

**APPENDIX B
OREGON PRODUCTION INDEX DATA**

LIST OF TABLES

	<u>Page</u>
TABLE B-1. Millions of coho smolts released annually into the OPI area by geographic area and rearing agency	81
TABLE B-2. Data set used in predicting 2007 Oregon production index hatchery (OPIH) adult coho with Stratified Random Sampling accounting. Adults and jacks shown in thousands of fish and smolts in millions of fish	82
TABLE B-3. Estimated coho salmon natural spawner abundance (SRS accounting) in Oregon coastal basins for each OCN coho management component	83
TABLE B-4. Data set used in predicting 2007 Oregon coastal natural river (OCNR) coho ocean recruits with Stratified Random Sampling (SRS) accounting	84

TABLE B-1. Millions of coho smolts^{a/} released annually into the OPI area by geographic area and rearing agency. (Page 1 of 1)

Year or Average	Columbia River						Oregon Coast				
	Oregon	Washington			Federal	Total	ODFW ^{b/}	Private		California	Total OPI
		Early	Late	Combined				Yearlings	Total		
1960-1965	5.6	-	-	6.1	4.5	16.2	2.0	-	2.0	0.4	18.6
1966-1970	6.0	10.2	4.9	15.1	6.5	27.6	2.9	0.0	2.9	1.3	31.8
1971-1975	6.8	10.7	6.8	17.5	4.5	28.8	3.9	0.0	3.9	1.2	33.9
1976-1980	8.0	7.3	10.1	17.4	4.7	30.1	3.8	1.4	5.2	0.7	36.0
1981-1985	7.1	4.3	14.4	18.7	3.2	29.0	3.9	3.3	7.2	0.7	36.9
1986-1990	7.3	3.1	15.6	18.7	4.1	30.1	5.2	1.9	7.1	1.4	38.6
1991	10.4	3.7	15.3	19.0	5.9	35.2	5.3	-	5.3	1.5	42.0
1992	11.5	4.3	14.3	18.6	2.7	32.8	6.2	-	6.2	0.7	39.7
1993	11.1	4.3	14.8	19.1	4.1	34.3	4.3	-	4.3	0.8	39.4
1994	9.1	2.5	12.0	14.5	3.0	26.6	5.2	-	5.2	0.6	32.4
1995	7.1	3.4	12.9	16.3	1.7	25.1	3.7	-	3.7	0.7	29.5
1996	8.4	3.4	12.9	16.3	3.4	28.1	3.3	-	3.3	0.3	31.7
1997	6.1	3.2	7.8	11.0	3.9	21.0	2.9	-	2.9	0.7	24.6
1998	6.1	5.8	11.4	17.2	3.6	26.8	1.7	-	1.7	0.6	29.1
1999	7.6	4.0	11.5	15.5	4.8	27.9	1.0	-	1.0	0.7	29.6
2000	7.8	6.2	10.8	17.0	5.9	30.7	0.9	-	0.9	0.6	32.2
2001	7.6	4.2	9.7	13.9	3.7	25.2	0.9	-	0.9	0.6	26.7
2002	7.5	3.3	8.6	11.9	4.3	23.7	1.0	-	1.0	0.6	25.3
2003	8.2	3.3	8.7	12.0	3.1	23.3	0.8	-	0.8	0.5	24.6
2004	6.7	3.0	8.8	11.8	3.6	22.1	0.8	-	0.8	0.6	23.5
2005	6.1	2.5	9.1	11.6	2.8	20.6	0.8	-	0.8	0.6	22.0
2006	6.1	2.8	9.0	11.7	2.6	20.4	0.8	-	0.8	0.6	21.8
2007 ^{c/}	6.2	3.1	9.0	12.1	3.1	21.4	0.7	-	0.7	0.6	22.7

a/ Defined here as 30 fish per pound or larger and released in February or later.

b/ Beginning in 1989, does not include minor releases from STEP projects.

c/ Preliminary.

TABLE B-2. Data set used in predicting 2008 Oregon production index hatchery (OPIH) adult cohort. Adults and jacks shown in thousands of fish and smolts in millions of fish. (Page 1 of 1)

Year	Adult OPIH ^{a/}	Columbia River Jacks ^{b/}	Oregon Coast/ California Jacks ^{c/}	Columbia River Smolts ^{d/}	Columbia River Delayed Smolts ^{e/}
1970	2,765.1	148.6	13.6	27.6	0.0
1971	3,365.0	172.8	6.6	24.0	0.0
1972	1,924.8	100.8	2.9	28.3	0.0
1973	1,817.0	85.7	5.7	29.9	1.8
1974	3,071.1	132.1	12.1	28.5	2.9
1975	1,652.8	75.1	1.1	27.8	1.8
1976	3,885.3	146.2	25.3	29.0	2.0
1977	987.5	46.2	7.5	28.9	0.2
1978	1,824.1	99.2	4.0	31.4	0.0
1979	1,476.7	64.1	8.4	32.6	5.0
1980	1,224.0	51.6	6.0	28.9	6.7
1981	1,064.5	40.6	8.1	28.1	5.6
1982	1,266.8	55.0	6.3	32.4	6.8
1983 ^{f/}	599.2	61.0	7.2	27.7	5.0
1984	691.3	28.1	3.6	27.0	5.1
1985	717.5	18.2	7.8	29.2	9.1
1986	2,416.6	64.6	12.9	28.8	12.2
1987	761.9	24.2	8.7	32.9	9.0
1988	1,479.9	72.3	12.9	28.8	7.7
1989	1,878.9	55.0	5.8	29.5	7.2
1990	673.5	37.1	9.6	29.6	8.5
1991	1,753.6	60.8	7.9	30.3	7.1
1992	482.9	19.9	5.7	35.3	6.0
1993	223.3	19.6	7.5	32.8	5.5
1994	214.3	3.9	1.3	34.4	6.0
1995	139.4	8.8	2.7	26.6	3.1
1996	176.5	14.1	3.2	25.2	4.2
1997	195.6	15.8	4.6	28.0	3.4
1998	228.7	6.8	3.0	21.0	2.5
1999	372.0	23.3	5.9	26.8	3.0
2000	617.7	31.2	3.5	27.9	4.1
2001	1,480.1	71.1	15.7	30.6	2.0
2002	688.9	18.9	6.3	23.5	1.4
2003	1,010.6	42.2	8.2	23.7	0.3
2004	692.2	29.4	6.0	23.2	2.0
2005	415.6	21.2	4.7	22.0	0.8
2006	431.5	20.9	5.4	20.6	0.4
2007	476.6	34.1	2.5	20.4	0.1
2008	216.1 ^{g/}	14.0	1.4	22.0	0.6

a/ Adult OPIH = Harvest impacts plus escapement for public hatchery stocks originating in the Columbia River, Oregon coastal rivers, and the Klamath River, California (1970-1985 with Stratified Random Sampling accounting; 1986-2007 with MSM abundance used for 2008).

b/ Jack CR = Columbia River jack returns corrected for small adults.

c/ Jack OC = Oregon coastal and California hatchery jack returns corrected for small adults.

d/ Sm CR = Columbia River smolt release from the previous year expected to return as adults in the year listed.

e/ Sm D = Columbia River delayed smolt releases from the previous year expected to return as adults in the year listed.

f/ Data not used in subsequent predictions due to El Niño impacts.

g/ Preseason predicted adults.

TABLE B-3. Estimated coho salmon natural spawner abundance (SRS accounting) in Oregon coastal basins for each OCN coho management component. Estimates adjusted for visual observation bias by multiplying observed count by 1.33. (Page 1 of 1)

Component and Basin ^{a/}	Miles	Adjusted SRS Natural Coho Spawner Estimates															1993-2007
		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Avg.
NORTHERN																	
Nehalem	386	2,265	2,007	1,463	1,057	1,173	1,190	3,713	14,285	22,310	20,903	33,059	21,479	10,451	11,614	9,887	10,457
Tillamook	249	860	652	289	661	388	271	2,175	1,983	1,883	15,715	14,584	2,290	1,995	8,774	3,167	3,712
Nestucca	167	401	313	1,811	519	271	169	2,201	1,171	3,940	13,003	8,929	6,152	695	1,876	1,377	2,855
Ind. Tribs.	97	983	485	319	1,043	314	946	728	474	5,247	2,912	3,068	3,142	1,218	750	457	1,472
TOTAL	899	4,508	3,457	3,882	3,280	2,146	2,576	8,842	17,913	33,380	52,515	59,563	33,063	16,475	24,135	15,143	18,725
NORTH CENTRAL																	
Siletz	118	400	1,200	607	763	336	394	706	3,553	1,437	2,252	9,736	6,399	14,567	5,205	1,750	3,287
Yaquina	109	549	2,448	5,668	5,127	384	365	2,588	647	3,039	23,981	13,254	4,989	3,441	4,247	2,887	4,908
Alea	221	1,071	1,279	681	1,637	680	213	2,050	2,465	3,339	6,170	8,957	6,005	13,907	1,972	1,384	3,454
Siuslaw	514	4,428	3,205	6,089	7,625	668	1,089	2,724	6,767	11,024	57,129	29,257	8,443	16,907	5,869	2,743	10,931
Ind. Tribs.	201	1,331	1,683	560	2,975	774	1,222	3,691	817	5,636	10,371	7,664	14,558	2,589	3,931	1,195	3,933
TOTAL	1,163	7,779	9,815	13,605	18,127	2,842	3,283	11,442	14,261	25,239	99,506	66,550	40,393	51,411	21,224	9,959	26,362
SOUTH CENTRAL																	
Umpqua	1,083	10,244	5,336	12,809	10,824	2,960	9,153	7,685	12,233	35,702	37,591	29,607	31,346	42,676	18,154	11,253	18,505
Coos	208	15,284	14,685	10,351	12,128	1,127	3,167	4,945	5,386	43,301	35,688	29,559	24,116	17,048	11,266	1,414	15,298
Coquille	331	7,384	5,035	2,116	16,169	5,720	2,466	3,001	6,130	13,310	8,610	23,909	22,276	11,806	28,577	4,879	10,759
Coastal Lakes	-	10,145	5,841	11,216	13,493	8,603	11,107	12,710	12,747	19,669	22,162	16,688	18,687	14,724	24,378	8,885	14,070
Ind. Tribs.	83	-	-	-	-	-	-	-	-	-	-	-	-	-	1,104	342	723
TOTAL	1,622	43,057	30,897	36,492	52,614	18,410	25,893	28,341	36,496	111,982	104,051	99,763	96,425	86,254	83,479	26,773	58,728
SOUTH																	
Rogue ^{b/}	-	361	5,439	3,761	4,622	8,282	2,316	1,438	10,966	12,213	7,800	6,754	24,481	9,953	3,937	5,242	7,171
COASTWIDE	-	55,705	49,608	57,740	78,643	31,680	34,068	50,063	79,636	182,814	263,872	232,630	194,362	164,093	132,775	57,116	110,987

a/ The sum of the individual basins may not equal the aggregate totals, due to the use of independent estimates at different geographic scales.

b/ Mark recapture estimate based on seining at Huntley Park in the lower Rogue River.

TABLE B-4. Data set used in predicting Oregon coastal natural river (OCNR) coho ocean recruits with Stratified Random Sampling (SRS) accounting prior to 2008. Recruits shown in thousands of fish. (Page 1 of 1)

Year	Recruits to Ocean			
	SRS	Ln SRS	JanAnom ^{a/}	UpAnom (t-1) ^{b/}
1970	183.1	5.21003	0.307	-16.92
1971	416.3	6.03141	-1.293	30.08
1972	185.5	5.22305	-1.393	10.08
1973	235.0	5.45959	-0.493	23.08
1974	196.4	5.28015	-0.693	47.08
1975	208.4	5.33946	-0.493	48.08
1976	451.7	6.11302	-0.893	65.08
1977	161.2	5.08265	-0.193	32.08
1978	111.6	4.71492	1.207	17.08
1979	188.8	5.24069	-1.193	-2.92
1980	108.3	4.68491	0.507	17.08
1981	174.5	5.16192	1.607	-1.92
1982	185.7	5.22413	-0.093	-8.92
1983	96.0	4.56435	1.007	14.08
1984	94.7	4.55071	0.607	-24.92
1985	124.9	4.82751	0.007	-24.92
1986	97.9	4.58395	0.107	-24.92
1987	70.1	4.24992	0.507	-39.92
1988	124.4	4.82350	-0.093	-21.92
1989	103.8	4.64247	-0.493	-43.92
1990	60.4	4.10099	-0.007	-21.92
1991	68.8	4.23120	-0.893	-37.92
1992	86.9	4.46476	0.107	43.08
1993	81.1	4.39568	-0.593	7.08
1994	40.6	3.70377	1.107	-50.92
1995	47.6	3.86283	0.707	-3.92
1996	65.5	4.18205	1.807	-1.92
1997	16.3	2.79117	0.907	9.08
1998	21.7	3.07731	2.407	-24.92
1999	37.8	3.63231	-0.393	18.08
2000	58.9	4.07584	0.107	84.08
2001	161.4	5.08389	0.707	9.08
2002	266.5	5.58537	0.207	65.08
2003	249.4	5.51906	1.107	54.08
2004	175.2	5.16593	0.407	53.08
2005	134.4	4.90082	0.317	3.08
2006	116.4	4.75703	1.607	-34.92
2007	49.6	3.90399	-1.153	16.08
2008			-0.933	24.08

a/ JanAnom = The annual deviation from mean (1969-1996) January sea surface temperature (degrees Centigrade) at Charleston, Oregon.

b/ UpAnom = Annual deviation from mean (1946-1996) April-June Bakun upwelling index at 42° N latitude.

c/ Preseason adult prediction.