Dam although the PUD is testing a video counting system at the hydro project.

The adult fishway automation project at Priest Rapids Dam has been completed and the Wanapum Dam project will require several more years to complete.

The Mid-Columbia Coordination Committee approved to permanently close all collection channel orifice gates at Wanapum and Priest Rapids Dams in 2001. Main slotted entrances at the end of the channel remain open.

With agency support, the PUD installed an adult PIT tag detector system and in ladder equipment for adult video counts at Priest Rapids Dam. The PIT tag detector system became operational on April 1 at both fishways. No adult video fish counts were taken.

Washington Department of Fish And Wildlife trapped and examined steelhead at the Priest Rapids Dam coded wire tag trapping facility from 22 July through 13 November. The trap was operated 8 hours a day usually every Tuesday and Thursday. During this operation, the Yakama Indian Nation trapped and radio tagged coho at the trapping facility.

The Priest Rapids Hatchery did not trap broodstock at Priest Rapids Dam. At fish agency request, removal of the left bank hatchery trapping facility was completed in 2003.

Priest Rapids Historic Fish Count Schedule 1988-2002 (information based on previous Annual Fish Passage Reports)
16 hour counts occurred between the hours of 0400-2000 PST unless otherwise stated.
8 hour counts occurred between the hours of 0800-1600 PST unless otherwise stated.

Year	Months	Count Period	Notes
1988	Apr 16 – 30	8 hour (0800-1600PST)	
	May 1 – Oct 31	16 hour	
	Nov 1 - 30	8 hour	
1989	Apr 16 – Oct 28	16 hour	
	Oct 29 – Nov 15	8 hour	
1990	Apr 16 – Oct 28	16 hour (0400-2000PDT)	
	Oct 29 – Nov 15	16 hour (0400-2000PST)	
1991	Apr 16 – Oct 26	16 hour (0400-2000PDT)	
	Oct 27 – Nov 15	16 hour (0400-2000PST)	
1992	Apr 17 – Nov 15	24 hour (0000-2400PST)	Three 8-hour shifts
1993-4	Apr 16 – Nov 15	24 hour	
1995-7	Apr 15 – Nov 15	16 hour	
1998	Apr 15 – Nov 15	24 hour	
1999	Apr 16 – Nov 15	16 hour	
2000-2	Apr 15 – Nov 15	24 hour	

TABLE 138

MONTHLY TOTALS OF SALMONIDS, SHAD, AND LAMPREY COUNTED OVER PRIEST RAPIDS DAM
2003

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*				9,291	7,957	24,809	55,240	14,934	35,015	11,609	1,578		160,433
STEELHEAD				7	2	95	2,924	5,198	8,009	1,362	55		17,652
SOCKEYE						6,185	29,996	358	12				36,551
COHO*							3	24	2,771	2,300	118		5,216
PINK													
TOTAL				9,298	7,959	31,089	88,163	20,514	45,807	15,271	1,751		219,852
SHAD				2	0	2,168	4,877	24	-2	-2			7,067
LAMPREY					28	61	828	2,596	690	122	13		4,338

***Jacks included**

TABLE 139

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

PRIEST RAPIDS PROJECT
APRIL 2003

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Apr 1	BEGIN COUNTING APRIL 15										99.7	0.0		
Apr 2											95.9	0.0		
Apr 3											99.5	0.0		
Apr 4											105.6	0.0		
Apr 5											73.0	0.0		
Apr 6											73.1	0.0		
Apr 7											100.8	0.0		
Apr 8											118.4	0.0		
Apr 9											91.9	0.0		
Apr 10											105.9	0.0		
Apr 11											113.1	0.0		
Apr 12											91.0	0.0		
Apr 13											84.9	0.0		
Apr 14											97.7	0.0		
Apr 15	327			0				0	0		107.1	0.0		
Apr 16	781			0				0	0		134.0	0.0		
Apr 17	369			0				0	0		148.3	0.0		
Apr 18	930			0				2	0		112.6	0.0		
Apr 19	741			0				0	0		117.6	0.0		
Apr 20	728			0				0	0		98.9	0.0		
Apr 21	516			0				1	0		114.6	0.0		
Apr 22	860			0				0	0		158.4	15.4		
Apr 23	670			1				0	2		149.1	90.3		
Apr 24	602			0				2	0		143.2	86.8		
Apr 25	535			0				1	0		160.8	97.3		
Apr 26	465			0				1	0		129.1	80.2		
Apr 27	160			0				0	0		111.8	69.3		
Apr 28	655			1				0	0		128.3	79.6		
Apr 29	549			0				0	0		151.9	93.8		
Apr 30	400			1				0	0		149.9	92.1		
TOTAL	9,288			3				7	2					
AVG.	581			0				0	0		115.5	23.5		

Water temperature and turbidity not available.

TABLE 140

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

PRIEST RAPIDS PROJECT

MAY 2003

FISH COUNTS | **RIVER CONDITIONS**

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
May 1	675			0			0	0	0	0	128.6	79.3		
May 2	591			1			0	0	0	0	125.3	77.1		
May 3	360			0			0	0	0	0	131.4	74.1		
May 4	537			0			0	0	0	0	143.1	65.9		
May 5	189			1			0	0	0	0	154.8	64.2		
May 6	740			2			0	0	0	0	161.7	84.0		
May 7	564			0			0	1	0	0	145.5	89.8		
May 8	337			2			0	0	0	0	162.9	91.6		
May 9	85			5			0	0	0	0	140.1	72.1		
May 10	656			7			0	0	0	0	120.1	62.9		
May 11	363			1			0	0	0	0	108.1	64.2		
May 12	419			12			0	0	0	1	130.7	53.0		
May 13	179			22			0	0	0	0	187.5	114.6		
May 14	178			19			0	0	0	0	148.3	67.1		
May 15	71			12			0	0	0	0	163.6	70.8		
May 16	152			11			0	1	0	0	160.2	62.9		
May 17	107			21			0	0	0	0	137.4	64.7		
May 18	118			30			0	0	0	0	131.5	70.9		
May 19	81			22			0	0	0	1	128.8	79.8		
May 20	132			46			0	0	0	1	158.5	98.5		
May 21	84			36			0	0	0	0	158.9	77.7		
May 22	251			36			0	0	0	0	192.7	96.6		
May 23	26			20			0	0	0	0	182.6	70.2		
May 24	161			45			0	0	0	0	121.6	68.3		
May 25	37			21			0	0	0	1	89.6	55.3		
May 26	115			40			0	0	0	2	117.1	73.3		
May 27	70			20			0	0	0	1	136.2	69.6		
May 28	43			28			0	0	0	0	143.0	63.9		
May 29	33			14			0	0	0	2	181.3	87.0		
May 30	26			13			0	0	0	0	163.5	88.4		
May 31	51			39			0	0	0	1	127.2	81.3		
TOTAL	7,431			526			0	2	0	28				
AVG.	240			17			0	0	0	0	144.6	75.5		

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	16,719	529

SOCKEYE	STEELHEAD	SHAD	LAMPREY
0	9	2	28

Water temperature and turbidity not available.

TABLE 141

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

PRIEST RAPIDS PROJECT

JUNE 2003

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Jun 1	69			18			0	0	1	6	107.1	68.6		
Jun 2	63			6			0	0	0	2	129.2	68.6		
Jun 3	25			9			0	0	0	2	153.7	62.6		
Jun 4	51			9			0	1	0	1	141.0	61.3		
Jun 5	68			12			0	0	0	2	150.9	85.9		
Jun 6	46			9			0	0	0	8	164.6	107.9		
Jun 7	95			10			0	3	0	3	174.4	114.9		
Jun 8	108			8			0	0	0	0	151.1	100.0		
Jun 9	156			8			0	0	0	3	151.6	100.3		
Jun 10	138			9			1	1	0	3	181.9	120.1		
Jun 11	74			4			2	2	1	3	176.3	115.3		
Jun 12	36			5			2	0	0	4	174.5	112.1		
Jun 13	488			20			4	2	1	2	189.2	120.8		
Jun 14		193		7			25	1	0	0	157.2	100.4		
Jun 15		353		13			41	1	0	2	139.8	81.2		
Jun 16		715		6			46	2	0	0	184.1	104.2		
Jun 17		973		17			101	1	0	2	177.3	102.4		
Jun 18		1,230		11			185	3	2	1	175.2	102.0		
Jun 19		1,486		27			174	5	0	0	116.8	68.0		
Jun 20		1,343		26			240	3	0	1	126.2	73.1		
Jun 21		554		15			214	1	0	1	116.9	67.9		
Jun 22		1,235		29			266	5	17	2	90.0	52.4		
Jun 23		1,735		27			315	6	12	2	129.4	74.3		
Jun 24		1,280		38			384	2	16	0	147.3	84.0		
Jun 25		1,236		42			485	4	32	-1	169.5	97.4		
Jun 26		1,857		33			545	14	86	1	181.8	103.4		
Jun 27		1,804		21			660	9	253	3	155.9	87.6		
Jun 28		1,779		48			591	6	517	3	151.5	86.9		
Jun 29		2,460		45			937	15	703	2	124.3	71.4		
Jun 30		2,579		48			967	8	527	3	118.3	67.7		
TOTAL	1,417	22,812		580			6,185	95	2,168	61				
AVG.	109	1342		19			206	3	72	2	150.2	88.8		

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	18,136	656
SUMMER	22,812	453
TOTAL	40,948	1,109

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	LAMPREY
0	0	6,185	104	2,170	89

Water temperature and turbidity not available.

TABLE 142

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

PRIEST RAPIDS PROJECT
JULY 2003

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Jul 1		1,460		23	0	0	1,407	7	545	3	146.5	82.9		
Jul 2		1,943		65	0	0	1,133	23	452	4	103.0	49.4		
Jul 3		2,097		76	0	0	2,339	17	424	2	94.9	28.6		
Jul 4		2,925		88	0	0	2,870	27	366	2	106.7	41.6		
Jul 5		3,592		147	0	0	2,839	21	566	2	60.7	18.4		
Jul 6		3,522		102	0	0	2,480	46	407	2	83.2	25.1		
Jul 7		2,502		69	0	0	2,273	46	490	4	112.3	55.8		
Jul 8		3,024		85	1	0	1,635	48	276	7	124.6	71.0		
Jul 9		2,297		58	0	0	1,624	62	283	5	127.2	72.4		
Jul 10		1,714		93	1	0	1,309	54	200	8	130.2	74.3		
Jul 11		3,115		117	0	0	1,230	57	168	13	135.4	77.6		
Jul 12		1,661		98	0	0	1,125	71	94	10	123.2	68.7		
Jul 13		2,446		78	0	0	1,333	96	148	7	97.3	56.0		
Jul 14		1,104		23	0	0	724	58	104	10	120.1	68.8		
Jul 15		1,027		49	0	0	620	49	51	6	125.4	71.7		
Jul 16		1,686		34	0	0	700	49	52	14	127.0	71.9		
Jul 17		2,457		24	0	0	949	97	57	21	109.5	61.5		
Jul 18		865		27	0	0	581	76	32	19	111.6	62.7		
Jul 19		1,482		48	0	0	666	111	37	11	103.5	57.3		
Jul 20		748		41	0	0	374	89	21	18	84.3	47.6		
Jul 21		1,803		45	0	0	387	116	18	12	103.1	57.5		
Jul 22		553		28	0	0	232	94	29	32	136.0	75.4		
Jul 23		228		54	0	0	197	114	18	34	129.1	72.8		
Jul 24		2,129		156	0	0	188	140	13	57	124.9	70.1		
Jul 25		260		54	0	1	105	107	-1	32	109.0	60.9		
Jul 26		1,723		126	0	0	147	156	2	48	103.8	58.5		
Jul 27		1,073		104	0	0	168	253	6	86	64.6	36.4		
Jul 28		850		85	0	0	131	153	2	96	108.5	60.7		
Jul 29		1,442		155	0	0	92	245	6	83	110.1	62.0		
Jul 30		612		113	0	0	74	232	4	103	121.6	68.4		
Jul 31		533		102	0	0	64	210	7	77	124.8	71.1		
TOTAL		52,873		2,367	2	1	29,996	2,924	4,877	828				
AVG.		1,706		76	0	0	968	94	157	27	111.7	59.9		

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	18,136	656
SUMMER	75,685	2,820
TOTAL	93,821	3,476

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	LAMPREY
2	1	36,181	3,028	7,047	917

Water temperature and turbidity not available.

TABLE 143

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

PRIEST RAPIDS PROJECT
AUGUST 2003

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Aug 1		673		58	0	0	49	274	3	119	111.5	62.7		
Aug 2		458		72	0	0	87	152	6	131	98.3	55.3		
Aug 3		665		74	0	0	94	239	7	122	61.1	34.3		
Aug 4		478		55	0	2	18	202	4	98	71.9	40.4		
Aug 5		1,496		95	0	0	18	327	4	113	106.3	60.4		
Aug 6		721		104	0	0	7	179	0	120	96.9	54.0		
Aug 7		363		116	0	0	9	186	-1	78	95.8	53.9		
Aug 8		364		113	0	1	5	178	1	98	97.4	54.4		
Aug 9		404		79	1	0	28	148	0	71	101.2	56.8		
Aug 10		405		105	0	0	2	170	0	47	76.8	43.1		
Aug 11		279		64	0	0	1	129	0	63	103.9	58.4		
Aug 12		484		85	1	0	0	158	0	79	104.0	58.6		
Aug 13		429		93	0	0	34	143	0	44	91.6	50.8		
Aug 14			625	114	0	1	0	139	0	78	106.1	21.9		
Aug 15			574	157	2	0	0	118	1	55	115.8	2.5		
Aug 16			604	122	0	0	0	172	0	111	92.1	1.0		
Aug 17			245	65	0	0	0	132	-1	87	70.9	1.0		
Aug 18			318	64	0	0	0	121	0	113	89.6	1.1		
Aug 19			444	113	1	0	0	196	0	110	109.0	0.9		
Aug 20			186	64	1	1	0	118	0	81	108.4	2.8		
Aug 21			310	60	1	0	0	126	0	70	125.3	3.8		
Aug 22			451	52	0	0	0	155	1	105	141.2	11.0		
Aug 23			211	43	1	0	0	131	0	78	97.4	1.2		
Aug 24			215	45	2	0	0	156	0	109	83.1	1.1		
Aug 25			251	56	1	0	0	149	0	98	121.8	1.4		
Aug 26			231	33	2	0	6	176	0	64	127.2	1.2		
Aug 27			141	50	0	0	0	195	0	57	91.1	1.0		
Aug 28			205	42	0	1	0	171	0	59	85.9	1.1		
Aug 29			208	34	4	1	0	156	0	72	96.3	1.1		
Aug 30			77	31	0	0	0	144	-1	25	99.7	9.9		
Aug 31			124	37	0	0	0	158	0	41	67.3	1.0		
TOTAL		7,219	5,420	2,295	17	7	358	5,198	24	2596				
AVG.		555	301	74	1	0	12	168	1	84	98.2	24.1		

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	18,136	656
SUMMER	82,904	3,933
FALL	5,420	1,182
TOTAL	106,460	5,771

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	LAMPREY
19	8	36,539	8,226	7,071	3,513

Water temperature and turbidity not available.

TABLE 144

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

PRIEST RAPIDS PROJECT
SEPTEMBER 2003

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Sep 1			219	46	0	0	0	215	0	42	58.1	1.1		
Sep 2			105	20	0	0	0	168	0	47	64.3	1.1		
Sep 3			755	51	0	0	0	231	0	35	81.8	1.1		
Sep 4			964	50	1	0	4	249	0	30	92.7	1.2		
Sep 5			1,053	53	0	0	0	224	0	23	84.3	1.0		
Sep 6			1,440	70	0	0	0	324	-1	27	48.4	0.8		
Sep 7			1,237	96	0	0	0	303	0	51	47.8	0.8		
Sep 8			1,683	75	1	0	0	339	0	21	52.7	1.1		
Sep 9			1,184	97	0	0	0	335	0	34	61.5	1.1		
Sep 10			802	71	0	0	0	328	0	20	47.3	1.0		
Sep 11			1,310	143	14	21	7	468	0	24	57.4	1.1		
Sep 12			2,080	130	124	16	0	397	-2	23	62.1	1.0		
Sep 13			714	72	160	11	1	237	4	11	56.6	1.1		
Sep 14			772	60	108	98	0	240	0	14	40.9	0.7		
Sep 15			1,986	102	93	17	0	370	0	25	56.7	1.0		
Sep 16			1,630	90	79	8	0	343	0	15	75.8	1.1		
Sep 17			1,111	78	82	5	0	248	0	12	67.6	1.0		
Sep 18			1,160	145	53	5	0	241	0	23	56.5	1.0		
Sep 19			1,135	82	87	2	0	240	0	26	55.2	1.1		
Sep 20			1,048	116	88	8	0	333	0	19	61.1	1.0		
Sep 21			1,097	111	73	2	0	338	0	16	54.0	1.0		
Sep 22			1,104	125	97	11	0	261	0	14	81.1	1.1		
Sep 23			1,618	120	114	7	0	319	0	29	66.2	1.0		
Sep 24			1,033	123	146	15	0	206	0	20	74.1	1.1		
Sep 25			1,494	242	203	15	0	240	0	24	84.1	1.1		
Sep 26			581	156	141	15	0	149	0	12	92.5	1.2		
Sep 27			339	136	209	12	0	147	0	7	73.3	0.9		
Sep 28			354	118	167	3	0	174	0	12	57.7	1.1		
Sep 29			1,055	169	211	13	0	171	-1	13	87.1	1.0		
Sep 30			854	151	234	2	0	171	-2	21	82.3	1.0		
TOTAL			31,917	3,098	2,485	286	12	8,009	-2	690				
AVG.			1064	103	83	10	0	267	0	23	66.0	1.0		

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	18,136	656
SUMMER	82,904	3,933
FALL	37,337	4,280
TOTAL	138,377	8,869

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	LAMPREY
2,504	294	36,551	16,235	7,069	4,203

Water temperature and turbidity not available.

TABLE 145

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

PRIEST RAPIDS PROJECT
OCTOBER 2003

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	SHAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Oct 1			406	110	201	7		113	1	26	88.6	1.1		
Oct 2			649	110	175	7		156	0	9	77.7	1.0		
Oct 3			313	88	100	0		76	0	19	66.6	1.1		
Oct 4			248	56	47	0		33	0	6	55.2	1.1		
Oct 5			301	93	95	7		78	0	6	51.7	1.0		
Oct 6			769	156	133	12		80	0	2	76.1	1.0		
Oct 7			1,131	194	168	12		96	0	10	73.9	0.5		
Oct 8			215	90	66	2		70	0	1	85.2	0.0		
Oct 9			203	42	58	5		58	0	2	83.6	0.6		
Oct 10			204	58	107	14		34	0	1	79.9	1.0		
Oct 11			149	32	35	1		39	0	6	68.1	1.0		
Oct 12			130	49	79	4		51	-1	1	57.6	0.9		
Oct 13			138	52	54	4		27	0	0	82.4	0.4		
Oct 14			84	36	65	4		31	0	6	74.2	0.0		
Oct 15			141	52	58	2		26	0	4	94.2	0.0		
Oct 16			117	40	58	0		17	0	2	83.0	0.5		
Oct 17			237	54	35	1		17	0	0	79.6	0.8		
Oct 18			189	39	28	1		23	0	0	61.9	0.6		
Oct 19			177	33	23	2		16	0	5	64.4	0.5		
Oct 20			237	38	37	1		29	0	1	61.2	0.5		
Oct 21			281	39	54	0		34	0	3	62.7	0.7		
Oct 22			264	58	65	1		66	0	0	88.6	1.0		
Oct 23			282	37	19	2		21	0	1	110.2	1.1		
Oct 24			323	43	21	0		17	0	0	107.6	1.0		
Oct 25			224	26	57	1		20	-1	2	110.0	1.0		
Oct 26			240	28	96	1		37	0	0	78.9	0.4		
Oct 27			239	41	65	1		14	0	1	93.3	0.6		
Oct 28			484	44	42	0		30	-1	4	108.1	0.8		
Oct 29			738	57	46	7		13	0	3	105.2	0.6		
Oct 30			348	27	66	11		27	0	1	93.9	0.8		
Oct 31			296	30	36	1		13	0	0	98.2	0.9		
TOTALS			9,757	1,852	2,189	111		1,362	-2	122				
AVG.			315	60	71	4		44	0	4	81.3	0.7		

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	LAMPREY
SPRING	18,136	656	4,693	405	36,551	17,597	7,067	4,325
SUMMER	82,904	3,933						
FALL	47,094	6,132						
TOTAL	148,134	10,721						

Water temperature and turbidity not available.

TABLE 146

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

PRIEST RAPIDS PROJECT
NOVEMBER 2003

FISH COUNTS / RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Nov 1			408	26	10	0	0	8		3	111.0	1.1		
Nov 2			405	24	10	0	0	9		1	110.7	1.0		
Nov 3			190	20	15	4	0	9		0	90.2	0.5		
Nov 4			131	9	12	1	0	3		1	90.8	0.8		
Nov 5			69	14	4	1	0	1		1	111.9	0.8		
Nov 6			69	13	15	0	0	7		0	118.8	0.8		
Nov 7			26	3	7	0	0	0		2	112.6	0.9		
Nov 8			39	8	17	1	0	3		0	106.6	0.8		
Nov 9			12	4	5	0	0	0		1	69.2	0.4		
Nov 10			12	2	1	0	0	2		0	91.2	0.7		
Nov 11			34	2	3	1	0	3		0	90.8	0.5		
Nov 12			22	0	4	0	0	5		0	104.6	0.4		
Nov 13			10	1	3	0	0	3		4	104.4	0.6		
Nov 14			16	0	2	0	0	1		0	97.6	0.8		
Nov 15			9	0	2	0	0	1		0	86.7	0.6		
Nov 16											87.0	0.0		
Nov 17											95.2	0.0		
Nov 18											93.2	0.0		
Nov 19											99.2	0.0		
Nov 20											119.7	14.4		
Nov 21											126.0	26.5		
Nov 22											123.6	22.2		
Nov 23											78.7	2.6		
Nov 24											92.6	0.0		
Nov 25											104.2	0.0		
Nov 26											104.5	0.0		
Nov 27											84.5	0.0		
Nov 28											72.7	0.0		
Nov 29											70.1	0.0		
Nov 30											71.7	0.0		
TOTALS			1,452	126	110	8	0	55		13				
AVG.			97	8	7	1	0	4		1	97.3	2.5		

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	18,136	656
SUMMER	82,904	3,933
FALL	48,546	6,258
TOTAL	149,586	10,847

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	SHAD	LAMPREY
4,803	413	36,551	17,652	7,067	4,338

Water temperature and turbidity not available.

TABLE 147

YEARLY TOTALS OF SALMONIDS COUNTED OVER PRIEST RAPIDS DAM
1982 - 2003

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	5,450	86,626	0	150,604
1994	32,892	6,706	12,385	0	51,983
1995	30,542	4,962	9,216	11	44,731
1996	26,836	8,324	29,457	6	64,623
1997	33,036	8,948	45,412	26	87,422
1998	29,415	5,837	10,769	18	46,039
1999	57,054	8,277	16,432	55	81,818
2000	91,223	11,331	89,547	378	192,479
2001	139,929	30,090	111,326	11,189	292,534
2002	161,510	15,895	47,883	1,555	226,843
2003	160,433	17,652	36,551	5,216	219,852
Totals	1,338,663	320,095	1,273,907	21,503	2,954,168
10-Year Average	76,287	11,802	40,898	1,845	130,832

***Jacks included**

***Yearly totals for 1993, 1994, 1996, 1998, 2001, and 2002 were updated from correspondence.**

TABLE 148

MONTHLY COUNT OF STEELHEAD
PRIEST RAPIDS DAM: 1960 - 2003

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				34	41	125	993	1,733	2,013	471	40		5,450
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		4,357
1996				9	14	35	546	3,234	3,810	627	49		8,324
1997				5	17	39	574	2,822	4,176	1,224	91		8,948
1998				7	9	40	806	935	2,976	1,005	59		5,837
1999				6	19	72	588	3,361	3,543	633	55		8,277
2000				2	13	155	1,895	3,786	4,825	598	57		11,331
2001				14	11	326	4,426	10,368	12,136	2,607	202		30,090
2002				22	15	134	3,225	7,442	4,101	874	82		15,895
2003				7	2	95	2,924	5,198	8,009	1,362	55		17,652
TOTAL	40	56	288	3,949	8,663	5,744	49,541	147,919	213,656	58,585	3,725	63	492,229
10-Year Average				8	13	101	1,643	3,975	4,873	1,056	74		11,742

*Yearly totals for 1993, 1995, and 1996 were updated through correspondence.

ROCK ISLAND DAM

FISH COUNTING SCHEDULE

Jan 1 – April 14	No counting
April 14 – Nov 14	Video recording 24 hours/day, 7 days/week.
April 15 – Nov 15	Videos counted 0700-1530 hours 7days/week
Nov 16 – Dec 31	No counting

FISH LADDER OPERATING SCHEDULE

Left Bank Ladder

Jan 1 – Jan 19	Fishway in service
Jan 20 – Feb 11	Fishway out of service for annual maintenance
Feb 12 – Dec 31	Fishway in service

Middle Ladder

Jan 1 – Jan 5	Fishway in service
Jan 6 – Feb 13	Fishway out of service for annual maintenance
Feb 14 – Dec 31	Fishway in service

Right Bank Ladder

Jan 1 – Feb 11	Fishway in service
Feb 12 – March 9	Fishway out of service for annual maintenance
March 10 – Dec 31	Fishway in service

FISHWAY ACTIVITIES

The Rock Island Bypass Trap was operated from April 1 through August 31. Juvenile fish were sampled daily during this time period.

Noise monitoring was completed in 2003 for the installation of the PIT tag detectors in the adult fishway. Final installation will be completed in March 2004.

Chelan County PUD was involved in a radio telemetry study to determine the migratory patterns of adult bull trout. The fish were monitored as they passed Rocky Reach and Rock Island dams and migrated up and down the Entiat and Wenatchee rivers. The PUD also assisted the Yakama Nation with monitoring the passage of radio-tagged adult coho at both projects.

Rock Island Historic Fish Count Schedule 1992-2002 (information based on previous Annual Fish Passage Reports)

Year	Months	Count Period	Notes
1992 – 1998	mid Apr – Nov 15	24 hour video	
1999 – 2000	Apr 14 – Nov 14	24 hour video	
2001 – 2002	Apr 15 – Nov 15	24 hour video	

TABLE 149

MONTHLY TOTALS OF SALMONIDS AND LAMPREY COUNTED OVER ROCK ISLAND DAM
2003

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*				6,811	9,246	16,281	62,938	14,911	12,181	8,070	1,729		132,167
STEELHEAD				17	17	51	1,664	4,233	9,339	2,061	127		17,509
SOCKEYE					6	2,962	31,595	205	10	1			34,779
COHO							9	4	1,975	3,743	138		5,869
PINK													
TOTAL				6,828	9,269	19,294	96,206	19,353	23,505	13,875	1,994		190,324
LAMPREY						11	252	2,941	1,463	324	9		5,000

***Jacks included**

TABLE 150

MONTHLY FISH PASSAGE SUMMARY REPORT — **ROCK ISLAND PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND — **APRIL 2003**

	FISH COUNTS									RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO						TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY	DISCH KCFS	SPILL KCFS	SECCHI	DEG F
Apr 1	BEGIN COUNTING 14 APR										102.2	0.0		
Apr 2											95.7	0.0		
Apr 3											104.1	0.0		
Apr 4											88.2	0.0		
Apr 5											69.4	0.0		
Apr 6											61.2	0.0		
Apr 7											115.4	0.0		
Apr 8											97.8	0.0		
Apr 9											104.4	0.0		
Apr 10											108.7	0.0		
Apr 11											101.1	0.0		
Apr 12											87.2	0.0		
Apr 13											71.7	0.0		
Apr 14											100.4	0.0		
Apr 15	98			0				0	0		119.2	0.0		
Apr 16	76			0				0	0		133.3	0.0		
Apr 17	93			0				3	2		129.7	24.8		
Apr 18	103			0				0	0		110.3	21.8		
Apr 19	291			1				2	1		113.1	21.0		
Apr 20	589			1				3	3		71.9	16.0		
Apr 21	366			1				2	1		143.8	22.0		
Apr 22	811			15				2	2		142.5	22.9		
Apr 23	493			2				1	1		139.2	26.3		
Apr 24	67			1				1	1		144.6	27.2		
Apr 25	287			7				1	0		146.7	27.7		
Apr 26	266			0				0	0		109.5	25.5		
Apr 27	753			6				1	1		98.6	23.6		
Apr 28	1,046			15				0	0		133.4	29.1		
Apr 29	784			1				1	1		141.3	29.9		
Apr 30	638			0				0	0		137.4	29.7		
TOTAL	6,761			50				17	13					
AVG.	423			3				1	1		110.7	11.6		

Water temperature and turbidity for April not available.

TABLE 151

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROCK ISLAND PROJECT

MAY 2003

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
May 1	371			3			0	0	0		119.7	28.9		
May 2	347			0			0	1	1		134.3	28.7		
May 3	505			3			0	0	0		120.5	24.9		
May 4	307			2			0	2	2		125.8	21.2		
May 5	139			0			0	0	0		147.2	29.2		
May 6	434			4			0	0	0		140.4	27.9		
May 7	171			0			0	1	1		139.8	29.2		
May 8	154			2			0	2	2		146.3	28.6		
May 9	647			4			0	0	0		129.1	28.1		
May 10	719			36			0	0	0		114.8	23.8		
May 11	569			6			0	0	0		107.1	20.2		
May 12	267			4			0	0	0		133.9	29.1		
May 13	454			19			1	0	0		163.7	26.7		
May 14	961			10			0	2	2		145.8	27.8		
May 15	495			9			0	0	0		144.3	29.0		
May 16	110			15			0	1	1		150.0	28.2		
May 17	288			21			0	0	0		135.6	26.2		
May 18	156			23			0	1	1		89.1	22.3		
May 19	81			7			1	1	1		146.0	29.1		
May 20	118			14			0	0	0		149.5	27.8		
May 21	45			14			0	1	1		149.7	28.9		
May 22	109			36			0	0	0		168.6	28.4		
May 23	174			34			0	0	0		150.6	27.4		
May 24	280			40			1	0	0		122.0	25.5		
May 25	125			15			0	1	1		100.4	23.8		
May 26	49			18			0	0	0		108.8	23.5		
May 27	61			30			0	0	0		130.2	31.9		
May 28	170			57			0	0	0		141.5	32.7		
May 29	139			46			0	3	1		170.3	27.7		
May 30	167			42			3	1	1		143.9	30.0		
May 31	101			19			0	0	0		122.6	26.9		
TOTAL	8,713			533			6	17	15					
AVG.	281			17			0	1	0		135.2	27.2		

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	COHO ADULT	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY
SPRING	15,474	583	0	6	34	28	0

Water temperature and turbidity for May not available.

TABLE 152

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROCK ISLAND PROJECT

JUNE 2003

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Jun 1	85			16			1	0	0	0	99.6	19.1		
Jun 2	46			11			1	0	0	0	128.9	31.9		
Jun 3	39			17			2	0	0	0	130.2	30.0		
Jun 4	27			13			1	0	0	0	134.8	28.3		
Jun 5	33			13			1	0	0	0	141.6	24.6		
Jun 6	57			4			2	2	2	1	164.3	26.0		
Jun 7	87			14			0	0	0	0	159.8	26.0		
Jun 8	64			13			0	0	0	0	137.8	23.8		
Jun 9	58			5			0	0	0	0	160.3	29.9		
Jun 10	57			4			0	1	1	0	171.5	36.5		
Jun 11	44			8			0	0	0	1	170.1	34.9		
Jun 12	118			8			4	0	0	0	164.7	34.0		
Jun 13	95			11			1	0	0	0	172.8	33.7		
Jun 14	94			5			1	2	2	1	152.0	28.6		
Jun 15	147			7			3	2	1	0	136.4	21.5		
Jun 16	105			12			8	0	0	0	166.7	31.9		
Jun 17	251			9			12	0	0	0	170.7	31.1		
Jun 18		432		9			21	2	2	1	152.3	30.0		
Jun 19		579		11			27	3	2	0	122.9	29.9		
Jun 20		595		20			73	1	0	0	139.5	30.4		
Jun 21		969		29			119	3	3	0	103.9	25.8		
Jun 22		1,053		26			114	1	1	0	85.4	15.1		
Jun 23		781		37			98	1	1	0	132.8	25.7		
Jun 24		551		19			130	4	3	0	148.7	26.6		
Jun 25		993		32			138	4	3	1	154.1	30.3		
Jun 26		2,037		42			252	3	3	0	153.8	30.4		
Jun 27		1,370		33			550	4	4	0	160.3	29.2		
Jun 28		1,632		29			458	3	3	4	151.7	23.9		
Jun 29		1,987		72			528	6	5	0	105.0	18.1		
Jun 30		1,290		76			417	9	9	2	126.3	29.9		
TOTAL	1,407	14,269		605			2,962	51	45	11				
AVG.	83	1098		20			99	2	2	0	143.3	27.9		

RUN YEAR TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK	COHO ADULT
SPRING	16,881	753	0
SUMMER	14,269	435	
TOTALS	31,150	1,188	

SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY
2,968	85	73	11

Water temperature and turbidity for June not available.

TABLE 153

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

ROCK ISLAND PROJECT
JULY 2003

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Jul 1		2,926		89	0		711	7	7	3	130.6	23.7		
Jul 2		2,549		92	0		1,002	11	10	5	103.3	23.4		
Jul 3		1,554		82	0		1,203	6	5	1	112.2	26.0		
Jul 4		1,743		128	0		1,426	15	9	0	78.0	14.7		
Jul 5		1,723		83	0		1,616	11	11	2	74.1	19.9		
Jul 6		3,160		130	0		1,991	26	18	1	76.4	16.7		
Jul 7		3,227		106	0		2,571	15	13	3	118.8	30.3		
Jul 8		3,442		165	0		2,924	15	10	4	120.7	28.7		
Jul 9		3,370		140	0		2,268	43	29	3	124.5	27.7		
Jul 10		3,226		175	0		2,261	36	24	3	135.4	25.0		
Jul 11		2,340		150	0		1,849	42	25	0	125.3	22.4		
Jul 12		2,334		184	0		1,819	42	25	3	114.8	21.5		
Jul 13		2,684		138	0		1,662	38	23	2	85.6	14.8		
Jul 14		2,035		156	1		998	51	37	2	119.0	23.8		
Jul 15		2,461		240	0		1,191	56	36	3	131.9	23.8		
Jul 16		1,406		121	1		1,031	40	27	1	116.7	23.4		
Jul 17		1,447		158	1		785	58	40	7	106.9	23.0		
Jul 18		1,602		139	0		773	46	32	12	104.5	20.4		
Jul 19		2,287		141	1		773	37	29	5	105.3	17.2		
Jul 20		1,385		79	3		562	59	47	9	78.9	11.0		
Jul 21		1,414		143	0		521	65	40	9	115.9	23.1		
Jul 22		1,094		198	2		405	68	49	14	122.8	24.9		
Jul 23		1,684		124	0		282	73	46	4	127.0	27.0		
Jul 24		1,024		140	0		221	87	48	8	111.3	25.1		
Jul 25		399		124	0		171	103	70	12	107.1	22.6		
Jul 26		1,130		163	0		131	72	45	3	89.8	21.8		
Jul 27		942		143	0		126	77	39	21	60.6	16.1		
Jul 28		1,141		163	0		89	83	55	18	108.3	24.9		
Jul 29		861		182	0		123	114	78	26	117.1	23.7		
Jul 30		1,001		147	0		59	148	104	38	116.8	22.9		
Jul 31		954		170	0		51	120	71	30	118.7	22.9		
TOTAL		58,545		4,393	9		31,595	1,664	1,102	252	108.3	22.3		
AVG.		1,889		142	0		1,019	54	36	8				

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	COHO ADULT	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY
SPRING	16,881	753	9	34,563	1,749	1,175	263
SUMMER	72,814	4828					
TOTALS	89,695	5,581					

Water temperature and turbidity for July not available.

TABLE 154

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

ROCK ISLAND PROJECT
AUGUST 2003

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY
Aug 1		925		226	0		44	145	93	35
Aug 2		639		116	0		29	147	81	16
Aug 3		349		78	0		19	91	57	16
Aug 4		347		90	0		11	62	44	66
Aug 5		841		128	0		13	165	107	52
Aug 6		524		93	0		11	173	103	84
Aug 7		562		104	0		9	223	151	95
Aug 8		831		147	0		10	192	119	122
Aug 9		433		102	0		2	167	97	146
Aug 10		228		89	0		4	125	72	66
Aug 11		422		101	0		3	83	57	124
Aug 12		363		119	0		10	155	93	70
Aug 13		354		143	0		7	172	84	92
Aug 14		401		145	0		6	97	64	91
Aug 15		509		139	0		6	153	101	140
Aug 16		504		105	0		4	143	73	120
Aug 17		497		105	0		4	117	89	62
Aug 18			321	82	0		0	90	55	123
Aug 19			331	80	0		1	122	83	74
Aug 20			186	75	0		0	91	62	92
Aug 21			278	61	0		1	127	76	188
Aug 22			248	71	0		0	165	117	128
Aug 23			295	37	0		2	121	77	76
Aug 24			374	90	0		0	101	64	99
Aug 25			110	59	0		1	96	65	80
Aug 26			228	79	0		0	130	95	52
Aug 27			239	126	0		2	170	120	83
Aug 28			142	69	1		2	143	100	134
Aug 29			153	59	0		0	157	109	104
Aug 30			113	57	0		2	150	99	143
Aug 31			162	27	3		2	160	111	168
TOTAL		8,729	3,180	3,002	4		205	4,233	2,718	2,941
AVG.		513	227	97	0		7	137	88	95

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Aug 1	105.3	21.6		
Aug 2	65.3	19.7		
Aug 3	61.1	13.7		
Aug 4	98.8	22.6		
Aug 5	105.9	19.7		
Aug 6	91.0	18.5		
Aug 7	95.5	17.7		
Aug 8	101.2	15.0		
Aug 9	86.5	13.4		
Aug 10	71.5	12.5		
Aug 11	112.0	19.5		
Aug 12	90.7	22.3		
Aug 13	89.4	23.2		
Aug 14	114.1	16.9		
Aug 15	110.2	20.0		
Aug 16	86.7	18.4		
Aug 17	65.0	0.0		
Aug 18	101.4	0.0		
Aug 19	100.9	0.0		
Aug 20	112.4	0.0		
Aug 21	121.2	0.0		
Aug 22	127.7	0.0		
Aug 23	93.6	0.0		
Aug 24	82.1	0.0		
Aug 25	128.4	0.0		
Aug 26	114.3	0.0		
Aug 27	80.7	0.0		
Aug 28	97.5	0.0		
Aug 29	97.9	0.0		
Aug 30	88.8	0.0		
Aug 31	61.0	0.0		
TOTAL	95.4	9.5		

RUN YEAR TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK	COHO ADULT	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY
SPRING	16,881	753	13	34,768	5,982	3,893	3,204
SUMMER	81,543	6,858					
FALL	3,180	972					
TOTALS	101,604	8,583					

Water temperature and turbidity for August not available.

TABLE 155

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

ROCK ISLAND PROJECT
SEPTEMBER 2003

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
	FISH COUNTS										RIVER CONDITIONS			
Sep 1			132	62	0		1	169	106	124	56.7	0.0		
Sep 2			64	42	0		0	123	92	72	69.2	0.0		
Sep 3			109	47	0		1	202	116	121	80.6	0.0		
Sep 4			94	37	0		0	203	131	46	78.8	0.0		
Sep 5			206	57	0		1	197	133	98	75.2	0.0		
Sep 6			420	89	0		0	239	146	73	44.4	0.0		
Sep 7			445	56	0		0	237	146	25	35.7	0.0		
Sep 8			327	51	0		0	219	158	41	59.8	0.0		
Sep 9			650	80	1		0	331	184	22	60.3	0.0		
Sep 10			528	63	0		1	251	169	19	48.9	0.0		
Sep 11			455	61	4		1	317	197	39	69.3	0.0		
Sep 12			470	97	4		1	348	260	40	69.4	0.0		
Sep 13			460	43	14		1	296	219	29	39.1	0.0		
Sep 14			387	87	24		0	293	196	28	42.5	0.0		
Sep 15			361	71	13		0	447	339	63	71.6	0.0		
Sep 16			416	54	32		0	536	413	48	64.5	0.0		
Sep 17			329	55	42		0	539	374	17	53.6	0.0		
Sep 18			294	50	62		0	322	244	21	62.2	0.0		
Sep 19			350	41	46		0	272	194	40	58.4	0.0		
Sep 20			303	66	71		1	366	272	30	54.1	0.0		
Sep 21			357	51	103		0	321	252	55	61.6	0.0		
Sep 22			523	72	130		0	416	303	57	79.6	0.0		
Sep 23			38	54	115		0	596	413	20	66.2	0.0		
Sep 24			372	59	115		0	385	296	46	69.0	0.0		
Sep 25			470	82	163		1	390	323	42	85.3	0.0		
Sep 26			360	46	180		1	355	268	21	87.6	0.0		
Sep 27			417	101	205		0	293	200	40	60.7	0.0		
Sep 28			371	98	242		0	203	148	46	54.8	0.0		
Sep 29			276	65	183		0	205	147	94	87.3	0.0		
Sep 30			264	96	226		0	268	180	46	86.0	0.0		
TOTAL			10,248	1,933	1,975		10	9,339	6,619	1,463	64.4	0.0		
AVG.			342	64	66		0	311	221	49				

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	COHO ADULT	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY
SPRING	16,881	753	1,988	34,778	15,321	10,512	4,667
SUMMER	81,543	6,858					
FALL	13,428	2,905					
TOTALS	111,852	10,516					

Water temperature and turbidity for September not available.

TABLE 156

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

ROCK ISLAND PROJECT
OCTOBER 2003

FISH COUNTS | **RIVER CONDITIONS**

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Oct 1			369	88	322	0	0	247	184	26	79.2	0.0		
Oct 2			391	79	308	0	0	149	90	28	69.9	0.0		
Oct 3			380	71	188	0	0	166	121	20	65.8	0.0		
Oct 4			248	62	276	0	0	103	57	17	50.3	0.0		
Oct 5			239	55	305	0	0	136	77	13	47.8	0.0		
Oct 6			244	56	232	0	0	115	71	25	79.1	0.0		
Oct 7			157	65	242	0	0	111	65	7	65.8	0.0		
Oct 8			241	58	176	0	0	98	63	3	70.5	0.0		
Oct 9			181	55	156	0	0	113	77	2	80.4	0.0		
Oct 10			252	85	150	0	0	102	75	2	66.9	0.0		
Oct 11			161	54	83	0	0	61	44	7	63.3	0.0		
Oct 12			214	53	165	0	0	66	43	5	54.4	0.0		
Oct 13			115	48	60	0	0	38	30	2	80.3	0.0		
Oct 14			117	44	33	0	0	50	34	1	81.2	0.0		
Oct 15			166	26	116	0	0	36	24	2	75.6	0.0		
Oct 16			170	56	186	0	0	51	39	0	67.8	0.0		
Oct 17			257	84	78	0	0	62	43	0	72.0	0.0		
Oct 18			263	26	92	0	0	35	29	0	57.0	0.0		
Oct 19			221	35	69	0	0	20	15	1	52.2	0.0		
Oct 20			169	39	53	0	0	23	14	2	80.2	0.0		
Oct 21			163	28	65	0	0	24	17	33	99.2	0.0		
Oct 22			131	16	68	0	0	29	23	41	98.4	0.0		
Oct 23			205	41	25	0	0	27	21	20	100.6	0.0		
Oct 24			162	19	58	0	1	24	20	22	99.9	0.0		
Oct 25			176	16	47	0	0	25	16	20	79.4	0.0		
Oct 26			154	20	34	0	0	19	12	3	59.2	0.0		
Oct 27			184	18	8	0	0	20	13	4	109.3	0.0		
Oct 28			141	16	24	0	0	19	13	3	98.9	0.0		
Oct 29			215	16	46	0	0	43	29	6	93.8	0.0		
Oct 30			250	9	36	0	0	27	18	2	108.1	0.0		
Oct 31			377	19	42	0	0	22	13	7	117.5	0.0		
TOTAL			6,713	1,357	3,743	0	1	2,061	1,390	324				
AVG.			217	44	121	0	0	66	45	10				
											78.2	0.0		

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	16,881	753
SUMMER	81,543	6,858
FALL	20,141	4,262
TOTALS	118,565	11,873

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY
5,731	0	34,779	17,382	11,902	4,991

Water temperature and turbidity for October not available.

TABLE 157

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

ROCK ISLAND PROJECT
NOVEMBER 2003

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Nov 1			391	18	26	0		20	11	3	98.2	0.0		
Nov 2			326	11	21	0		26	19	2	64.4	0.0		
Nov 3			266	6	23	0		10	6	1	90.8	0.0		
Nov 4			159	4	10	0		17	13	2	115.5	0.0		
Nov 5			114	2	15	0		10	7	0	119.4	0.0		
Nov 6			107	3	7	0		13	13	0	109.5	0.0		
Nov 7			90	3	2	0		4	4	0	107.0	0.0		
Nov 8			71	1	10	0		1	1	1	74.8	0.0		
Nov 9			48	9	9	0		8	6	0	65.1	0.0		
Nov 10			22	1	5	0		3	2	0	91.3	0.0		
Nov 11			18	2	1	0		5	4	0	94.2	0.0		
Nov 12			23	0	2	0		3	3	0	109.5	0.0		
Nov 13			16	2	6	0		5	3	0	103.8	0.0		
Nov 14			12	4	1	0		2	2	0	97.9	0.0		
Nov 15											87.8	0.0		
Nov 16											84.1	0.0		
Nov 17											98.8	0.0		
Nov 18											99.4	0.0		
Nov 19											111.5	0.0		
Nov 20											111.8	0.0		
Nov 21											111.9	0.0		
Nov 22											96.5	0.0		
Nov 23											72.0	0.0		
Nov 24											111.8	0.0		
Nov 25											105.4	0.0		
Nov 26											97.0	0.0		
Nov 27											53.4	0.0		
Nov 28											67.9	0.0		
Nov 29											65.9	0.0		
Nov 30											58.7	0.0		
TOTAL			1,663	66	138	0		127	94	9	95.3	0.0		
AVG.			119	5	10	0		9	7	1				

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	16,881	753
SUMMER	81,543	6,858
FALL	21,804	4,328
TOTALS	120,228	11,939

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY
5,869	0	34,779	17,509	11,996	5,000

Water temperature and turbidity for November not available.

TABLE 158

MONTHLY COUNT OF STEELHEAD

ROCK ISLAND DAM 1981 - 2003

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
1998				20	13	29	449	726	2,486	1,141	98		4,962
1999				17	22	37	377	2,429	2,900	540	40		6,362
2000				18	5	74	1,356	3,299	4,974	727	63		10,516
2001				49	23	185	3,094	9,380	12,129	3,461	292		28,613
2002				53	20	85	2,327	6,374	5,144	1,200	79		15,282
2003				17	17	51	1,664	4,233	9,339	2,061	127		17,509
Total				1,468	1,838	2,643	29,896	87,074	130,442	43,484	4,626		301,471
10-Year Average				26	21	59	1,092	3,311	4,847	1,346	105		10,807

ROCKY REACH DAM

FISH COUNTING SCHEDULE

Jan 1 - Apr 13	No counting.
Apr 14 - Nov 14	Video recording 24 hours per day/7 days a week. Video counting daily 0700 - 1530 hours Pacific Standard Time.
Nov 15 - Dec 31	No counting; video recording 24 hours per day/7days a week to monitor bull trout passage at Rocky Reach Dam only.

FISH LADDER OPERATING SCHEDULE

Jan 2 to Feb 28 - Fishway out of service for annual maintenance

Mar 1 to Jan 1 - Fishway in service

FISHWAY ACTIVITIES

The juvenile fish bypass system was operated for fish passage from April 1 to August 31, 2003. Juvenile fish sampling was conducted throughout the entire operation. The annual bypass evaluation included radio tag releases and collection of data on species composition and fish condition. Chelan County PUD completed construction of the new juvenile fish bypass (production) system in late March 2003.

Chelan County PUD was involved in a radio telemetry study to determine the migratory patterns of adult bull trout. The fish were monitored as they passed Rocky Reach and Rock Island dams and migrated up and down the Entiat and Wenatchee rivers. The PUD also assisted the Yakama Nation with monitoring the passage of radio-tagged adult coho at both projects.

Rocky Reach Historic Fish Count Schedule 1993-2002 (information based on previous Annual Fish Passage Reports)

Year	Months	Count Period	Notes
1992	May 1 – Apr 30	16 hour (0500-2100 PDT)	
	Oct 31 – Nov 15	16 hour (0400-2000 PST)	
1993 – 94	Apr 15 – Nov 15	16 hour (0400-2000 PST)	
1995 - 8	Apr 15 – Nov 15	24 hour video	
1999	Apr 15 – Nov 14	24 hour video	
2000 - 1	Apr 14 – Nov 14	24 hour video	
2002	Apr 14 – Nov 14	24 hour video	Video counting daily 0700-1530 PST

TABLE 159

MONTHLY TOTALS OF SALMONIDS AND LAMPREY COUNTED OVER ROCKY REACH DAM
2003

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*				1,075	2,661	8,438	50,185	14,851	7,018	3,296	487		88,011
STEELHEAD				46	4	40	1,154	3,393	6,649	2,211	153		13,650
SOCKEYE						1,903	27,980	449	22	1			30,355
COHO							2		96	781	114		993
PINK													
TOTAL				1,121	2,665	10,381	79,321	18,693	13,785	6,289	754		133,009
LAMPREY							138	1,495	763	125			2,521

***Jacks included**

TABLE 160

MONTHLY FISH PASSAGE SUMMARY REPORT — **ROCKY REACH PROJECT**

U.S. ARMY ENGINEER DISTRICT, PORTLAND — **APRIL 2003**

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Apr 1	BEGIN COUNTING 14 APRIL										93.0	0.0		
Apr 2											90.8	0.0		
Apr 3											97.6	0.0		
Apr 4											81.2	0.0		
Apr 5											67.0	0.0		
Apr 6											56.6	0.0		
Apr 7											109.3	2.0		
Apr 8											93.8	0.0		
Apr 9											99.8	0.0		
Apr 10											105.0	0.0		
Apr 11											96.1	0.0		
Apr 12											80.8	0.0		
Apr 13											69.0	0.0		
Apr 14	3			0				3	3	0	95.3	0.0		
Apr 15	4			0				6	4	0	112.2	0.0		
Apr 16	14			0				7	6	0	127.1	0.0		
Apr 17	6			0				1	0	0	122.4	0.0		
Apr 18	9			0				2	1	0	105.8	0.0		
Apr 19	1			0				3	3	0	107.1	0.0		
Apr 20	3			0				7	5	0	67.0	11.6		
Apr 21	132			0				1	0	0	141.5	17.1		
Apr 22	52			0				3	2	0	135.4	18.6		
Apr 23	110			0				2	1	0	135.1	20.0		
Apr 24	22			0				1	1	0	140.9	21.0		
Apr 25	114			0				4	4	0	141.7	21.2		
Apr 26	43			0				1	1	0	104.2	20.5		
Apr 27	85			0				1	1	0	93.7	18.9		
Apr 28	131			0				1	1	0	129.8	27.2		
Apr 29	237			0				2	2	0	138.0	22.4		
Apr 30	109			0				1	0	0	131.9	21.8		
TOTAL	1,075			0				46	35	0				
AVG.	63			0				3	2	0	105.6	7.4		

Water temperature and turbidity for April not available.

TABLE 161

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROCKY REACH PROJECT

MAY 2003

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
May 1	195			0				1	1		114.3	20.5		
May 2	22			0				0	0		130.3	20.7		
May 3	64			0				0	0		114.3	17.7		
May 4	115			0				0	0		118.6	15.4		
May 5	85			0				0	0		143.1	18.5		
May 6	50			0				0	0		133.7	17.8		
May 7	91			0				0	0		136.6	18.9		
May 8	79			0				1	1		143.1	17.6		
May 9	33			0				0	0		127.0	33.9		
May 10	115			1				0	0		111.1	28.7		
May 11	158			2				0	0		101.2	24.2		
May 12	124			2				0	0		133.7	35.8		
May 13	103			0				0	0		161.0	32.0		
May 14	105			4				0	0		141.1	32.5		
May 15	331			7				1	1		140.6	35.2		
May 16	41			6				0	0		146.0	33.8		
May 17	19			8				0	0		130.0	31.7		
May 18	11			6				0	0		83.6	27.5		
May 19	56			8				0	0		144.8	34.6		
May 20	17			4				0	0		146.9	33.5		
May 21	8			5				0	0		148.2	35.0		
May 22	1			7				0	0		166.8	35.6		
May 23	106			44				0	0		146.2	36.5		
May 24	24			16				0	0		116.2	35.6		
May 25	93			25				0	0		90.0	30.9		
May 26	37			10				0	0		97.8	30.6		
May 27	40			17				0	0		123.9	38.3		
May 28	113			39				0	0		133.6	26.0		
May 29	54			35				0	0		159.6	33.7		
May 30	47			38				0	0		130.9	21.0		
May 31	14			26				1	0		111.7	19.1		
TOTAL	2,351			310				4	3					
AVG.	76			10				0	0		129.9	28.2		

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	COHO	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY
SPRING	3,426	310	0	0	50	38	0

Water temperature and turbidity for May not available.

TABLE 162

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROCKY REACH PROJECT

JUNE 2003

FISH COUNTS | **RIVER CONDITIONS**

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Jun 1	87			22			0	0	0		87.0	12.4		
Jun 2	38			7			0	0	0		119.6	22.1		
Jun 3	36			9			0	0	0		121.2	20.7		
Jun 4	45			7			0	0	0		126.0	18.4		
Jun 5	8			7			0	0	0		132.8	14.5		
Jun 6	5			7			0	0	0		154.5	16.1		
Jun 7	13			10			0	0	0		147.8	19.2		
Jun 8	15			8			0	0	0		123.1	17.2		
Jun 9	47			15			0	0	0		148.8	17.8		
Jun 10	27			7			0	0	0		160.4	25.3		
Jun 11	13			3			0	1	0		160.6	24.7		
Jun 12	37			4			0	1	1		156.1	24.1		
Jun 13	42			6			3	0	0		164.9	24.4		
Jun 14	69			3			3	0	0		143.5	20.8		
Jun 15	24			0			1	1	1		129.6	15.0		
Jun 16	27			4			3	0	0		161.8	23.4		
Jun 17	67			9			4	1	0		162.4	22.4		
Jun 18	23			4			8	1	1		145.5	21.8		
Jun 19	170			8			15	1	0		113.0	21.8		
Jun 20		104		6			32	3	0		135.3	21.7		
Jun 21		454		3			63	0	0		96.7	16.8		
Jun 22		418		9			53	3	0		81.0	13.0		
Jun 23		669		20			104	1	0		128.6	20.8		
Jun 24		364		13			100	0	0		149.1	19.6		
Jun 25		475		17			95	3	3		150.9	21.9		
Jun 26		646		15			124	7	6		150.8	21.5		
Jun 27		1035		37			153	4	3		154.3	19.4		
Jun 28		934		30			269	3	3		146.5	12.5		
Jun 29		1087		40			502	4	4		96.0	11.6		
Jun 30		1101		28			371	6	5		122.1	21.7		
TOTAL	793	7,287		358			1,903	40	27					
AVG.	42	662		12			63	1	1		135.7	19.4		

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	4,219	450
SUMMER	7,287	218
TOTALS	11,506	668

COHO ADULTS
0

SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY
1,903	90	65	0

Water temperature and turbidity for June not available.

TABLE 163

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROCKY REACH PROJECT

JULY 2003

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Jul 1		908		32	0		492	4	4	1	124.4	17.7		
Jul 2		1,905		33	0		627	3	3	0	99.5	17.4		
Jul 3		1,482		41	0		597	8	6	0	107.8	19.3		
Jul 4		1,075		45	0		757	6	4	1	70.6	11.3		
Jul 5		1,192		53	0		1,289	6	3	0	71.9	15.3		
Jul 6		1,558		82	0		1,221	11	6	3	70.6	13.9		
Jul 7		2,078		88	0		1,071	15	11	3	119.8	23.5		
Jul 8		1,957		121	0		2,257	15	8	1	118.2	20.6		
Jul 9		2,466		193	1		2,488	11	5	1	120.5	20.2		
Jul 10		2,435		150	0		1,448	28	17	1	133.5	18.7		
Jul 11		2,030		158	0		1,645	17	12	1	121.4	17.3		
Jul 12		1,924		135	0		1,979	43	26	2	110.1	16.3		
Jul 13		1,769		98	0		1,418	38	23	6	83.1	11.5		
Jul 14		2,348		143	0		2,021	37	25	2	115.3	19.2		
Jul 15		1,686		129	0		1,163	29	18	4	128.0	17.3		
Jul 16		1,944		209	0		1,182	48	30	4	112.8	17.4		
Jul 17		1,442		146	0		952	50	32	2	104.9	16.7		
Jul 18		1,088		123	0		695	34	22	3	105.2	14.5		
Jul 19		1,130		145	0		775	39	28	4	102.8	12.3		
Jul 20		2,527		194	0		809	47	28	9	77.6	8.3		
Jul 21		1,148		122	0		662	32	22	6	115.4	17.2		
Jul 22		1,320		154	0		577	59	33	11	121.5	18.3		
Jul 23		1,115		157	0		421	48	32	6	124.8	20.2		
Jul 24		1,639		182	0		424	62	40	6	108.0	18.8		
Jul 25		789		135	0		281	65	32	5	106.5	17.0		
Jul 26		488		141	0		206	46	25	6	87.1	14.2		
Jul 27		1,132		146	0		144	63	41	7	60.3	9.9		
Jul 28		1,060		169	1		144	77	51	7	109.0	18.3		
Jul 29		1,060		165	0		97	61	35	7	115.9	17.3		
Jul 30		665		123	0		71	58	41	15	115.7	16.7		
Jul 31		883		130	0		67	94	65	14	116.2	17.0		
TOTALS		46,243		3,942	2		27,980	1,154	728	138				
AVG.		1492		127	0		903	37	23	4				
RUN YEAR TOTALS TO DATE		CHINOOK ADULT	CHINOOK JACK		COHO ADULTS		SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY	105.7	16.6		
	SPRING	4,219	450		2		29,883	1,244	793	138				
	SUMMER	53,530	4,160											
	TOTAL	57,749	4,610											

Water temperature and turbidity for July not available.

TABLE 164

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

ROCKY REACH PROJECT
AUGUST 2003

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO					DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Aug 1		1,104		145			79	99	58	12	104.2	16.0		
Aug 2		963		177			54	102	54	26	62.0	14.7		
Aug 3		487		93			57	126	72	27	59.0	9.7		
Aug 4		435		63			29	111	63	28	98.6	16.8		
Aug 5		537		102			33	82	47	22	106.4	12.1		
Aug 6		875		129			19	78	46	26	87.1	11.9		
Aug 7		524		118			27	105	59	38	95.6	11.1		
Aug 8		452		87			17	131	61	26	100.6	9.5		
Aug 9		669		87			7	136	76	39	83.4	9.8		
Aug 10		242		52			4	121	71	40	70.2	9.5		
Aug 11		311		68			14	133	79	52	110.6	13.6		
Aug 12		499		99			18	147	97	67	88.0	16.5		
Aug 13		331		110			15	121	46	47	89.3	17.2		
Aug 14		268		133			13	95	40	37	113.6	12.9		
Aug 15		255		127			7	135	60	44	109.7	0.0		
Aug 16		257		124			5	108	55	55	85.0	0.0		
Aug 17		533		87			3	83	57	85	62.7	0.0		
Aug 18		559		122			4	105	61	87	100.5	0.0		
Aug 19		336		112			5	142	80	64	100.8	0.0		
Aug 20			343	98			7	128	84	49	112.7	0.0		
Aug 21			338	77			3	110	65	67	122.9	0.3		
Aug 22			125	73			5	94	52	76	125.9	1.6		
Aug 23			39	46			1	67	39	80	91.8	0.0		
Aug 24			205	44			3	93	55	56	81.2	0.0		
Aug 25			518	66			6	122	79	60	129.0	0.0		
Aug 26			144	60			2	97	60	35	112.7	0.0		
Aug 27			138	76			2	88	54	23	79.1	0.0		
Aug 28			71	45			3	78	47	68	102.1	0.0		
Aug 29			216	63			3	137	88	43	98.6	0.2		
Aug 30			62	40			3	104	68	51	86.2	1.2		
Aug 31			236	56			1	115	69	65	60.3	0.0		
TOTAL		9,637	2,435	2,779			449	3,393	1,942	1,495				
AVG.		507	203	90			14	109	63	48	94.5	6.0		

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	4,219	450
SUMMER	63,167	6,195
FALL	2,435	744
TOTALS	69,821	7,389

COHO ADULTS
2

SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY
30,332	4,637	2,735	1,633

Water temperature and turbidity for August not available.

TABLE 165

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

ROCKY REACH PROJECT
SEPTEMBER 2003
RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Sep 1			98	29	0		0	58	32	65	53.2	0.2		
Sep 2			119	43	0		1	118	76	62	68.7	0.0		
Sep 3			84	51	0		3	191	116	89	82.1	0.0		
Sep 4			64	46	0		1	157	91	23	78.3	0.0		
Sep 5			32	39	0		3	104	60	29	74.1	0.0		
Sep 6			139	42	0		2	133	77	49	45.4	0.0		
Sep 7			198	51	0		0	121	73	55	34.8	0.0		
Sep 8			414	42	0		0	187	118	17	60.2	0.0		
Sep 9			72	29	0		1	187	110	19	59.1	0.0		
Sep 10			387	46	0		1	171	112	14	50.3	0.0		
Sep 11			398	39	0		0	171	89	13	68.5	0.0		
Sep 12			316	32	2		0	190	99	18	70.0	0.0		
Sep 13			234	39	1		4	205	119	12	37.8	0.0		
Sep 14			386	42	0		0	223	139	29	43.0	0.0		
Sep 15			275	33	1		0	219	136	13	71.6	0.0		
Sep 16			185	43	3		0	315	212	13	65.8	0.0		
Sep 17			131	28	0		0	334	214	18	53.5	0.0		
Sep 18			93	35	0		1	317	204	14	62.3	0.0		
Sep 19			150	41	1		0	299	205	14	58.0	0.0		
Sep 20			173	27	1		0	189	131	7	54.4	0.0		
Sep 21			151	27	1		0	228	201	10	62.7	0.0		
Sep 22			137	33	6		0	287	210	22	79.5	0.0		
Sep 23			213	35	8		2	266	194	4	68.6	0.0		
Sep 24			173	33	2		0	369	269	21	69.9	0.0		
Sep 25			145	31	2		1	354	242	28	86.6	0.0		
Sep 26			186	33	5		0	332	230	26	88.8	0.0		
Sep 27			357	49	7		0	272	192	26	60.2	0.0		
Sep 28			120	32	19		0	219	149	21	56.0	0.0		
Sep 29			271	67	9		2	235	146	17	89.1	0.0		
Sep 30			160	40	28		0	198	134	15	87.8	0.0		
TOTAL			5,861	1,157	96		22	6,649	4,380	763				
AVG.			195	39	3		1	222	146	25	64.7	0.0		

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	4,219	450
SUMMER	63,167	6,195
FALL	8,296	1901
TOTALS	75,682	8,546

COHO ADULTS
98

SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY
30,354	11,286	7,115	2,396

Water temperature and turbidity for September not available.

TABLE 166

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

ROCKY REACH PROJECT
OCTOBER 2003

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Oct 1			17	33	26		0	111	76	20	81.4	0.0		
Oct 2			136	52	36		0	218	135	23	70.3	0.0		
Oct 3			47	31	30		1	120	81	15	67.0	0.0		
Oct 4			68	33	38		0	112	74	18	49.0	0.0		
Oct 5			123	46	43		0	95	55	11	47.9	0.0		
Oct 6			53	45	28		0	97	65	12	80.2	0.0		
Oct 7			76	57	40		0	72	41	2	67.5	0.0		
Oct 8			21	20	25		0	68	40	4	70.0	0.0		
Oct 9			57	47	25		0	108	69	6	83.5	0.0		
Oct 10			37	29	21		0	63	40	0	70.4	0.0		
Oct 11			21	28	17		0	70	47	1	63.7	0.0		
Oct 12			40	30	34		0	62	40	2	53.2	0.0		
Oct 13			28	17	19		0	54	37	0	82.1	0.0		
Oct 14			26	22	32		0	61	43	2	81.3	0.0		
Oct 15			35	30	44		0	46	32	0	74.7	0.0		
Oct 16			53	19	31		0	51	39	0	67.9	0.0		
Oct 17			46	16	49		0	85	68	0	70.2	0.0		
Oct 18			53	38	37		0	180	146	1	52.8	0.0		
Oct 19			23	27	27		0	106	86	1	49.9	0.0		
Oct 20			131	28	20		0	46	39	0	78.4	0.0		
Oct 21			131	23	30		0	51	36	1	92.8	0.0		
Oct 22			522	29	20		0	48	37	3	88.3	0.0		
Oct 23			203	19	8		0	55	44	2	97.1	0.0		
Oct 24			32	6	3		0	31	26	0	96.8	0.0		
Oct 25			155	22	22		0	46	43	0	75.9	0.0		
Oct 26			68	10	10		0	18	16	0	55.5	0.0		
Oct 27			88	9	6		0	21	15	1	108.5	0.0		
Oct 28			40	9	13		0	33	25	0	97.9	0.0		
Oct 29			59	5	9		0	27	21	0	91.5	0.0		
Oct 30			55	7	18		0	28	23	0	104.6	0.0		
Oct 31			62	3	20		0	28	22	0	118.0	0.0		
TOTAL			2,506	790	781		1	2,211	1,561	125				
AVG.			81	25	25		0	71	50	4				
											77.0	0.0		

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	COHO ADULTS	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY
SPRING	4,219	450	879	30,355	13,497	8,676	2,521
SUMMER	63,167	6,195					
FALL	10,802	2691					
TOTALS	78,188	9,336					

Water temperature and turbidity for October not available.

TABLE 167

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

ROCKY REACH PROJECT
NOVEMBER 2003

FISH COUNTS / **RIVER CONDITIONS**

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Nov 1			38	3	24			13	7		94.3	0.0		
Nov 2			104	10	20			14	10		60.0	0.0		
Nov 3			88	5	20			11	8		90.2	0.0		
Nov 4			84	4	20			36	11		113.8	0.0		
Nov 5			42	0	9			12	9		117.0	0.0		
Nov 6			32	0	9			16	13		107.5	0.0		
Nov 7			20	3	3			8	7		104.5	0.0		
Nov 8			10	1	3			3	3		72.0	0.0		
Nov 9			11	1	2			8	8		65.3	0.0		
Nov 10			11	0	1			5	4		87.9	0.0		
Nov 11			10	0	0			6	4		93.1	0.0		
Nov 12			1	0	1			6	3		106.3	0.0		
Nov 13			8	0	1			6	4		101.1	0.0		
Nov 14			1	0	1			9	8		95.1	0.0		
Nov 15											85.7	0.0		
Nov 16											79.6	0.0		
Nov 17											98.0	0.0		
Nov 18											97.3	0.0		
Nov 19											106.4	0.0		
Nov 20											105.0	0.0		
Nov 21											107.5	0.0		
Nov 22											90.9	0.0		
Nov 23											67.1	0.0		
Nov 24											107.5	0.0		
Nov 25											100.6	0.0		
Nov 26											92.9	0.0		
Nov 27											46.2	0.0		
Nov 28											63.3	0.0		
Nov 29											60.9	0.0		
Nov 30											55.9	0.0		
TOTAL			460	27	114			153	99					
AVG.			33	2	8			11	7		89.1	0.0		

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	4,219	450
SUMMER	63,167	6,195
FALL	11,262	2,718
TOTALS	78,648	9,363

COHO ADULTS
993

SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY
30,355	13,650	8,775	2,521

Water temperature and turbidity for November not available.

TABLE 168

MONTHLY COUNT OF STEELHEAD

ROCKY REACH DAM: 1981 - 2003

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
1998				71	18	23	281	671	2,025	1,127	226		4,442
1999				35	16	46	198	1,518	2,361	557	84		4,815
2000				62	22	34	679	2,276	4,289	835	78		8,275
2001				83	33	83	1,861	6,843	9,827	3,025	290		22,045
2002				152	33	49	1,441	4,631	4,103	1,332	112		11,853
2003				46	4	40	1,154	3,393	6,649	2,211	153		13,650
Total				1,245	1,420	1,699	17,603	57,895	92,015	34,454	4,081		210,412
10-Year Average				54	19	33	643	2,368	3,685	1,277	136		8,215

WELLS DAM

FISH COUNTING SCHEDULE

Adult counting schedules at Wells are from May 1 through November 15. Fish passage is assessed by reviewing a videotape record made the previous day. Passage by species and ladder is made for each hour of the day. Counts between 1967 and 1997 were reported for 16 hours (0500 – 2100 PST). Starting in 1998, as per the request of the Wells Coordinating Committee, counts were reported in a 24 hour (0000 – 2400) format. Either format is available upon request from Douglas PUD. Chinook are separated into three populations based upon date of passage through the ladders. Spring Chinook pass from May 1 through June 28, Summer Chinook between June 29 and August 28, and Fall Chinook from August 29 through November 15.

DESCRIPTION OF THE ADULT PASSAGE FACILITIES

The two fish ladders at Wells Dam are conventional staircase type fish ladders with 73 pools. The ladders are located at the east and west endwall of the dam. The lower 56 pools discharge a constant 48 cfs dropping one foot at each pool into the attraction chamber in the lower ladder. Discharge from one pool to another is over a seven foot wide overflow section in the wall between pools with additional flow through two 18 inch by 15 inch submerged orifices. Pools 67 and 68 have adult PIT tag detection weirs that interrogate passage of all adults just prior to the ladder exit. Information on PIT tag detection of adults using both east and west ladders is found on the PTAGIS web page (http://www.pittag.org/web/Adult/index.html). Pool No. 64 of both fishways contain facilities for counting fish. The main features of this facility are a counting room with an observation window adjacent to the fish ladder, a telescoping gate and light panel are used to guide the fish closer to the observation window. At Pool No. 40 of the ladders are provisions for sorting and trapping various species of fish. The fisheries agencies and tribes develop broodstock collection protocols at the beginning of each season for collection of spring and summer chinook, sockeye and coho salmon and summer steelhead. These plans are submitted annually to the Wells Coordinating Committee.

At the bottom of the fish ladder, projecting downstream from the line of the hydrocombine is the portion of the endwall structure, which incorporates the functions of fish attraction and collection. Two-turbine pumps deliver attraction flow to the water supply chamber located adjacent to the ladder. The total flow from the turbine pump(s) plus the 48 cfs coming down the ladder from the reservoir is discharged to the tailwater through a single fish attraction opening per ladder. These openings are eight-foot wide vertical slot openings with vertical miter gates. Originally an additional set of side gates were provided. Ladder entrances were designed to have the side gate be open at 2 – 4' and the end gate would automatically adjust its width to maintain a one foot differential in the collection chamber. Since July 1970, the side gate has been set at a four foot

opening with the end gate fixed at six feet. A 1.5 foot differential is maintained as the two turbine pumps adjust output. On June 29, 2000, the joint fisheries parties agreed to have the side entrances permanently closed. This decision was based upon several years of radio telemetry studies with various species of anadromous fish that showed improved passage times with the side gates closed.

FISH LADDER OPERATING SCHEDULE

Annual maintenance is performed on the ladders at Wells to clean the ladder of debris and service the attraction flow pumps. During this time the ladders are taken out of service and de-watered. The dates of this work in 2003 were as follows:

West Ladder
January 1 through January 22, 2003 Inspection & Maintenance

December 2 through December 31, 2003 (Outage will extend into 2004)

East Ladder
January 27 through February 20, 2003 Inspection and Maintenance

JUVENILE PASSAGE FACILITIES

The juvenile Bypass at Wells Dam uses the hydrocombine design of the dam by modifying five of the eleven spill bays. The even number spill bays are partially constricted with barriers that improve the attraction flow from the forebay into the spill bay area. Up to 11,000 cfs of water is made available for bypass flow during the juvenile migration.

The operation of the bypass in 2003 was coordinated with the Wells Habitat Conservation Plan Coordinating Committee and with the Wells Coordinating Committee. In the past hydroacoustics and fyke netting have provided information on real time data of the fish migration. The fixed dates agreed to by both committees were established from 21 years of hydroacoustic and 14 years of species composition information collected on juvenile run patterns at Wells Dam. The spring period ran from April 12 through June 13 for a total of 63 days and a total discharge of 1.0 MAF, or 6.5% of total project discharge. The summer bypass started on June 14 and ran through August 26 for a total of 74 days and a project discharge of 1.1 MAF or 6.6% of the total discharge.

MISCELLANEOUS

In 2003, radio telemetry receivers were monitored at Wells Dam for a Chelan PUD study with Bull Trout and a Yakama Indian Nation study with coho. Antenna and receiving

units were installed at Wells Dam as well as in neighboring tributaries. Information from these two studies is still being analyzed.

2003 was the sixth highest total passage of salmonids from the 36 years of passage records since the completion of the dam in 1967, based upon the historical 16-hour count format. It was the second largest year for summer chinook with over nine times the average value. It was also a very high count for lamprey. Average lamprey passage for the past five years (1998 – 2003) is 235. In 2003, there were 1,408 lampreys that ascended Wells Dam.

Wells Historic Fish Count Schedule 1992-2002 (information based on previous Annual Fish Passage Reports)

Year	Months	Count Period	Notes
1992	May 1 – Oct 30	24 hour	16 hour (0500-2100 PDT) + 8 hour video
	Oct 31 – Nov 15	24 hour	16 hour (0400-2000 PST) + 8 hour video
1993	May 1 – Oct 30	16 hour (0500-2100 PDT)	
	Oct 31 – Nov 15	16 hour (0400-2000 PST)	
1994	May 1 – Oct 29	16 hour (0500-2100 PDT)	
	Oct 30 – Nov 15	16 hour (0400-2000 PST)	
1995	May 1 - Oct 31	16 hour (0500-2100 PDT)	
1996	May 1 – Oct 26	16 hour (0500-2100 PDT)	
	Oct 27 – Nov 15	16 hour (0400-2000 PDT)	
1997	May 1 – Oct 25	16 hour (0500-2100 PDT)	
	Oct 26 – Nov 15	16 hour (0400-2000 PST)	
1998-2002	May 1 – Nov 15	24 hour video	

TABLE 169

MONTHLY TOTALS OF SALMONIDS COUNTED OVER WELLS DAM
2003

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
CHINOOK*					1,448	4,439	32,292	13,472	4,374	3,158	163		59,346
STEELHEAD					21	10	456	2,346	4,618	2,320	192		9,963
SOCKEYE						732	27,630	603	12				28,977
COHO									2	141	25		168
TOTAL					1,469	5,181	60,378	16,421	9,006	5,619	380		98,454
LAMPREY						3	40	234	334	552	245		1,408

***Jacks included**

TABLE 170

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

WELLS PROJECT

MAY 2003

FISH COUNTS

RIVER CONDITIONS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
May 1	38			0				0	0		115.6	8.2	8.0	
May 2	105			0				5	3		132.8	8.7	10.0	46.1
May 3	42			0				3	0		115.8	8.1	11.0	46.6
May 4	35			0				3	3		117.7	8.5	14.0	46.3
May 5	110			0				0	0		145.7	9.2	11.0	46.5
May 6	20			0				3	3		137.2	8.4	11.0	46.6
May 7	62			0				0	0		140.2	8.2	11.0	46.8
May 8	9			0				1	0		145.7	8.3	14.0	46.8
May 9	19			0				2	1		128.7	8.3	11.0	47.2
May 10	274			0				0	0		110.7	7.7	13.0	47.5
May 11	36			0				2	1		101.9	7.5	13.0	47.7
May 12	3			0				1	1		139.2	14.0	14.0	48.0
May 13	5			0				0	0		158.8	12.6	19.0	48.2
May 14	15			0				0	0		142.6	8.6	14.0	48.3
May 15	48			1				1	1		141.8	9.1	14.0	48.9
May 16	19			0				0	0		150.5	9.1	14.0	49.0
May 17	114			2				0	0		124.4	8.8	12.0	49.0
May 18	16			0				0	0		87.7	6.4	14.0	48.4
May 19	3			1				0	0		146.5	9.1	12.0	48.0
May 20	8			2				0	0		147.5	9.2	12.0	48.4
May 21	14			3				0	0		148.3	8.7	13.0	49.1
May 22	19			2				0	0		166.2	9.8	14.0	49.8
May 23	10			0				0	0		147.7	9.6	9.0	
May 24	150			7				0	0		115.8	8.1	9.0	
May 25	33			6				0	0		88.2	6.6	12.0	
May 26	120			5				0	0		95.8	7.0	11.0	
May 27	11			2				0	0		124.8	7.9	11.0	52.4
May 28	3			0				0	0		139.5	12.0	11.0	52.0
May 29	17			1				0	0		157.7	14.6	14.0	52.3
May 30	25			2				0	0		127.4	9.0	8.0	52.5
May 31	15			16				0	0		109.9	7.8	8.0	52.6
TOTAL	1,398			50				21	13					
AVG.	45			2				1	0		130.7	9.0	12.0	48.7

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	STEELHEAD	WILD STEELHEAD
SPRING	1,398	50	21	13

TABLE 171

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

WELLS PROJECT
JUNE 2003

FISH COUNTS / **RIVER CONDITIONS**

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Jun 1	123			26			0	0	0	0	85.9	6.4	7.0	52.7
Jun 2	32			10			0	0	0	0	118.6	7.6	6.0	52.5
Jun 3	34			6			0	0	0	0	123.8	7.8	7.0	52.7
Jun 4	15			3			0	0	0	0	128.8	8.0	7.0	
Jun 5	37			0			0	0	0	0	135.7	8.4	8.0	53.8
Jun 6	62			1			0	0	0	0	159.0	8.9	8.0	53.9
Jun 7	22			1			0	0	0	0	145.8	12.4	8.0	54.4
Jun 8	8			3			0	0	0	0	121.6	8.1	8.0	55.5
Jun 9	28			7			0	0	0	0	153.2	8.9	8.0	55.0
Jun 10	6			2			0	0	0	0	160.3	10.0	6.0	55.5
Jun 11	9			4			0	0	0	0	165.6	10.0	7.0	55.2
Jun 12	6			2			0	0	0	0	159.8	10.0	9.0	55.6
Jun 13	37			1			0	0	0	0	164.8	10.0	8.0	54.9
Jun 14	16			0			0	0	0	0	145.1	9.1	9.0	55.8
Jun 15	14			2			0	0	0	0	130.7	8.2	15.0	56.8
Jun 16	83			8			0	0	0	0	166.4	10.0	15.0	56.3
Jun 17	40			0			0	0	0	0	164.4	9.6	12.0	56.6
Jun 18	20			2			0	0	0	0	146.1	9.3	10.0	56.8
Jun 19	27			8			0	0	0	0	112.8	7.9	10.0	57.6
Jun 20	19			7			0	0	0	0	138.8	8.6	7.0	57.0
Jun 21	34			7			0	0	0	0	94.8	6.8	7.0	56.6
Jun 22	21			3			14	0	0	0	79.5	5.7	12.0	56.9
Jun 23	505			9			38	0	0	0	135.6	8.3	12.0	57.3
Jun 24	112			3			22	0	0	0	153.6	8.5	13.0	57.3
Jun 25	27			7			57	2	1	0	155.0	27.9	7.0	57.8
Jun 26	120			1			69	0	0	0	153.6	20.3	13.0	58.4
Jun 27	295			17			51	4	2	2	157.8	9.0	9.0	59.2
Jun 28	1354			8			123	2	1	0	148.9	8.8	14.0	59.3
Jun 29		573		4			159	2	1	1	90.8	6.9	11.0	59.4
Jun 30		590		18			199	0	0	0	130.0	7.9	11.0	59.3
TOTAL	3,106	1,163		170			732	10	5	3				
AVG.	111	582		6			24	0	0	0	137.6	9.6	9.5	56.2

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	4,504	198
SUMMER	1,163	22
TOTAL	5,667	220

SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY
732	31	18	3

TABLE 172

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

WELLS PROJECT
JULY 2003

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD		DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Jul 1		717		17			331	1	1	0	121.9	11.2	12.0	59.2
Jul 2		685		16			405	1	1	0	101.3	7.4	12.0	59.7
Jul 3		1,169		5			521	0	0	0	109.8	7.9	12.0	59.6
Jul 4		1,171		17			470	1	0	0	59.2	4.9	13.0	60.3
Jul 5		1,613		20			837	2	1	2	74.5	6.4	13.0	60.6
Jul 6		1,049		9			734	2	0	2	66.6	6.0	11.0	60.9
Jul 7		819		5			987	1	1	0	122.0	7.8	11.0	60.5
Jul 8		1,488		4			1,116	2	1	1	120.2	7.0	14.0	60.1
Jul 9		1,080		8			1,304	7	4	0	124.1	7.8	14.0	59.9
Jul 10		1,074		17			1,332	6	5	0	132.7	7.9	14.0	61.1
Jul 11		2,118		51			2,343	14	11	1	120.9	7.9	14.0	61.3
Jul 12		1,348		54			1,562	20	9	1	106.8	7.5	14.0	
Jul 13		1,643		55			1,397	13	9	0	80.7	6.3	14.0	62.0
Jul 14		1,434		31			1,797	11	4	2	121.6	8.1	14.0	62.2
Jul 15		1,993		43			1,954	10	9	0	132.4	22.2	14.0	62.2
Jul 16		169		10			1,386	11	3	1	106.7	7.0	14.0	62.2
Jul 17		1,422		33			1,391	12	8	1	107.2	7.5	14.0	61.8
Jul 18		878		30			1,184	22	14	0	106.1	7.0	14.0	62.5
Jul 19		499		18			1,083	20	13	3	99.9	7.0	14.0	63.1
Jul 20		695		26			669	15	7	2	77.7	6.2	12.0	63.1
Jul 21		1,430		26			668	16	10	3	123.7	7.9	13.0	63.0
Jul 22		519		23			882	26	15	2	122.6	14.1	14.0	
Jul 23		479		8			613	5	25	4	123.8	7.9	14.0	63.6
Jul 24		305		28			608	37	15	2	106.5	6.9	13.0	63.8
Jul 25		2,307		45			625	33	19	1	109.0	7.2	14.0	64.0
Jul 26		662		25			440	35	18	5	89.6	6.4	14.0	64.4
Jul 27		325		19			273	31	19	4	58.8	5.0	14.0	65.1
Jul 28		508		14			375	15	7	-1	110.3	7.7	14.0	64.7
Jul 29		746		31			149	23	10	3	121.9	8.1	14.0	64.5
Jul 30		459		34			102	24	14	1	118.0	7.8	14.0	64.8
Jul 31		691		75			92	40	24	0	114.7	7.7	13.0	65.0
TOTAL		31,495		797			27,630	456	255	40				
AVG.		1016		26			891	15	9	1	106.2	8.0	13.0	62.2

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK
SPRING	4,504	198
SUMMER	32,658	819
TOTAL	37,162	1,017

SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY
28,362	487	273	43

TABLE 173

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

WELLS PROJECT
AUGUST 2003

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY
Aug 1		906		74	0		68	39	28	6
Aug 2		809		73	0		47	58	38	4
Aug 3		214		46	0		80	58	31	4
Aug 4		790		63	0		90	68	41	2
Aug 5		591		37	0		86	72	32	2
Aug 6		287		18	0		43	74	43	1
Aug 7		624		40	0		35	46	23	0
Aug 8		348		24	0		24	50	32	1
Aug 9		686		34	0		15	61	30	4
Aug 10		1,164		36	0		28	80	46	4
Aug 11		672		39	0		22	92	58	5
Aug 12		559		47	0		8	85	41	7
Aug 13		422		27	0		16	98	60	5
Aug 14		250		28	0		7	61	34	10
Aug 15		78		11	0		7	67	37	4
Aug 16		250		39	0		3	61	27	15
Aug 17		99		41	0		4	35	22	11
Aug 18		677		76	0		6	159	79	15
Aug 19		334		32	0		9	71	39	17
Aug 20		159		22	0		1	24	15	14
Aug 21		137		43	0		1	81	53	6
Aug 22		137		38	0		0	80	45	13
Aug 23		157		19	0		2	89	53	10
Aug 24		193		48	0		0	73	45	11
Aug 25		399		47	0		1	94	50	13
Aug 26		369		25	0		0	76	39	9
Aug 27		73		13	0		0	50	37	13
Aug 28		461		29	0		0	81	37	7
Aug 29			180	20	0		0	108	75	7
Aug 30			96	15	0		0	130	86	10
Aug 31			223	24	0		0	125	52	4
TOTAL		11,845	499	1,128	0		603	2,346	1,328	234
AVG.		423	166	36	0		19	76	43	8

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Aug 1	105.0	7.7	13.0	65.6
Aug 2	63.3	5.1	14.0	66.0
Aug 3	58.7	4.9	13.0	66.1
Aug 4	102.7	7.3	13.0	65.9
Aug 5	108.4	7.4	12.0	65.7
Aug 6	85.2	6.4	7.0	65.6
Aug 7	100.3	6.9	14.0	65.2
Aug 8	100.9	7.0	14.0	66.0
Aug 9	83.0	6.2	14.0	66.5
Aug 10	72.8	6.0	14.0	66.6
Aug 11	111.3	7.5	14.0	66.3
Aug 12	90.5	7.2	13.0	66.6
Aug 13	93.1	7.4	7.0	66.5
Aug 14	111.1	7.0	13.0	66.4
Aug 15	117.7	45.0	13.0	67.0
Aug 16	81.3	21.3	7.0	66.9
Aug 17	64.1	4.8	13.0	67.3
Aug 18	105.2	6.8	15.0	67.4
Aug 19	102.0	6.8	13.0	67.4
Aug 20	115.3	7.5	15.0	67.3
Aug 21	134.4	10.3	15.0	67.4
Aug 22	122.5	9.1	15.0	66.7
Aug 23	94.5	7.3	15.0	66.6
Aug 24	83.5	6.7	7.0	66.8
Aug 25	134.4	8.6	13.0	67.2
Aug 26	112.4	8.0	13.0	67.1
Aug 27	78.3	0.0	13.0	67.3
Aug 28	105.8	0.0	13.0	67.5
Aug 29	102.5	0.2	14.0	67.7
Aug 30	87.2	0.1	14.0	67.8
Aug 31	61.8	0.0	15.0	67.8
AVG.	96.4	7.6	12.8	66.7

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	COHO	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY
SPRING	4,504	198	0	28,965	2,833	1,601	277
SUMMER	44,503	1,888					
FALL	499	59					
TOTAL	49,506	2,145					

TABLE 174

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

WELLS PROJECT
SEPTEMBER 2003

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD		DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Sep 1			396	42	0		0	123	84	10	48.2	0.0	15.0	67.7
Sep 2			292	51	0		2	68	31	14	71.3	0.0	15.0	67.8
Sep 3			139	36	0		1	52	26	16	82.9	0.0	15.0	68.0
Sep 4			92	20	0		0	85	39	14	77.6	0.0	14.0	67.9
Sep 5			71	22	0		0	154	85	11	70.5	0.0	14.0	67.9
Sep 6			36	22	0		0	90	52	13	48.3	0.0	7.0	68.0
Sep 7			120	36	0		0	190	111	13	31.1	0.0	15.0	67.8
Sep 8			42	16	0		0	63	38	10	64.0	0.0	13.0	67.8
Sep 9			232	22	0		3	77	41	13	57.1	0.0	15.0	67.3
Sep 10			243	21	0		2	98	53	7	52.0	0.0	14.0	67.0
Sep 11			110	21	0		1	196	141	12	67.1	0.0	14.0	67.0
Sep 12			93	20	0		0	114	71	18	69.5	0.0	14.0	66.9
Sep 13			11	10	0		0	31	18	8	35.6	0.0	15.0	66.6
Sep 14			483	29	0		0	154	66	8	38.9	0.0	15.0	66.4
Sep 15			342	27	0		0	193	93	14	71.7	0.0	14.0	66.1
Sep 16			80	7	0		0	102	54	13	63.6	0.0	15.0	65.9
Sep 17			39	21	0		0	174	94	11	53.6	0.0	15.0	65.5
Sep 18			43	6	0		0	133	84	10	57.3	0.0	14.0	65.5
Sep 19			40	12	0		0	193	110	7	61.9	0.0	15.0	65.3
Sep 20			64	17	0		0	207	120	7	53.6	0.0	14.0	65.0
Sep 21			115	16	0		0	251	141	15	63.3	0.0	15.0	65.2
Sep 22			31	19	1		0	180	115	9	78.3	0.0	15.0	65.5
Sep 23			24	14	0		3	110	67	13	66.8	0.0	15.0	65.8
Sep 24			15	7	0		0	176	103	18	74.2	0.0	14.0	65.9
Sep 25			98	12	0		0	234	124	13	86.5	0.0	15.0	66.0
Sep 26			77	10	0		0	219	135	3	88.8	0.0	15.0	66.2
Sep 27			56	14	0		0	214	130	3	58.0	0.0	15.0	66.4
Sep 28			146	15	1		0	357	198	3	56.2	0.0	7.0	66.5
Sep 29			156	11	0		0	185	98	20	86.0	0.0	15.0	66.4
Sep 30			101	11	0		0	195	114	8	86.4	0.0	15.0	66.4
TOTAL			3,787	587	2		12	4,618	2,636	334				
AVG.			126	20	0		0	154	88	11	64.0	0.0	14.1	66.6

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	COHO ADULTS	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY
SPRING	4,504	198	2	28,977	7,451	4,237	611
SUMMER	44,503	1,888					
FALL	4,286	646					
TOTAL	53,293	2,732					

TABLE 175

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

WELLS PROJECT
OCTOBER 2003

FISH COUNTS

DATE	CHINOOK ADULT SPRING	CHINOOK ADULT SUMMER	CHINOOK ADULT FALL	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY
Oct 1			138	12	2		0	138	100	20
Oct 2			41	12	4		0	157	107	18
Oct 3			26	18	0		0	71	48	21
Oct 4			64	10	4		0	86	62	9
Oct 5			54	14	1		0	195	130	12
Oct 6			71	11	9		0	95	61	5
Oct 7			56	10	4		0	86	57	7
Oct 8			67	8	2		0	104	64	15
Oct 9			60	9	3		0	93	67	7
Oct 10			40	5	0		0	72	48	1
Oct 11			52	29	5		0	70	38	7
Oct 12			44	8	6		0	57	40	3
Oct 13			48	8	2		0	54	38	7
Oct 14			25	6	6		0	40	24	5
Oct 15			53	12	2		0	82	47	14
Oct 16			69	4	4		0	56	38	5
Oct 17			42	3	1		0	52	29	2
Oct 18			62	2	5		0	46	27	6
Oct 19			66	5	5		0	74	51	4
Oct 20			75	7	7		0	47	30	7
Oct 21			97	5	7		0	64	50	22
Oct 22			847	17	22		0	150	103	32
Oct 23			236	10	11		0	48	37	29
Oct 24			169	5	7		0	75	56	48
Oct 25			101	3	4		0	125	85	47
Oct 26			107	6	5		0	67	44	45
Oct 27			68	0	5		0	25	14	28
Oct 28			58	1	4		0	26	19	33
Oct 29			32	2	1		0	22	12	28
Oct 30			28	0	1		0	17	15	25
Oct 31			20	0	2		0	26	22	40
TOTAL			2,916	242	141		0	2,320	1,563	552
AVG.			94	8	5		0	75	50	18

RIVER CONDITIONS

DATE	DISCH KCFS	SPILL KCFS	TURBIDITY SECCHI	TURBIDITY DEG F
Oct 1	79.8	0.0	15.0	66.4
Oct 2	66.0	0.0	14.0	66.2
Oct 3	68.7	0.0	14.0	66.1
Oct 4	47.8	0.0	14.0	65.9
Oct 5	47.4	0.0	14.0	65.7
Oct 6	79.9	0.0	15.0	65.5
Oct 7	65.4	0.0	15.0	65.3
Oct 8	66.6	0.0	14.0	64.9
Oct 9	86.3	0.1	15.0	64.2
Oct 10	69.0	0.0	15.0	63.7
Oct 11	59.1	0.0	15.0	63.3
Oct 12	52.8	0.0	14.0	63.0
Oct 13	80.7	0.0	13.0	62.4
Oct 14	80.0	0.0	15.0	62.1
Oct 15	73.3	0.0	15.0	62.2
Oct 16	66.2	0.0	15.0	61.8
Oct 17	66.7	0.0	15.0	61.3
Oct 18	50.7	0.0	15.0	61.2
Oct 19	50.4	0.0	13.0	61.5
Oct 20	77.9	0.0	13.0	61.5
Oct 21	84.8	0.0	13.0	61.5
Oct 22	80.0	0.2	2.0	61.2
Oct 23	88.8	0.0	5.0	61.3
Oct 24	87.0	7.9	2.0	60.5
Oct 25	71.5	0.0	4.0	60.1
Oct 26	54.9	0.0	5.0	60.3
Oct 27	105.1	0.0	5.0	59.9
Oct 28	95.7	0.0	5.0	60.0
Oct 29	92.5	1.5	10.0	60.0
Oct 30	100.9	0.0	14.0	59.6
Oct 31	116.6	0.0	13.0	58.9
AVG.	74.6	0.3	11.8	62.5

RUN YEAR TOTALS TO DATE

	CHINOOK ADULT	CHINOOK JACK
SPRING	4,504	198
SUMMER	44,503	1,888
FALL	7,202	888
TOTAL	56,209	2,974

COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY
143	0	28,977	9,771	5,800	1,163

TABLE 176

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

WELLS PROJECT
NOVEMBER 2003

	FISH COUNTS										RIVER CONDITIONS			
	CHINOOK ADULT			CHINOOK	COHO	COHO			WILD		DISCH	SPILL	TURBIDITY	
DATE	SPRING	SUMMER	FALL	JACK	ADULT	JACK	SOCKEYE	STEELHEAD	STEELHEAD	LAMPREY	KCFS	KCFS	SECCHI	DEG F
Nov 1			24	3	3	0		30	25	37	87.0	0.0	13.0	58.6
Nov 2			9	0	5	0		12	8	23	55.8	0.0	14.0	58.2
Nov 3			13	4	6	0		54	42	30	91.4	0.0	13.0	57.4
Nov 4			6	0	1	0		4	4	35	109.7	0.0	7.0	56.8
Nov 5			35	2	3	0		15	12	20	112.8	0.0	15.0	56.7
Nov 6			33	0	2	0		11	9	12	102.3	0.0	15.0	56.8
Nov 7			7	0	1	0		16	9	16	101.0	0.0	15.0	56.2
Nov 8			4	0	1	0		4	3	6	71.6	0.0	15.0	56.1
Nov 9			9	1	2	0		11	9	9	61.9	0.0	13.0	56.0
Nov 10			4	0	0	0		4	3	6	88.2	0.0	14.0	55.6
Nov 11			3	0	1	0		5	5	13	95.6	0.0	15.0	55.7
Nov 12			1	0	0	0		1	1	13	104.5	0.0	15.0	55.9
Nov 13			4	0	0	0		6	6	14	99.3	0.0	13.0	55.5
Nov 14			0	0	0	0		7	6	8	100.2	0.0	15.0	55.2
Nov 15			1	0	0	0		12	10	3	84.9	0.0	14.0	55.1
Nov 16											74.5	0.0		
Nov 17											100.6	0.0		
Nov 18											94.8	0.0		
Nov 19											106.1	0.0		
Nov 20											106.4	0.0		
Nov 21											108.4	0.0		
Nov 22											86.1	0.0		
Nov 23											67.1	0.0		
Nov 24											108.9	0.0		
Nov 25											100.0	0.0		
Nov 26											91.7	0.0		
Nov 27											43.1	0.0		
Nov 28											62.5	0.0		
Nov 29											56.1	0.0		
Nov 30											58.1	0.0		
TOTALS			153	10	25	0		192	152	245				
AVG.			10	1	2	0		13	10	16	91.1	0.0	13.7	56.4

RUN YEAR TOTALS TO DATE	CHINOOK ADULT	CHINOOK JACK	COHO ADULT	COHO JACK	SOCKEYE	STEELHEAD	WILD STEELHEAD	LAMPREY
SPRING	4,504	198	168	0	28,977	9,963	5,952	1,408
SUMMER	44,503	1,888						
FALL	7,355	898						
TOTAL	56,362	2,984						

TABLE 177

MONTHLY COUNT OF STEELHEAD
WELLS DAM: 1976 - 2003

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1976					44	37	56	530	1964	1856	156		4643
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
1998					5	3	161	363	1,031	995	110		2,668
1999					13	33	106	903	1,941	446	62		3,504
2000					23	6	309	1,338	3,661	857	86		6,280
2001					30	34	947	5,404	8,326	3,339	403		18,483
2002					66	33	957	3,630	3,388	1,244	157		9,475
2003					21	10	456	2,346	4,618	2,320	192		9,963
TOTAL					1,812	1,175	11,729	45,736	82,468	46,059	8,133		197,112
10-Year Average					22	15	341	1,622	2,800	1,220	170		6,174

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

ADDENDUM
Corrections to previous reports

DATE	PROJECT	FISH SPECIES	COUNT	OTHER TABLES AFFECTED
January 1996	Bonneville	Chinook Adult	Monthly total is correct; daily's are not	Table 30
March 1996	Bonneville	Chinook Adult	Monthly total is correct; daily's are not	Table 32
April 1996	Bonneville	Chinook Adult	Monthly total is correct; daily's are not	Table 33
May 1996	Bonneville	Chinook Adult	Monthly total is correct; daily's are not	Table 34
March 1997	Bonneville	Chinook Adult, Steelhead	Monthly total is correct; daily's are not	Table 33
April 1997	Bonneville	Chinook Adult	Monthly total is correct; daily's are not	Table 34
May 1997	Bonneville	Chinook Adult	Monthly total is correct; daily's are not	Table 35
December 1997	Bonneville	Steelhead	Daily's are correct; monthly total is 84.	Table 42
February 1998	Bonneville	Chinook Adult	Monthly total is correct; daily's are not	Table 32
March 1998	Bonneville	Chinook Adult	Monthly total is correct; daily's are not	Table 33
April 1998	Bonneville	Chinook Adult	Monthly total is correct; daily's are not	Table 34
May 1998	Bonneville	Chinook Adult	Monthly total is correct; daily's are not	Table 35
July-December 2000	Bonneville	Lamprey	None	Lamprey were not counted for video counts
21-Oct-00	Priest Rapids	Shad	1	Table 2, 154, 161, 162
02-Jul-01	Priest Rapids	Chinook Jack	30	Table 155, 159, 160, 161, 162, 163, 164
02-Jul-01	Priest Rapids	Steelhead	51	Table 155, 159, 160, 161, 162, 163, 164, 165
12-Aug-01	Priest Rapids	Coho Adults	0	Table 155, 160, 161, 162, 163, 164
12-Aug-01		Coho Jacks	1	Table 155, 160, 161, 162, 163, 164
14-Sep-01	John Day	Steelhead	7212	Table 1, 51, 58, 59, 61, 65
19-Sep-01			10724	Table 1, 51, 58, 59, 61, 65
23-Sep-01			9338	Table 1, 51, 58, 59, 61, 65
19-Jul-02	Priest Rapids	Chinook Adults	1821	Table 2, 155, 164, 159, 160, 161, 162, 163
05-Apr-02	John Day	Chinook Adults	189	Table 1, 51, 53, 54, 55, 56, 57, 58, 59, 61, 62

DATE	PROJECT	FISH SPECIES	COUNT	OTHER TABLES AFFECTED
30-Oct-02	Bonneville	Chinook Adults	172	Table 1, 5, 14, 15, 17, 18
02-Nov-02	Bonneville	Chum	1	Table 5, 15, 17, 34
03-Nov-02			1	
04-Nov-02			1	
08-Nov-02			5	
09-Nov-02			1	
10-Nov-02			1	
11-Nov-02			2	
12-Nov-02			5	
13-Nov-02			2	
17-Nov-02			3	
20-Nov-02			1	
21-Nov-02			16	
22-Nov-02			19	
23-Nov-02			6	
24-Nov-02			3	
25-Nov-02			3	
26-Nov-02			5	
27-Nov-02			6	
28-Nov-02			11	
29-Nov-02			10	
30-Nov-02			13	
1-Dec-02			8	Table 5, 15 ,17, 35
2-Dec-02			1	
3-Dec-02	Bonneville	Chum	3	
4-Dec-02			2	
6-Dec-02			4	
7-Dec-02			10	
10-Dec-02			3	
11-Dec-02			1	
13-Dec-02			2	
14-Dec-02			1	
15-Dec-02			2	
16-Dec-02			1	
November 2001	Lower Monumental	Chinook Adults		See https://www.nwp.usace.army.mil/op/fishdata/ for data

DATE	PROJECT	FISH SPECIES	COUNT	OTHER TABLES AFFECTED
		Chinook Jacks		
November 2001	Lower Monumental	Steelhead		
		Steelhead Wild		
		Coho Adults		
		Coho Jacks		
	Little Goose	Chinook Adults		
		Chinook Jacks		
		Steelhead		
		Steelhead Wild		
		Coho Adults		
		Coho Jacks		
December 2001	Lower Monumental	Chinook Adults		See https://www.nwp.usace.army.mil/op/fishdata/ for data
		Chinook Jacks		
		Steelhead		
		Steelhead Wild		
		Coho Adults		
		Coho Jacks		
	Little Goose	Chinook Adults		
		Steelhead		
		Steelhead Wild		
		Coho Jacks		
January 2002	Lower Monumental	Chinook Adults		See https://www.nwp.usace.army.mil/op/fishdata/ for data
		Steelhead		
		Steelhead Wild		
February 2002	Lower Monumental	Steelhead		See https://www.nwp.usace.army.mil/op/fishdata/ for data
		Steelhead Wild		
	Little Goose	Steelhead		
February 2002	Little Goose	Steelhead Wild		
March 2002	Lower Monumental	Chinook Adults		See https://www.nwp.usace.army.mil/op/fishdata/ for data
		Steelhead		
		Steelhead Wild		
	Little Goose	Chinook Adults		
		Steelhead		
		Steelhead Wild		
November 2002	Lower Monumental	Chinook Adults		See https://www.nwp.usace.army.mil/op/fishdata/ for data

DATE	PROJECT	FISH SPECIES	COUNT	OTHER TABLES AFFECTED
		Chinook Jacks		
November 2002	Lower Monumental	Steelhead		
		Steelhead Wild		
		Coho Adults		
		Coho Jacks		
	Little Goose	Chinook Adults		
		Chinook Jacks		
		Steelhead		
		Steelhead Wild		
December 2002	Lower Monumental	Chinook Adults		See https://www.nwp.usace.army.mil/op/fishdata/ for data
		Chinook Jacks		
		Steelhead		
		Steelhead Wild		
	Little Goose	Chinook Adults		
		Chinook Jacks		
		Steelhead		
		Steelhead Wild		