



**COLUMBIA  
RIVER SALMON AND  
STEELHEAD HARVEST  
1980 TO 2006**

by

John McKern

for

The Columbia-Snake River Irrigators Association

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## 1980 THROUGH 2006

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### FISH PASSAGE SOLUTIONS

1. This report was prepared for the Columbia-Snake River Irrigators Association to review the harvest of Columbia River salmon and steelhead. For comparative purposes, the period selected was from 1980 (the year the Northwest Power Planning and Conservation Act passed) through 2006. The primary source of data was the Oregon Department of Fish and Wildlife/Washington Department of Fish and Wildlife Joint Staff Columbia River Fisheries Reports at <http://www.dfw.state.or.us/OSCRP/CRM/reports.html>). Additional information was obtained from the Idaho Department of Fish and Game technical library at (<https://research.idfg.idaho.gov/Fisheries%20Research%20Reports/Forms/Show%20All%20Reports.aspx>), by personal communication from the Oregon and Washington Departments of Fish and Wildlife, and from the Idaho Department of Fish and Game. Many of the Joint Staff reports are special purpose reports containing information aimed at the fishing public or at fishery management committees. They often did not list information in the manner needed for this report so data had to be accumulated and summarized to produce the data used herein. Occasionally, reports did contain summarized data for given states, the mainstem, or the mainstem and tributaries. In such cases, that data could be used, but the data did not always jibe with data from individual year reports or data accumulated from periodic reports published by the agencies. Data used are found in the Appendix.

2. There are six species of Pacific salmon and steelhead that return to the Columbia River:

- Chinook salmon (*Oncorhynchus tshawytscha*)
- Coho salmon (*Oncorhynchus kisutch*)
- Sockeye salmon (*Oncorhynchus nerka*)
- Chum salmon (*Oncorhynchus keta*)
- Pink salmon (*Oncorhynchus gorbuscha*)
- Steelhead (*Oncorhynchus mykiss*)

Chinook and coho are typically targeted for non-Indian commercial and sport fisheries as well as Indian commercial and ceremonial and subsistence (C&S) fisheries. Chinook and coho support significant sport fisheries in the lower River, and Chinook support sport fisheries in upper reaches of the Columbia and in the Snake River Basin in Idaho. Sockeye numbers are usually too low to allow harvest, and Snake River sockeye are listed as an endangered species. Sockeye are pursued in Indian C&S fisheries and may be sold when returns are higher. Chum and pink salmon typically spawn in the lower river or lower ends of tributaries, with numbers too low to permit harvest. Chum salmon are also listed under the Endangered Species Act though pink salmon which are extremely low in numbers are not. Commercial harvest of steelhead by non-Indians has been prohibited since 1974 but steelhead are sold “over the bank” by Indian fishers. Steelhead support significant sport fisheries in Oregon, Washington, and Idaho.

3. Data by species are often reported in several segmented ways. For example, steelhead are divided into winter and summer steelhead, with hatchery and wild stocks of each. Summer steelhead are further divided into A and B runs with hatchery and wild stocks of each. Spring Chinook are typically reported only as wild and hatchery stocks, although they are divided into downriver and upriver stocks, or in the case of the Willamette River, into separate tributary stocks. Summer Chinook are predominantly hatchery fish from the Snake River, but they are largely wild fish from the Columbia River supported by the prolific Hanford Reach stock between Priest Rapids Dam and McNary Reservoir. Fall Chinook are divided into upriver brights (URBs) and lower river Tules with wild and hatchery stocks of each. Mid-Columbia URBs are estimated separate from other URBs, and Bonneville Reservoir hatchery stocks are estimated separate from other Tule stocks. Coho are divided into early hatchery and wild stocks typically destined for hatcheries or tributaries east the Willamette River while late hatchery and wild stock coho typically return to hatcheries and tributaries west of the Willamette. Data for these various stocks and races were consolidated insofar as possible to give a comprehensive view of the status of the runs and fisheries thereon. Total returns to the Columbia River for Chinook, coho, steelhead, sockeye, and chum (the Joint Staff reports did not include pink salmon) are shown in Figure 1 and reported in Appendix Table 1.

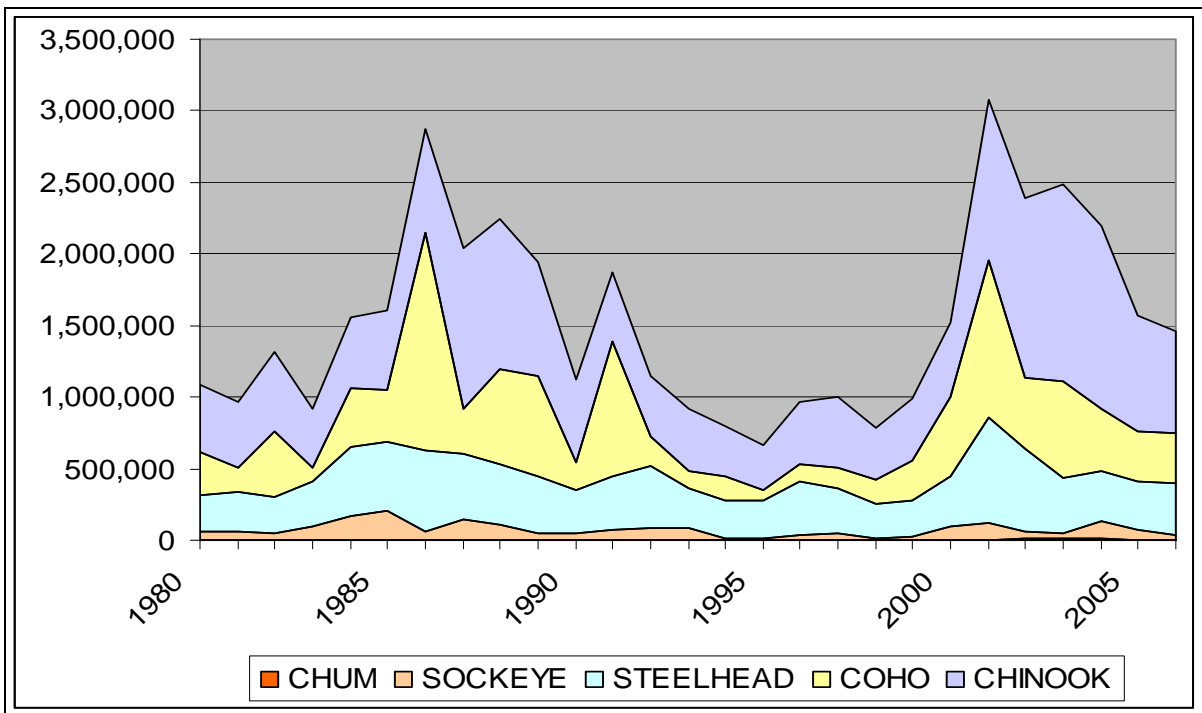


Figure 1: Total returns of Chinook, coho, sockeye, and chum salmon and steelhead to the Columbia River 1980 to 2006 (Source: WDFW/ODFW Joint Staff Reports). Note: Chum numbers are so low they barely show on the graph around 1995-1997 and 2003-2005.

4. The Chinook, coho, and steelhead are more important for commercial and sport harvest than the sockeye, chum, and pink salmon. Few pink salmon return to the river, and like the chum salmon, typically only to the lower river below Bonneville Dam although pink salmon have been reported as far inland as the Tucannon River in southeastern Washington. Pink salmon were not reported in the documents reviewed. Chum salmon have made a significant

come-back in recent years, presumably in response to intensive management of flows below Bonneville Dam to protect their spawning areas. Nonetheless, chum harvest is incidental to harvest of more plentiful species. While sockeye runs were strong during a stretch in the 1980s, in recent years they have been marginal and no targeted fishery for them has occurred. Commercial harvest of steelhead by non-Indians ended in 1974, though Indians are still allowed to sell them. Typically tens to hundreds of thousands of chinook, coho, and steelhead are harvested each year, while tens to hundreds of sockeye and chum are harvested, and then only sporadically. While combined species harvest was reviewed, it was most illustrative to separate the species and look at them individually.

5. Three runs of Chinook enter the Columbia. Spring Chinook migrate farther upstream with main segments of the runs found in the Willamette, Snake, and upper Columbia and their tributaries. In most cases, the strength of the run is strongly dependent on hatchery production with the strongest run in the Willamette Basin. Summer Chinook are strongest in the Snake River and mid Columbia River below Chief Joseph Dam. Again, hatcheries play a strong part in the strength of the run. Fall Chinook are divided into lower river Tule Chinook and URB Chinook. Most lower river Tules are hatchery products. Many URB Chinook are hatchery products, except for the main natural production area, the free flowing Hanford Reach between Richland, WA and Priest Rapids Dam.

6. For the purpose of this report, harvest information is from the main stem Columbia except for steelhead, which includes all tributaries, especially in Idaho. Select area fisheries have also been established, starting in 1992 in Young's Bay near the mouth of the Columbia. Four areas are now managed for commercial fisheries augmentation at Young's Bay, Blind Slough, and Tongue Point on the Oregon side and Deep River on the Washington side of the river. For these fisheries, Chinook salmon are transported from hatcheries to net pens in the estuary, reared for a period of time, and released for a short migration to the ocean. As adults, they return to the net pen areas and support mostly commercial but also limited recreational fisheries with little impact on the listed runs migrating further up the river. Commercial catch has ranged up to 10,000 fish and sport catch up to 1,000+ fish per year of the experiment.

7. While some main stem commercial fisheries occur on the spring Chinook, the catch has been relatively small in recent years compared with the somewhat larger catch of summer Chinook and the considerably larger catch of fall Chinook. The non-Indian commercial, non-Indian sport and Indian catch of Chinook are compared with the total return to the river in Figure 2. The total return to the river includes fish returning to tributaries and special area fisheries below Bonneville Dam. Returns over Bonneville Dam are shown in Appendix Table 2. The non-Indian commercial fisheries include fish caught in Zones 1 through 5, which are subdivided areas from the mouth of the river to Bonneville Dam. The Indian fishery includes fish caught and reported as commercial catch in the joint ODFW/WDFW reports. Ceremonial and subsistence catch reporting is sporadic and incomplete. Therefore, C&S catch was lumped with Indian commercial catch for most analyses. Note that this chart shows less than half of the fish entering the river being harvested by all means. Historically, this was not the case. Beginning in the 1860s, up to 90% of some runs were harvested in the lower river commercial fishery and as late as the 1970s, combined ocean and lower river fisheries took over 75% of the fall Chinook runs.

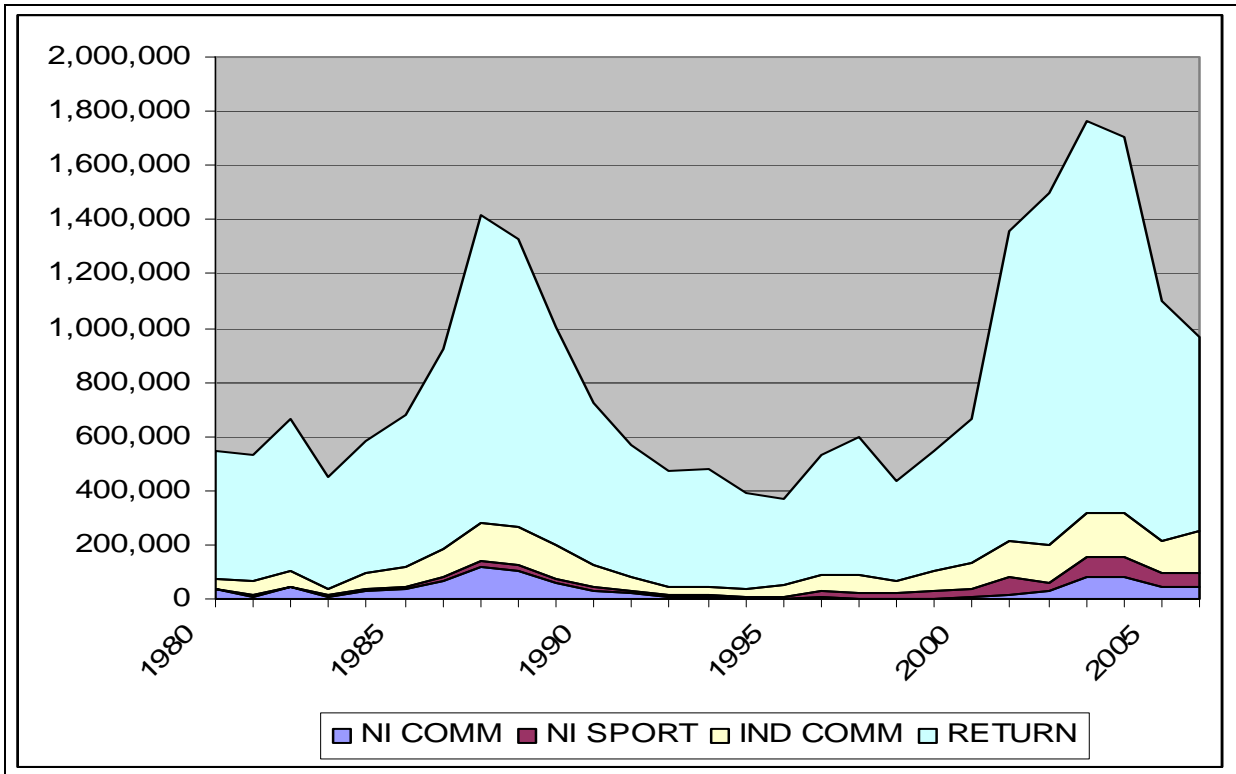


Figure 2: Non-Indian commercial and sport catch, and Indian commercial catch of Columbia River Chinook salmon compared with the total Columbia River return of Chinook salmon 1980 through 2005 (Source: WDFW/ODFW Joint Staff Reports).

8. Non-Indian commercial(Appendix Table 3), non-Indian sport (Appendix Table 4), and total Indian Chinook catch (Appendix Table 5) are compared in Figure 3 (WDFW/ODFW Joint Staff Reports). Indian commercial and Indian C&S catch are presented in Appendix Tables 6 and 7, but because C&S catch statistics were incomplete, total catch was used for comparison. A number of factors apportioned the catch, chief among them the treaties of the mid-1850s that set aside reservations for the various tribes. Those treaties typically provided for the tribes at harvest fish of the streams on their reservation, and to fish in common with the non-Indians in the accustomed fishing areas off the reservation. Legal decisions that followed (the Boldt Decision, the Belloni Decision, the US v Oregon decision, and others) gave the Indians “co-equal” management of the fish, and re-apportioned harvest. As currently managed, non-Indian commercial harvesters, who took the lion’s share in the late 1800s and early to mid 1900s, now take the smaller share, followed by non-Indian sport harvesters, and the Indians take the largest share of Chinook harvest in the Columbia Basin (apportionment is markedly different in the ocean before the salmon enter the Columbia Basin with commercial harvest and sport harvest taking smaller shares of the spring and summer Chinook and far more fall Chinook than are harvested in freshwater).

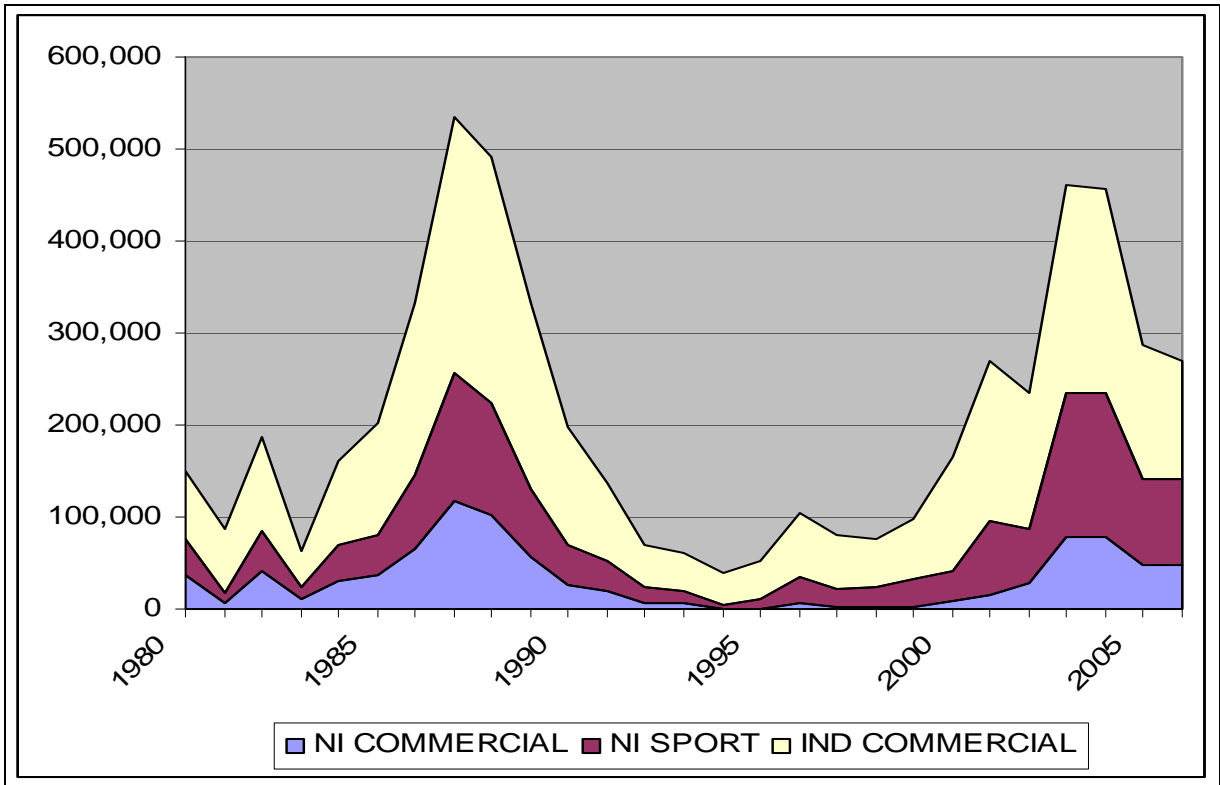


Figure 3: Non-Indian commercial and sport catch compared to Indian commercial catch of Chinook salmon in the Columbia Basin, 1980 through 2005 (Source: WDFW/ODFW Joint Staff Reports).

9. Indian salmon and steelhead harvest have increased markedly since the 1970s (Appendix Table 5, Figure 4). Chinook followed by steelhead, sockeye, coho, and chum (too few to show up on the chart) comprised the catch. In the late 1980s, an upsurge in sockeye runs allowed Indian fishers to take a significant harvest, and in addition to C&S use, substantial numbers of sockeye were sold “over the bank.” As indicated, Chinook (primarily fall Chinook) have been the mainstay of the Indian catch in most years. For ceremonial and subsistence purposes, spring Chinook play an important role, as do sockeye. The ODFW/WDFW Joint Staff noted that beginning in 1995, Indians were selling more fish “over-the-bank” to the public at various locations along the river. As there were no records of these sales, they were not included in the Indian commercial catch reported. An interesting note is that unaccounted for fish were attributed in some reports to dam-caused mortality, whereas in the Fraser River system, the BC Department of Fisheries and Oceans has attributed unaccounted for losses to un-reported First Nations fisheries.

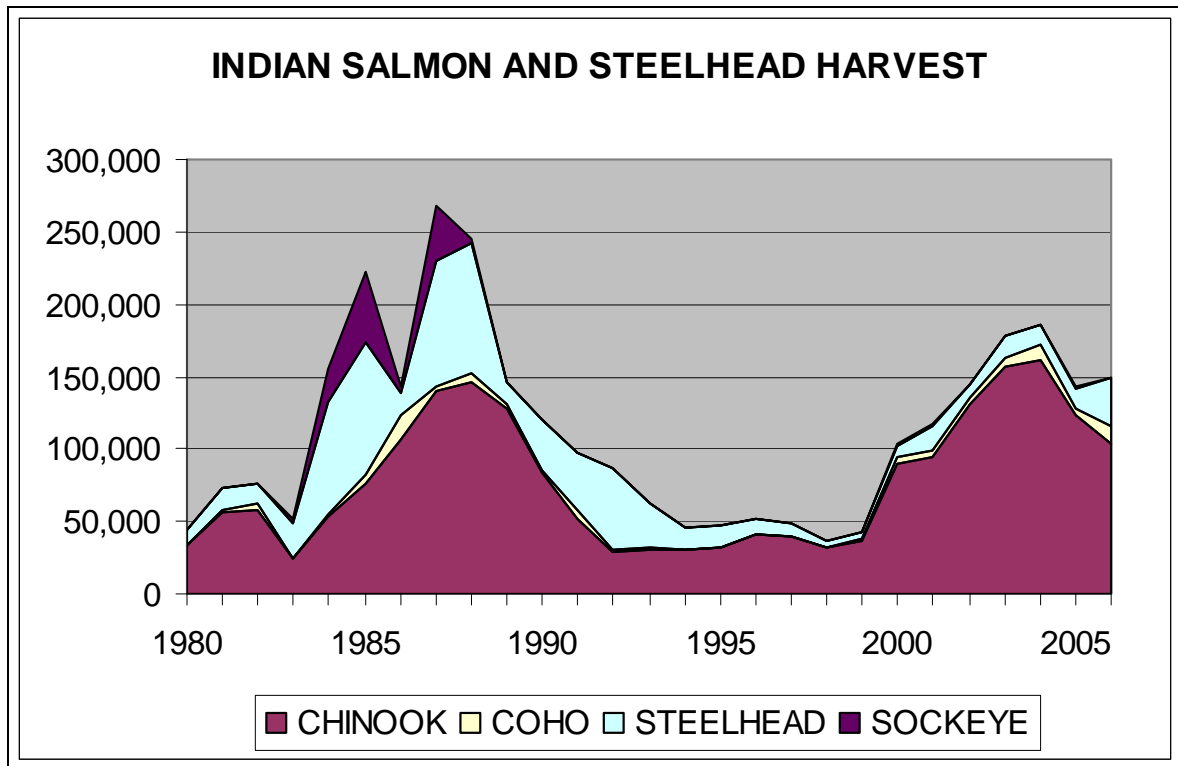


Figure 4. Indian salmon and steelhead harvest in the Columbia Basin from 1980 through 2006 (except chum – too few to show) (Source: WDFW/ODFW Joint Staff Reports).

10. Looking at the Indian Chinook catch by itself, since 1980, most of the catch has been fall Chinook (Figure 6). However, since 2000, strong increases in spring and summer Chinook have allowed increased harvest of those races too.

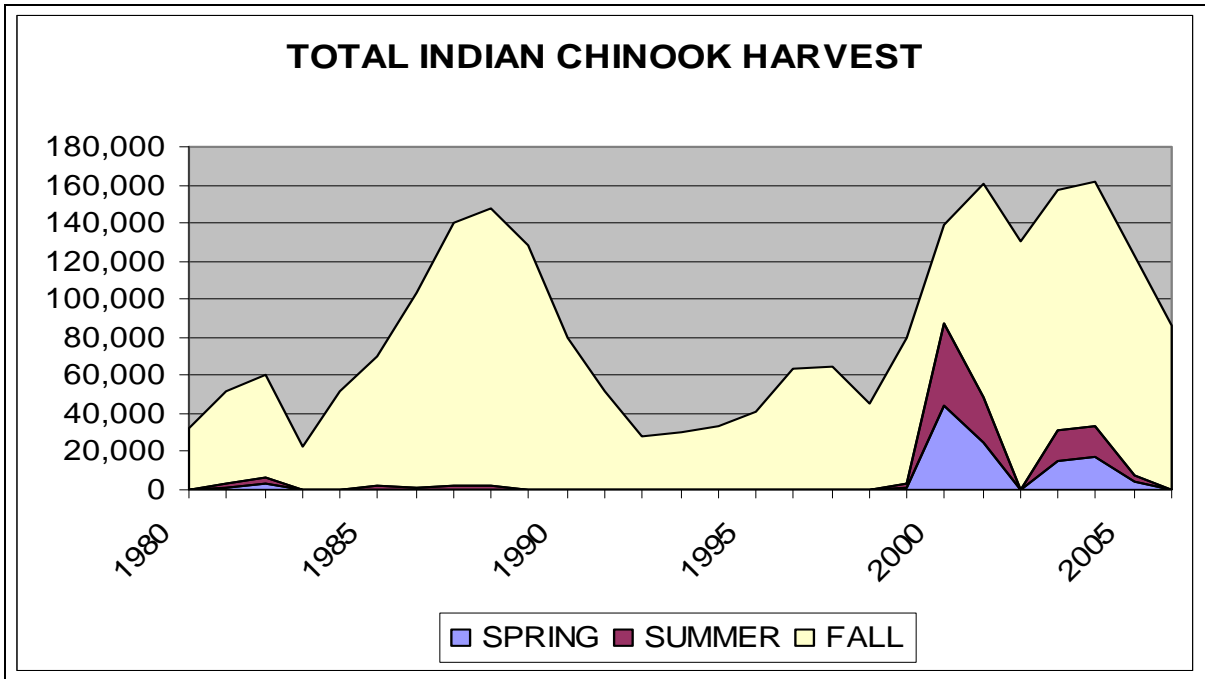


Figure 5. Total Indian spring, summer and fall Chinook salmon harvest reported for the Columbia Basin, 1980 through 2005 (Source: WDFW/ODFW Joint Staff Reports).

11. In the 1970s when legal actions curtailed non-Indian commercial harvest in the lower river, Indian harvest increased to take fish allowed to pass above Bonneville Dam. As indicated by Figure 5, there has been a trend of increasing fall chinook harvest as well as the recent increase in spring and summer Chinook harvest (Figure 6).

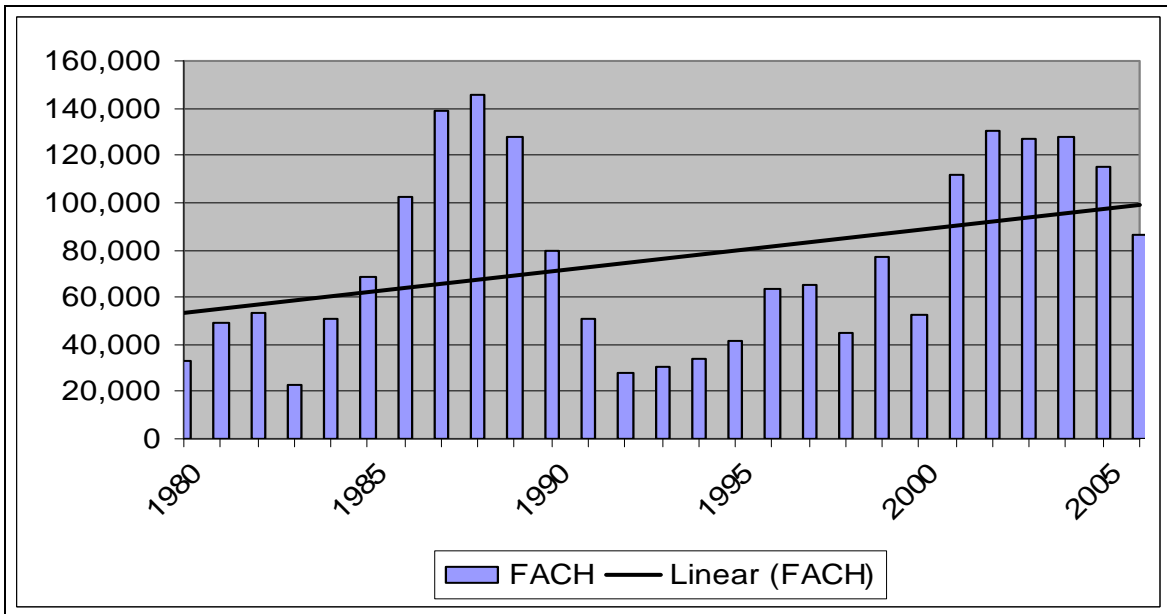


Figure 6: Indian harvest of fall Chinook salmon in the Columbia Basin, 1980 through 2005 (Source: WDFW/ODFW Joint Staff Reports).

12. Compared at the same scale, total fall Chinook harvest divided into non-Indian commercial harvest, non-Indian sport harvest, and Indian harvest shows that recent apportionment has reduced the non-Indian shares and increased the Indian shares of fall Chinook harvest (Figure 7).

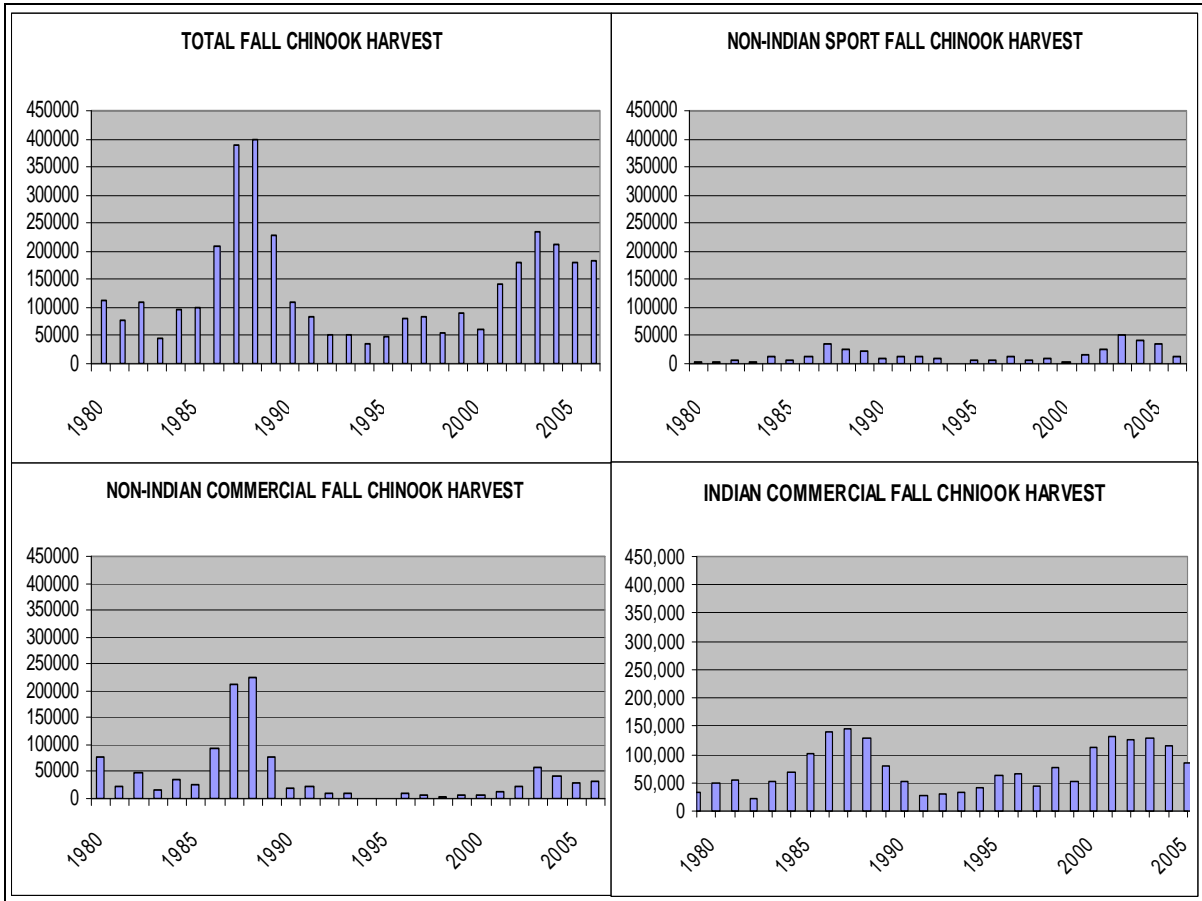


Figure 7: Total fall chinook harvest showing the division of non-Indian commercial, non-Indian sport, and Indian harvest at the same scale (Source: WDFW/ODFW Joint Staff Reports).

13. The total coho return to the Columbia River has fluctuated from less than 200,000 to over 1,500,000 since 1980 with major peaks in 1986 and 2001. Non-Indian commercial harvest has followed the fluctuation of the run closely, harvesting as little as 7 percent and as much as 65% of the run depending on the estimated abundance and the seasons set by the harvest management agencies. Non-Indian commercial fisheries take the largest share followed by non-Indian sport fisheries (Appendix Table 8). Indian catch is limited because the majority of coho are produced at hatcheries below Bonneville Dam, and non-Indian commercial and sport catch significantly reduce the runs before they enter the Zone 6 Indian fishing area. All forms of harvest are compared at the same scale with the total return in Figure 7. Indian harvest is expanded separately at a reduced scale in Figure 8 to illustrate how the harvest has fluctuated.

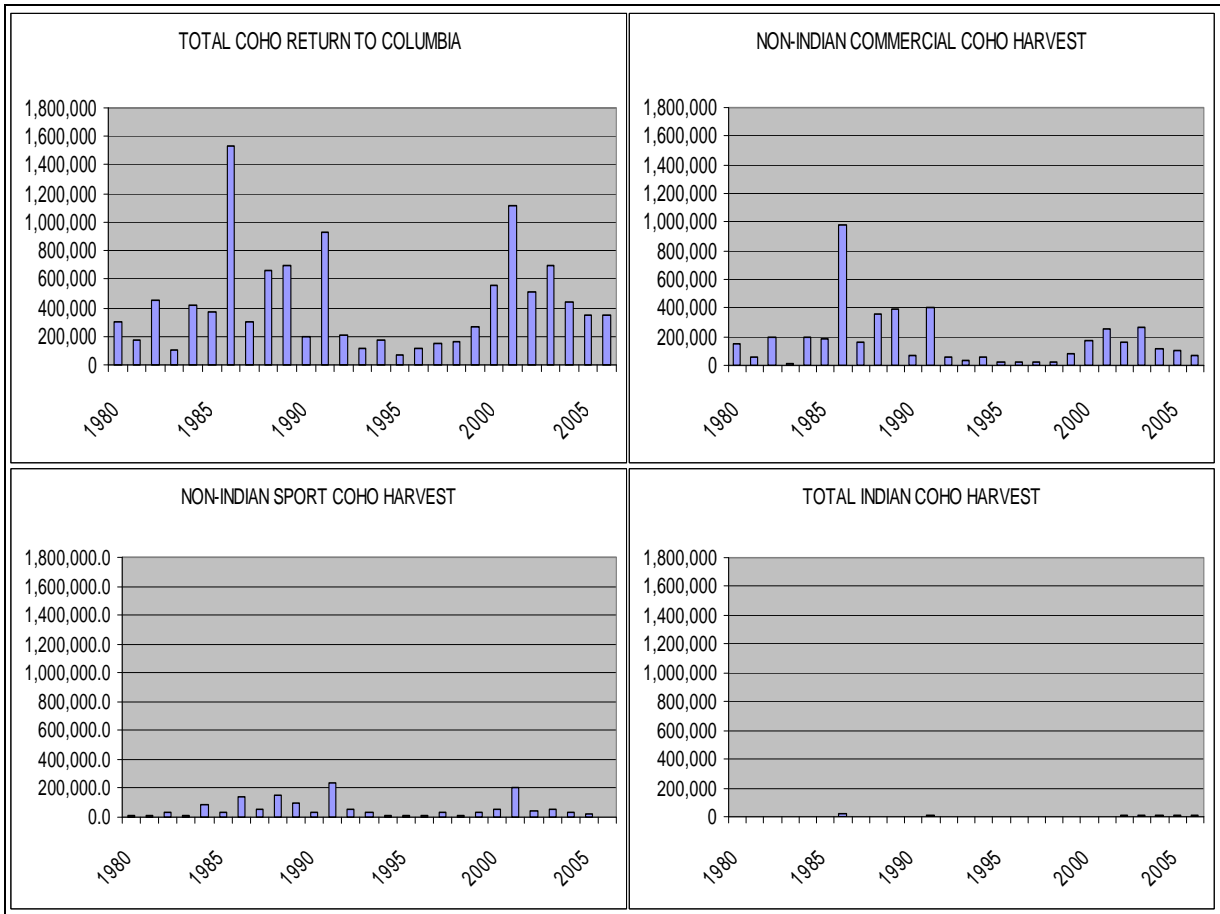


Figure 8. Total coho, non-Indian commercial coho harvest, non-Indian sport coho harvest, and Indian coho harvest all shown at the same scale (Source: WDFW/ODFW Joint Staff Reports).

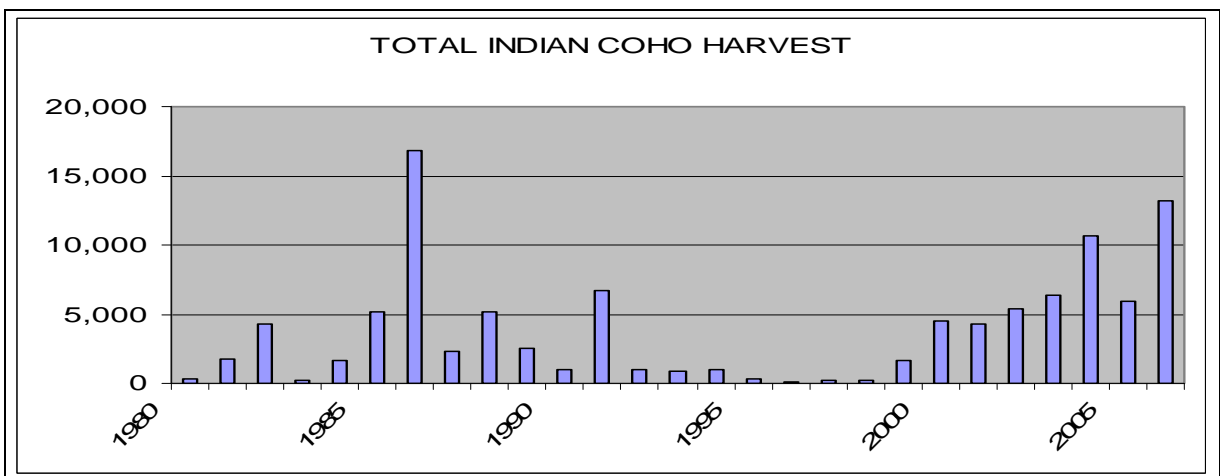


Figure 9. Indian coho harvest, 1980 through 2006) from Figure 8, scale reduced to illustrate magnitude of catch. Source: WDFW/ODFW Joint Staff Reports).

14. Idaho steelhead sport harvest data since 1964 was available from the Idaho Department of Fish and Game (Appendix Table 9). As shown in Figure 10, harvest declined in the 1970s, and reached its nadir in 1976 when no harvest was allowed. Then, in response to Lower Snake River Fish and Wildlife Compensation Plan hatcheries coming into production, initiation of the Juvenile Fish Transportation Program, and improvements in dam passage and survival with improved juvenile fish screens and bypass facilities, the steelhead runs and harvest began to rebound in the mid-1980s. A drought period that began in the mid-1970s ended in 1995, and ocean conditions improved in the late 1990s and early 2000s.

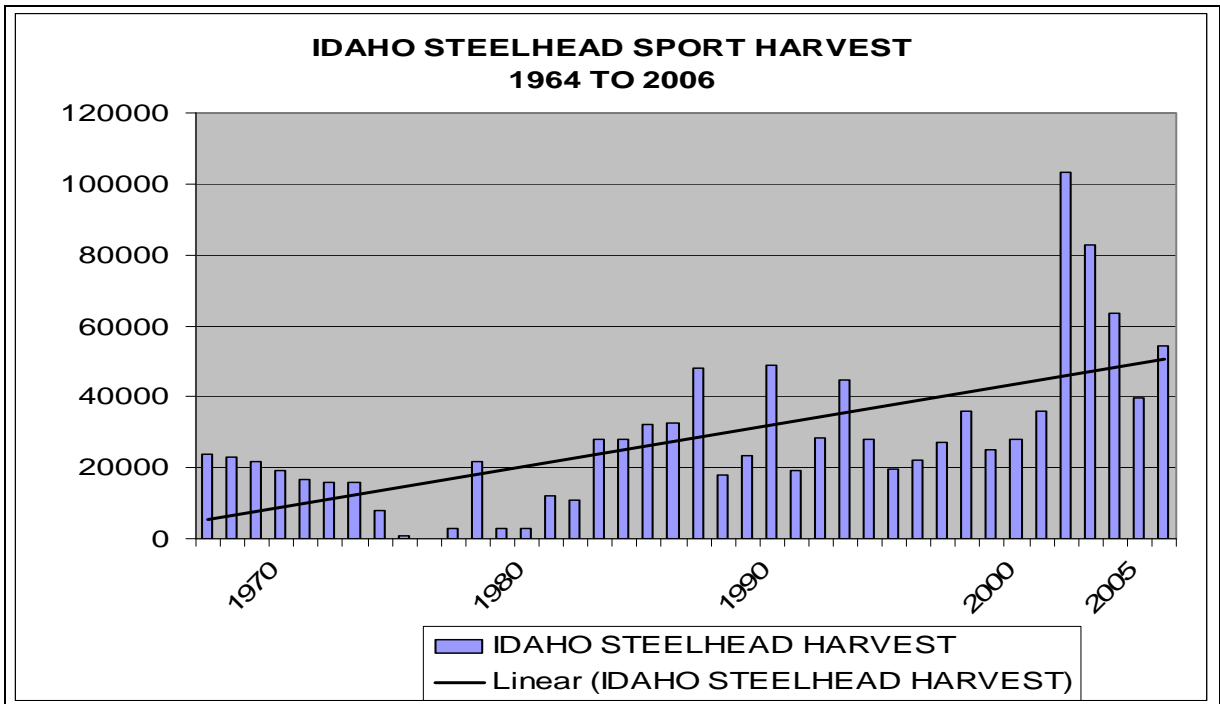


Figure 10. Idaho sport harvest on steelhead from 1964 through 2005 (Source: Idaho Department of Fish and Game).

15. The commercial sale of non-Indian caught steelhead ended in 1974. However, Indian caught steelhead continued to be used for ceremonial and subsistence purposes, and over-the-bank sales of steelhead increased in the late 1980s and 1990s, and decreased since the ESA listings in the mid 1990s. State sport harvest of steelhead has had an upward trend in Washington and Idaho in recent years while Oregon harvests were probably supported by lower tributary catches in the 1980s therefore do not exhibit the marked increase seen in the other two states. Oregon, Washington, Idaho, and Indian steelhead harvest (Appendix Table 10) are compared at the same scale in Figure 11 .

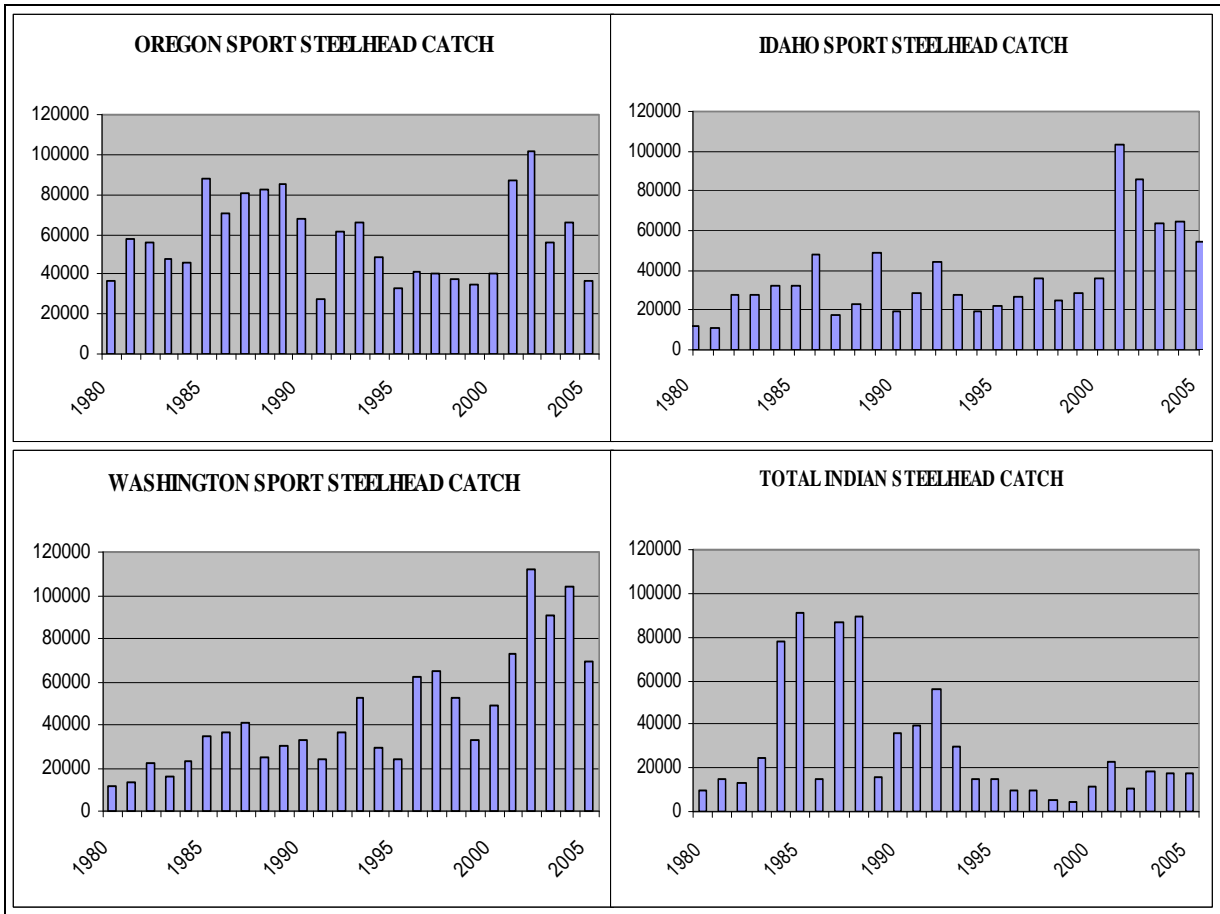


Figure 11: Oregon, Washington, Idaho, and Indian steelhead harvest from 1980 through 2005 compared at the same scale (Sources: WDFW/ODFW Joint Staff Reports, Oregon Department of Fish and Wildlife, Washington Department of Fish and Wildlife, Idaho Department of Fish and Game).

16. Since the Endangered Species Act listing of several of the Columbia Basin salmon evolutionarily significant units, the Joint Staff reports have included analysis of the fate of many of the species. The fates of Snake River wild spring Chinook are illustrated in Figure 12 (Appendix Table 11). Non-Indian and Indian catch are restricted by US V Oregon harvest regulations. Unaccounted losses are attributed to dam passage by the Joint Staffs, however, similar unaccounted losses occur with Fraser River, BC, runs of salmon where the Department of Fisheries and Oceans attributes them to un-reported harvest by First Nations fishers. Fates of upper Columbia River wild spring Chinook are illustrated in Figure 13 (Appendix Table 12). The more constant take by Indian fishers may reflect the Colville tribal fisheries at the base of Chief Joseph Dam.

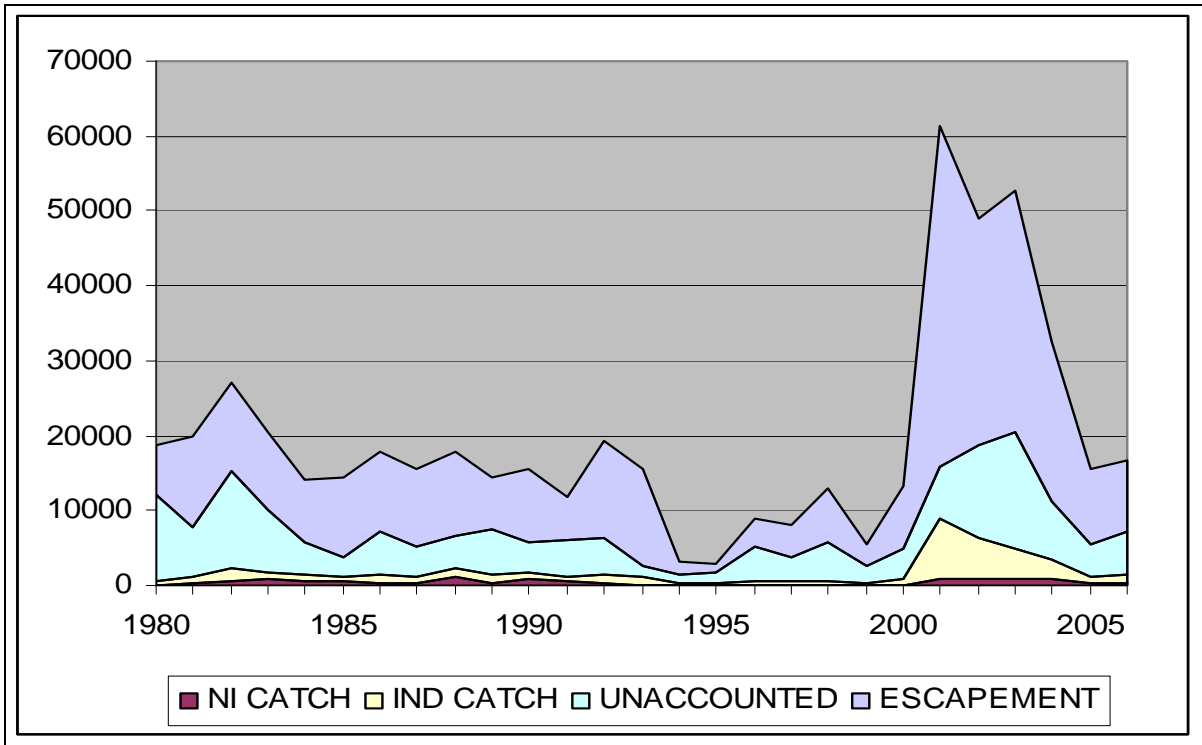


Figure 12: Fate of up-river wild spring Chinook destined for the Snake River, 1980 to 2006 (Source: WDFW/ODFW Joint Staff Reports).

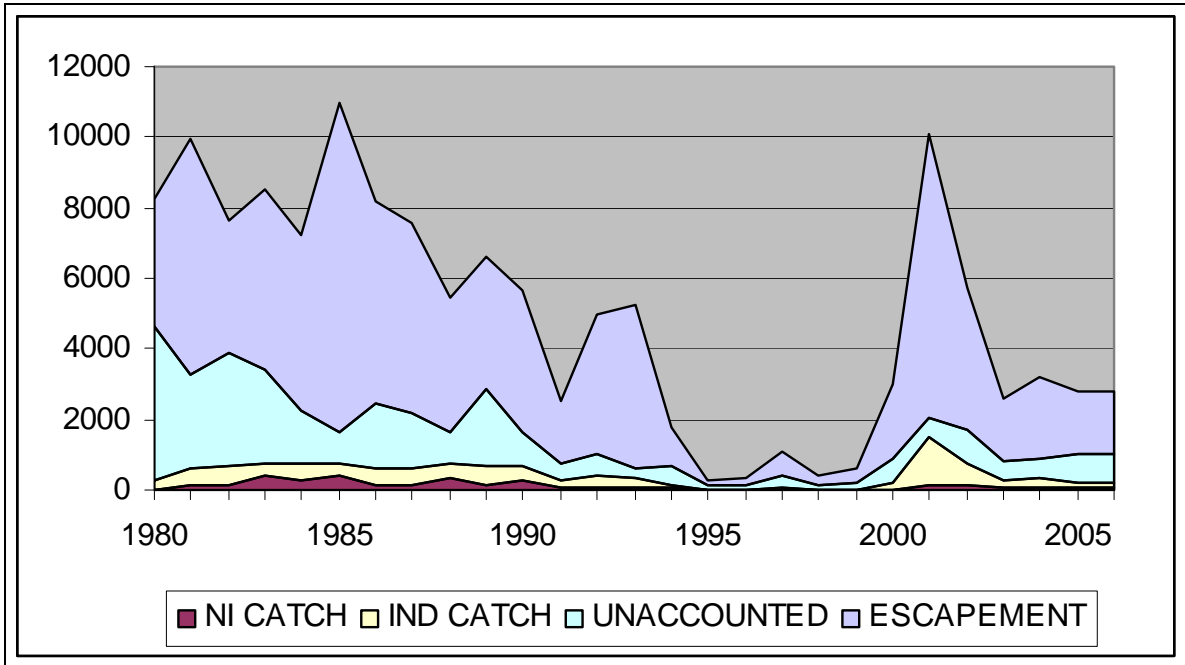


Figure 13: Fate of up-river wild spring Chinook destined for the upper Columbia River, 1980 to 2006 (Source: WDFW/ODFW Joint Staff Reports).

17. Summer Chinook destined for the upper Snake River have sustained very little harvest over the period reviewed (Figure 14) (Appendix Table 13).

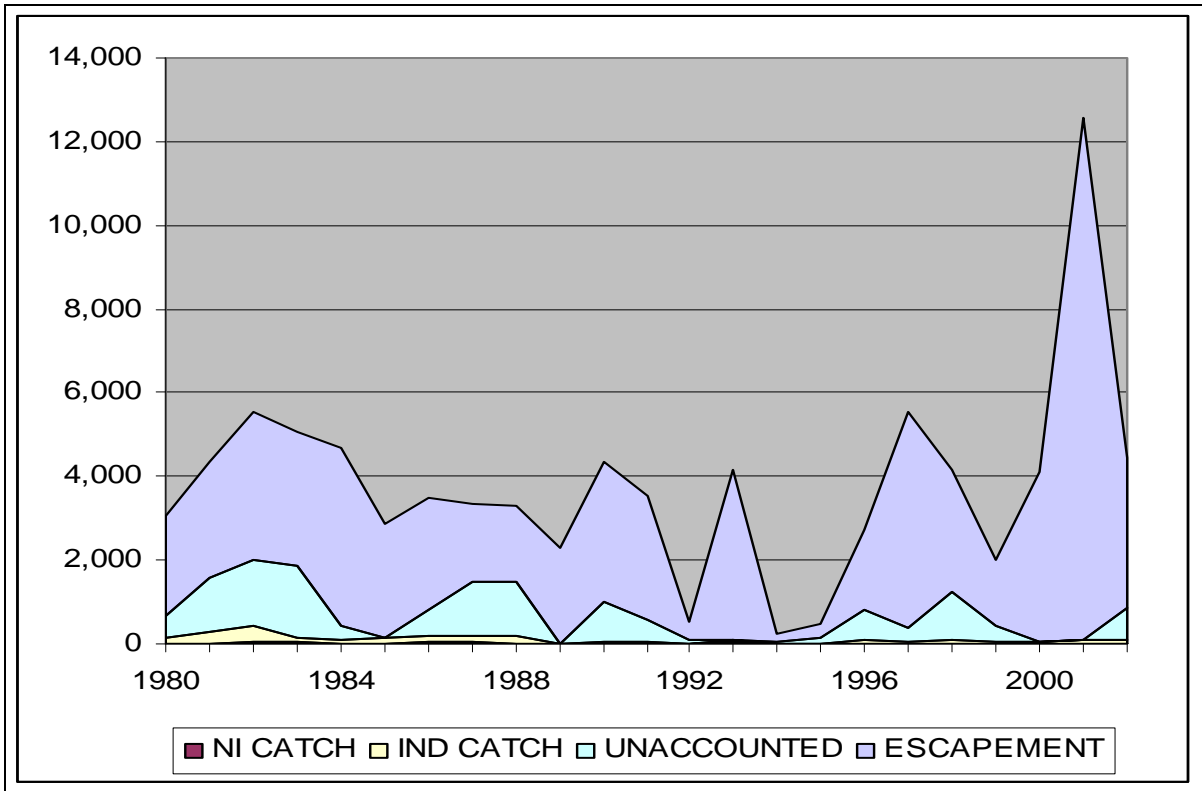


Figure 14: Fate of up-river wild summer Chinook destined for the Snake River, 1980 to 2006 (Source: WDFW/ODFW Joint Staff Reports).

18. In addition to non-Indian and Indian harvest, which took a higher proportion of wild Snake River fall Chinook in the 1980s, brood stock for Lyons Ferry Fall Chinook hatchery were captured at Ice Harbor Dam and transported to the hatchery in the late 1980s (shown in yellow in Figure 15)(Appendix Table 14).

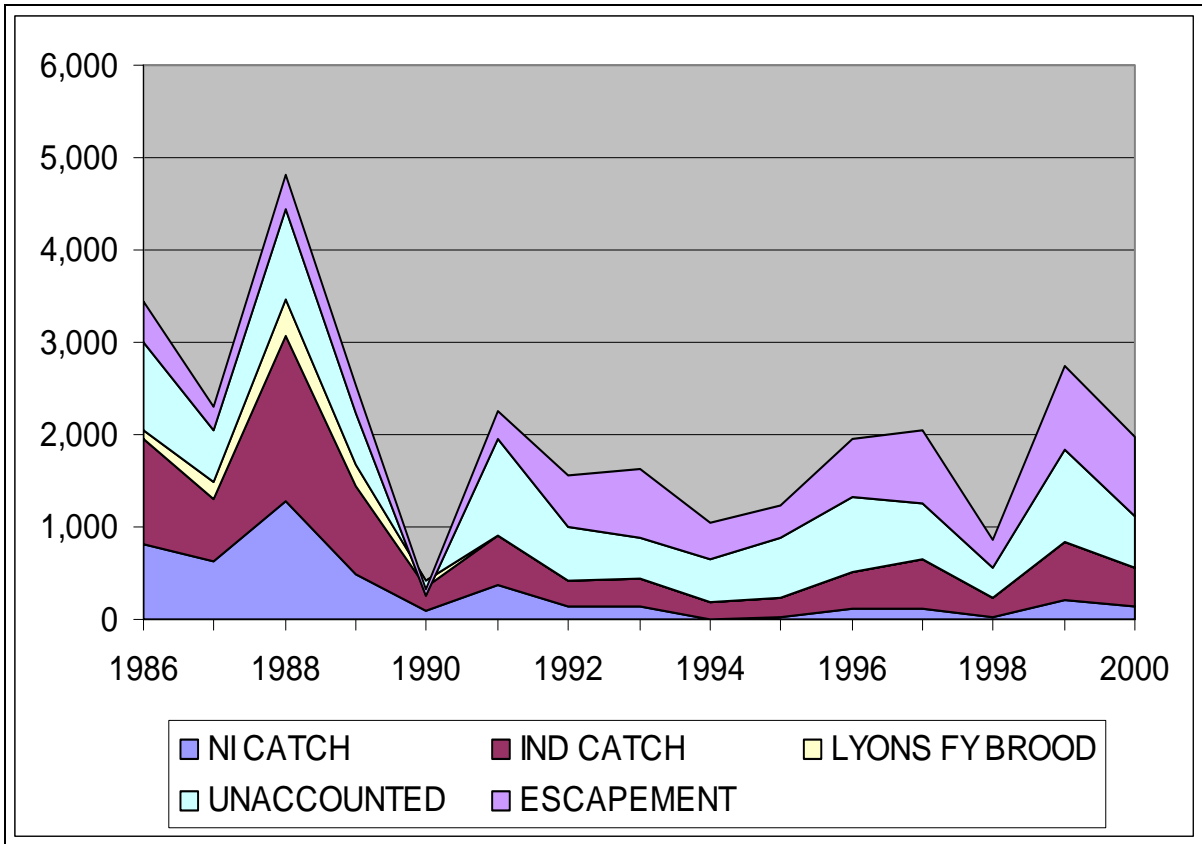


Figure 15: Fate of up-river wild fall Chinook destined for the Snake River, 1980 to 2006 (Source: WDFW/ODFW Joint Staff Reports).

19. The fate of Snake River sockeye was also estimated in the Joint Staff reports.

Note that in the first two years of the graph, negative escapement is indicated. During those two years, more fish were counted in the up-river areas that were estimated to have returned to the river (see Appendix Table 15).

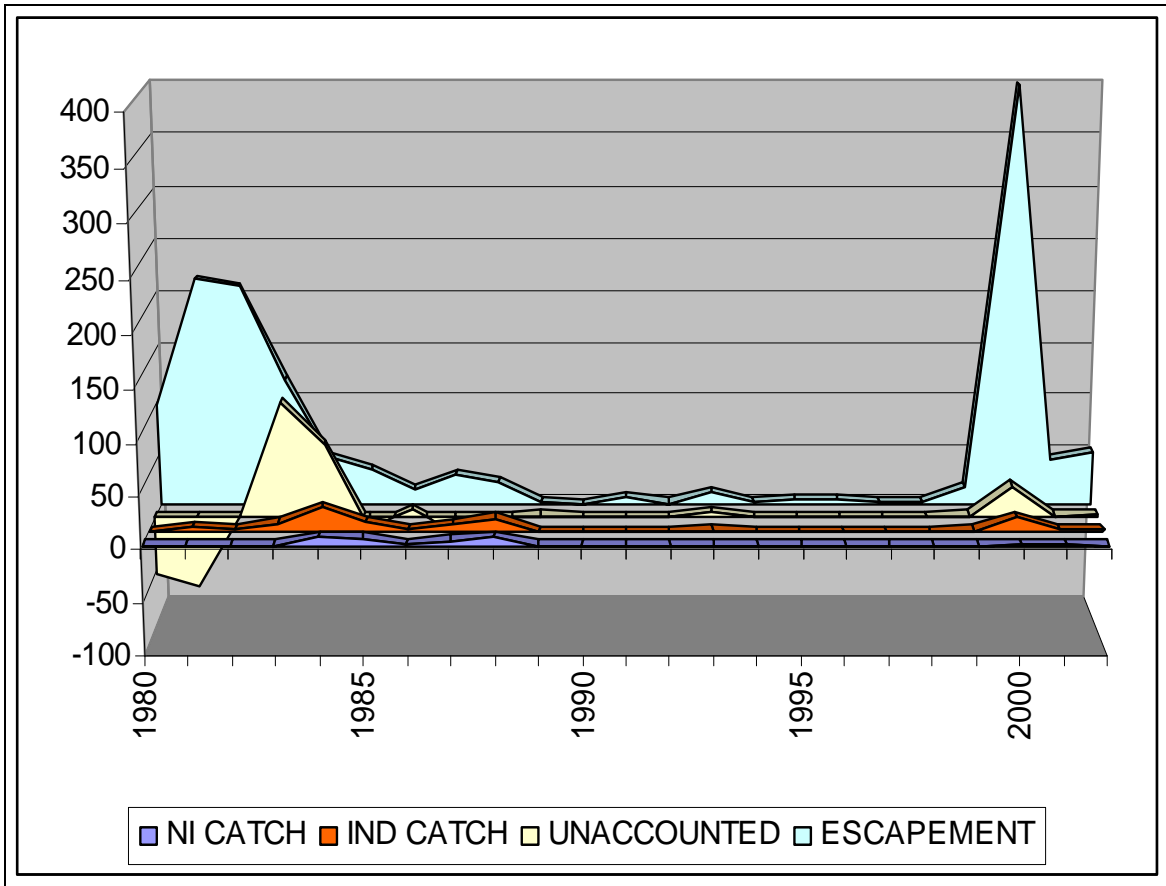


Figure 16: Fate Snake River sockeye, 1980 to 2006 (Source: WDFW/ODFW Joint Staff Reports).

20. **Conclusion:** Harvest of Columbia River salmon and steelhead fluctuates widely from year to year. However, trends have generally been upward since the inception of the Northwest Power and Conservation Council’s fish and wildlife program. More and more evidence has come to light that ocean survival plays a greater part in adult returns than freshwater survival of the juvenile salmon. Nonetheless, improvements in habitat and dam passage have contributed to the general increase in the adult returns. The increase has allowed more harvest by non-Indian sport and commercial fishers, and by Indian fishers for commercial and ceremonial and subsistence purposes. Finer control of fishing by non Indian and Indian fishers alike has resulted in increased escapement into the spawning areas and to hatcheries in the Columbia Basin.

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APPENDIX TABLES

**TABLE 1: TOTAL ESTIMATED SALMONID RETURN TO THE COLUMBIA RIVER - 1980 TO 2006**

YEAR	CHINOOK SALMON				COHO	STEELHEAD			SOCKEYE	CHUM	TOTAL SALMONDS
	SPRING	SUMMER	FALL	TOTAL		WINTER	SUMMER	TOTAL			
1980	126100	22991	319300	469391	301600	80600	177400	258000	58886	500	1093300
1981	157400	19124	278900	455424	170300	67000	217700	284700	56037	1500	976200
1982	181400	14677	363100	559177	453100	46000	207900	253900	50319	2900	1322300
1983	149300	23576	237600	410476	100500	67700	240200	307900	100628	600	918000
1984	163100	18999	309400	491499	414200	94400	388400	482800	161886	2300	1551900
1985	168100	19084	361300	548484	366200	77300	405300	482600	200759	1300	1608100
1986	210800	19307	494800	724907	1527800	85000	474200	559200	59963	3000	2885600
1987	232400	23604	871000	1127004	307600	91700	364300	456000	145546	2500	2048600
1988	243000	23397	784700	1051097	664800	59300	362800	422100	99780	4800	2248600
1989	220200	22739	552100	795039	701600	68000	327800	395800	47477	2000	1945600
1990	250800	19296	313000	583096	196100	44700	247400	292100	49754	2900	1872100
1991	189900	14569	276100	480569	934300	63200	311000	374200	76484	1300	1153600
1992	191800	9796	219000	420596	210900	55900	372100	428000	85000	4900	918900
1993	201200	14781	214900	430881	113900	36400	242800	279200	84273	4500	801200
1994	81500	14977	254000	350477	168900	52200	212100	264300	12679	1200	672600
1995	60500	12615	242800	315915	74800	20100	247100	267200	9178	1500	859600
1996	93900	12333	330800	437033	111600	26500	244000	380500	30280	3300	1020200
1997	159500	18277	321500	499277	149400	15300	292500	307800	46939	1700	788500
1998	91400	16332	255400	363132	164500	23600	216600	240200	13220	1900	991000
1999	101400	22347	313200	436947	273500	23300	235800	259100	17878	2400	1534200
2000	250800	23169	255000	528969	553700	30400	316900	347300	93757	2500	3105300
2001	508400	54935	548900	1112235	1109500	40100	689400	729500	116623	5500	2445700
2002	431600	92820	733300	1257720	503700	33711	553100	572200	49629	11900	2395149
2003	400586	83120	893100	1376806	677200	23452	364100	387552	39375	8934	2489867
2004	411020	65446	799000	1275466	441400	29566	314800	344366	123992	11439	2196663
2005	192962	60060	561400	814422	346800	14672	317800	332472	72452	3378	1569524
2006	208190	76196	430600	714986	350000	16613	340200	356813	37100		1458899

**TABLE 2: ADULT SALMON COUNTS AT BONNEVILLE DAM - 1980 TO 2006**

YEAR	CHINOOK SALMON				COHO	STEELHEAD	SOCKEYE	CHUM	TOTAL SALMONIDS
	SPRING	SUMMER	FALL	TOTAL					
1980	60987	31065	325312	417364	12974	129254	58882	44	618518
1981	65009	26929	193712	286650	21935	159270	56037	4	523896
1982	76044	26614	220151	322809	55816	157640	50219	12	586496
1983	56721	23458	164167	244346	8398	218439	100545	50	571778
1984	51045	28507	244873	324425	16759	315560	152541	64	809349
1985	90961	29870	343042	463873	38550	343987	166340	97	1012847
1986	123043	31041	416797	570881	108649	379891	58123	77	1117621
1987	101807	37707	407980	547494	17922	303081	116993	147	985637
1988	94746	36524	362755	494025	27054	279072	79714	60	879925
1989	87259	32975	295883	416117	27418	287798	41884	16	773233
1990	96252	28021	216717	340990	11627	183027	49581	26	585251
1991	61228	21953	191441	274622	58868	274545	76481	5	684521
1992	90582	19245	146472	256299	14369	314975	84992	39	670674
1993	112172	23616	141869	277657	10642	188386	80178	17	556880
1994	20566	20201	203553	244320	20291	163124	13154	26	440915
1995	12961	17791	214598	245350	10933	209071	8135	30	473519
1996	56608	18904	224450	299962	16067	212475	31093	22	559619
1997	117964	31105	250715	399784	24713	266840	48342	47	739726
1998	39117	24111	217716	280944	45858	197501	13613	21	537937
1999	48098	30951	268428	347477	41337	212118	18304	43	619279
2000	204581	45073	251338	500992	88277	282665	97541	17	969492
2001	439533	99685	498127	1037345	271153	676793	123416	29	2108736
2002	275290	135388	513907	924585	94018	510680	51200	72	1580555
2003	210028	128166	658466	996660	125747	365821	39291	411	1527930
2004	179193	105032	621972	906197	115042	313378	123291	80	1457988
2005	78325	83703	438371	600399	83305	315650	72972	139	1072465
2006	96458	98107	279529	474094	102111	339301	37066	165	952737

TABLE 3: NON-INDIAN COLUMBIA RIVER COMMERCIAL HARVEST, 1980 TO 2006.

YEAR	CHINOOK				COHO	SOCKEYE	CHUM
	SPRING	SUMMER	FALL	TOTAL			
1980	0	16	75900	36816	150100	4	200
1981	600	9	23300	6409	60000	0	1400
1982	500	117	49300	40917	201700	100	1800
1983	2200	92	17000	10192	7100	83	200
1984	1400	22	34200	30922	201500	9345	1800
1985	2800	36	25100	37336	190000	32213	700
1986	1100	109	93800	65509	981000	1840	1800
1987	1000	142	212000	117442	165200	28553	1300
1988	5100	81	224800	101381	361500	17632	2500
1989	1500	9	76700	56409	387300	36	1400
1990	2100	15	20500	26615	66200	173	800
1991	900	9	21700	20009	407500	3	400
1992	200	35	11200	6835	54100	8	700
1993	200	81	10800	6481	35600	64	99
1994	400	23	1600	423	60700	1	99
1995	0	0	400	100	21400	1	99
1996	53	15	10400	6368	26100	25	99
1997	67	6	7300	1773	20500	12	99
1998	99	1	2700	1499	23000	2	99
1999	85	1	5200	2799	79000	1	99
2000	100	0	6000	7700	171000	366	99
2001	2900	1	14200	15701	253400	1690	126
2002	10100	8	23100	29008	163000	19	13
2003	10962	36	58428	78563	262450	0	6
2004	24329	236	41057	78035	118466	672	89
2005	10557	2574	27536	46789	98175	4	9
2006	16453	5017	30568	47021	66025	0	3

TABLE 4: NON-INDIAN COLUMBIA RIVER SPORT HARVEST, 1980 TO 2006.

YEAR	CHINOOK				COHO	STEELHEAD				SOCKEYE	CHUM	SPORT TOTAL
	SPRING	SUMMER	FALL	TOTAL		WASHINGTON	OREGON	IDAHO	TOTAL			
1980	0	0	4300	3902	11200	11900	37000	12076	60976	0		76078
1981	200	0	4100	3071	7700	13400	58114	10916	82430	0		93201
1982	600	0	5300	3919	36500	21900	56111	27912	105923	0		146342
1983	400	0	3800	3628	8900	16300	47350	28101	91751	0		104279
1984	100	0	11300	9125	90000	23300	45917	31990	101207	9100		209432
1985	300	0	7200	5366	35900	35100	88083	32585	155768	31900		228934
1986	1300	0	13500	8667	145100	36800	70567	47900	155267	1800		310834
1987	400	5	36900	21459	54200	40600	80725	17989	138314	28300		242273
1988	1400	8	27100	23526	155700	25200	82009	23521	130730	17500		327456
1989	500	17	22800	17999	97200	30200	85447	48885	164532	0		279731
1990	3100	6	10700	8755	28500	32800	67957	19040	119797	0		157052
1991	1500	3	11600	11997	239100	23800	27593	28573	79966	0		331063
1992	1200	12	13100	7253	52100	36600	60956	44665	142221	0		201574
1993	400	15	10300	115	27800	52200	65859	27825	145884	0		173799
1994	400	27	1300	1627	5800	29300	48551	19620	97471	0		104898
1995	0	18	7000	5518	8300	24100	33279	22107	79486	0		93304
1996	0	27	6500	11927	9200	62229	40918	27215	130362	0		151489
1997	0	19	12200	9719	32500	64583	40681	35938	141202	0		183421
1998	0	27	6100	13127	10200	52618	37301	25038	114957	0		138284
1999	0	41	8100	8141	28800	32710	34804	28220	95734	0		132675
2000	100	25	4300	18090	58000	49177	40295	35943	125415	300		201805
2001	22900	64	15800	28354	208700	73057	86622	103286	262965	1600		501619
2002	16200	1503	27100	49013	41700	112305	102028	85992	300325	0		391038
2003	9600	2007	50240	52247	55500	90476	55422	63682	209580	0		317327
2004	16600	1240	43300	44540	31700	104214	66294	64895	235403	0		311643
2005	15425	1622	36541	53588	22300	68993	36687	54358	160038	0		235926
2006	14896	4924	14400	34220	5100							

TABLE 5: TOTAL COLUMBIA RIVER INDIAN HARVEST - 1980 TO 2006.

YEAR	CHINOOK				COHO	STEELHEAD	SOCKEYE	CHUM
	SPRING	SUMMER	FALL	TOTAL				
1980	1800	1200	32600	35600	300	9900	699	0
1981	3400	2999	48900	55299	1800	14900	1599	0
1982	5300	4699	53600	63599	4300	13500	800	0
1983	2599	399	22800	25798	200	24700	3300	99
1984	3500	500	50900	54900	1600	78100	24600	0
1985	3400	1899	68300	73599	5200	90900	49900	99
1986	7400	1300	102300	111000	16800	15000	6700	0
1987	6600	1900	138600	147100	2300	86400	39600	0
1988	6900	1600	145700	152400	5200	89300	3100	0
1989	6699	199	128200	135098	2500	15590	2199	0
1990	6999	198	79300	86497	1000	36100	2499	0
1991	3999	199	51100	55298	6700	39100	3399	0
1992	5700	100	28100	33900	1000	55900	2299	0
1993	7399	499	30400	38298	900	30000	5099	0
1994	1199	299	33700	35198	1000	15000	500	0
1995	600	400	41400	42400	300	14800	400	0
1996	2899	599	63200	66698	100	9600	1400	0
1997	8399	399	65000	73798	200	9400	2000	0
1998	2299	499	44700	47498	200	5500	400	0
1999	3400	1800	77200	82400	1700	4600	700	0
2000	53800	44000	52369	150169	4480	11730	2900	0
2001	35100	25100	112086	172286	4236	22641	3300	0
2002	8900	200	131049	140149	5050	10680	2600	0
2003	15422	15422	127295	158139	6947	18485	0	0
2004	16910	16910	128044	161864	10787	17553	0	0
2005	3853	3853	115661	123367	5653	17448	728	0
2006	8587	16319	78082	102988	13192	33716	0	0

TABLE 6: INDIAN COMMERCIAL CATCH IN THE COLUMBIA RIVER, 1980 TO 2006.

YEAR	CHINOOK SALMON				COHO	STEELHEAD			SOCKEYE	CHUM
	SPRING	SUMMER	FALL	TOTAL		SUMMER	WINTER	TOTAL		
1980	0	100	32600	33900	300	7300	2600	9900	99	0
1981	1600	1699	48900	56400	1800	10000	4900	14900	99	0
1982	3300	3399	53600	57700	4300	9400	4100	13500	100	0
1983	99	99	22800	24500	200	18500	6200	24700	1800	99
1984	100	200	50900	53500	1600	75100	3000	78100	22500	0
1985	400	1800	68300	76900	5200	85500	5400	90900	49400	99
1986	300	1000	102300	107100	16800	7200	7800	15000	4300	0
1987	200	1600	138600	140500	2300	79100	7300	86400	39500	0
1988	100	1600	145700	146900	5200	78500	10800	89300	3100	0
1989	99	99	128200	128100	2500	6090	9500	15590	99	0
1990	99	99	79300	83800	1000	32600	3500	36100	99	0
1991	99	99	51100	51200	6700	37000	2100	39100	99	0
1992	0	0	28100	29200	1000	51900	4000	55900	99	0
1993	99	99	30400	31100	900	27600	2400	30000	99	0
1994	99	99	33700	29700	1000	12900	2100	15000	0	0
1995	0	0	41400	31400	300	12700	2100	14800	0	0
1996	99	99	63200	41700	100	9500	100	9600	0	0
1997	99	99	65000	39600	200	9200	200	9400	0	0
1998	99	99	44700	31300	200	5300	200	5500	0	0
1999	1400	1400	77200	36800	1700	4500	100	4600	0	0
2000	43700	43700	52100	89400	4400	8900	0	8900	100	0
2001	24300	24400	111721	95100	3800	15900	200	16100	1600	0
2002	8900	100	130622	130722	5000	9400	99	9499	0	0
2003	15442	15442	126612	157496	5670	14915		14915	0	0
2004	16910	16910	127628	161448	10287	14593		14593	0	0
2005	3853	3853	115091	122797	5413	13689		13689	728	0
2006	1	1	77691	77693	13192	33716		33716	0	0

TABLE 7: INDIAN CEREMONIAL AND SUBSISTENCE HARVEST IN THE COLUMBIA RIVER,  
1980 TO 2006.

YEAR	CHINOOK SALMON				COHO	STEELHEAD	SOCKEYE
	SPRING	SUMMER	FALL	TOTAL			
1980	1800	1100	NA	2900	NA	NA	600
1981	1800	1300	NA	3100	NA	NA	1500
1982	2000	1300	NA	3300	NA	NA	700
1983	2500	300	NA	2800	NA	NA	1500
1984	3400	300	NA	3700	NA	NA	2100
1985	3000	99	NA	3099	NA	NA	500
1986	7100	300	NA	7400	NA	NA	2400
1987	6400	300	NA	6700	NA	NA	100
1988	6800	0	NA	6800	NA	NA	0
1989	6600	100	NA	6700	NA	NA	2100
1990	6924	99	NA	6999	NA	NA	2400
1991	3871	100	NA	4000	NA	NA	3300
1992	5711	100	NA	5800	NA	NA	2200
1993	7296	400	NA	7700	NA	NA	5000
1994	1151	200	NA	1300	NA	NA	500
1995	620	400	NA	1000	NA	NA	400
1996	2911	500	NA	3300	NA	NA	1400
1997	8309	300	NA	8600	NA	NA	2000
1998	2224	400	NA	2600	NA	NA	400
1999	1983	400	NA	2400	NA	NA	700
2000	9973	300	269	10669	80	2830	2800
2001	10985	700	365	11865	436	6741	1700
2002	9208	100	427	9427	50	1280	2600
2003	9090	NA	683	683	1277	3570	NA
2004	9114	NA	416	416	500	2960	NA
2005	6163	NA	570	570	240	3759	NA
2006	8586	NA	391	NA	NA	NA	NA

NOTE: NA - DATA  
NOT AVAILABLE.

TABLE 8: COLUMBIA RIVER COHO HARVEST, 1980 TO 2006.

YEAR	COHO			
	NI COMMERCIAL	NI SPORT	INDIAN	TOTAL
1980	150100	12200	300	301600
1981	60000	7700	1800	170300
1982	201700	36500	4300	453100
1983	7100	8900	200	100500
1984	201500	90000	1600	414200
1985	190000	35900	5200	366200
1986	981000	145100	16800	1527800
1987	165200	54200	2300	307600
1988	361500	155700	5200	664800
1989	387300	97200	2500	701600
1990	66200	28500	1000	196100
1991	407500	239100	6700	934300
1992	54100	52100	1000	210900
1993	35600	27800	900	113900
1994	60700	5800	1000	168600
1995	21400	8300	300	74500
1996	26100	9200	100	113800
1997	20500	32500	200	149600
1998	23000	10200	200	165100
1999	79000	28800	1700	270900
2000	171000	58000	4480	553500
2001	253400	208700	4236	1112900
2002	163000	41700	5427	514800
2003	262450	55500	6353	694800
2004	118466	31700	10703	446200
2005	98175	22300	5983	346800
2006	66025	5100	13192	350000

TABLE 9: IIDAHO STEELHEAD HARVEST BY RUN YEAR,  
1964 TO 2005 (SOURCE,  
IDF&G).

1964-65	14,231		1984-85	32585
	23,687			47900
	22,948			17989
	21,616			23521
	19,163			48885
1969-70	16580		1989-90	19040
	16007			28573
	15874			44665
	8128			27825
	726			19620
1974-75	0		1994-95	22107
	3095			27215
	21924			35938
	3096			25038
	2839			28220
1979-80	12076		1999-00	35943
	10916			103286
	27912			82992
	28101			63682
	31990			39865
			2004-05	54358

TABLE 10: COLUMBIA RIVER STEELHEAD HARVEST, 1980 TO 2006

YEAR	STEELHEAD SPORT HARVEST				INDIAN	GRAND
	WASHINGTON	OREGON	IDAHO	TOTAL	HARVEST	TOTAL
1980	11900	37000	12076	60976	9900	70876
1981	13400	58114	10916	82430	14900	97330
1982	21900	56111	27912	105923	13500	119423
1983	16300	47350	28101	91751	24700	116451
1984	23300	45917	31990	101207	78100	179307
1985	35100	88083	32585	155768	90900	246668
1986	36800	70567	47900	155267	15000	170267
1987	40600	80725	17989	138314	86400	224714
1988	25200	82009	23521	130730	89300	220030
1989	30200	85447	48885	164532	15590	180122
1990	32800	67957	19040	119797	36100	155897
1991	23800	27593	28573	79966	39100	119066
1992	36600	60956	44665	142221	55900	198121
1993	52200	65859	27825	145884	30000	175884
1994	29300	48551	19620	97471	15000	112471
1995	24100	33279	22107	79486	14800	94286
1996	62229	40918	27215	130362	9600	139962
1997	64583	40681	35938	141202	9400	150602
1998	52618	37301	25038	114957	5500	120457
1999	32710	34804	28220	95734	4600	100334
2000	49177	40295	35943	125415	11730	137145
2001	73057	86622	103286	262965	22641	285606
2002	112305	102028	85992	300325	10680	311005
2003	90476	55422	63682	209580	18485	228065
2004	104214	66294	64895	235403	17553	252956
2005	68993	36687	54358	160038	17448	117486

TABLE 11: FATE OF SNAKE RIVER WILD SPRING CHINOOK, 1980 TO 2006.

YEAR	RUN SIZE	HARVEST		UNACCOUNTED	ESCAPEMENT
		NON-INDIAN	INDIAN		
1980	18660	31	605	11370	6646
1981	19819	270	1005	6407	12127
1982	27050	471	1866	12894	11812
1983	20363	983	825	8137	10417
1984	14052	485	937	4361	8266
1985	14551	528	497	2749	10773
1986	17969	368	1046	5811	10739
1987	15424	240	939	4043	10198
1988	17963	1154	1195	4394	11217
1989	14271	340	1073	6068	6788
1990	15649	788	1030	3987	9836
1991	11935	471	720	4727	6013
1992	19283	314	1165	4719	13079
1993	15435	128	945	1527	12831
1994	3401	2	151	1147	1954
1995	3017	2	151	1678	1186
1996	8896	10	468	4629	3788
1997	8126	4	546	3169	4406
1998	13062	12	668	4990	7391
1999	5579	6	260	2457	2856
2000	13201	26	803	4116	8255
2001	60962	961	7999	6998	45281
2002	48677	908	5286	12503	30213
2003	52863	854	4156	15313	32325
2004	32629	727	2821	7559	21367
2005	15543	275	968	4103	10148
2006	16730	312	1100	5841	9480

TABLE 12: FATE OF UPPER COLUMBIA RIVER WILD SPRING CHINOOK, 1980 TO 2006.

YEAR	RUN SIZE	HARVEST		UNACCOUNTED	ESCAPEMENT
		NON-INDIAN	INDAIN		
1980	8206	17	266	4366	3586
1981	9982	141	506	2639	6695
1982	7626	135	526	3252	3714
1983	8542	413	346	2624	5158
1984	7250	252	483	1509	5006
1985	11006	402	376	891	9336
1986	8175	170	476	1813	5716
1987	7584	120	462	1628	5374
1988	5488	354	365	891	3878
1989	6580	158	495	2195	3732
1990	5643	287	372	977	4007
1991	2514	100	152	526	1736
1992	5007	83	302	641	3980
1993	5268	45	322	222	4678
1994	1804	71	88	490	1155
1995	290	0	15	118	157
1996	308	0	16	119	173
1997	1071	1	72	343	655
1998	401	0	21	97	284
1999	642	1	30	160	451
2000	3007	6	183	720	2098
2001	10103	156	1326	574	8047
2002	5757	112	625	982	4037
2003	2581	40	204	553	1785
2004	3119	65	271	579	2264
2005	2445	38	185	787	1778
2006	2817	38	185	787	1807

TABLE 13: FATE OF WILD SNAKE RIVER SUMMER CHINOOK, 1980 TO 2002.

YEAR	RUN SIZE	HARVEST		UNACCOUNTED	ESCAPEMENT
		NON-INDIAN	INDIAN		
1980	3064	4	134	523	2404
1981	4337	4	264	1330	2739
1982	5522	63	351	1576	3531
1983	5078	52	83	1725	3219
1984	4678	9	95	345	4229
1985	2853	8	149	0	2696
1986	3478	29	147	618	2684
1987	3326	29	169	1273	1855
1988	3306	18	157	1323	1807
1989	3124	4	11	0	2299
1990	4359	7	19	991	3342
1991	3550	4	33	546	2967
1992	533	3	2	88	441
1993	4169	29	58	0	4082
1994	246	1	3	60	183
1995	498	1	14	140	343
1996	2717	12	83	706	1916
1997	5533	7	62	327	5137
1998	4166	7	72	1175	2913
1999	2004	5	33	383	1584
2000	4094	3	24	0	4067
2001	12556	19	71	0	12475
2002	4433	12	81	789	3552

TABLE 14: FATE OF WILD SNAKE RIVER FALL CHINOOK, 1986 TO 2000.

YEAR	RUN SIZE	HARVEST		LYONS FY BROOD	UNACCOUNTED	ESCAPEMENT
		NON-INDIAN	INDIAN			
1986	3440	812	1141	87	951	449
1987	2295	636	673	179	554	253
1988	4811	1290	1775	405	973	368
1989	2527	489	956	220	567	295
1990	335	96	258	71	-168	78
1991	2261	362	545	0	1036	318
1992	1555	143	267	0	596	549
1993	1620	130	320	0	428	742
1994	1055	1	191	0	457	406
1995	1223	18	214	0	641	350
1996	1957	108	408	0	802	639
1997	2048	119	540	0	592	797
1998	864	29	200	0	329	306
1999	2739	200	631	0	1003	905
2000	1977	144	422	0	554	857

TABLE 15: FATE OF SNAKE RIVER SOCKEYE, 1980 TO 2002.

YEAR	RUN SIZE	HARVEST		UNACCOUNTED	ESCAPEMENT
		NON-INDIAN	INDIAN		
1980	41	0	0	-55	96
1981	154	0	4	-68	218
1982	215	0	3	1	211
1983	241	0	8	111	122
1984	148	9	23	70	47
1985	41	7	10	-11	35
1986	28	2	3	8	15
1987	25	5	7	-16	29
1988	43	8	13	-1	23
1989	4	0	0	2	2
1990	1	0	0	1	0
1991	10	0	0	1	8
1992	2	0	0	1	1
1993	18	0	1	5	12
1994	3	0	0	1	2
1995	5	0	0	1	4
1996	4	0	0	0	4
1997	2	0	0	0	2
1998	4	0	0	1	3
1999	19	0	1	2	16
2000	447	2	14	31	400
2001	51	1	3	2	45
2002	57	0	3	3	51