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An update on trends in catch of Pacific salmon in Canada

by

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INTRODUCTION

Six species of Pacific salmon are harvested in British Columbia coastal waters. Sockeye, pink, and chum salmon are mainly harvested in commercial net fisheries while chinook and coho salmon are targeted by commercial, troll, and (increasingly) by sport fisheries located primarily in the Strait of Georgia. Steelhead constitute a minor component of the catch, and are not discussed in this document.

In general, escapement goals are established in Canada for major sockeye, pink, and chum stocks, and fisheries are managed to meet these escapement objectives. Chinook and coho fisheries are managed to achieve specified harvest rates although escapement goals have also been established for key stocks.

This document reports data on the changes in catch (numbers and total weight) for the five major salmon species caught in British Columbian waters for the period 1952-1998.

Catch Trends

The 1998 Catch was 29,748 tonnes or roughly one half of the average catch of 64,167 tonnes for the period 1952-1998. More than half the 1998 catch was composed of chum (19,797 tonnes). The sockeye catch was below the average for the period 1952-1998 and well below average for this cycle year since the regime shift in 1977. The 1998 pink catch of 3,900 tonnes was well below the long term average catch of 20,011 tonnes and the even-year cycle average catch of 17,450 tonnes. Chum salmon catch was 19,797 tonnes and was above the long term average catch of 13,501 tonnes. Chinook salmon production has decreased steadily since the early 1970's and the 1998 catch of 1203 tonnes was the third lowest on record and only about 23 percent of the long term average catch of 5,123 tonnes. Coho salmon catches in 1998 were severely reduced at 16 tonnes and were well below the long term average catch of 8,659 tonnes.

Reduced levels of both coho and chinook salmon production resulted in catch restrictions in 1997, 1998 and 1999. Conservation concerns have resulted in no directed fisheries for coho in 1998 and harvest restrictions on fisheries that intercept coho salmon. Thus, only incidental catches of coho salmon were allowed in 1998. Catch data for 1998 were anticipated to be less than that in 1997 both as a result of decreased production as well as the curtailment of a number of fisheries as special conservation initiatives.

Total catch by weight and numbers is reported in Tables 1 and 2 for the period 1952-98. Table 3 and 4 provides a breakdown of salmon catch by major statistical area in 1998 by weight and numbers.

FIGURES

Fig. 1 a,b. Major statistical reporting areas for Pacific salmon catches in British Columbia.

Table 1: Total Salmon Catch (numbers) by species in British Columbia 1952 – 1998

	<u>Chinook</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>	<u>TOTAL</u>
1952	906300	4838372	2751537	11216949	2478502	22191660
1953	1020933	5913673	2893396	11110454	4672030	25610486
1954	879657	6702385	2444538	5439171	5838326	21304077
1955	876373	2835430	2975900	11239809	1568697	19496209
1956	982731	3257283	3049662	7351861	2458288	17099825
1957	948190	3035506	3136849	11310116	2412105	20842766
1958	1073634	12044550	2989288	6908186	3191765	26207423
1959	955732	3259757	2896886	6776401	2015339	15904115
1960	752874	2857974	2030207	4097540	1836758	11575353
1961	701219	4564402	3299815	8304983	1217524	18087943
1962	721980	3499193	3625679	23428633	1496001	32771486
1963	803247	2085976	3421397	12201446	1463240	19975306
1964	965186	3619050	4148485	9628385	2252798	20613904
1965	981091	3019510	4443095	5109269	633143	14186108
1966	1164642	4020471	5411764	17261355	1310722	29168954
1967	1129839	6749885	3318203	9846051	1130035	22174013
1968	1082726	6345805	5262190	20248961	3095039	36034721
1969	1099993	4267739	2407299	2570508	1310461	11656000
1970	1212368	4078274	3945433	13601475	3680227	26517777
1971	1593252	6306007	4788842	8455992	1262977	22407070
1972	1548849	3562689	3355852	13996264	6031462	28495116
1973	1423792	7585778	3530197	6521341	6225042	25286150
1974	1466846	7225360	3693968	7373961	2201804	21961939
1975	1411706	2271494	2331676	4633607	1147184	11795667
1976	1543060	4813793	3698416	10348865	1901061	22305195
1977	1492516	6346302	3316546	10356377	1088184	22599925
1978	1367868	7221754	3349967	10748013	2978708	25666310
1979	1329230	5691342	3646858	11822526	866324	23356280
1980	1476408	3260096	3835871	8418658	3452751	20443784
1981	1331589	8443091	3138642	18085803	1122961	32122086
1982	1365458	10074474	3588233	2679553	2974848	20682566
1983	1154668	5523728	4534183	24000538	1005661	36218778
1984	1424876	5081199	4048203	7500864	1850797	19905939
1985	1137642	12250917	3681122	20319522	5492723	42881926
1986	1019717	10557884	5479257	17980804	5581417	40619079
1987	937419	5424675	4027972	13446962	2302062	26139090
1988	892440	4490092	3835265	23131194	6194142	38543133
1989	847471	13796395	3977130	17174907	1828401	37624304
1990	859345	14242568	4522247	17268954	3146630	40039744
1991	855936	10467706	3742379	24275731	2364147	41705899
1992	881621	8339244	3645070	10321920	4029580	27217435
1993	827621	18262989	2749005	10300434	4231336	36371385
1994	577904	11615700	2877718	2225908	4344478	21641708
1995	302205	4500156	2016361	11912923	2481188	21212833
1996	162450	5968258	1568920	5909232	1373624	14982484
1997	327968	10746972	369289	6613812	1894234	19952275
1998	233702	1816426	5671	2433699	4461645	8951143

Table 2 Total Salmon Catch (tonnes) by species in British Columbia 1952
– 1998

	<u>Chinook</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>	<u>TOTAL</u>
1952	5829	13965	8893	23200	14452	66338
1953	6379	16029	9570	27901	24686	84565
1954	5551	21319	8586	11673	33747	80876
1955	5129	7549	9768	28624	8246	59316
1956	5544	9751	10531	13126	12441	51393
1957	5079	7130	9349	25840	12356	59754
1958	5828	33571	10141	15309	17284	82133
1959	5540	8173	8085	15601	10481	47880
1960	4248	7017	5827	7673	9214	33980
1961	3719	12064	10209	22464	6624	55081
1962	3712	9107	10953	42281	8186	74240
1963	4148	5377	10465	27079	6992	54060
1964	5486	10398	12968	16532	10847	56231
1965	5152	7350	15040	10310	3014	40866
1966	6177	11636	15890	33065	6965	73732
1967	6254	16732	9296	22721	5514	60517
1968	6205	18921	13813	25583	16645	81168
1969	5755	10877	7114	5993	6073	35813
1970	5915	11240	12484	23710	16748	70097
1971	7669	17039	12640	17202	5410	59960
1972	7387	9467	9429	17653	29925	73861
1973	6692	21413	10146	12936	32644	83831
1974	6721	21276	9264	11061	12465	60786
1975	6436	5635	7091	9961	5380	34502
1976	6841	12295	8283	16869	10913	55200
1977	6693	17328	8798	23759	6013	62591
1978	6987	21813	8139	15221	15804	67964
1979	6080	14343	9137	23406	4723	57690
1980	5893	8054	8225	13766	17358	53296
1981	5244	20950	6688	36861	6137	75881
1982	6341	28980	8224	3933	15055	62533
1983	4786	14197	9173	38720	4890	71767
1984	5509	12792	8779	11695	8978	47753
1985	4865	31062	7971	36546	23479	103924
1986	4486	29811	11666	29264	24922	100148
1987	4622	14714	7357	25865	11037	63596
1988	5218	11842	6155	31467	30205	84887
1989	4698	33674	7704	29593	9288	84956
1990	4642	35861	9221	25615	16846	92186
1991	4538	24525	8733	34130	10203	82129
1992	4731	20785	6370	14563	17953	64403
1993	4303	41809	3766	15328	17167	82373
1994	3180	29777	6760	3277	20315	63309
1995	1382	10467	4229	18934	11953	46965
1996	505	15495	3373	8373	6495	34241
1997	1476	24631	663	11929	8656	47355
1998	1203	4833	16	3900	19797	29748

Table 3 1998 Salmon Catch (tonnes) by Statistical Area*

<u>AREA</u>	<u>Chinook</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>	<u>TOTAL</u>	
1	8	0	0	0	112	6	127
2E	2	0	0	0	246	392	640
2W	962	214	0	0	818	95	2,089
3	19	429	0	0	842	1,118	2,407
4	39	270	0	0	32	91	432
5	0	10	0	0	2	8	20
6	16	78	0	0	914	2,113	3,120
7	3	0	4	0	11	396	414
8	50	58	0	0	806	2,990	3,903
9	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
11	0	23	0	0	1	0	24
12	8	1,800	0	0	85	2,513	4,407
13	1	747	0	0	29	4,249	5,026
14	0	0	0	0	0	2,381	2,381
15	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0
19A	0	0	0	0	0	0	0
19B	0	0	0	0	0	0	0
20	1	140	0	0	0	0	141
21	0	0	0	0	0	2,887	2,887
22	0	0	0	0	0	0	0
23	13	165	0	0	0	0	177
23A	0	0	0	0	0	0	0
23B	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0
25	16	0	0	0	0	463	479
26	4	0	0	0	0	0	5
27	1	0	0	0	0	0	1
28	0	0	0	0	0	0	0
29	59	869	0	0	0	93	1,022
30	0	0	0	0	0	0	0
C	0	0	0	0	0	0	0
Taku	3	30	11	0	0	0	45
Stikine	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0
Totals	1,203	4,833	16	3,900	19,797		29,748

Table 4 1998 Salmon Catch (number) by Statistical Area*

	<u>Chinook</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>	<u>TOTAL</u>
1	878	11	0	66751	1487	69127
2E	199	8	0	150026	90961	241194
2W	115331	84092	0	504013	23921	727357
3	2407	154557	5	474714	248772	880455
4	5142	94123	0	18437	19071	136773
5	29	3403	0	1414	1630	6476
6	2200	29355	0	582179	437529	1051263
7	331	137	991	7414	99985	108858
8	5355	21803	0	517011	639911	1184080
9	0	0	0	0	0	0
10	0	0	0	0	0	0
11	8	8902	0	863	24	9797
12	3411	658324	2	76888	563648	1302273
13	3540	261273	3	26297	955932	1247045
14	4875	17	1	2922	563147	570962
15	913	131	26	327	2	1399
16	902	0	101	128	0	1131
17	1380	0	0	365	50	1795
18	1170	0	0	270	106	1546
19	0	0	0	0	0	0
19A	122	0	0	71	0	193
19B	6512	2489	69	3123	49	12242
20	3347	49336	122	122	50	52977
21	23	3	0	0	694690	694716
22	0	0	0	0	0	0
23	4673	69744	0	0	9	74426
23A	13452	55423	0	0	9	68884
23B	21349	836	0	67	83	22335
24	4722	0	0	7	0	4729
25	20889	108	0	0	101736	122733
26	914	184	0	0	0	1098
27	190	0	0	0	0	190
28	807	218	1155	144	11	2335
29	7631	310769	337	146	18832	337715
30	0	0	0	0	0	0
C	0	0	0	0	0	0
Taku	495	11180	2859	0	0	14534
Stikine	0	0	0	0	0	0
Unknown	0	0	0	0	0	0
Totals	233197	1816426	5671	2433699	4461645	8950638

Figure 1 a

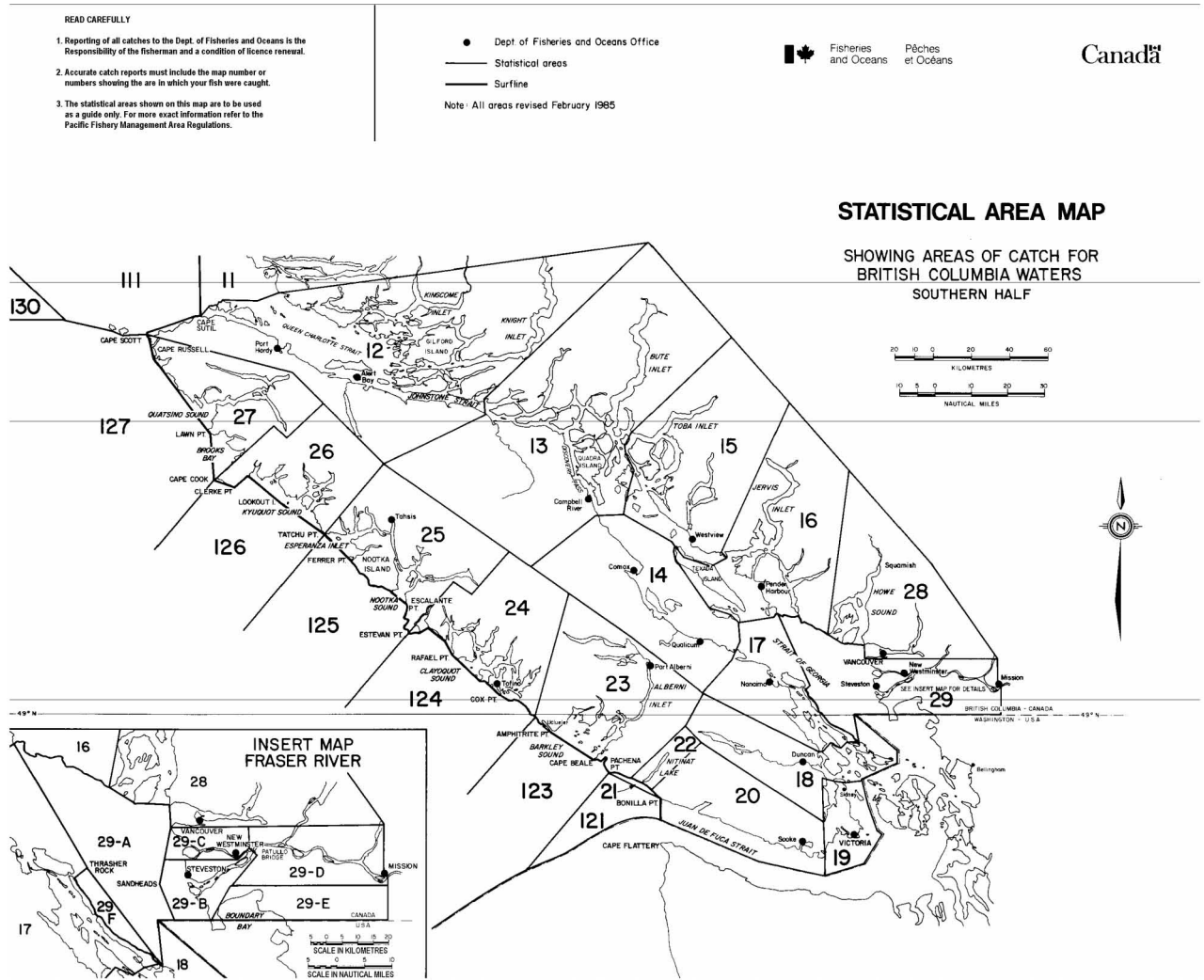


Figure 1 b

