JOINT STAFF REPORT
CONCERNING COMMERCIAL SEASONS FOR SPRING CHINOOK, STEELHEAD, STURGEON, SHAD, SMELT, AND OTHER SPECIES AND MISCELLANEOUS REGULATIONS FOR 2005

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JOINT STAFF REPORT CONCERNING COMMERCIAL SEASONS FOR SPRING CHINOOK, STEELHEAD, STURGEON, SHAD, SMELT, AND OTHER SPECIES AND MISCELLANEOUS REGULATIONS FOR 2005

INTRODUCTION

This report is the second in an annual series the Joint Columbia River Management Staff of the Oregon Department of Fish & Wildlife (ODFW) and Washington Department of Fish & Wildlife (WDFW) produces prior to each major Columbia River Compact hearing. The second Compact hearing for 2005 management will begin at 10 AM, Friday January 28, at the Water Resources Education Center located at 4600 S.E. Columbia Way in Vancouver, Washington. The data and recommendations in this report were reviewed by members of the *US v Oregon* Technical Advisory Committee (TAC).

THE COMPACT

The Columbia River Compact is the entity charged with congressional and statutory authority to adopt seasons and rules for Columbia River commercial fisheries. In recent years, the Compact has consisted of the Oregon and Washington agency directors, or their delegates, acting on behalf of the Oregon Fish and Wildlife Commission (OFWC) and the Washington Fish and Wildlife Commission (WFWC). In addition, the Columbia River treaty tribes have authority to regulate treaty Indian fisheries. When addressing commercial seasons for salmon, steelhead, and sturgeon, the Compact must consider the effect of the commercial fishery on escapement, treaty rights, and sport fisheries, as well as the impact on species listed under the Endangered Species Act (ESA).

Although the Compact has no authority to adopt sport fishing seasons or rules, it is an inherent responsibility of the Compact to address the allocation of limited resources between sport, commercial, and tribal users. This responsibility has become increasingly demanding in recent years. The Compact can be expected to continue the recent trend of conservative management when considering fisheries that will impact listed Columbia River salmon and steelhead stocks.

SEASONS CONSIDERED

On January 28, 2005, the Compact will consider non-Indian and treaty Indian commercial winter seasons for spring chinook, steelhead, sturgeon, and shad in the mainstem Columbia River and winter, spring, and summer seasons in Select Area fishing sites. Winter commercial seasons occur from January through March and spring commercial seasons occur from April through mid-June. Summer Select Area commercial seasons occur during mid-June through July. The Compact will also be considering non-Indian commercial shad seasons which usually occur in late May and June. At this time, commercial sockeye seasons are not anticipated in 2005. Non-Indian commercial sturgeon (January through mid-February) and smelt (January through March) seasons were adopted at the December 16, 2004 Compact hearing and modifications to these seasons may be considered at the January 28, 2005 Compact hearing. The anchovy and herring fishery, which is open all year in the lower Columbia River, and general permanent commercial fishery rules will also be considered at this Compact hearing. Other commercial seasons or

modifications to seasons adopted at the January 28, 2005 Compact hearing will be considered at future Compact hearings as additional information on fish runs and ongoing fisheries become available.

STOCKS CONSIDERED

Spring Chinook

Spring chinook entering the lower Columbia River from mid-February to mid-March are predominantly large, 5-year old fish destined for lower river tributaries. Age-5 chinook are dominant throughout March and reach peak abundance in the lower Columbia River by late March. Smaller 4-year old fish enter in increasing numbers after mid-March, reaching peak abundance during April. Upriver spring chinook destined for above Bonneville Dam begin entering the Columbia River in substantial numbers after mid-March and generally peak in the lower Columbia River near mid-April.

Genetic stock identification (GSI), visual stock identification (VSI), and coded-wire tag (CWT) recoveries indicate that spring chinook destined for the Willamette River typically comprise the majority of the chinook caught during past winter commercial seasons and March Columbia River sport fisheries. Willamette River fish predominate because they exhibit a broader migration pattern and contain a greater proportion of early-entering 5-year old fish than other spring chinook runs. The remaining spring chinook landed are typically destined for the upper Columbia River and other lower river tributaries such as the Cowlitz, Kalama, Lewis, and Sandy rivers, plus Select Area sites of Youngs Bay, Tongue Point, Blind Slough, and most recently Deep River (Table 1). Early April sport fisheries and spring commercial seasons include increasing numbers of upriver stock spring chinook and 4-year old spring chinook fish destined for lower river tributaries while catches during late April seasons are predominately 4-year old spring chinook destined for the Willamette River.

Willamette River Spring Chinook

Although Willamette River fish predominate in the winter gillnet season catch, the bulk of the run actually enters the lower Columbia River after the season closes. The run passes through the lower Columbia River from February through May with peak abundance during mid-March to mid-April. Migration through the lower Willamette River varies with water conditions but typically occurs from mid-March through April. Passage through the Willamette Falls fishway occurs from mid-April to mid-June with peak passage in May.

Historically, wild spring chinook spawned in nearly all east side tributaries above Willamette Falls. During 1952-1968 the U.S. Army Corps of Engineers (USACE) constructed dams on all the major east side tributaries above Willamette Falls, blocking over 400 stream miles of rearing area for wild spring chinook. Some residual spawning areas remain, including about two-thirds of the McKenzie River and about one-quarter of the North Santiam River; however, these areas are affected by upstream dams through alteration of flows and temperature. Additionally, the majority of the Clackamas River Basin remains accessible, although the 3-dam complex (River miles (RM) 23-31) has impacted migration and rearing conditions in the mainstem Clackamas River. Recent estimates place the percentage of wild fish in current Willamette spring chinook runs at about 10-12%, with the majority destined for the McKenzie River. Passage over Leaburg

Dam on the McKenzie River and North Fork Dam on the Clackamas River plus redd counts in the North Santiam River are currently used to index the status of wild spring chinook populations in the Willamette River Basin. The National Marine Fisheries Service (NMFS) classified spring chinook destined for the Willamette River above Willamette Falls and the Clackamas River into a single Evolutionarily Significant Unit (ESU) and listed the wild component as a threatened species under the ESA effective May 24, 1999.

Accurate Willamette River spring chinook run size estimates prior to 1946 are not available. During 1946-1989, it was generally believed that the 1953 run was the largest on record, at 125,000 fish. The 1953 run was predominantly wild. This run was eclipsed by a return of 130,600 spring chinook in 1990, comprised mainly of hatchery fish. A new record run was established in 2004 with a return of 143,700 fish, again comprised primarily of hatchery fish.

Four large hatcheries above Willamette Falls produce up to 4.4 million smolts annually, plus additional fingerlings to seed reservoir and stream areas. About 75% of this hatchery production is funded by USACE as mitigation for lost production areas. Below Willamette Falls, hatchery releases in the Clackamas River total about 1.0 million smolts annually.

2004 Run

The Willamette River return of 143,700 spring chinook entering the Columbia River in 2004 was the largest return on record, continuing an increasing trend observed since the record low return of 34,800 in 1996 (Table 2). The 2004 run was 31% greater than the preseason forecast of 109,400; was well above the recent 5-year average of 88,100; and exceeded the old Willamette Basin Fish Management Plan (WFMP) objective of 100,000 Willamette River spring chinook entering the Columbia River for the third straight year (Table 3). Wild fish comprised about 10% of the 2004 Willamette spring chinook run; similar to recent years.

2004 Sport Fishery

Beginning with the adoption of the Willamette River spring chinook Fishery Management and Evaluation Plan (FMEP) in 2001, mark selective fishery regulations were required for all freshwater fisheries and freshwater impacts were limited to 15% of the wild Willamette River spring chinook return. In 2004, the lower Willamette River mainstem was open for spring chinook angling seven days per week under permanent mark selective regulations (only adipose fin-clipped fish could be retained), with no quota in effect. The daily catch limit was two fish per day. Hatchery-produced spring chinook were nearly 100% marked with an adipose fin clip for selective fishery purposes.

The 2004 lower Willamette River sport catch totaled 14,660 spring chinook (11,740 kept and 2,920 released). The kept catch of 11,740 was lower than the 2003 kept catch of 13,150 but above the recent 5-year average of 8,960 (Table 2). Angler effort in 2004 (110,760 trips) was higher than in 2003 (91,400 trips), but the catch rate of 0.13 spring chinook per angler day was less than the rate observed in 2003 (0.18). The total number of angler trips in the lower Willamette River during 2004 was much higher than effort totals from the late 1990's but less than one half of the record high 236,000 trips expended in 1991. Much of the recent decline in

lower Willamette angler trips can be attributed to expanded spring chinook fishing opportunities in the mainstem Columbia River and a commensurate shift in effort.

The upper Willamette River mainstem spring chinook sport fishery opened on January 1, seven days per week, with regulations identical to the lower Willamette River. Release of non-adipose fin-clipped chinook was first required in the McKenzie River beginning in 1995 and was required in all Willamette River tributaries beginning in 2001. The 1980-2000 sport catch above Willamette Falls (mainstem and tributaries combined) has ranged from 1,900 to 10,900, or 6-26% of the Willamette Falls count (Table 4). The 2001-2004 sport catches for the fishery above Willamette Falls are not currently available because of delays in receiving and processing angler returned catch records.

2004 Escapement

For the third straight year, the Willamette Falls escapement was a record high with 95,970 spring chinook passing the falls in 2004. This was considerably higher than the recent 5-year average of 60,870 fish (Table 2). Since 1971, the number of spring chinook passing Willamette Falls has ranged from 20,600 to 95,970 and averaged 43,700 fish.

In December 2001, the OFWC adopted a revised Willamette River spring chinook allocation and escapement schedule based on the abundance of hatchery origin Willamette spring chinook. Like previous management plans, it included a sliding scale for escapement and an increased commercial allocation on large runs. Unlike previous management plans, the sliding scale for escapement was not designed to increase wild fish escapements but to provide for enhanced tributary fisheries when runs are large. Wild fish escapements are protected through the full implementation of mark selective fisheries.

Preliminary returns to Leaburg Dam on the McKenzie River during 2004 totaled 9,060 (4,800 wild). The 2004 Leaburg return represents both the second largest total and wild run in the database, dating back to 1970. Spring chinook passage over Leaburg Dam averaged 4,900 during the strong return years of 1988-1993 and 1,600 during the poor return years of 1994-1999. Escapement of wild spring chinook past Leaburg Dam has only been estimated since 1994, with wild counts ranging between 825 and 5,500. Escapement of wild spring chinook past Leaburg Dam in 2004 was well within the range of escapement goals set forth in the FMEP. The spring chinook return of 8,030 fish to North Fork Dam on the Clackamas River in 2004 was the second highest return on record. Spring chinook passage over North Fork Dam averaged 3,500 during the strong return years of 1988-1993 and 1,400 during the poor return years of 1994-1999.

Hatchery egg take needs for the combined Willamette and Clackamas River programs have been met annually from 1980 to 2004, with the exception of 1984. Also in 1994, McKenzie River Hatchery achieved only 67% of the egg take goal necessary for the McKenzie River smolt program; however, other Willamette and Clackamas River hatcheries met their egg take goals that year. The Willamette Falls escapement of 95,970 fish (94,680 adults) in 2004 resulted in 33,560 fish (33,250 adults) returning to upper Willamette River hatcheries.

With a strong return of 193,400 upper Columbia River spring chinook in 2004, the Columbia River treaty tribes were able to meet their minimum ceremonial and subsistence (C&S)

entitlement, as set forth in the expired Columbia River Fish Management Plan (CRFMP), through their own fishing efforts; therefore, no additional Willamette River hatchery spring chinook were provided as part of the minimum C&S entitlement. Some surplus fish from upper Willamette hatcheries were either provided to Oregon coastal Indian tribes or supplied to local food banks. Additionally, other surplus Willamette River spring chinook were either passed upstream of hatcheries or recycled downstream through fisheries.

2005 Forecast

The ODFW staff is forecasting a return of 116,900 Willamette River spring chinook to the Columbia River mouth in 2005. Age-specific returns are expected to total 1,900 3-year olds, 26,300 4-year olds, 87,500 5-year olds, and 1,200 6-year olds. The 2005 forecast includes adjustments for expected ocean harvest in Canadian and Southeast Alaskan fisheries. The 2005 forecast is higher than the 2004 preseason forecast of 109,400, but is substantially less than the 2004 actual return of 143,700 (Table 3). With 80,900 4-year old fish predominating the 2004 actual return, the 2005 return is expected to be comprised of a strong return of 87,500 5-year old fish. The 2005 return is expected to include about 11,700 wild fish (10% of total return) which would be less than the preliminary estimated return of 14,400 wild fish in 2004.

Clackamas River Spring Chinook

The return of spring chinook (including jacks) to the Clackamas River in 2004 totaled 22,300 fish, which is the largest return on record, nearly doubling the recent 5-year average. Wild fish comprised approximately 28% (6,200 fish) of the 2004 run. The run entering the Clackamas River has increased from an annual average of 2,600 in the 1970s, 8,200 in the 1980s, and 8,700 in the 1990s, to 14,100 since 2000. The larger returns in recent years are due to production from Clackamas Hatchery at McIver Park, which came on-line in 1979, and an increase in passage over North Fork Dam with a corresponding increase in natural production. The 2004 Clackamas River return exceeded the average annual run size goal (12,400 fish entering the Clackamas River) stated in Objective 6 of the Clackamas River spring chinook chapter of the FMEP for the third consecutive year.

2004 Sport Fishery

The 2004 lower Clackamas River fishery was open to salmon and steelhead angling seven days per week and catch limits were consistent with the lower Willamette River sport fishery. In accordance with the Willamette River spring chinook FMEP, a selective fishery allowing only adipose fin-clipped salmon to be retained was in effect for the fourth year in the lower Clackamas River. Anglers in the 2004 lower Clackamas River sport fishery caught an estimated 1,620 spring chinook (1,340 kept and 280 released) from 9,860 angler trips. The kept catch was down slightly from the recent 5-year average of 1,550 fish and effort was well below the recent 5-year average of 13,130 trips. The catch rate of 6.1 angler days to catch one Clackamas River spring chinook was slightly better than the recent 5-year average of 7.4 angler days per fish.

2004 Escapement

The North Fork Dam count of 8,030 spring chinook in 2004 included 5,170 unmarked fish that were passed upstream and 2,860 marked fish that were recycled downstream to provide additional sport fishing opportunity. Furthermore, about 1,000 fish remained below North Fork

Dam with some probably spawning naturally. The 5,170 spring chinook that passed over North Fork Dam exceeded not only the interim escapement goal of 400-800 adults set forth in Objective 4 of the Clackamas River spring chinook chapter of the FMEP, but also surpassed the long term escapement goal of 2,900 adults past North Fork Dam as set forth in Objective 5 of the Clackamas River chapter. The dam count has increased from an annual average of 500 in the 1970s, 2,600 in the 1980s, and 2,300 in the 1990s, to 5,900 since 2000. During 1980-1998, passage over North Fork Dam included unknown numbers of hatchery fish. Since 1999, only unmarked spring chinook have been passed over North Fork Dam and marked hatchery fish have been recycled through fisheries to the fullest extent possible. The first year in which all returning hatchery adults were mass-marked with an adipose fin-clip was 2003. In 2004, a record 11,230 spring chinook returned to Clackamas Hatchery and 300 returned to Eagle Creek National Fish Hatchery; the highest number since 1990.

Sandy River Spring Chinook

Most spring chinook returning to the Sandy River originate from transferred hatchery stocks produced in the Willamette River system. Spring chinook smolt releases were initiated in 1976 and subsequently doubled beginning in 1986. The purpose of these releases was to supplement the depleted native run with Willamette spring chinook. The Marmot Dam count has increased from an average of 120 fish during 1954-1970, 1,000 during the 1980s, and 2,900 during the 1990s, to 3,900 since 2000. Spring and fall chinook destined for Columbia River tributaries below the mouth of the Klickitat River (excluding Willamette River Basin spring chinook) form a single ESU that was listed as threatened under the ESA effective May 24, 1999. This ESU includes wild spring chinook destined for the Sandy River in Oregon and the Cowlitz, Kalama, and Lewis rivers in Washington.

The minimum spring chinook run entering the Sandy River is the sum of Marmot Dam passage, hatchery returns, and sport catches below Marmot Dam. The preliminary 2004 Sandy River run size of 13,400 adults is the largest return on record; more than doubling the recent 5-year average of 5,500. The 2005 Sandy River forecast of 7,400 spring chinook is based on the recent 5-year average and would be down substantially from the actual 2004 return (Table 5). The total adult return to Marmot Dam in 2004 was 5,280 fish. The return included 2,700 wild fish, with the majority passing the Marmot facility to spawn naturally in the upper Sandy River Basin except about 190 fish were collected as broodstock for the hatchery program. Hatchery returns in 2004 consisted of 2,950 adults collected at Sandy River Hatchery and 2,570 adults trapped at Marmot Dam.

2004 Sport Fishery

For the third year, the Sandy River spring chinook sport fishery was conducted under selective fishing regulations requiring the release of all non-adipose fin-clipped spring chinook. The sport fishery for spring chinook on the Sandy River is not sampled for catch and effort; therefore, catch is estimated from angler returned catch records. Catch records for 2002-2004 are not available at this time due to delays in receiving and processing angler punch cards. Since 1986 harvest rates in the Sandy River have ranged between 28% and 54%, averaging 38%. Based on the average harvest rate and the 2004 Marmot Dam escapement of 5,280, the projected sport catch for 2004 is 5,180 fish.

Washington Lower River Spring Chinook

Spring chinook returning to the Washington tributaries of the lower Columbia River are destined for the Cowlitz, Kalama, and Lewis rivers. The Cowlitz, Kalama, and Lewis River runs are genetically similar and are essentially supported by hatchery production. These fish migrate earlier than upriver stocks with the majority of the run passing through the lower Columbia River from mid-March to mid-May. Contribution of this run is included under "other lower river" in Table 1 and "Cowlitz, Kalama, and Lewis rivers combined (adults)" in Table 3. Estimated adult returns to the Cowlitz, Kalama, and Lewis rivers for recent years are shown in Table 5. Spring and fall chinook destined for Columbia River tributaries below the mouth of the Klickitat River (excluding the Willamette River Basin spring chinook) form a single ESU that was listed as threatened under the ESA effective May 24, 1999. This ESU includes wild spring chinook destined for the Sandy River in Oregon and the Cowlitz, Kalama, and Lewis rivers in Washington. Beginning in 2002, spring chinook sport fisheries in the Cowlitz, Kalama, and Lewis rivers were managed using selective fishery regulations that required the release of all non-adipose fin-clipped spring chinook.

Cowlitz River Returns

The adult return of 16,700 spring chinook in 2004 was slightly larger than the 2003 return. The hatchery escapement of 12,800 adults surpassed the 1,150 fish escapement goal. The natural spawning escapement of 1,800 adults was similar to the 2003 return. The preseason forecast provided for a liberal sport fishery that produced a total catch of 2,100 hatchery fish (Table 6).

The forecast for the Cowlitz River in 2005 is for a return of 12,700 adult spring chinook of which 62% are expected to be age-5 fish. A return of 12,700 adults would be slightly lower than the large returns of 2003 and 2004. Adult returns had been in a general pattern of decline since 1984 and had stabilized at low levels during 1994-2001 when adult returns ranged between 1,100-3,100 and averaged 1,900. Beginning in 2002, the returns began increasing and the 2004 return of 16,700 was the largest since 1987. An adult run size of approximately 1,400 is needed to achieve the 1,150 fish minimum hatchery escapement goal because a portion of the run spawns naturally. Surplus hatchery fish are available to support a sport fishery in 2005.

Kalama River Returns

The adult spring chinook return of 4,600 fish to the Kalama River in 2004 was the largest return since 1983. The hatchery return of 3,000 adults exceeded the hatchery escapement goal of 450. Escapement included 2,000 adults passed upstream to spawn in the area above the hatchery barrier. The natural spawn escapement for the reach downstream from the hatchery barrier was less than 400 adults. The preseason forecast resulted in a 7-day per week sport fishery in 2004 with a catch of 1,200 hatchery fish (Table 6).

The forecast for the Kalama River in 2005 is for a return of 4,500 adult spring chinook, which would be similar to the 2003 and 2004 returns. Age-5 fish are expected to comprise 78% of the 2005 forecast. The 2005 forecast shows continued improvement from the extremely poor return years of 1995-1998 when returns ranged between 400 and 700 adults annually. A run of approximately 600 adults is needed to achieve the 450 fish minimum hatchery escapement goal

because a portion of the run spawns naturally. The 2005 forecasted return would be adequate to support a full area sport fishery.

Lewis River Returns

The adult spring chinook return of 11,100 fish to the Lewis River in 2004 was the strongest return observed since 1989. The hatchery return of 4,100 adults achieved the hatchery escapement goal of 700 adults. Natural spawning escapement was 500 adults. The sport fishery was not restricted by area and daily catch limits due to the strong preseason forecast. Sport catch totaled 6,500 hatchery adults in 2004 (Table 6).

The forecast for the Lewis River in 2005 is for a return of 7,600 adult spring chinook of which 51% are expected to be age-4 fish. A return of 7,600 would be the second largest return since 1991. Adult returns had been in a general state of decline since 1989, which appears to have culminated with the record poor return of 1,600 adults in 1998. During 1999-2001 returns remained low, ranging between 1,800-2,200 adults. An adult return of approximately 1,600 is needed to achieve the 700 fish minimum hatchery escapement goal because a portion of the run spawns naturally. Surplus hatchery fish are available to support a sport fishery in 2005.

Select Area Spring Chinook

The spring chinook program in Select Areas began modestly in 1989 with the Clatsop County Economic Development Council's Fisheries Project (CEDC) conducting releases of primarily sub-yearling (age-0+) juveniles from net pens in Youngs Bay and the South Fork Klaskanine Hatchery through 1992. No fish were released in 1993 to accommodate a change in rearing strategies from sub-yearling (0+) to yearling (1+) life history patterns starting in 1994. Beginning in 1995 the Bonneville Power Administration (BPA) funded the Select Areas Fisheries Evaluation (SAFE) Program which allowed for expansion of the SAFE spring chinook program. Currently, adult spring chinook returning to Select Areas originate from transferred hatchery stocks that are reared and/or acclimated in net pens located in Youngs Bay, Tongue Point, and Blind Slough in Oregon and Deep River in Washington. Spring chinook releases in Oregon Select Areas are Willamette stock while the Washington site utilizes Cowlitz and/or Lewis stocks. Most Select Area spring chinook are reared in hatcheries supported by the BPA-funded SAFE Project: Gnat Creek Hatchery and CEDC's South Fork Klaskanine Hatchery in Oregon and Grays River Hatchery in Washington although some smolts are trucked directly to the net pens from Willamette Basin hatcheries. Both over-winter and short-term (2-6 weeks) acclimation rearing strategies are used depending on the site.

Prior to 1994 most spring chinook released from the SAFE Project were sub-yearling fish with only 54,300 smolts released in 1990 and 32,000 smolts released in 1992. Since 1994, spring chinook production has been restricted to releases of full-term smolts only. During 1995-2003, annual releases of spring chinook in Youngs Bay have ranged between 426,400 and 537,900 smolts (464,470 average). Releases of spring chinook smolts into Tongue Point and Blind Slough began in 1996. Since then, smolt releases into Blind Slough have ranged between 171,200 and 426,300 smolts annually, with an average annual release of 273,500 fish. During 1996-2000 releases into Tongue Point ranged between 224,300 and 301,800 smolts annually; however, excessive straying resulted in termination of full scale releases in 2000. To resolve this issue, a new rearing site has been developed at the MERTS dock approximately 1.2 miles

upstream (east) of the present site. In 2003 and 2004, experimental groups of 20,900-30,400 spring chinook treated with a chemo-attractant (morpholine) were released from this site along with a non-treated group of ~27,000 smolts released approximately 3.0 miles up the John Day River. Annual combined releases from these two sites were 57,800 smolts in 2003 and 48,100 in 2004. Consequently, full-fleet winter or spring commercial fisheries are not anticipated at the Tongue Point site until 2007 or later. Test fishing in the area is planned for 2005-2006 to evaluate homing of adults from 2003-2004 experimental releases and determine the feasibility of reinstating production-level releases at this site. Releases into Deep River began in 1998 and have ranged from 39,700-159,600 (98,500 average) annually except in 2000 when no spring chinook were released. Spring chinook releases in all Select Areas combined ranged between 890,400-1,077,600 smolts annually during 1996-2003 but increased by approximately 640,000 to 1,649,000 smolts in 2004 with transition of production at CEDC's South Fork Hatchery from coho to spring chinook. Beginning with the 2001 releases (1999 brood year) all spring chinook hatchery production in SAFE areas has been mass marked with an adipose fin-clip.

2004 Run

Since Select Area spring chinook originate from transferred hatchery stock that are acclimated in net pens, fisheries are adopted with the intent of harvesting 100% of the returning adults to minimize straying and maximize economic value of the returns. Commercial landings of chinook salmon in 2004 Select Area winter-summer fisheries totaled 10,500 chinook (10,205 spring chinook) of which 6,840 were landed in Youngs Bay, 3,545 were landed in Blind Slough, and 115 in Deep River. The 2004 combined harvest of 10,500 chinook in winter-summer SAFE fisheries was the second highest catch on record, exceeded only by the 11,700 chinook landed in 2002.

2005 Forecast

The 2005 Select Area spring chinook return will be comprised of age-4 and age-5 adults from smolts released in 2003 and 2002, respectively. Based on the total release of 2.0 million smolts, survival rates for the 1999-2000 brood years for each site, and average non-target harvest rates, the expected SAFE harvest in 2005 is for 10,200 adult chinook of which 5,200 will be destined for Youngs Bay, 4,500 for Blind Slough, and 300 for Deep River. Production-level releases of spring chinook were discontinued at the Tongue Point site in 2000; however, approximately 200 adults are expected to return to Tongue Point in 2005 from the first group of experimental releases in 2003. A return of 10,200 chinook to Select Areas would be slightly higher than the 2001-2004 average annual harvest of 9,800 fish and the third highest overall return since 1992.

Upriver Spring Chinook

In 2003, the TAC completed an assessment of run timing of spring and summer chinook destined for the Snake River and Upper Columbia River (upstream of Priest Rapids Dam) basins. Analysis of PIT tag data indicates that a differential run timing exists between Snake River summer chinook and the Upper Columbia River summer chinook, with the Snake River component being earlier timed than the Upper Columbia River component. The TAC developed two new databases: 1) combined upriver spring chinook and Snake River summer chinook and 2) upper Columbia summer chinook (Tables 7 and 8). The upriver spring chinook run will now be defined as all spring chinook destined for above Bonneville Dam and Snake River summer

chinook. The listed portion of this run will be used to determine impacts to spring and summer chinook stocks listed under the ESA in the future. Upper Columbia River summer chinook are not listed under the ESA.

2005 will be the first year to implement the new management described above, resulting in the upriver spring chinook counts at Bonneville Dam continuing an additional two weeks, extending from January 1 through June 15. In addition, the summer chinook counts at Bonneville Dam will begin two weeks later, defining the summer timeframe as June 16 through July 31.

Upriver spring chinook begin entering the Columbia River in late February and early March and reach peak abundance in the lower river (below Bonneville Dam) during April and early May. Historically all chinook passing Bonneville Dam from March through May were counted as upriver spring chinook (Figure 1). Beginning in 2005, the upriver spring chinook run size includes Snake River summer chinook and will be determined by the sum of the Bonneville Dam count and the number of fish of upriver origin landed in lower river fisheries (kept catch plus release mortalities) from January 1 through June 15.

The upriver spring run is comprised of stocks from three geographically separate production areas: 1) the Columbia River system above the mouth of the Snake River, 2) the Snake River system, and 3) Columbia River tributaries between Bonneville Dam and the Snake River. In each of these areas, production is now a mix of hatchery and wild/natural fish. Although no estimates of hatchery contribution to upriver runs are available prior to 1977, it can be assumed those runs were predominantly wild. Hatchery production in the 1960s and early 1970s was very limited in comparison to current production. Since the 1970s, spring chinook hatchery production in the upriver system has expanded to the point that in recent years about two-thirds of the run is hatchery produced. Beginning in 2002, the majority of the hatchery production returning to the Columbia River was mass marked with an adipose fin-clip. With considerable numbers of hatchery eggs, fry, smolts, and adults being outplanted in recent years, it is likely that some of the current natural production is also an indirect hatchery product. Snake River summer chinook are destined for Lower Granite Dam. Under the ESA, the NMFS listed Snake River wild spring/summer chinook as threatened in May 1992 and upper Columbia wild spring chinook as endangered effective May 24, 1999.

Data in Table 7 illustrates recent trends in upriver spring chinook run sizes. The data shows runs were extremely poor in 1979-1984 (52,100-108,200 fish) with a low point in 1984. The returns in 1985-1993 were somewhat improved, with a high point in 1986 of 127,800 fish. The 1994 and 1995 runs were the lowest at 23,800 and 12,600 respectively. The 1996 run of 55,300 and the 1997 run of 123,800 showed an improvement after the two-year low; however, the 1998 and 1999 returns, which were primarily offspring of the record low returns in 1994 and 1995, were near record lows at 43,500 and 42,600, respectively. The 2000 return of 186,100 showed a dramatic improvement, which continued in 2001 and 2002. The 2001 return of 437,900 fish was the largest return in recent history.

The 2003 return of upriver spring chinook totaled 242,600 adults, which continues the trend of strong returns (Table 7). The 2003 Snake River wild spring/summer chinook run size was greater than 2002 with 52,000 fish returning, and the 2003 upper Columbia River wild spring chinook run size of 2,500 fish was down compared to 2002 (Table 9 and 10).

2004 Run

The upriver spring chinook run was predicted to total 394,400 fish in 2004. The run forecast was comprised of 360,700 adult upriver spring chinook and 33,700 adult Snake River summer chinook. Actual returns in 2004 totaled 221,600 fish. The 2004 Snake River wild spring/summer chinook run size was 32,900, which is the fourth largest since 1979 (Table 9). The 2004 upper Columbia River wild spring chinook return was 3,100 fish, improving over 2003 returns, but less than the recent 5-year average (Table 10).

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2005 Forecast

The 2005 forecast is for another strong return of 254,100 adult upriver spring chinook, (which includes the Snake River summer chinook component) to the Columbia River. This projected return exceeds the 2004 return and would become the fourth largest since 1979 (Table 7). The forecast for the 2005 Snake River wild spring/summer chinook run is 23,400, which is less than the 2004 return; yet still the fifth largest since 1979 (Table 9). The 2005 projected run size for upper Columbia wild spring chinook return is 6,200 fish, twice that of the 2004 return (Table 10). Snake River wild spring/summer chinook and upper Columbia River wild spring chinook are the ESA-listed components of the upriver spring chinook run.

Upper Columbia River Summer Chinook

Historically, all chinook passing Bonneville Dam from June 1 through July 31 were counted as summer chinook (Figure 1). Beginning in 2005, all chinook passing Bonneville Dam from June 16 through July 31 will be counted as upper Columbia River summer chinook. These chinook are destined for production areas and hatcheries above Priest Rapids Dam (upper Columbia River stock). Since 2002, the majority of the hatchery production returning to the Columbia River Basin was mass marked with an adipose fin-clip. Historically, the upriver run size was the sum of the Bonneville Dam count and catch or mortalities in lower river fisheries during late May through July. Beginning in 2005 the upper Columbia River summer chinook run size will be the sum of the Bonneville Dam count and catch or mortalities in lower river fisheries during June 16 through July 31.

During 1979-2000, the upper Columbia River summer chinook adult returns were at low levels, but fairly stable, ranging between 9,800 and 23,600. The return in 2001 increased significantly to 54,900 adults and in 2002 a record high 92,800 upper Columbia summer chinook adults returned to the Columbia River. The 2003 return of 83,000 was the second largest run since 1979 (Table 8).

2004 Run

The upper Columbia summer chinook run size for 2004 totaled 65,200 fish and was the third largest since 1979. A selective sport fishery was adopted in 2004 during the summer chinook time frame (June 16-July 31) and a total of 1,100 hatchery summer chinook adults were harvested below Bonneville Dam. In addition, a commercial season was set to harvest hatchery summer chinook. This fishery harvested 200 hatchery chinook, which was the first commercial harvest of summer chinook since the 1970's (Table 8).

2005 Forecast

The forecast for the 2005 upper Columbia River summer chinook run is 62,400 adults to the Columbia River. The 2005 forecasted return is near the 2004 return and would be the fourth largest return since 1979 (Table 8).

Sockeye

Sockeye salmon migrate through the lower Columbia River during June and July, with normal peak passage at Bonneville Dam around July 1 (Figure 1). Sockeye runs include fish from the Okanogan and Wenatchee rivers in the upper Columbia River Basin plus a remnant Snake River run that has been listed as endangered since December 20, 1991. The Wenatchee stock generally migrates earlier than the Okanogan stock although run timing overlaps. Current run timing information for the Snake River stock is not available. The goal of 65,000 sockeye salmon at Priest Rapids Dam, as described in the Interim Management Agreement, requires 75,000 fish migrate past Bonneville Dam, assuming average migration conditions.

2004 Run

An estimated 80,650 sockeye were expected to enter the Columbia River in 2004, which would be a significant improvement over the poor returns of 2002 and 2003. The return was expected to be comprised of 27,500 Wenatchee stock, 53,000 Okanogan stock, and 154 Snake River stock. The 2004 sockeye run proved to be better than projected, with 124,000 fish returning to the Columbia River. Stock composition estimates, based on run reconstruction data, for the 2004 return include 30,900 Wenatchee stock, 93,000 Okanogan stock, and 120 Snake River stock. The large run size allowed for both sport and commercial harvest while still remaining within ESA guidelines, therefore sport fisheries on the Columbia River were modified inseason to allow the retention of sockeye and commercial fisheries were adopted allowing the retention of sockeye. The recreational fisheries harvested 9 sockeye and the commercial fisheries harvested 670 sockeye. The escapement goal of 65,000 at Priest Rapids Dam was reached in 2004, with over 100,000 sockeye counted. The 2004 sockeye return was the largest since 1988 (Table 11).

2005 Forecast

The 2005 forecast for sockeye is 70,700, which includes 30,400 Wenatchee stock, 40,300 Okanogan stock, and 66 Snake River stock. The overall run size is less than the recent five-year average and greater than the recent 10-year average (Table 11).

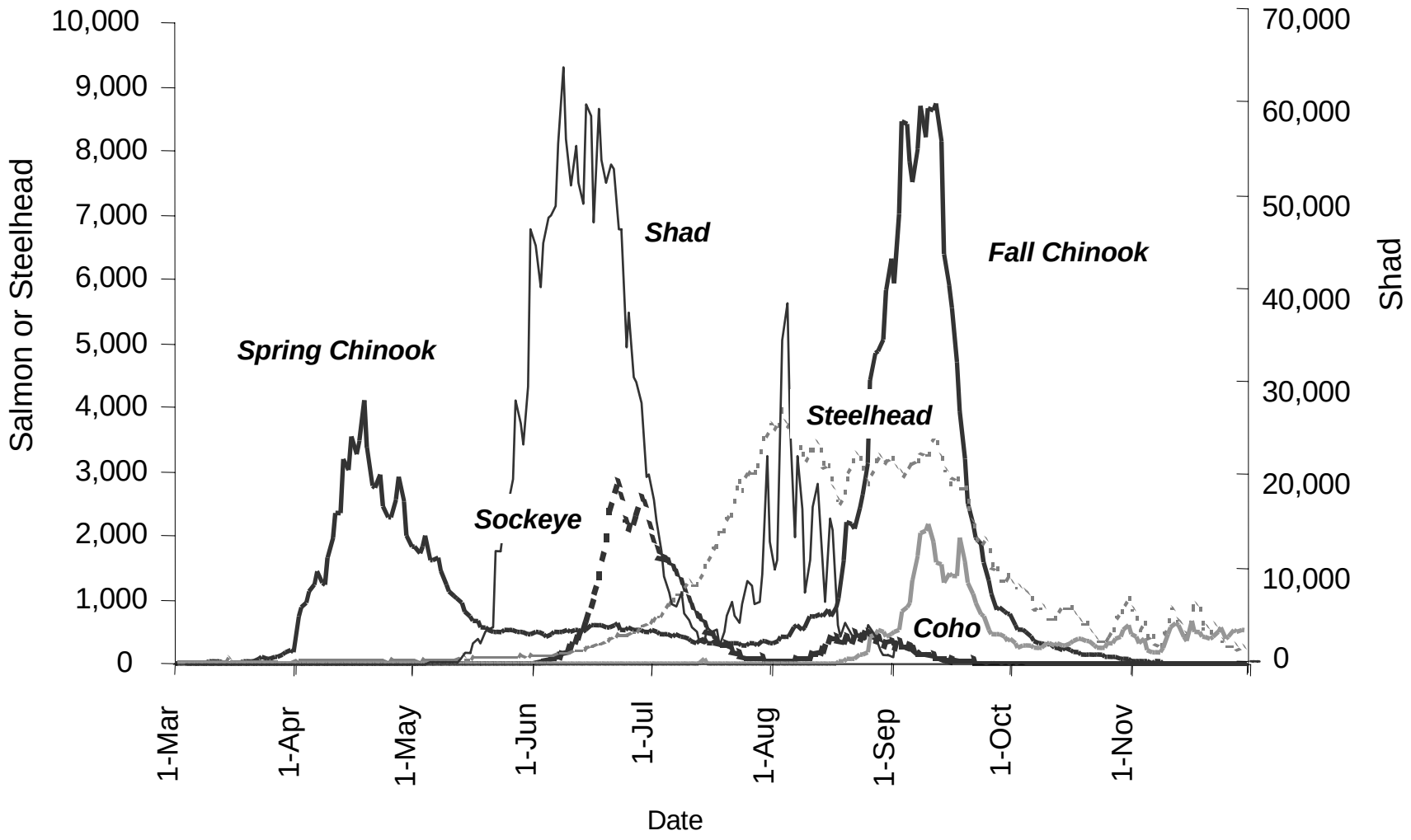

Figure 1. Average Daily Counts of Salmon, Steelhead, and Shad at Bonneville Dam, 1986-2002.

Summer Steelhead

The Columbia River summer steelhead run is comprised of populations from lower river and upper river tributaries. Summer steelhead enter fresh water year-round with peak run timing in early summer and fall. The lower river component of the run includes hatchery fish derived from Skamania stock which tend to be earlier timed than the upriver stocks with abundance peaking during May and June. Skamania stock hatchery steelhead are widely planted in the lower Columbia, including in the Willamette Basin. Wild lower river summer steelhead are present in the Cowlitz, Kalama, Lewis, Wind, and Washougal rivers in Washington and in the Hood River in Oregon. Skamania stock hatchery fish are also released annually in some tributaries above Bonneville Pool. Summer steelhead caught on the mainstem lower Columbia River through June each year are classified and counted as Skamania stock for management purposes. The lower Columbia River steelhead ESU, including wild summer steelhead, was listed as threatened by the NMFS on May 24, 1999.

Upriver summer steelhead include hatchery and wild steelhead that pass Bonneville Dam from April 1 through October 31 each year. However, those counted at Bonneville Dam in April, May, and June are considered to be Skamania stock for harvest management purposes (Figure 1). The upriver run is divided into Group A and Group B fish. Historically peak counts at Bonneville Dam were bimodal, with the first peak in early August (Group A stock) and the second peak in mid-September (Group B stock). The Group A fish are characteristically smaller (under 10 pounds) fish that spend one or two years at sea and return to tributaries throughout the mid and upper Columbia River system plus the Snake River basin. The later arriving Group B fish are larger (over 10 pounds), typically having spent two or three years at sea and are considered to return primarily to Idaho's upper Clearwater and Salmon River subbasins in the Snake River system. The NMFS has divided the upriver summer steelhead run into three ESU's: (1) the middle Columbia ESU (wild fish only) which was listed as threatened on May 24, 1999, (2) the upper Columbia ESU (hatchery and wild fish) which was listed as endangered on May 24, 1999, and (3) the Snake River ESU (wild fish only, including both Group A and B fish) which was listed as threatened on October 17, 1997.

Since 1984, summer steelhead passing Bonneville Dam have been randomly sampled throughout the run (April-October) to determine age and size composition plus hatchery to wild ratios for each year's return. Prior to 1999, managers used a date to distinguish A and B steelhead, where the Group A run included all fish counted during April 1 through August 25 and the Group B run as all fish counted during August 26 through October 31.

In recent years, distinct summer and fall bimodal peaks at Bonneville Dam have become less evident. A new method of assessing the relative returns of Group A and Group B steelhead was developed by the TAC in 1999. In this method, all fish counted during April 1-June 30 are classified as Skamania Index. Those fish that pass Bonneville Dam from July 1-October 31 that are less than 78 cm fork length are now classified as Group A Index while all fish that are greater than or equal to 78 cm fork length in the same period are classified as Group B Index. The index method is used to estimate run sizes and to make inseason fishery management decisions pertaining to the ESA. No escapement goals have been developed based on the index method; however, since 1999, fisheries impacts have been limited to less than 17% of the wild Group B Index steelhead return. In 2004, high water temperatures at Bonneville Dam precluded sampling during important portions of the late summer run. As a result, the sample size of large fish was

particularly small in some weeks leading to a possible under-estimate of the abundance of the Group B Index stock.

2004-2005 Run

The summer steelhead run is the sum of lower river tributary returns (lower river stocks), mainstem harvest during May-October (lower river and upriver stocks), and Bonneville Dam counts during April-October (upriver stocks). The 2004-2005 run is still in progress at upriver dams, some harvest has yet to occur, and escapement estimates are incomplete. Final run size data will be included in the *"Joint Staff Report Concerning 2005 Fall In-River Commercial Harvest of Columbia River Fall Chinook Salmon, Summer Steelhead, Coho Salmon, Chum Salmon, and Sturgeon"* (yet to be produced) but preliminary estimates are included in this report. Based on preliminary run reconstruction data the total 2004-2005 summer steelhead run of 416,000 was the fifth largest return during the post Bonneville Dam era (since 1938). Run size estimates and dam counts based on the date method through 2003 for lower river, Group A, and Group B summer steelhead are presented in Tables 14-15. The total run of upriver summer steelhead during the July through October period was 293,800 fish, including 69,900 wild fish. The estimated Group A Index steelhead total return was 260,300 fish and the Group B Index steelhead total return was 33,500 fish based on the current methodology. Run size and wild escapement at Lower Granite Dam are included in Table 15; however, the 2004-2005 count at Lower Granite Dam will not be complete until May 31, 2005.

2005-2006 Forecast

The TAC has not yet developed a 2005-2006 run forecast for summer steelhead. A forecast for the total run will be available in early 2005. TAC is continuing to review possible approaches for defining the Group A and B Indices to account for low sample sizes during portions of the season.

Shad

Shad are an introduced species brought to the West Coast from Pennsylvania stock in the 19th century. Since the extensive development of mainstem hydroelectric projects, shad runs have increased markedly in abundance and have extended their range into the upper Columbia River and into Hells Canyon of the Snake River. Since the late 1970's, all shad runs have exceeded one million fish, with a peak of over five million in 2004. Shad run timing extends from mid-May through early August at Bonneville Dam, with peak daily counts occurring in June (Figure 1). Since the run timing of the prolific shad runs overlap with upriver chinook, sockeye, and steelhead runs, harvest opportunities are strictly regulated to minimize handle and impact on ESA listed salmonids.

2004 Run

The 2004 shad run size was a minimum of 5,678,350, with a minimum spawning escapement of over 5,472,400 above The Dalles Dam, plus an unknown number below The Dalles Dam. The non-Indian (lower Columbia and Willamette rivers) sport and commercial combined catches of 205,945 fish was similar to 2003 and amounted to 3.6% of the estimated total shad run size. The 2004 minimum shad run in the Columbia River, at nearly 5.7 million fish, is the largest shad run on record, surpassing the previous record return of 4.8 million fish in 2003 (Table 16).

REVIEW OF MAINSTEM AND SELECT AREA FISHERIES

Non-Indian Fisheries

Past Lower River Mainstem Winter Gillnet Salmon and Sturgeon Seasons

Winter gillnet salmon seasons have been established since 1878. Past season dates were January 1-March 1, 1878-1942; January 29-March 1, 1943-1958; February 15-March 1, 1959-1967; and since 1968 (excluding 1995 and 1997-1999) seasons opened as early as February 10 and closed as late as March 11 with seasons varying from one to 20 days. No lower river winter gillnet salmon seasons occurred during 1995 and 1997-1999; however, small numbers of spring chinook were landed in conjunction with winter target sturgeon seasons during these years.

Winter season fishing dates, mesh size restrictions, and landings since 1970 are included in Table 17. Since 1970, chinook landings have ranged from less than 100 fish to 18,300 fish. A minimum mesh size restriction of 7¼-inches was placed on the fishery in 1970 to reduce steelhead handle. Subsequent to the prohibition on the sale of steelhead in 1975, the minimum mesh size restriction was increased to 8-inches which continued through 2001. No salmon fishing has been allowed above Kelley Point at the Willamette River mouth during winter salmon seasons since 1975 to reduce catch of upriver spring chinook. Since 1957, all non-Indian commercial fisheries have been restricted to Zones 1-5 (below Bonneville Dam) and treaty Indian commercial seasons to Zone 6 (Bonneville Dam to McNary Dam) (Figure 2).

During the 1975-1990 winter salmon seasons, the Joint Staff estimated an average of 250 steelhead were handled each fishing day, with a seasonal average of less than 500 steelhead mortalities annually. The steelhead estimates were based on changes in time, area, and mesh size regulations plus observations made onboard gillnet boats during 1970-1977 and 1986 winter salmon seasons. Monitoring data collected indicated that about 17% of the steelhead handled were immediate mortalities, which corresponds to an average of 40 steelhead mortalities per day. Based on observations during the 1991-1993 winter salmon seasons in the Marine Mammal Observer Program, less than 100 steelhead were handled per fishing day, with 17% assumed to be immediate mortalities based on the aforementioned sampling data. This provided a current average of 16 steelhead mortalities per fishing day, considerably less than the 40-per-day average assumed for prior winter salmon seasons.

White sturgeon have been an important commercial species during winter salmon seasons. During 1989-1993, white sturgeon landings during winter salmon seasons ranged from 500-1,200 fish and comprised 10-21% (15% average) of the total annual white sturgeon gillnet landings. Sturgeon management and quotas changed several times between 1993 and 1997. These changes culminated with the adoption of the original Olympia Accord on sturgeon management by Oregon and Washington in October 1996, and since 1997 sturgeon management has been guided by three joint state agreements on sturgeon management. The agreement for 2003-2005 retained major tenets of the original 1997-1999 Olympia Accord on sturgeon management which included allowing target sturgeon seasons to access the commercial white sturgeon catch allocation; however, the harvestable number was reduced from 50,000 to 40,000 white sturgeon (32,000 for sport fisheries and 8,000 for commercial fisheries) beginning in 2003. The reduced commercial catch guideline required additional restrictions on commercial fisheries

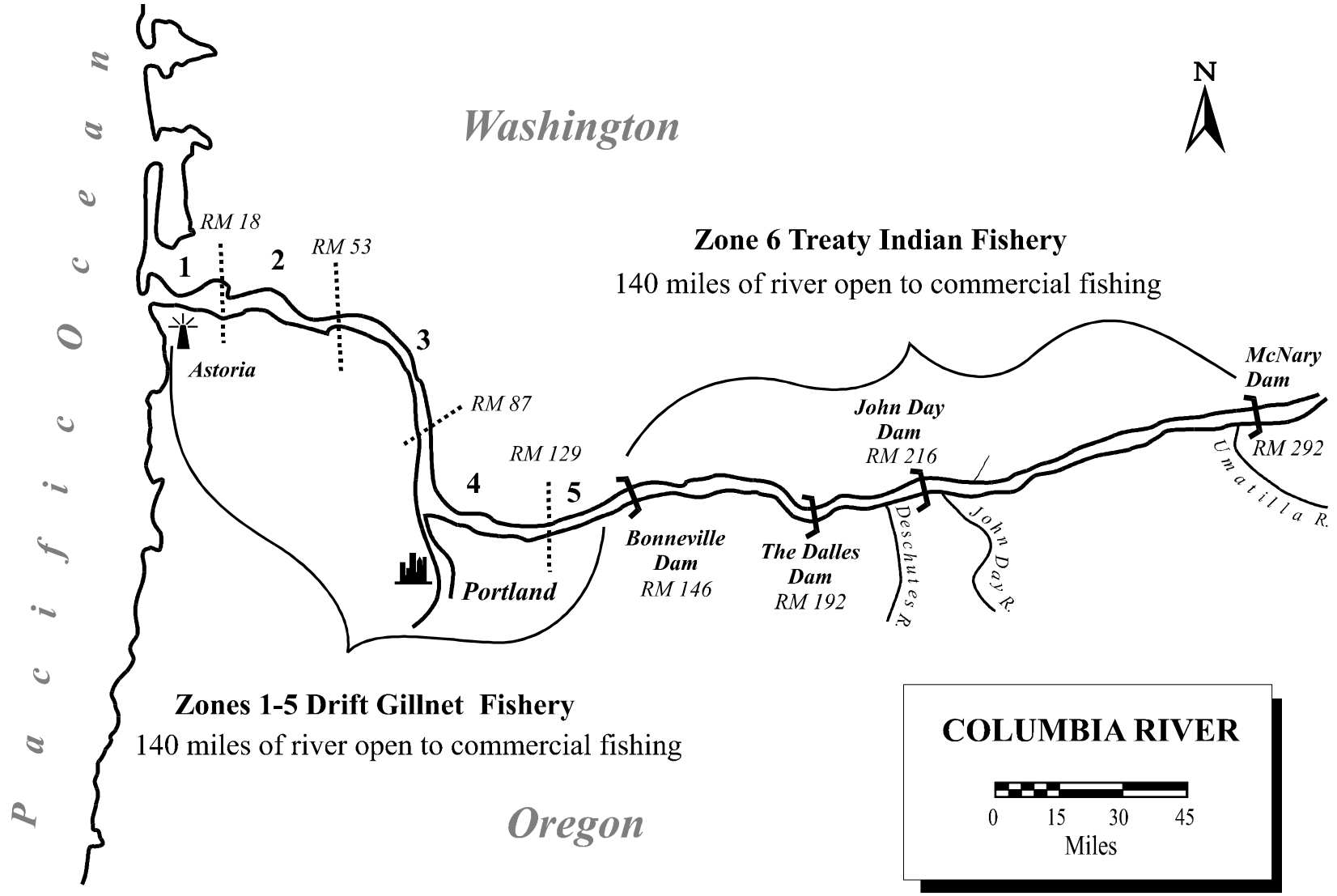

Figure 2. Map of the Columbia River Below McNary Dam Showing Areas Open to Commercial Fishing.

beginning in 2003 to ensure that landings did not exceed the 8,000 white sturgeon catch guideline. Protocol for management of white sturgeon retention in 2003-2005 commercial fisheries based on input from the commercial fishing industry was adopted at the February 6, 2003 Compact hearing. The key features of the adopted protocol were commercial catch guidelines for the January-July (2,000 white sturgeon), August (2,000 white sturgeon), and September-October (3,600 white sturgeon) timeframes and allocation among individual commercial fishers via per vessel possession and sales limits. Additionally, SAFE fisheries were allocated 400 white sturgeon, of which only 300 could be sold prior to August 1. Since 1997 sturgeon directed fisheries have operated from early January through mid-February with landings during winter sturgeon seasons averaging 2,325 white sturgeon or 22.7% of the annual white sturgeon gillnet landings. More detailed information concerning past sturgeon management can be found in the document titled *"Joint Staff Report Concerning Commercial Seasons for Sturgeon and Smelt in 2005"*.

The adoption of the Willamette River spring chinook FMEP in 2001 required the release of unmarked spring chinook in future commercial and recreational freshwater fisheries. The initial commercial fishery requiring the release of non-adipose fin-clipped spring chinook occurred in the spring of 2001. This live capture fishery consisted of a permit fishery with participation limited to 20 vessels. The fishery consisted of one 8-hour fishing period per week during the 4-week period from April 23 through May 18 and resulted in a kept catch of 1,300 adipose fin-clipped spring chinook.

The first live capture demonstration commercial fishery that included participation of the entire fleet occurred in 2002. The 2002 fishery regulations included a 5½-inch maximum mesh size restriction, 150-fathom (900 feet) maximum net length, soak times not to exceed 45 minutes, use of recovery boxes on lethargic or bleeding fish, and sales of only adipose fin-clipped chinook and sturgeon. The season consisted of 15 fishing days between February 25 - March 27 and produced a landed catch of 14,200 adipose fin-clipped spring chinook. Steelhead handle exceeded expectations with an estimated total of 20,900 steelhead (8,500 marked and 12,400 unmarked) handled in the fishery. Additionally, the use of 5½-inch mesh gear in this fishery resulted in a non-benign handle of steelhead with the majority being captured by the gills or the body which reduces survival rates of released fish.

A second full-fleet live capture demonstration commercial fishery was adopted in 2003. Regulations for this fishery were similar to 2002 except use of large mesh nets (8-inch minimum) was required during the early part of the season to minimize steelhead handle and the maximum mesh size for tangle nets was reduced to 4¼-inches to increase the rate of capture by tangling for both spring chinook and steelhead. Use of 175-fathom nets fitted with an optional steelhead excluder (5-10 feet of 12-inch mesh or equivalent along the top margin of the net) was also permitted in order to obtain additional data for this gear type. At the February 6, 2003 Compact, six 16-hour (5 AM-9 PM) large-mesh fishing periods were adopted for Mondays, Wednesdays, and Fridays from February 17-28, 2003. Landings during the first two fishing periods included 1,084 spring chinook (519 kept) and 27 white sturgeon; however, upriver spring chinook comprised an unexpectedly high percentage of the salmon catch, thereby requiring the final large mesh fishing periods be rescinded. With nearly half of the commercial upriver impact allocation accrued, commercial fishers volunteered to conduct test fishing in cooperation with agency staff to determine the most appropriate time for an additional tangle net

fishing period. Based on test fishing results, additional fishing periods were postponed until March 21 when a 10-hour (9 AM-7 PM) fishing period occurred using 4¼-inch mesh. Landings during this period included 4,357 spring chinook (2,527 kept) but due to the combined upriver spring chinook impacts during the initial three fishing periods, no additional winter salmon fishing periods were adopted in 2003. A total of 5,441 spring chinook were handled during the 2003 live capture fishery with 3,046 kept and 2,395 released which was far less than expected. The estimated 2,097 steelhead (1,054 marked and 1,043 unmarked) handled during the 2003 season was substantially less than occurred in 2002 due to the short season and new gear restrictions.

2004 Lower River Winter Gillnet Season

Commercial fisheries in 2004 were initiated with a winter target sturgeon fishery adopted at the December 19, 2003 Compact hearing consisting of five, 24-hour fishing periods from 6 AM Tuesdays to 6 AM Wednesdays from January 13 through February 11. Gear regulations included both 9-inch minimum and 9¾-inch maximum mesh size restrictions to target the fishery on legal-sized sturgeon and minimize handle of steelhead and sub-legal sturgeon. Combined landings during the initial three fishing periods included 1,210 white sturgeon and zero spring chinook. In order to manage the fishery in accordance with the 2003-2005 Joint State Management Agreement and a management guideline of 1,800 sturgeon for the winter season, possession and landing limits of 20 sturgeon per vessel per week were adopted at the February 2, 2004 Compact hearing for the final two fishing periods. The 2004 winter target sturgeon fishery resulted in a catch of 1,696 white sturgeon and 48 spring chinook

2004 Lower River Demonstration Salmon Season

For the third consecutive year a full fleet commercial spring chinook fishery was conducted in the lower Columbia River. The 2004 fishery occurred from the mouth upstream to Kelley Point (Zones 1-4) with allowable sales of adipose fin-clipped salmon and sturgeon (three fish landing limit). As was the case in 2003, additional restrictions adopted for this fishery to maximize survival of released fish included a maximum net length of 150 fathoms (or 175 fathoms with an optional excluder panel), maximum soak time of 45 minutes, and required use of a recovery box on all lethargic or bleeding fish. As in previous years, all participants in this fishery were required to have previously attended a joint state sponsored workshop that covered regulations for the fishery and proper fish handling techniques necessary to improve survival rates of released fish. As with past commercial spring chinook demonstration fisheries in 2002-2003, onboard monitoring was conducted by staff of WDFW and ODFW on each fishing day. Data collected included effort, numbers of spring chinook and steelhead caught and released, mark rates, recovery times of lethargic fish, capture conditions, physical capture method, other bycatch, and marine mammal encounters.

This fishery was managed in accordance with the *"Interim Management Agreement for Upriver Spring Chinook, Summer Chinook, and Sockeye"* which allocated impacts to treaty Indian and non-Indian fisheries based on run sizes of upriver spring chinook. Based on 2004 preseason run size forecasts, the Interim Management Agreement allowed for a 15% total impact rate on listed upriver spring chinook, of which 2% was allocated to non-Indian fisheries. In addition, the states adopted an agreement allocating 60% (1.2% impact rate) of non-Indian upriver spring chinook impacts to recreational fisheries and 40% (0.8% impact rate) to commercial fisheries

below Bonneville Dam. The live capture fishery was managed in accordance with the FMEP which allocated surplus Willamette River hatchery spring chinook between sport and commercial fisheries based on a sliding scale matrix that increased commercial shares with increased run sizes. For 2004 the FMEP set forth a commercial catch allocation of 16,700 Willamette hatchery spring chinook (30% of the harvestable number). Additional significant ESA restrictions included a total non-Indian fishery impact rate of 2% for wild steelhead ESU's. The allowable impact rate for wild Willamette River spring chinook was 15% for all freshwater fisheries.

Further guidance for the 2004 winter commercial salmon season was provided by a fishing plan developed by the states in cooperation with the Columbia River Commercial Fishing Advisory Group and adopted at the February 5, 2004 Compact hearing. This plan outlined a weekly schedule for implementing fishing periods based on voluntary test fishing in order to maximize commercial harvest of Willamette Hatchery spring chinook and minimize handle of listed upriver spring chinook and winter steelhead. At this same Compact hearing, mortality rates recommended by the Technical Advisory Committee for fish released during winter commercial fisheries were also adopted. Release mortality rates were 40% for spring chinook and 30% for steelhead caught in large mesh (8-9 inch minimum mesh) and 18.5% for both spring chinook and steelhead caught in small mesh gear (4¼-inch maximum mesh size).

Based on these management guidelines, voluntary test fishing using 4¼-inch nets was initiated on Sunday February 22, 2004. Due to low chinook catch rates, no fishing periods were adopted and test fishing was repeated on Sunday February 29, 2004. Due to improved spring chinook to steelhead catch ratios, a 16-hour (5 AM-9 PM) fishing period was adopted for Tuesday March 2, 2004. With an expected 86% Willamette River spring chinook mark rate and a desire to minimize steelhead handle, 9-inch minimum and a 9¾-inch maximum mesh size restrictions were required for this fishing period. Five additional large-mesh fishing periods were adopted for March 4-5 (16 hours), March 9-10 (24 hours), March 11-12 (24 hours), March 15-16 (15 hours), and March 18-19 (15 hours) based on results of prior fishing periods (onboard monitoring data and landings) and test fishing conducted on March 7, 14, and 17. Subsequent test fishing conducted on March 21 indicated a significant increase in abundance of upriver spring chinook and stable steelhead numbers, triggering a switch to small-mesh tangle nets for the next fishing period adopted for March 23-24 (8 hours). Based on positive results for this fishing period, two additional tangle net fishing periods were adopted for March 25-26 (8 hours) and March 29-30 (10 hours). No additional fishing periods were adopted due to declining optimism the upriver spring chinook run would meet the preseason forecast and because commercial impacts to upriver spring chinook were nearing management guidelines.

For the six large-mesh fishing periods, an estimated 5,158 spring chinook (3,490 kept) and 323 steelhead (210 unmarked) were handled. An additional 12,824 spring chinook (9,620 kept) and 1,830 steelhead (947 unmarked) were handled in the three tangle-net fishing periods. Total kept catch for the 2004 live capture commercial fishery included 174 white sturgeon and 13,110 spring chinook which was much higher than the 2003 live capture fishery and similar to landings in 2002. Based on CWT and VSI data, the kept spring chinook catch (13,158 fish) during non-Indian winter commercial seasons was comprised of 5,265 (40.0%) upriver stock; 5,720 (43.5%) Willamette stock; 1,317 (10.0%) Cowlitz, Kalama, Lewis, and Sandy stock; and 856 (6.5%) SAFE stock while the released catch was comprised of 3,101 (63.5%) upriver stock; 1,314

(26.9%) Willamette stock; 468 (9.6%) Cowlitz, Kalama, Lewis, and Sandy stock; and zero SAFE stock. For a second consecutive year, the steelhead catch in the live-capture demonstration fishery remained within preseason catch expectations primarily due to adoption of the 9-inch minimum mesh size regulation, optional steelhead excluder devices, and adaptive management. A total of 2,153 steelhead were handled in the live-capture demonstration fishery, of which 996 were marked and 1,157 were unmarked. Unmarked steelhead included wild fresh run winter and summer steelhead, unmarked hatchery fresh run winter and summer steelhead, and spawned out winter and summer steelhead kelts. Based on preseason run sizes, the impact rate on listed wild winter steelhead was well below the 2% limit.

Past Lower Columbia River Spring Chinook Sport Fisheries

Under permanent regulations, the mainstem Columbia River from the mouth to the I-5 Bridge (RM 106) is open to angling for chinook salmon January 1 through March 31 to target early migrating Willamette spring chinook, and closed April 1 through July 31 to protect upriver spring and summer chinook. The area from the I-5 Bridge upstream to the Oregon/Washington border above McNary Dam has been closed under permanent regulations during January 1 through July 31 since 1993 to protect upriver spring and summer chinook. During 1995-1999, recreational fisheries for spring chinook on the lower Columbia River were all but eliminated to protect a weak return of upriver spring chinook in 1995 and low Willamette spring chinook runs during 1996-1999. In 2000 biologists predicted the largest upriver run since 1977 (134,000 preseason projection) and an improved Willamette River run size of 59,900 which prompted the OFWC to formally allocate 1,200 Willamette spring chinook to the mainstem Columbia River sport fishery. However, problems with the issuance of a Biological Opinion from the NMFS resulted in an early (March 16) closure of the 2000 recreational fishery and a catch of only 322 adult spring chinook.

An unprecedented forecast for a return of 364,600 upriver spring chinook to the Columbia River in 2001 coincided with negotiations by the parties of *US v Oregon* for a new management agreement regarding the harvest of upriver spring chinook in Columbia River fisheries. The *"Interim Management Agreement for Upriver Spring Chinook, Summer Chinook, and Sockeye"* was signed on February 16, 2001 and allowed up to a 15% impact to listed upriver spring chinook based on the expected upriver run size and abundance of ESA-listed Snake River wild spring chinook. A total impact of 2% was allocated to non-Indian fisheries, and managers expected to accrue about a 0.8% impact in the lower Columbia River recreational fishery. The total expected return of 434,000 adult spring chinook, including lower river spring chinook stocks, to the Columbia River during 2001 was the largest predicted run size of the post-Bonneville Dam era (since 1938). The high percentage of adipose fin-clipped fish returning in 2001 allowed the states to adopt the first-ever, selective recreational fishery for adipose fin-clipped spring chinook on the lower Columbia River. Selective regulations began on March 12, 2001 and required the release of non-adipose fin-clipped spring chinook for the purpose of maximizing both the conservation of ESA-listed fish and the harvest of surplus hatchery fish while maintaining consistent sport fishing regulations for the lower Columbia and Willamette rivers. Additionally, beginning March 12, the states opened the area of the Columbia from the I-5 Bridge upstream to Bonneville Dam to spring chinook angling, and established a closure date of April 30. The recreational fishery had not been open upstream of the I-5 Bridge during the month of April since 1977. The 2001 recreational spring chinook fishery was both extremely

popular and successful, with record high angler effort and catch rates. Additionally, angler compliance with the selective fishing regulations was excellent. Inseason management action was necessary to maintain the fishery within ESA guidelines, and resulted in a brief closure of the fishery during April 18-24; however, the fishery was reopened during April 25-29. During February 1-April 29, 2001, anglers made 172,312 trips and caught an estimated 41,172 adult spring chinook (25,711 kept and 15,461 released) and 2,048 steelhead (1,631 kept and 417 released). A limited selective fishery was also adopted for the mainstem Columbia River upstream of Bonneville Dam. The fishing area extended from The Dalles Dam upstream to McNary Dam and was open during May 6-8. Selective fishing regulations requiring the release of non-adipose fin-clipped fish were in effect during the 3-day fishery which resulted in 1,432 angler trips producing a total catch of 272 chinook (73 kept and 199 released).

Expectations for the 2002 Columbia River spring chinook run and recreational fishery were again high with biologists predicting a near record return of 333,700 upriver spring chinook adults. In addition, biologists predicted a return of nearly 85,000 lower river spring chinook for a total of 418,000 spring chinook, which was the second highest predicted spring chinook return to the mouth of the Columbia River during the post-Bonneville era. The *"Interim Management Agreement for Upriver Spring Chinook, Summer Chinook, and Sockeye"* allowed for a 2% impact to ESA-listed upriver spring chinook in all non-Indian fisheries. At the January 31 Compact hearing, the states adopted a harvest-sharing matrix for the allocation of the non-Indian portion of the upriver spring chinook impact between the sport and commercial fishery in the lower Columbia River. For 2002, the harvest-sharing matrix allowed a 1.02% upriver impact in the recreational fishery compared to the 2001 impact rate of 0.80%.

Regulations adopted for 2002 included a January 1-May 15 season for the Columbia River below the I-5 Bridge and a March 16-May 15 season from The Dalles Dam upstream to the Oregon-Washington border. The Bonneville Pool remained closed because of the large, non-selective, tributary sport fisheries in the reservoir and possible sampling and enforcement problems. On April 3, 2002 the states opened the area in Bonneville Pool from Tower Island upstream to The Dalles Dam to increase opportunity in the upper Bonneville Pool above the tributary fisheries. During the 2002 regulation review process, adipose fin-clipped only retention regulations for spring chinook were permanently adopted for the recreational fishery for January 1-March 31 and were subsequently extended for the duration of the 2002 fishery at the January 31, 2002 Joint State hearing.

The 2002 lower Columbia River recreational spring chinook fishery was again very popular and successful, and similar to 2001, required inseason management changes to maintain the fishery within ESA impact guidelines. Lower than expected counts of spring chinook at Bonneville through mid-April prompted TAC to make two successive downgrades of the upriver run size, which caused managers to close the lower Columbia River recreational fishery April 28. Improved passage just prior to and during the recreational fishery closure allowed the states to reopen the recreational fishery for four more days during May 5-8, and continued good passage during the four-day re-opener allowed the states to extend the fishery through the original closure date of May 15. The fishery below Bonneville Dam occurred during February 1-April 27 and May 5-15, 2002 and produced catches of 34,442 adult spring chinook (20,464 kept and 13,978 released), 247 fin-clipped spring chinook jacks, and 2,376 steelhead (1,982 kept and 394 released) from a record 175,052 angler trips. No inseason management changes were necessary

for the fishery above Bonneville Dam. The estimated catch total for the fishery above Bonneville Dam was 2,024 spring chinook (1,149 kept and 875 released) from 7,996 angler trips.

Expectations in 2003 were for a return of 145,400 upriver spring chinook to the Columbia River, the fourth highest predicted run size since 1973 but down from the modern record runs of 2001 and 2002. In addition, biologists predicted a strong return of 126,200 lower river spring chinook to the Columbia River in 2003, which included 109,800 Willamette spring chinook. The *"Interim Management Agreement for Upriver Spring Chinook, Summer Chinook, and Sockeye"* provided for a 2% impact to ESA-listed upriver spring chinook in all non-Indian fisheries in 2003. The harvest-sharing matrix adopted January 31, 2002 further divided the non-Indian impact between the sport and commercial fisheries with 1.11% for the sport fishery, 0.59% for the commercial fishery, and 0.30% for other fisheries occurring in 2003.

Sport fishing regulations for the 2003 spring chinook fishery were adopted at the February 6, 2003 Joint State meeting. The adopted sport season was January 1-May 15 for the Columbia River from Buoy 10 to the I-5 Bridge and February 15-May 15 for the Columbia River from I-5 to Bonneville Dam, Tower Island upstream to McNary Dam, and the Oregon bank between Bonneville Dam and Tower Island. Selective, adipose fin-clipped only regulations for spring chinook were permanently adopted in 2002 for January 1-March 31 and subsequently extended for the duration of the 2003 fishery. Additionally anglers were allowed to keep adipose fin-clipped steelhead and shad during the open spring chinook fishery. Managers would modify or close the fishery early if upriver impacts were reached with some consideration of fairness for opportunity in the fishery above Bonneville Dam. Other state bag limits and permanent rules applied.

The 2003 Columbia River recreational spring chinook fishery continued to be very popular and productive, and like the 2001-2002 fisheries, required in-season management to remain within catch guidelines. Strong early returns of upriver spring chinook in 2003, coupled with an intense fishery above the I-5 Bridge, resulted in a near record March catch of spring chinook, with upriver fish dominating. As upriver impacts in the sport fishery were far higher than expected through the end of March, managers had to take action to avoid a total closure of the fishery by mid-April. Effective April 6, the states closed the fishery between the I-5 Bridge and Bonneville Dam and reduced the fishery below I-5 to four days per week. The area above Bonneville Dam also went to a four day per week fishery on April 30. Two successive upgrades to the upriver run size by TAC, along with a decreasing proportion of upriver fish in the catch, allowed fisheries to continue on a four day per week basis through May 15. The total estimated catch for the 2003 spring chinook sport fishery below Bonneville Dam was 26,019 adult spring chinook (16,892 kept and 9,127 released), 473 spring chinook jacks, and 1,878 steelhead (1,428 kept and 450 released) from 160,765 angler trips. The Zone 6 sport catch was 3,135 spring chinook (1,999 kept and 1,136 released).

2004 Lower Columbia River Spring Chinook Sport Fishery

Expectations in 2004 were for a return of 360,700 upriver spring chinook to the Columbia, the second highest predicted run size since 1938. In addition, biologists predicted a strong return of 141,900 lower river spring chinook to the Columbia in 2004, which included 109,400 Willamette spring chinook. The *"Interim Management Agreement for Upriver Spring Chinook, Summer Chinook, and Sockeye"* provided for a 2% impact to ESA-listed upriver spring chinook in all

non-Indian fisheries in 2004. The harvest-sharing adopted February 5, 2004 further divided the non-Indian impact between the sport and commercial fisheries with 1.20% for the sport fishery (including fisheries above McNary Dam) and 0.80% for the commercial fishery including SAFE.

Sport fishing regulations for the 2004 spring chinook fishery were adopted at the February 5 Compact hearing. The adopted sport season was January 1-May 15 for the Columbia River from Buoy 10 to the I-5 Bridge and March 16-May 15 for the Columbia River from I-5 to Bonneville Dam, Tower Island upstream to McNary Dam, and the Oregon bank between Bonneville Dam and Tower Island. Selective, adipose fin-clipped only regulations for spring chinook were permanently adopted in 2002 for January 1-March 31 and extended for the duration of the 2004 fishery. Additionally, anglers were allowed to keep adipose fin-clipped steelhead and shad during the open spring chinook fishery. During 2004, a new regulation which prohibited the removal of unmarked fish from the water was added to provide additional protection for released fish. Managers would modify or close the fishery early if upriver impacts were reached, with some consideration for fairness of opportunity in the fishery above Bonneville Dam. Other state bag limits and permanent rules applied.

The Columbia River was low, clear, and cold at the start of 2004 with below average flows and temperature well into March. The first spring chinook was sampled on January 24, 2004 at Prescott Beach, but effort and catch were light during February and early March as local rains discolored the Cowlitz, Lewis, and Willamette rivers leaving much of the lower Columbia River unfishable. During February, anglers caught 79 spring chinook (48 adipose fin-clipped fish kept and 31 unmarked fish released) and 251 steelhead (98 adipose fin-clipped fish kept and 153 unmarked fish released) in 9,467 trips. VSI sampling indicated that 57% of the February spring chinook catch was comprised of lower river fish. Angler effort and catch increased after mid-March as more fish entered the river, but the fishery continued to be limited by cold water conditions for a good part of the month. The best catch rates were observed in the lower Columbia River downstream of Cathlamet. The total catch during March was 3,341 spring chinook (2,614 kept and 727 released) and 789 steelhead (495 kept and 294 released) from 44,576 angler trips. The 2004 spring chinook catch for March was below the 2001-2003 average for that month, and based on VSI sampling, consisted of 54% upriver fish.

In April, as water conditions in the Columbia River improved, catch rates increased dramatically, particularly in the area below Bonneville Dam. The catch rate for boat anglers in the Bonneville area during April was 1.5 chinook per boat, or four times the average catch rate for boats in the rest of the river. Catch rates also remained strong downstream of Cathlamet. By April 18, 67% of the upriver impact (0.8%) reserved for the mainstem sport fishery below Bonneville Dam had been utilized, and managers decided to reduce the fishery between the I-5 Bridge and Bonneville Dam to three days per week beginning April 22; however, on April 21 the states decided to close the fishery between I-5 and Bonneville completely because such a large proportion of the cumulative upriver impact had occurred in this fishery. With only 99,922 spring chinook adults counted at Bonneville Dam through April 27, TAC downgraded the run size to between 264,000 and 360,700. Based on a run size in the midpoint of that range (312,000), staff projected that by April 30, 99.5% of the impact reserved for the mainstem sport fishery below Bonneville Dam would be used. Therefore, the states decided to close the fishery below the I-5 Bridge effective May 1. During April, anglers made 102,058 trips and caught 27,560 spring chinook (21,078 kept and 6,482 released) and 926 steelhead (832 kept and 94 released). Upriver fish comprised

73% of the spring chinook catch during April. The total catch for the 2004 spring chinook sport fishery below Bonneville Dam was 30,980 adult spring chinook (23,740 kept and 7,240 released), 137 spring chinook jacks, and 1,966 steelhead (1,425 kept and 541 released) from 156,101 angler trips. Upriver spring chinook comprised 71% of the total number of spring chinook handled (16,579 kept and 5,474 released). The 2004 final upriver run size of 193,400 was 54% of the preseason forecast, resulting in a final impact rate to ESA-listed upriver spring chinook for the lower Columbia River sport fishery below Bonneville Dam of 1.14%.

In the fishery from Bonneville Dam to McNary Dam, a total of 350 spring chinook had been caught (300 kept and 50 released) through April 25. At the May 4 Compact hearing, the states closed this fishery effective May 6. The final catch for Zone 6 was 1,608 spring chinook (1,231 kept and 377 released) from 7,600 angler trips.

2004 Columbia River Summer Steelhead Sport Fishery

The main-stem Columbia River is open to the retention of hatchery summer steelhead during May 16-December 31 from the Tongue Point/Rocky Point line upstream to the I-5 Bridge and during June 16-December 31 from the I-5 Bridge upstream to the Highway 395 Bridge at Pasco, Washington. During 1992-1999, this fishery was directed specifically toward the harvest of hatchery summer steelhead. Beginning in 2000 the states allowed the retention of chinook jacks (≤24") and sockeye salmon during the same time frame. During 2002, the retention of sockeye was prohibited April 1 in Washington and June 25 in Oregon when it was determined the 2002 sockeye return was less than the management goal of 75,000 fish.

The states opened the summer chinook fishery below Bonneville Dam on June 28, 2002 for the first time since 1973 when the 2002 summer chinook run size was upgraded to 140,000. The high mark rate of hatchery summer chinook allowed the states to adopt selective fishery regulations for summer chinook to provide an opportunity to harvest hatchery summer chinook while maintaining the impact to ESA-listed summer chinook to less than 1%. On July 9, 2002 the states also opened the area from Bonneville Dam upstream to the Oregon/Washington border for the retention of adipose fin-clipped summer chinook. The total catch below Bonneville during May 16-July 31, 2002 was 10,814 summer steelhead (7,785 adipose fin-clipped fish kept and 3,029 released), 3,435 summer chinook (1,352 kept and 2,083 released), 60 sockeye (13 kept and 47 released), and 145 chinook jacks. The Zone 6 sport catch was less than 100 fish from 1,000 angler trips.

In 2003, the summer chinook return was forecast to be 87,600 adults. With a desired escapement goal of 85,000 adult summer chinook and a 1% non-Indian impact to ESA-listed summer chinook, there was an opportunity for a limited sport fishery in 2003. Therefore, a selective summer chinook fishery was adopted for the Columbia River from Tongue Point upstream to the Oregon/Washington border above McNary Dam from June 16 to July 31 to match the summer steelhead season above the I-5 Bridge. The daily bag limit was two adipose fin-clipped adult summer chinook. During May 16-July 31, 2003, anglers below Bonneville Dam made 52,818 trips and caught 7,224 summer steelhead (4,979 kept and 2,245 released), 3,771 summer chinook adults (1,854 kept and 1,917 released), and 273 chinook jacks. During the 2003 summer chinook fishery, anglers above Bonneville made 2,594 trips and caught 18 summer chinook adults and nine chinook jacks.

Expectations for 2004 were for a summer chinook run of 102,800 adults entering the Columbia River. On June 8, 2004 the states adopted a summer chinook fishery for the Columbia River from Tongue Point upstream to the Oregon/Washington border above McNary Dam during June 16-July 31. The daily bag limit was two adipose fin-clipped adult summer chinook. During May 16-June 15, anglers on the lower Columbia River below the I-5 Bridge made 7,937 trips and caught 1,217 summer steelhead (1,145 kept and 72 released), 37 chinook jacks (all kept), and 239 adult summer chinook (all released). During June 16-July 31, 2004 anglers made 39,804 trips below Bonneville Dam and caught 2,385 adult summer chinook (1,119 kept and 1,266 released), 169 chinook jacks, and 7,386 steelhead (5,117 kept and 2,269 released). The total catch in the lower Columbia River during May 16-July 31, 2004 was 2,624 summer chinook adults (1,119 kept and 1,505 released), 206 chinook jacks, and 8,603 summer steelhead (6,262 kept and 2,341 released). During the 2004 summer chinook fishery (June 16-July 31), anglers above Bonneville Dam made 1,537 trips and caught 12 summer chinook adults and 4 chinook jacks.

Spring Chinook Fisheries Above McNary Dam

A selective sport fishery occurred in the Snake River upstream of Little Goose Dam from April 16 through May 7, 2004 although the fishery was originally scheduled to continue through May 31. There were a total of 2,800 angler trips compared to 5,600 during 2003. The total kept catch was 1,224 adult spring chinook and 347 fish were released. (337 wild). The Wanapum Tribe conducted a C&S fishery in the mainstem Columbia River below Priest Rapids Dam during May 3 through May 6, which resulted in a harvest of 14 spring chinook.

Past Select Area Fisheries

Spring chinook commercial fisheries in Select Areas were initiated with 9-day fishing seasons in Youngs Bay only during 1992-1994. Through 1996, fishing time was limited to less than 15 days each year with annual landings ranging from 155-851 spring chinook. Since 1997, landings in the spring Youngs Bay commercial fishery have increased significantly from 1,821 chinook landed in 1997 to 5,000-5,700 chinook landed in 2002-2004. Initial seasons in Youngs Bay were restricted to the spring fishing period with seasons occurring primarily during late April through early June. As returns increased, winter and summer seasons were also adopted in an attempt to harvest 100% of the returning adults. Winter seasons during late February through mid-March were initiated in 1998 to harvest early returning 5-year old spring chinook. Beginning in 1999, summer seasons during mid-June through July were adopted to increase harvest of late returning 4-year old spring chinook and early returning Select Area Bright (SAB) fall chinook. Prior to 2004, fisheries were consistently closed during mid-March through mid-April to minimize the handle of non-local spring chinook stocks which tend to be most abundant in SAFE areas during this period.

Commercial fisheries for spring chinook in Blind Slough were initiated in 1998 with a 9-day spring season that resulted in a catch of 60 spring chinook. Landings increased steadily during 1999-2000, and stabilized at approximately 2,030 fish harvested annually during 2001-2003. The first winter season in Blind Slough was established in 2000. As with Youngs Bay these winter seasons targeted early returning 5-year old SAFE spring chinook that are present prior to arrival of significant numbers of non-local stocks. Fisheries have consistently been closed during mid-March through mid-April to minimize the handle of non-local spring chinook stocks

which tend to be most abundant in SAFE areas during this period. The fishing area was initially limited to Blind Sough but was expanded to include the waters of Knappa Slough from the mouth of Blind Slough to the east end of Minaker Island in 1999 as returns increased. The expanded area was adopted to increase catch and decrease congestion during peak fishing periods. A trial summer season was adopted in Blind Slough in 1999 but it resulted in a harvest of only three spring chinook. No summer seasons have been adopted for Blind Slough since 1999.

Spring commercial fisheries in Tongue Point were initiated in 1998 and continued through 2003 with additional winter seasons occurring in 2000-2001. Similar to Blind Slough, nighttime weekday fishing periods (7pm-5am or 7pm-7am) were consistently adopted to minimize interactions with recreational boaters. The number of fishing periods allowed each year increased from 9 in 1998 to 18 during 2000-2001, and the area was expanded to include the South Channel in 1999 to reduce congestion during peak fishing periods. During 1998-2002, annual chinook harvest increased dramatically with landings peaking in 2002 when 3,003 fish were landed. High abundance of upriver spring chinook in this area during the 2003 spring fishery resulted in the harvest of 348 chinook during one fishing period prior to the remainder of the season being rescinded. Since production level releases of spring chinook at this site were discontinued in 2001 due to higher than anticipated straying of earlier releases, no winter or spring seasons were adopted in 2004 and future spring chinook fisheries at this site are contingent upon positive homing results of 2003-2005 experimental releases.

Although spring chinook have been released into the Deep River Select Area since 1998, releases were experimental, and returns were not adequate to support a commercial fishery until 2003. This initial experimental season resulted in a harvest of 117 fish, considerably less than the forecasted harvest of 600 fish, although effort was limited.

Select area fishing sites have been open for sport fishing since inception of the SAFE Project; however, angling participation has expanded slowly due to limited adult returns early in the program's history and because there are so many other fishing opportunities in the lower Columbia River. Recently, both effort and harvest in SAFE sport fisheries have increased, likely due to increasing adult returns and quality fishing opportunities. Within Select Areas, the most popular and productive spring chinook fisheries occur in Blind Slough/Knappa Slough and Youngs Bay during March-May. Based on limited creel data, the estimated annual recreational spring chinook harvest in Youngs Bay from 1998-2004 was 59 fish per year (range 14-121) with success usually dictated by water conditions. In Blind Slough/Knappa Slough an average of 346 spring chinook have been landed annually since 2000. During the same period, recreational harvest in nearby Gnat and Big creeks has ranged from 0-637 fish annually. The estimated sport harvest of 1,017 spring chinook in 2004 SAFE fisheries was a record high harvest for this fishery. Increased harvest in SAFE recreational spring chinook fisheries in recent years is likely an artifact of reduced commercial fishing opportunities in 2003-2004 and increased popularity among recreational fishers.

Since 1998, year-round recreational seasons have been in effect for chinook and adipose fin-clipped coho in Youngs Bay, Tongue Point, and Blind Slough. Similar regulations were adopted for South Channel and Knappa Slough in 1999 and for Deep River in 2000. In 2003, regulations to allow year-round angling for adipose fin-clipped steelhead were adopted in all Oregon Select

Areas. To minimize impacts to listed stocks of spring chinook, selective, adipose fin-clipped only regulations were permanently adopted for Select Area recreational fisheries effective January 1, 2004.

2004 Youngs Bay Winter/Spring/Summer Gillnet Season

A winter commercial fishery was adopted for the seventh consecutive year in Youngs Bay to target early arriving 5-year old SAFE spring chinook prior to the time when significant numbers of non-local chinook stocks are present in the lower Columbia River area. Since 2000, fishing time has consisted of one or two fishing periods weekly of 30-54 hours each for three weeks. In most years, this season structure has effectively allowed for harvest of early returning local stock adults while minimizing impacts on listed stocks. In 2003, an unanticipated high abundance of upriver stocks during the first three fishing periods prompted an emergency closure of the remaining three fishing periods.

For the 2004 winter fishery in Youngs Bay, seven fishing periods (four 12-hour and three 18-hour) between February 14 and March 7 were initially adopted at the February 5, 2004 Compact hearing. As in 2003, a 7¼-inch minimum mesh size was in place since steelhead handle is minimal in this fishery. Based on low impacts to upriver spring chinook during these fishing periods and an industry request for additional winter fishing opportunity, two additional winter fishing periods were adopted for March 13 (18 hours) and March 20 (12 hours). In order to focus the harvest on SAFE spring chinook, the fishing area during the later fishing period was restricted to the area upstream of the alternate (Old) Highway 101 Bridge. In addition, several fishers volunteered their boats and time to conduct test fishing in the restricted area prior to implementing the fishing period to ensure few upriver spring chinook were present. The nine fishing periods resulted in a record Youngs Bay winter season harvest of eight white sturgeon and 1,029 spring chinook; nearly double the previous high salmon catch for this season and area.

Based on results of the 2002-2003 Select Area spring seasons when impacts to upriver spring chinook increased beyond historic levels, the 2004 spring season in Youngs Bay was designed to begin in late- rather than mid-April and consist of progressively longer fishing periods through mid-June. This strategy of shorter, staggered fishing periods during the early portion of the fishery was intended to allow fishery managers time to summarize harvest sampling data between openings and adjust future proposed seasons to minimize impacts on non-local spring chinook. Although the initial spring fishing period was scheduled to occur on April 22-23 (12-hours) in the entire Youngs Bay area, the commercial industry requested consideration of a short, reduced-area fishing period earlier in April to provide a harvest opportunity on local SAFE stock while market demand and prices were high. Similar to the extended winter fishing periods, test fishing was conducted by volunteer fishers to determine if a mid-April opening would result in excessive upriver spring chinook impacts. Based on favorable stock composition during test fishing, the Youngs Bay spring season was initiated with a 4-hour daylight fishing period on April 12 in the area above the Old Youngs Bay Bridge. Subsequent seasons scheduled for April 22-23, 26-27, 29-30 (all 12 hours), and May 3-4 (18 hours) occurred as planned. Unfortunately, a lower than anticipated upriver run size inflated mainstem commercial impacts beyond management guidelines, thereby requiring inseason action for Select Area fisheries. On May 4, 2004 all adopted Select Area fishing periods from May 5-June 18 were rescinded. Because of a very low probability of accruing additional upriver impacts in Select Areas after mid-May, the

previously scheduled fishing periods for Select Areas were allowed to resume beginning May 20 except in Youngs Bay where fishing periods were shortened to three 12-hour periods during May 20-28. Normal extended fishing periods of 3-4 days per week in Youngs Bay were allowed to resume on May 31 and continued through June 18. The combined fishing period modifications for winter and spring seasons in Youngs Bay resulted in a net loss of about 5 fishing days for the 2004 season. The modified 2004 Youngs Bay spring fishery landed 92 white sturgeon and 5,555 chinook which is the second highest chinook harvest for this season since first established in 1992. Throughout the spring season, an 8-inch maximum mesh size restriction was in effect to target chinook instead of sturgeon.

To provide harvest opportunity on early returning Select Area bright (SAB) stock fall chinook and any remaining local spring chinook, a six week summer gillnet season was set in Youngs Bay during late June through July. The 2004 summer season opened for two days from noon June 23 through noon June 25 and continued with five more fishing periods as follows: noon June 30 to noon July 2 (2 days); noon July 7 to 6 PM July 8 (1 day); noon July 14 to 6 PM July 15 (1 day); noon July 21 to 6 PM July 22 (1 day); and noon July 28 to 6 PM July 29 (1 day). An 8-inch maximum mesh size restriction was adopted to target chinook instead of sturgeon. The Youngs Bay summer fishery yielded landings of 256 chinook and 19 white sturgeon.

The combined Youngs Bay winter/spring/summer fishery stock composition was based on VSI and CWT analysis with a total of 2,912 chinook (43% of the combined catch of 6,840 chinook) examined for fin marks and CWT's and 769 snouts being collected. Based on scale readings, verified with CWT's, the age composition of the catch was <1% age-3, 31% age-4, 68% age-5, and 1% age-6 fish. The 2004 combined catch was estimated to include 5,746 spring chinook and 255 SAB fall chinook destined for Select Area sites; 158 spring chinook and 38 summer chinook destined for locations above Bonneville Dam; 477 Willamette River spring chinook; 39 Sandy River spring chinook; and 127 spring chinook destined for the Cowlitz, Kalama, or Lewis rivers.

2004 Blind Slough/Knappa Slough Winter/Spring Gillnet Season

Similar to 2000-2003, a winter gillnet season was adopted for the Blind Slough area only in 2004 to harvest early arriving, larger 5-year old chinook. Similar to Youngs Bay, a 7¼-inch minimum mesh restriction was in place to target salmon and minimize handle of steelhead. The season was set at the February 5, 2004 Compact hearing for four 12-hour periods (7 PM-7 AM) during February 14-15, 21-22, 28-29, and March 6-7. As occurred in Youngs Bay, two additional winter fishing periods were adopted for March 13-14 (7 PM-7 AM) and March 20-21 (7 PM-7 AM) based on an industry request to maximize fishing opportunity. To ensure minimal risk of impacts to upriver spring chinook stocks, the extended fishing periods were restricted to Blind Slough and local fishers conducted volunteer test fishing to determine stock composition prior to adoption of the extended seasons. During the six winter fishing periods in 2004, a total of 290 spring chinook and one white sturgeon were landed which was a record high winter harvest for the Blind Slough fishing site.

During the spring fishery, the Blind Slough Select Area site was expanded to include Knappa Slough to increase fishing area and maximize the opportunity to harvest local SAFE stock spring chinook. An 8-inch maximum mesh size restriction was also required to target chinook and limit sturgeon catch. The 2004 spring fishery was intended to consist of 16, 12-hour (7 PM-7 AM) fishing periods occurring one or two weeknights each week between April 23 and June 18.

However, to provide additional fishing opportunity in Select Areas as requested by the commercial industry, an additional earlier 4-hour fishing period was adopted on April 12, concurrent with the additional Youngs Bay opener. Following this initial abbreviated opener, three subsequent fishing periods planned for April 22-23, 29-30, and May 3-4 (all 7 PM-7 AM) occurred as expected; however, the following four periods during May 6-May 18 were rescinded due to uncertainty regarding the upriver run size. Fishing resumed on May 20 and continued as planned through June 18 (nine 12-hour periods). The combined modifications to the 2004 winter and spring seasons in Blind Slough resulted in a net loss of one fishing day. The modified 2004 Blind/Knappa Slough spring fishery landed 59 white sturgeon and a record 3,255 spring chinook.

The combined Blind Slough/Knappa Slough winter and spring fishery stock composition was based on VSI and CWT analysis with a total of 1,680 chinook (47% of the combined catch) examined for fin marks and CWT's and 702 snouts being collected. Based on scale readings, verified with CWT's, the age composition of the catch was <1% age-3, 54% age-4, 45% age-5, and <1% age-6 fish. The 2004 Blind Slough/Knappa Slough catch was estimated to include 3,348 spring chinook and 2 SAB fall chinook destined for Select Area sites; 35 spring chinook destined for locations above Bonneville Dam; 118 Willamette River spring chinook; 21 Sandy River spring chinook; and 21 spring chinook destined for the Cowlitz, Kalama, or Lewis rivers.

2004 Deep River Experimental Spring Gillnet Season

An experimental spring fishery was established in Deep River for the second year in 2004. Winter seasons were not established for this site in 2003 and 2004 due to limited adult returns. Similar to Blind Slough, a total of 16 spring fishing periods (7 PM-7 AM) occurring one or two nights weekly between April 22 through June 18 were adopted at the February 5, 2004 Compact hearing. The earlier fishing period (April 12) adopted in Youngs Bay and Blind Slough was not considered for this site due to fewer returning adults. The first three fishing periods on April 22-23, 29-30, and May 3-4 occurred as scheduled but as previously explained, the four periods planned for May 6-7, 10-11, 13-14, and 17-18 were rescinded. Fishing resumed on May 20 and continued as planned through June 18 (nine 12-hour periods). The fishing area during all periods was restricted to the area from the Highway 4 Bridge to the Deep River boat launch. Gear regulations included a 100-fathom maximum length, an 8-inch maximum mesh size, and no weight restrictions. As has been the case in other SAFE sites, the 2003 and 2004 spring seasons at this site were considered experimental with complete (100%) sampling of the landed catch required before harvested fish could be transported out of the fishing area. To facilitate this, a sampling station was established at Kato's dock upstream of the Highway 4 Bridge.

A total of 115 chinook were landed in the fishery with a 92% mark rate. All fish were examined for fin marks and CWT's with 30 snouts collected. Visual stock identification corrected for coded-wire tag recoveries indicated the catch consisted entirely of lower river stock spring chinook.

2004 Commercial Shad Seasons

The Compact adopted a 29-day commercial shad season for Area 2S in 2004 which included all weekdays (except Memorial Day) from May 17 to June 25 with the following gear specifications that have been in place since 1996: mesh size restriction of 5⅜ to 6¼-inches, 10-lb. breaking

strength, and net not to exceed 40 meshes in depth nor 150 fathoms in length. The shallower and shorter nets have substantially reduced the handle of salmonids compared to the traditional gear used in fisheries prior to 1996. The 2004 fishery was restricted to daily periods of 3 PM to 10 PM only, which has also been in effect since 1996. Only shad could be kept and sold and all salmon, steelhead, walleye, and sturgeon were required to immediately be released.

As has been the case in recent years, participation was low with only 3-6 boats participating during the 2004 season. A total of 48,360 shad (130,570 pounds) were landed in the Area 2S fishery; with a salmonid handle of 11 summer chinook, 4 summer steelhead, and 1 sockeye (Table 16). Immediate and delayed salmonid mortalities were estimated to be 2 adult summer chinook, 2 summer steelhead, and zero sockeye. No monitoring occurred during the 2004 fishery. The 1999-2001 average shad per salmonid ratios observed from onboard monitoring were adjusted for salmonid run sizes and used to estimate the salmonid handle in the 2004 fishery.

Until 2000, a long-standing Washougal Reef commercial shad fishery had been adopted annually. The physical characteristics of this area allowed shad to be harvested without incidental handle of salmonids. Interest in this fishery waned during the late 1990's with only one fisher participating in this fishery during 1996-1997 and no fishers participating during 1998-2000. Due to lack of interest no Camas-Washougal Reef shad fishery has been adopted since 2000 (Table 16).

2004 Impacts to ESA Listed Stocks

The impact guideline for listed upriver spring chinook in non-Indian Columbia River fisheries was 2.0% in 2004. The 2% impact rate was allocated 60% to sport fisheries including above McNary Dam, and 40% to commercial fisheries including SAFE. The impact rate on listed upriver spring chinook in the sport fisheries was 1.14% below Bonneville Dam and 0.08% from Bonneville Dam to McNary Dam. The Snake River sport fishery had an impact rate on Snake River wild spring chinook of 0.16% and the Wanapum tribal fishery had an impact rate on Upper Columbia wild spring chinook of 0.06%. Combined sport fishery impacts to listed upriver spring chinook, as measured at the Columbia River mouth was 1.38% compared to the allocation of 1.2%.

The impact rate on listed upriver spring chinook in the commercial fishery was 0.95% in the mainstem commercial fishery and 0.1% in the SAFE commercial fisheries for a total of 1.05% compared to the allocation of 0.8%. Combined impacts in all non-Indian fisheries in 2004 on Snake River wild spring chinook was 2.43% and on upper Columbia wild spring chinook was 2.34%, compared to the guideline of 2%. The sport/commercial share of the impact rate was 57% sport and 43% commercial, consistent with the allocation sharing guideline of 60% sport and 40% commercial.

Summer chinook fisheries occurred after June 16 and were directed at upper Columbia River summer chinook. Impacts to Snake River wild summer chinook have not been calculated; however, during June 1-15 a total of 47 mortalities to summer chinook occurred during steelhead sport fisheries or SAFE commercial fisheries. Total non-Indian impacts to listed summer chinook are projected to be well within the guideline of 1% for 2004.

Total impacts to Snake River sockeye are estimated to be 0.5% in 2004, compared to the allowable impact rate of 1%. It is estimated that one Snake River sockeye was handled/harvested in 2004. Impacts to wild winter steelhead are estimated to be 0.8% (0.7% commercial and 0.1% sport), compared to the 2% impact rate guideline.

Treaty Indian Fisheries

2004 Treaty Indian Winter Commercial Season

The 2004 winter setline fishery was open in all of Zone 6 from January 1 to January 31. No harvest was recorded. The winter gillnet season was open for 37 days from February 2 through March 10 in the Bonneville and The Dalles pools and 48 days from February 2 through March 21 in the John Day Pool. The 2004 winter gillnet season commercial sturgeon catches were more than those observed during 2003 with 1,840 sturgeon caught. The steelhead and chinook catches were less than 2003 with a total catch of 66 steelhead, 2 spring chinook, and 49 walleye (Table 18). The winter season steelhead catch has been low in recent years, due to fishers targeting sturgeon. The sale of spring chinook was discontinued on March 10.

2004 Winter Commercial Landings

		White Sturgeon			
Pool	Steelhead	Setline	Gillnet	Walleye	Chinook
Bonneville	57	0	500	15	2
The Dalles	6	0	1017	0	0
John Day	3	0	323	34	0
Total	**66**	**0**	**1,840**	**49**	**2**

2004 Treaty Indian Mainstem Spring and Summer Chinook and Sockeye Fisheries

Tribal intent for 2004 spring chinook fisheries was to remain within impact rates allowed by the 2001-2003 Interim Management Agreement. The preseason planning for the 2004 treaty mainstem harvest was 46,891 spring chinook (13% of the 360,700 forecasted run). Additionally, preseason planning was for 5,140 summer chinook (5.0% of 102,800 forecasted run), and 5,635 sockeye (7.0% of 80,500 forecasted run). The actual run sizes were 193,400 spring chinook, 93,400 summer chinook and 124,000 sockeye.

The four tribes issued permits for gillnet C&S fisheries for spring chinook during March and April, and held a commercial gillnet fishery consisting of four weekly openings from May 4 to May 28. During the commercial fishery, fish were sold to commercial buyers and over the bank to the public. The estimated C&S gillnet permit catch was 7,544 spring chinook (3.9% of 193,400 upriver run). The commercial fishery landed 8,368 spring chinook (4.3% of 193,400 upriver run). Additionally, 2 spring chinook were caught during the winter commercial fishery. The estimated catches for the platform and hook-and-line C&S fisheries were 1,260 spring chinook (0.6% of 193,400 upriver run) and 700 summer chinook (0.8% of 93,400 upriver run). There were also 8,004 summer chinook harvested in five commercial gillnet openings. During 2004 spring chinook harvest totaled 17,172 and summer chinook harvest was 8,704.

Estimates of stock composition are based on upriver run proportions determined by the TAC run reconstruction. The final upriver spring chinook run was estimated to total 193,400 which resulted in an allowed harvest rate of 9%. Winter and spring fisheries harvested 8.8% of the upriver spring chinook return (Table 7). The summer chinook catch of 8,704 was 9.3% of the

actual 2004 summer chinook return of 93,400. However, because TAC estimated that the 5% harvest rate limit on Snake River summer chinook was exceeded by June, tribal fisheries were allowed to continue in July after Snake River summer chinook were presumed to be clear of Zone 6 (Table 8).

There were 2,590 sockeye caught in platform and hook-and-line C&S fisheries and 1,719 sockeye caught in commercial gillnet fisheries. The overall catch of 4,317 was 3.5% of the return of 124,000 as compared to the allowed harvest rate of 7%. The TAC estimated that 5 of the sockeye caught were Snake River sockeye (Table 11).

Steelhead harvest during winter and spring fisheries was less than 2003 with tribal fishers harvesting 461 steelhead during winter and spring fisheries. Harvest was greater in the summer fisheries with 5,464 steelhead landed. Many of the 5,628 total steelhead would be expected to be Skamania or Group A summer steelhead. Some of the winter and spring season catch may have been winter steelhead and hold-over summer steelhead from the 2003-2004 run. These fish were not sampled to determine a hatchery to wild ratio and there is no definitive method of determining the number of winter steelhead or hold-over steelhead in the early season catch.

2004 Ceremonial and Subsistence Entitlement

The Interim Management Agreement as well as the expired CRFMP identified a minimum C&S annual entitlement to the Columbia River treaty tribes of 10,000 spring and summer chinook, or fish of equivalent quality. After spring and summer C&S platform and permit gillnet fisheries are accounted for, the balance of the entitlement is to be provided to the tribes by the states of Oregon and Washington. Due to the large upriver spring and summer chinook return the full entitlement was achieved in 2004 without using surplus fish from ODFW or WDFW.

2004 Ceremonial and Subsistence Entitlement Summary		
C&S permit gillnet spring fishery	7,544	spring chinook
Winter gillnet fishery	2	spring chinook
C&S platform winter/spring fishery	1,260	spring chinook
Commercial gillnet fishery	8,368	spring chinook
C&S platform summer fishery	700	summer chinook
Commercial gillnet fishery	8,004	summer chinook
Total	***25,878***	***Spring and summer chinook***

2004 Shad Fisheries

In 2004, treaty Indian fishers harvested approximately 30,000 shad (~60,000 pounds) in early June at The Dalles Dam east fish ladder exit. Precise catch estimates are not available at this time.

2005 MANAGEMENT GUIDELINES

Endangered Species Act Consultation

Salmon and Steelhead

Since 1991, the NMFS has identified the majority of Columbia River basin salmon and steelhead populations as requiring protection under the ESA. The table below describes the status of Columbia River basin ESU's. Unless otherwise noted, the listed component includes wild/natural populations only.

The NMFS has provided a Biological Opinion on the *"Interim Management Agreement for Upriver Spring Chinook, Summer Chinook, and Sockeye"*, which will cover fisheries until a new Biological Opinion has been signed for the 2005-2007 *"Interim Management Agreement for Upriver Chinook, Sockeye, Steelhead, Coho and White Sturgeon"*. The states have re-initiated consultation with NOAA Fisheries regarding impacts to wild winter steelhead and a response is expected prior to the January Compact hearing.

Federally-listed Salmon and Steelhead of the Columbia River Basin. [1]			
Species - *ESU*	Designation	Listing Date	Effective Date
Chinook			
Snake River Fall	Threatened	April 22, 1992	May 22, 1992
Snake River Spring/Summer	**Threatened**	**April 22, 1992**	**May 22, 1992**
Upper Columbia Spring	**Endangered**	**March 24, 1999**	**May 24, 1999**
Upper Columbia Summer/Fall	**Not warranted**	--	--
Middle Columbia Spring	**Not warranted**	--	--
Lower Columbia River Spring/Fall	**Threatened**	**March 24, 1999**	**May 24, 1999**
Upper Willamette Spring	**Threatened**	**March 24, 1999**	**May 24, 1999**
Deschutes River Fall	Not warranted	--	--
Steelhead			
Snake River	**Threatened**	**August 18, 1997**	**October 17, 1997**
Upper Columbia River [2]	**Endangered**	**August 18, 1997**	**October 17, 1997**
Lower Columbia River	**Threatened**	**March 19, 1998**	**May 18, 1998**
Middle Columbia River	**Threatened**	**March 25, 1999**	**May 24, 1999**
Southwest Washington	Not warranted	--	--
Upper Willamette	**Threatened**	**March 25, 1999**	**May 24, 1999**
Sockeye – Snake River	**Endangered**	**November 20, 1991**	**December 20, 1991**
Chum – Columbia River	Threatened	March 25, 1999	May 24, 1999
Coho – Columbia River [3]	Candidate	--	--

1. *The ESU's in bold are present in the Columbia River basin during the time when fisheries described in this report occur and therefore may be impacted by these fisheries.*
2. *Includes hatchery fish.*
3. *On June 14, 2004 Lower Columbia River coho were proposed for listing. This ESU includes all naturally spawning population of coho salmon in the Columbia River and its tributaries from the mouth of the Columbia up to and including the White Salmon and Hood rivers.*

Wild Winter Steelhead Management

The states of Washington and Oregon are proposing an increase in the allowable incidental take limit for wild winter steelhead populations in the three Columbia River ESU's affected by non-Indian spring chinook fisheries. This increase is from a 2% to a 6% allowable impact, with a management guideline of 5% for fisheries taking place in 2005. In January of 2004 the states requested re-initiation of consultation with NOAA fisheries regarding the "Biological Opinion-Impacts of the Interim Management Agreement for Upriver Spring Chinook, Summer Chinook and Sockeye on Salmon and Steelhead Listed under the Endangered Species Act".

The current 2% impact limit specification is found in the existing biological opinion (NMFS 2001) and supplemental biological opinion (NMFS 2003). These biological opinions include management guidelines that would direct the non-Indian commercial spring chinook live capture fishery to be conducted in such a way as to not exceed the 2% impact limit on wild winter steelhead. In addition to the guidelines set forth in these biological opinions, the states are proposing the following management actions and measures for 2005 fisheries:

1. A commercial fishing plan for 2005 will be adopted at the January 28, 2005 Compact hearing. This fishing plan will set forth a schedule for test fishing, decision making dates and possible commercial fishing dates to ensure that the fishery focuses on hatchery Willamette spring chinook and minimizes handle of listed spring chinook and steelhead.
2. Live capture fishing period lengths will not exceed 16 hours during fishing periods that incorporate a 4 ¼-inch net.
3. The minimum mesh size restriction for the large mesh portion of the fishery will be 9-inch. The 9-inch minimum mesh size regulation should nearly eliminate steelhead handle during this period.
4. Large sanctuaries around the Washington tributary mouths will be adopted at the January 28, 2005 Compact hearing.
5. The fishery will attempt to limit commercial fishing during the third to fourth weeks in March, or when wild winter steelhead abundance is at its peak. Fishing during this time frame will be based on results of test fishing or previous commercial fishing periods. This management strategy may require some commercial fishing in April to reduce steelhead handle in late March.
6. The use of steelhead excluders will be encouraged by the states in 2005.

Marbled Murrelet ESA Consultation

There has been no change in the status of marbled murrelet since 1994. The winter, spring, and summer fisheries are still not likely to adversely affect the listed marbled murrelet.

Columbia River Fish Management Plan

The CRFMP expired on December 31, 1998, but was extended through July 31, 1999. The parties to *United States v Oregon* have re-negotiated a new plan covering fisheries from January 2005 through December 2007.

2005-2007 Interim Management Agreement

The Interim Management Agreement titled *"2005-2007 Interim Management Agreement for Upriver Chinook, Sockeye, Steelhead, Coho and White Sturgeon"* provides specific fishery management constraints with respect to upriver spring chinook, summer chinook, and sockeye.

Upriver Spring Chinook (January 1 through June 15)

Non-Indian and treaty Indian winter and spring season fisheries will be managed in accordance with Table A1 of the *"2005-2007 Interim Management Agreement for Upriver Chinook, Sockeye, Steelhead, Coho and White Sturgeon"*. Based on preseason forecasts, the spring chinook harvest allocation table allows for non-Indian impacts up to 2% of the upriver spring chinook run and treaty Indian impacts up to 10%.

Table 1A. Harvest Rate Schedule for Chinook in Spring Management Period

Total Upriver Spring and Snake River Summer Chinook Run Size	Snake River Natural Spring/Summer Chinook Run Size [1]	Treaty Zone 6 Total Harvest Rate [2,5]	Non-Treaty Natural Harvest Rate [3]	Total Natural Harvest Rate [4]	Non-Treaty Natural Limited Harvest Rate [4]
<27,000	<2,700	5.0%	<0.5%	<5.5%	0.5%
27,000	2,700	5.0%	0.5%	5.5%	0.5%
33,000	3,300	5.0%	1.0%	6.0%	0.5%
44,000	4,400	6.0%	1.0%	7.0%	0.5%
55,000	5,500	7.0%	1.5%	8.5%	1.0%
82,000	8,200	7.0%	2.0%	9.0%	1.5%
109,000	10,900	8.0%	2.0%	10.0%	
141,000	14,100	9.0%	2.0%	11.0%	
217,000	**21,700**	**10.0%**	**2.0%**	**12.0%**	
271,000	27,100	11.0%	2.0%	13.0%	
326,000	32,600	12.0%	2.0%	14.0%	
380,000	38,000	13.0%	2.0%	15.0%	
434,000	43,400	14.0%	2.0%	16.0%	
488,000	48,800	15.0%	2.0%	17.0%	

1. *If the Snake River natural spring/summer forecast is less than 10% of the total upriver run size, the allowable mortality rate will be based on the Snake River natural spring/summer Chinook run size. In the event the total forecast is less than 27,000 or the Snake River natural spring/summer forecast is less than 2,700, Oregon and Washington would keep their mortality rate below 0.5% and attempt to keep actual mortalities as close to zero as possible while maintaining minimal fisheries targeting other harvestable runs.*
2. *Treaty Fisheries include: Zone 6 Ceremonial, subsistence, and commercial fisheries from January 1-June 15. Harvest impacts in the Bonneville Pool tributary fisheries may be included if TAC analysis shows the impacts have increased from the background levels.*
3. *Non-Treaty Fisheries include: Commercial and recreational fisheries in Zones 1-5 and mainstem recreational fisheries from Bonneville Dam upstream to the Hwy 395 Bridge in the Tri-Cities and commercial and recreation SAFE (Selective Areas Fisheries Evaluation) fisheries from January 1-June 15; Wanapum tribal fisheries, and Snake River mainstem recreational fisheries upstream to the Washington-Idaho border from April through June. Harvest impacts in the Bonneville Pool tributary fisheries may be included if TAC analysis shows the impacts have increased from the background levels.*
4. *If the Upper Columbia River natural spring Chinook forecast is less than 1,000, then the total allowable mortality for treaty and non-treaty fisheries combined would be restricted to 9% or less. Whenever Upper Columbia River natural fish restrict the total allowable mortality rate to 9% or less, then non-treaty fisheries would transfer 0.5% harvest rate to treaty fisheries. In no event would non-treaty fisheries go below 0.5% harvest rate.*
5. *The Treaty Tribes and the States of Oregon and Washington may agree to a fishery for the Treaty Tribes below Bonneville Dam not to exceed the harvest rates provided for in this Agreement.*

The Interim Management Agreement provides for a minimum mainstem treaty Indian C&S entitlement to the Columbia River treaty tribes of 10,000 spring and summer chinook. It is anticipated that the majority of this entitlement will be taken from the January 1 through June 15 management period. Tributary harvest of spring and summer chinook is not included in this entitlement. It is understood that if the total mainstem Columbia River treaty Indian harvest of spring and summer chinook is greater than or equal to 10,000 spring and summer chinook, then this entitlement has been met. If the total mainstem Columbia River treaty Indian harvest of spring and summer chinook is less than 10,000, then the difference will be distributed to the tribes from spring chinook hatcheries below Bonneville Dam as first priority. If spring chinook are not available from hatcheries below Bonneville Dam, or by agreement of the parties, the entitlement may be filled from other hatchery sources of equivalent quantity and quality.

Upper Columbia River Summer Chinook

Mainstem Columbia River chinook fisheries occurring from June 16 through July 31 will be managed based on the abundance of upper Columbia River summer chinook – fish destined for areas above Priest Rapids Dam. The parties agree to manage upper Columbia River summer chinook based on an interim management goal of 29,000 hatchery and natural origin adults as measured at the Columbia River mouth. The management goal is based on an interim combined spawning escapement goal of 20,000 hatchery and natural adults. Mainstem fisheries will not be managed for these individual components. The following table lists the components of the goal:

Run Size at River Mouth	*Allowed Treaty Harvest*	*Allowed Non-Treaty Harvest*
<5,000	5%	<100 Chinook
5,000-<16,000	%	<200 Chinook
16,000-<29,000	10%	5%
29,000-<32,000	10%	5-6%
32,000-<36,250 (125% of 29,000 goal)	10%	7%
36,250-50,000	50% of total harvestable [1]	50% of total harvestable [1]
>50,000	50% of 75% of margin above 50,000 plus 10,500 [2]	50% of 75% of margin above 50,000 plus 10,500 [2]

1 The total number of harvestable fish is defined as the run size minus 29,000 for run sizes of 36,250 to 50,000.

*2 For the purposes of this Agreement, the total number of harvestable fish at run sizes greater than 50,000 is to be determined by the following formula: (0.75 * (runsize-50,000)) + 21,000.*

Based on the run forecast for 2005 of 62,400 upper Columbia summer chinook at the mouth of the Columbia River, the harvest rate for all non-Indian fisheries, including sport and tribal fisheries above McNary Dam is 23.8%, and the harvest rate for treaty Indian fisheries is 23.8%.

Sockeye

The management goal for upper Columbia River sockeye is 65,000 adult sockeye as measured at Priest Rapids Dam, which under average migration conditions requires a 75,000 run over Bonneville Dam. Combined non-Indian commercial and recreational impacts on listed sockeye will be minimized to the degree possible, but shall not exceed 1% of the run entering the

Columbia River. Fisheries conducted by the Columbia River treaty tribes will be managed according to the following schedule:

Upriver Sockeye Run Size	Harvest Rate
<50,000	5%
50,000-75,000	7%
>75,000	7%, with further discussion

All fishery impacts on sockeye will be included in the specified harvest rates. If the upriver sockeye run is projected to exceed 75,000 adults over Bonneville Dam then any party may propose harvest rates exceeding the aforementioned harvest rates. Parties shall prepare a revised Biological Assessment of proposed Columbia River fishery impacts on ESA-listed sockeye and shall submit the Biological Assessment to the NOAA Fisheries for consultation under Section 7 of the ESA.

Non-Indian Allocation of Upriver Impacts

The 2005-2007 Interim Management Agreement currently provides a harvest rate for upriver spring chinook of 2.0% for non-Indian sport and commercial fisheries for 2005. A policy decision concerning the allocation of non-Indian upriver spring chinook impacts between sport and commercial fisheries was determined for 2004 and 2005. Guiding principles and fisheries management objectives were adopted to provide staff with guidance when shaping fisheries preseason and managing fisheries inseason.

Mainstem Columbia River Spring Chinook Allocation For Non-Indian Fisheries, 2004-2005
Guiding Principles
• Meet conservation requirements for wild spring chinook, including populations listed under the federal Endangered Species Act.
• Manage non-Indian harvest of spring chinook within the provisions of the *U.S. v Oregon* Management Agreement for upriver spring chinook.
• Manage harvest to meet hatchery escapement goals.
• Focus sport and commercial fisheries' allocation on harvest of hatchery fish by implementing live capture and release of unmarked spring chinook.
Fisheries Management Objectives
• Specific structure of sport and commercial fisheries will be set by the Columbia River Compact on an annual basis to meet adopted allocation policies and fisheries objectives after annual run size forecasts are available and after public discussions.
• Provide for in-season management flexibility to utilize the non-Indian upriver spring chinook impact allocation to meet the objectives of both fisheries, i.e., upriver impact sharing adjustments in response to in-season information pertaining to catch and run size.
• Adjustments to the sport fishery may occur in-season if it is estimated the fishery will not continue through April. In-season adjustments may include such options as days/week and area closures.
• Reduce sport mortality rate with a new regulation requiring “any salmon to be released may not be removed from the water”.
• Recognize economic benefits of sport and commercial fisheries in the Columbia River.
• Provide for sport fisheries throughout the Columbia River downstream of McNary Dam, sport/tribal fisheries in the Snake River and Upper Columbia River, and commercial and sport fisheries in Select Areas.

The Directors of WDFW and ODFW provided staff with additional guidance for implementing OFWC and WFWC Commission policies concerning allocation of non-Indian spring chinook impacts between sport and commercial fisheries. Non-Indian fisheries will be allocated 60% for sport fisheries and 40% for commercial fisheries. Sport fisheries include fisheries above McNary Dam and commercial fisheries include SAFE areas.

Willamette Spring Chinook Management

Fishery Management and Evaluation Plan For Willamette Spring Chinook

On May 24, 1999 wild spring chinook destined for the Willamette River Basin were listed as threatened under the ESA. In accordance with the threatened listing, the state of Oregon completed an FMEP to comply with Section 4(d) of the ESA. The FMEP sets forth wild Willamette River spring chinook freshwater impact limits of 20% for 2001 and 15% for 2002 and beyond. The FMEP also addresses impacts associated with sport fisheries occurring in the Willamette River Basin and sport and commercial fisheries occurring in the mainstem Columbia River. In addition to the impact limits, the FMEP also requires that all wild Willamette River spring chinook landed in freshwater fisheries be released. The ODFW will conduct a comprehensive review of this plan after completion of 2004 fisheries to evaluate whether fisheries and wild populations are performing as expected. Comprehensive reviews will be repeated by the ODFW at 5-year intervals thereafter until such time as wild stocks are recovered or delisted. In accordance with the FMEP, sport and commercial fisheries occurring in 2005 will be managed such that cumulative freshwater impacts from sport and commercial fisheries will not exceed 15% on wild spring chinook destined for the Willamette River. Additionally, all wild Willamette spring chinook landed in 2005 sport and commercial fisheries in the mainstem Columbia and Willamette rivers will be released.

Willamette River Basin Fish Management Plan

The original WFMP was adopted in 1981, readopted in 1988, and revised in 1992 for the mainstem Willamette River, the Clackamas River Basin, the Molalla and Pudding rivers, the Santiam and Calapooia River basins, the McKenzie River Basin, and the Willamette River Basin above the mouth of the McKenzie River. On February 27, 1998 the OFWC adopted revisions to spring chinook chapters of the WFMP and on February 19, 1999 the OFWC further revised the fishery matrix regime in the "Mainstem Willamette Spring Chinook" chapter. Beginning in 2001 freshwater fisheries were managed in accordance with the FMEP, which superceded the fishery matrix regime in the "Mainstem Willamette Spring Chinook" chapter. For mainstem Columbia River fisheries in 2001 impact limits of 6-7% for commercial fisheries and 1.7% for sport fisheries were adopted by the OFWC.

More recently, the operating policies and objectives of the mainstem WFMP for spring chinook were revised in accordance with the recently completed FMEP for Willamette spring chinook and these revisions were adopted at the OFWC meeting on December 14, 2001. Revisions to the WFMP included adoption of escapement goals for hatchery-produced spring chinook over Willamette Falls and to the Clackamas River plus determination of the sport/commercial allocation of hatchery-produced spring chinook in excess of the escapement goal. These revisions to the WFMP are designed to allow for the orderly implementation of live capture selective fishing strategies for all freshwater fisheries beginning in 2002. Due to the selective

nature of live capture fisheries, sport and commercial allocations will be focused on the abundance of hatchery-produced Willamette spring chinook.

The escapement goals adopted by the OFWC are shown in the table below. These escapement levels provide for full selective fisheries in Willamette River tributaries and meet hatchery broodstock escapement goals. The increase in escapement goals as the hatchery run size increases allows tributary areas to share in increased fishery benefits created by an increased abundance of hatchery fish.

Hatchery Spring Chinook Escapement Goals at Willamette Falls And the Clackamas River			
Predicted	Hatchery Fish Escapement		
Hatchery Return	Falls	Clackamas	Total
<40,000	20,000	3,000	23,000
40,000-49,999	22,000	3,300	25,300
50,000-59,999	24,000	3,600	27,600
60,000-69,999	26,500	4,000	30,500
70,000-79,999	29,000	4,400	33,400
80,000-89,999	32,000	4,900	36,900
90,000-100,000	35,000	5,400	40,400
>100,000	39,000	6,000	45,000

The sport and commercial allocation of hatchery-produced Willamette spring chinook is shown in the table below. Sport fisheries included in the sport allocation are those occurring in the lower Columbia River (below Bonneville Dam), lower Willamette River (below Willamette Falls), and lower Clackamas River (below North Fork Dam). Commercial fisheries included in the commercial allocation are those occurring in the lower Columbia River. The sport/commercial allocation plan is designed to allow for full sport fisheries in the mainstem Willamette and Clackamas rivers at hatchery run sizes greater than 32,000 fish and allow the commercial share to gradually increase as the forecasted run and allowable catch increases.

Sport/Commercial Allocation of Willamette Hatchery Spring Chinook		
	Allocation of Harvestable Numbers	
Predicted Hatchery Return	Sport	Commercial
<23,000	<1%	<1% of predicted return as incidental for other fisheries
23,000-39,999	100%	<1% of predicted return as incidental for other fisheries
40,000-44,999	85%	15%
45,000-49,999	80%	20%
50,000-59,999	76%	24%
60,000-75,000	73%	27%
>75,000	70%	30%

Lower Columbia River Sturgeon Management

In October 1996, the directors of ODFW and WDFW signed "The Olympia Accord on Columbia River Sturgeon Fishery Management". Major tenets of the Management Agreement for lower Columbia fisheries guided white sturgeon fishery management decisions during 1997-1999. During the late fall and winter of 1999, the Oregon and Washington Fish and Wildlife Commissions reevaluated the major tenets of The Olympia Accord, especially the harvestable number and the sport/commercial allocation. These discussions culminated in February 2000 when the Directors of ODFW and WDFW signed a 3-year Joint State Management Agreement concerning sturgeon management for 2000-2002. A new harvestable number of 50,000, down from 67,300 in the previous Accord, was adopted but other major tenets of the previous Accord remained intact, including the 80% sport/20% commercial catch allocation.

During the fall of 2002 the Oregon and Washington Fish and Wildlife Commissions again reevaluated the major tenets of the previous Joint State Agreement, especially the harvestable number. Based on declining abundance estimates the Commissions adopted a reduced harvestable number of 40,000 white sturgeon for 2003-2005. Other major tenets of the previous Joint State Agreements remained intact, including the 80% sport and 20% commercial catch allocation. The current Joint State Sturgeon Agreement calls for an average annual harvestable number of 40,000 white sturgeon (32,000 sport and 8,000 commercial), which equates to a 3-year total of 120,000 white sturgeon (96,000 sport and 24,000 commercial). In 2004 additional modifications were made to the management guidelines. These modifications include reducing the annual recreational catch limit in Washington from ten to five sturgeon, changing the legal size limit of harvestable sturgeon in the sport fishery during specific areas and time frames, and the OFWC adopted a regulation making it unlawful to use more than one single barbless hook while fishing for sturgeon. The WFWC will meet in February of 2005 and consider the same regulation. The major tenets of this Joint State Agreement are described in "*The Joint Staff Report Concerning Commercial Seasons for Sturgeon and Smelt in 2005"*

2005 WINTER, SPRING, AND SUMMER SEASON RECOMMENDATIONS

Fisheries considered in this report will be managed in accordance with the "2005-2007 Interim Management Agreement for Upriver Chinook, Sockeye, Steelhead, Coho and White Sturgeon". The states will submit a Biological Assessment to NOAA Fisheries regarding fisheries covered in this Agreement.

A sliding scale harvest matrix is currently in effect for upriver spring chinook. Based on the current matrix and a river mouth run size forecast of 254,100 upriver spring chinook, the total harvest rate on upriver spring chinook (January through June 15) will be 12% with 2% allocated to non-Indian fisheries and 10% allocated to treaty Indian fisheries. In 2005, non-Indian fisheries will include selective sport and commercial spring chinook fisheries where the release of non-adipose fin-clipped chinook will be required, in accordance with the Willamette River spring chinook FMEP. Release mortality impacts will be estimated and monitored inseason to ensure that impacts do not exceed 2% of the upriver spring chinook run. Summer chinook fisheries occurring after June 15 will be managed based on the fishery management framework in the Management Agreement (see table). Impacts to listed sockeye will vary depending on run size which will be updated inseason. Impacts to steelhead in non-Indian fisheries will occur as

release mortalities during selective sport and commercial fisheries. A decision from NOAA Fisheries regarding wild winter steelhead impact rates for 2005 is expected soon.

Recognizing the complexities of managing a mixed stock fishery, the Compact will have to be cautious and creative in shaping and adopting 2005 seasons that minimize impacts on listed and depressed runs. Potential mainstem Columbia River commercial fisheries for the 2005 winter, spring, and summer season time frames listed here will be considered at the January 28 Compact hearing. Ongoing or other potential fisheries will be considered at future Compact hearings and other management forums.

At the time this report was written expectations for 2005 winter, spring, and summer fisheries were based on preseason run size forecasts and impact limits set forth in the 2005-2007 Interim Management Agreement.

2005 Non-Indian Fisheries

Commercial Winter Sturgeon Fishery (adopted by the Compact on December 16, 2004)

The currently adopted season consists of five 24-hour fishing periods (6 AM Tuesday to 6 AM Wednesday) in all of Zones 1-5 from January 18, 2005 through February 16, 2005. Season dates, gear restrictions, and expected catches are included in the Fact Sheet developed by the Joint Staff for the December 16, 2004 Compact hearing. This target sturgeon fishery provides maximum protection to depressed and listed stocks while allowing commercial fishers to access a portion of the commercial white sturgeon allocation. This fishery is expected to harvest up to 1,800 white sturgeon and less than 50 spring chinook. In past years this fishery has typically continued through mid to late February with catches ranging between 1,500-3,000 white sturgeon.

Commercial Spring Chinook Fisheries (Compact consideration January 28, 2005)

In accordance with the Willamette River spring chinook FMEP, commercial fisheries harvesting spring chinook in the mainstem Columbia River will require the release of all non-adipose fin-clipped spring chinook. Catch expectations and impact limits are set forth in the Interim Management Agreement and the FMEP. Allocation of upriver spring chinook is 40% (0.8% impact rate) for commercial fisheries including SAFE. Based on a total run size expectation of 116,900 (105,200 hatchery) Willamette spring chinook the commercial fishery will be allocated a catch of 18,100 Willamette hatchery spring chinook.

Commercial fisheries targeting spring chinook may occur during the mid-February through mid-May timeframe. Restrictive regulations will include: 1) 150-175 fathom net length restriction (depending on use of a steelhead excluder), 2) 45 minute or less soak time (first net mesh in to last net mesh out), and 3) use of recovery box required on all stressed, lethargic, or bleeding salmon or steelhead. Large mesh (9-inch minimum) size regulations will be considered early in the season to reduce steelhead handle and small mesh (4¼-inch maximum) will be required later in the season to ensure high survival rates of released species. The use of large mesh (12"

minimum) steelhead excluder panels on the top portion (5'-10') of the net is voluntary. Additional efforts to reduce steelhead handle will include shaping of fishery to reduce effort during peak abundance times for wild winter steelhead.

A fishing plan for the winter salmon season will be included in the Fact Sheet developed for the January 28, 2005 Compact hearing. The fishing plan will include expected calendar days on which test fishing and commercial fishing periods are to occur, initial date for test fishing, expected duration and hours of commercial fishing periods, and calendar days on which Compact hearings are expected to occur. Data collected from test fishing operations will be used during the season setting process to maximize catch of Willamette River hatchery spring chinook and minimize handle of listed wild spring chinook and wild winter steelhead. Specific fishing period times and dates will be considered at future Compact hearings occurring during the winter/spring fishery management period.

Lower Columbia River Spring Chinook Sport Fishery
(Joint State consideration January 28, 2005)

In accordance with the Willamette Spring Chinook FMEP sport fisheries harvesting spring chinook in the mainstem Columbia River will require the release of all non-adipose fin-clipped spring chinook. Catch expectations and impact limits are set forth in the Interim Management Agreement and the FMEP. Allocation of upriver spring chinook is 60% (1.2% impact rate) for sport fisheries. Based on a run size expectation of 116,900 (105,200 hatchery) Willamette River spring chinook the sport fishery below Willamette Falls will be allocated a catch of 42,100 Willamette hatchery spring chinook.

The fishery is currently scheduled to remain open for adipose fin-clipped chinook and adipose fin-clipped steelhead from Buoy 10 upstream to the I-5 Bridge through March 31, 2005. This fishery will likely extend up to McNary Dam with the duration of the season depending on catch rates, effort levels, and impacts to listed species. In recent years the area between Bonneville Dam and Tower Island (8 miles below the Dalles Dam), excluding the Oregon bank fishery, has been closed to spring chinook fishing. At the time this report was written the states were considering whether to allow spring chinook angling to occur in this section of the river. The staff will develop a fishing plan in cooperation with the Columbia River Recreational Advisory Group and proposed fishery regulations will be included in the Fact Sheet prepared for the January 28, 2005 Joint State meeting.

Select Area Commercial Fisheries
(Compact and State consideration January 28, 2005)

Proposed seasons for winter, spring, and summer fisheries in the Blind Slough, Deep River, and Youngs Bay Select Areas will be described in the Fact Sheet developed for the January 28, 2005 Compact hearing. Both winter and spring seasons will be proposed for Youngs Bay and Blind Slough while only a spring season will be proposed for Deep River. Additionally, a summer season will also be proposed for Youngs Bay. The Compact will set seasons for Select Areas in concurrent jurisdiction waters and ODFW and WDFW will set seasons for Select Areas in state waters. Impacts to listed salmonids in these fisheries will be included in the commercial fishery share of total non-Indian impacts. Season proposals for 2005 will be similar to those proposed in

2004 but will be finalized based on input from a public meeting concerning spring Select Area fisheries scheduled for January 19, 2005 in Astoria, Oregon.

Columbia River Steelhead Sport Fishery
(Adopted season as per permanent regulations)

Dates: May 16 to December 31, below I-5 Bridge
June 16 to December 31, above I-5 Bridge

Area: Main-stem Columbia River up to Highway 395 Bridge at Pasco, WA

Expected catch (through July): 6,000 hatchery steelhead

Expected wild steelhead handle (through July): 3,000 fish (300 mortalities)

Expected summer chinook handle: 1,200 fish (120 mortalities)

Expected sockeye handle: <100 fish (<10 release mortalities)

Based on the preseason run size forecasts the retention of sockeye is not expected to be allowed in Oregon or Washington waters during 2005 but the retention of summer chinook will likely be allowed during a portion of this fishery.

Area 2S Shad Fishery
(Compact consideration January 28, 2005)

For 2005, it is recommended that the Area 2S shad fishery operate using modified gill nets and restricted hours as occurred during 1996-2004. Only shad may be kept and sold. All salmonids, walleye, and sturgeon must be returned immediately to the water, and those alive must be released unharmed (in effect since 1976). The number of incidental species that will be handled in the proposed 2005 Area 2S shad fishery is expected to be similar to the low levels observed during 1996-2004 fisheries.

Season: <u>Daily 3 PM-10 PM</u>

May 16-20	(5 days)
May 23-27	(5 days)
May 31-June 3	(4 days)
June 6-10	(5 days)
June 13-17	(5 days)
June 20-24	(5 days)

Area: True north/south line through Light #50 near Sandy River mouth upstream to boundary near Beacon Rock (in effect since 1976).

Gear: Single-wall, unslackened, floater gill net, 5⅜-6¼-inch mesh, 10-lb breaking strength (in effect since 1976), may not exceed 150 fathoms in length nor 40 meshes in depth (in effect since 1996).

Expected catch: Up to 45,000 shad

Expected summer chinook handle: <25 fish (5 mortalities)

Expected sockeye handle: <5 fish (zero mortalities)

Expected steelhead handle: <25 fish (10 mortalities)

Expected wild steelhead handle: up to five fish (two mortalities)

Washougal Reef Shad Fishery
(Compact consideration January 28, 2005)

Season: Daily 8 PM-12 AM

May 15-19	(5 days)
May 22-26	(5 days)
May 29 – June 2	(5 days)
June 5-9	(5 days)
June 12-16	(5 days)
June 19-23	(5 days)

Area: Camas-Washougal Reef Area means those water of Zones 4 and 5 inside of a line commencing at the white six-second equal-interval light approximately ¾ miles east of the Washougal Woolen Mill pipeline and projected westerly to the Washougal blinker light, thence to the white four-second blinker light on the east end of Lady Island, thence easterly and along the shoreline of Lady Island to the State Highway 14 Bridge, thence easterly and along the shoreline of Lady Island to the State Highway 14 Bridge, thence easterly across the State Highway 14 Bridge to the mainland.

Gear: Single-wall, unslackened, floater gill net, 5⅜-6¼-inch mesh, 30-lb breaking strength (in effect since 1977, except 1982).

Expected catch: Up to 5,000 shad

Expected summer chinook handle: zero

Expected sockeye handle: zero

Expected steelhead handle: <10 fish (4 mortalities)

Expected wild steelhead handle: up to five fish (two mortalities)

2005 Treaty Indian Fisheries

Spring and summer chinook harvest has occurred primarily in the C&S fisheries except in years of high abundance, such as in the past five years. Additionally, a few spring chinook are incidentally harvested in the winter season gillnet fishery and very limited incidental handling mortality could occur if the tribal experimental target shad fishery is pursued. Treaty Indian C&S fisheries, including dipnet fisheries, are managed individually by the four Columbia River treaty tribes through a permit and catch monitoring system. The tribes have defined regulations concerning lawful gear, fishing area, notice restrictions, and other miscellaneous regulations concerning the tribal C&S fisheries. Tribal staffs will continue to monitor the C&S fishery and provide in-season accounting of this fishery. The tribes may implement commercial spring chinook fisheries depending on the run size and would bring any commercial proposal before the Compact. The tribes would monitor and provide accounting for any commercial salmon fishery as well as any proposed experimental shad fishery, if it occurs.

2005 Treaty Winter Commercial Fisheries
(Adopted by the Compact on December 16, 2004)

The winter sturgeon setline fishery occurs by permanent regulation from January 1 through January 31. The tribes plan to manage the winter gillnet fishery consistent with the expired

CRFMP which states in section II.B.1. "The treaty Indian winter gillnet fishery shall commence on February 1 and shall terminate on March 21 to minimize the incidental harvest of upriver destined spring chinook." The 2005 winter gillnet fishery is scheduled to be open in all of Zone 6 from noon February 1 to noon March 21. The fishery may close early if sturgeon harvest guidelines are met. In recent years, most of the winter gillnet harvest has been sturgeon with incidental catches of steelhead and chinook. In 2004, the winter season gillnet fishery harvested 1,840 sturgeon, 2 chinook, and 66 steelhead. The steelhead catch is likely a mix of hatchery and wild steelhead. The wild steelhead would be comprised of winter steelhead and kelt and holdover summer steelhead. The 2005 winter season fisheries are expected to have similar catches and effort as in recent years.

2005 Treaty Indian Spring Season Fisheries

The treaty tribes have not yet determined the structure of their 2005 spring chinook fisheries. The parties to *U.S. v. Oregon* have reached agreement on a new three year interim management plan which modifies the spring and summer management periods from previous years. Based on the new management agreement and the pre-season forecast run size, the tribes will manage for a 10% harvest rate. The tribes anticipate that no more than 1,000 steelhead will be caught in spring fisheries. The majority of the catch would be 2005 Skamania stock hatchery returns with some holdovers and kelts from the 2004-2005 summer steelhead run.

2005 Treaty Indian Summer Season Fisheries

The treaty tribes have not yet determined the structure of their 2005 summer chinook and sockeye fisheries (platform and permit gillnet or potential commercial fisheries). Summer chinook, sockeye, and steelhead are expected to be caught in the summer fishery.

The harvest framework in summer fisheries has been modified in the new interim management agreement. Fisheries will target unlisted upper Columbia summer chinook, which should result in increased harvest opportunities compared to recent years. Based on the pre-season forecast, treaty fisheries may be allowed a chinook catch of approximately 15,000. The average catch of steelhead, during the years 1996-2000, in summer platform and permit gillnet fisheries was 3,146 summer steelhead and in 2001 the summer season steelhead catch was 8,220 based on an all time record return of summer steelhead. Summer steelhead catch totaled 4,967 in 2002 and 4,455 in 2003 and 5,464 in 2004.

2005 Treaty Indian Shad Fisheries

Implementation of a shad dipnet fishery at The Dalles Dam east ladder exit will depend on identifying a market. Any new gears or methods would be expected to have little or no adverse impact to listed salmonids. Run timing data indicate that shad fishing in Zone 6 should occur in the month of June. This is generally the period of maximum shad-to-chinook and shad-to-sockeye ratios, based on counts at Bonneville Dam (Figure 1). Daily fish ladder counts during this period average about 50,000 shad, 370 chinook, and 30 sockeye.

Summer chinook counting at Bonneville Dam begins on June 16. Results of the experimental fisheries in 1994-1996 suggest that trap net and dip net harvest methods will encounter very few salmonids. This information suggests that less than 20 chinook will be handled by the gear, and

zero will be killed. Any chinook or sockeye mortalities will be counted as part of the allowable impacts for those species. Sockeye salmon will begin to enter the shad fishing area in mid-June. On average, 45% of the sockeye run will have passed The Dalles Dam by June 28.

Primary issues with the experimental shad fishery are related to safety, possible delay in upstream salmonid migration, and associated delayed mortality that may be caused if fishing activities are carried out in the immediate vicinity of fishway entrances and exits. Resolution of these issues and mutual agreement by the managing entities will be sought before exact fishing locations are established. Based on the 1996 experience, it is considered unlikely that significant numbers of salmonids will be encountered in dip nets or trap nets. However, in the event that a salmon is observed in the dip net or trap net, it will be immediately released unharmed upstream of the fishing area and gear. Impacts associated with experimental shad fisheries will be included in the total harvest of all treaty Indian fisheries.

The Joint Staff recommends that treaty Indian fishers continue to be allowed to sell shad caught incidentally to commercial salmonid seasons and in traditional dipnet fisheries, as well as the proposed trap and dipnet fisheries.

ANCHOVY AND HERRING FISHERY

The anchovy and herring fishery primarily provides bait to the local recreational salmon and sturgeon fisheries. The anchovy and herring season is open year round seaward of the Megler-Astoria Bridge, with seines of a mesh size not less than ½-inch and not over 1,400 feet in length. All other species must be released. The Joint Staff recommends no changes for the 2005 bait fisheries.

MISCELLANEOUS REGULATIONS

Miscellaneous regulations including dam sanctuaries, river mouth closures, gear requirements, sturgeon rules, etc., are usually adopted annually at the January Compact hearing. The Joint Staff will include recommended changes to miscellaneous regulations in the January 28, 2005 Fact Sheet.

The Sturgeon Management Task Force (SMTF) will meet on January 18 to discuss and develop a management plan for 2005 Zone 6 sturgeon fisheries. Results of the SMTF meetings will be presented at the January 28, 2005 Compact hearing.

Oregon Department of Fish and Wildlife
Washington Department of Fish and Wildlife
January 14, 2005

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Table 1. Estimates of the Spring Chinook Stock Composition (in Thousands) in Lower Columbia Fisheries, 1985-2004.

Year	Willamette River [1] No.	%	Other Lower River [2] No.	%	Upriver No.	%	Total [3] Catch
			Winter Commercial Season (Feb-Mar) [4]				
1985	10.0	79	1.5	12	1.1	9	12.7
1986	7.3	81	0.6	7	1.1	12	9.0
1987	8.5	76	1.7	15	1.0	9	11.2
1988	11.3	62	1.9	10	5.1	28	18.3
1989	10.9	78	1.5	11	1.5	11	13.9
1990	15.5	85	0.7	4	2.1	11	18.3
1991	11.2	89	0.5	4	0.9	7	12.6
1992	3.9	76	1.0	19	0.2	5	5.1
1993	0.8	55	0.4	29	0.2	16	1.5
1994	0.1	54	0.4	23	0.4	23	1.9
1995	--	--	--	--	--	--	0.0
1996	0.1	89	<0.1	6	<0.1	5	0.1
1997	0.1	91	0.0	0	<0.1	9	0.1
1998	<0.1	100	0.0	0	0.0	0	<0.1
1999	<0.1	81	<0.1	6	<0.1	13	<0.1
2000	0.4	76	<0.1	7	0.1	17	0.5
2001	2.8	51	1.1	20	1.6	29	5.4
2002	5.4	37	0.8	5	8.3	58	14.4
2003	0.8	25	0.2	7	2.1	68	3.0
2004	5.7	44	2.2	16	5.3	40	13.2
			Main-Stem Sport Fishery (Feb-Mar)				
1985	1.0	72	0.1	7	0.3	21	1.4
1986	1.4	74	0.2	10	0.3	16	1.9
1987	1.9	68	0.5	18	0.4	14	2.8
1988	2.9	63	0.3	7	1.4	30	4.6
1989	0.9	75	0.2	17	0.1	8	1.2
1990	6.8	75	0.3	3	2.0	22	9.1
1991	3.5	62	0.6	11	1.5	27	5.6
1992	3.1	59	1.0	19	1.2	22	5.3
1993	0.3	56	0.2	29	0.1	15	0.6
1994	1.0	67	0.3	17	0.2	16	1.5
1995	--	--	--	--	--	--	0.0
1996	0.0	--	0.0	--	0.0	--	0.0
1997	0.0	--	0.0	--	0.0	--	0.0
1998	<0.1	85	<0.1	15	0.0	0	0.1
1999	0.0	--	0.0	--	0.0	--	0.0
2000	0.2	62	<0.1	11	0.1	27	0.3
2001	0.8	18	0.1	2	3.7	80	4.6
2002	0.6	27	0.1	3	1.4	70	2.1
2003	1.1	19	0.2	3	4.5	78	5.8
2004	1.0	38	0.3	11	1.4	51	2.6
			Main-Stem Sport Fishery (April)				
1986	1.7	45	1.1	29	1.0	26	3.8
1989	1.1	61	0.3	17	0.4	22	1.8
1990 [5]	2.0	63	<0.1	1	1.1	36	3.2
1993	0.6	49	0.3	26	0.3	25	1.2
1994	0.3	55	0.1	14	0.2	31	0.5
2001	2.8	13	0.4	2	17.9	85	21.1
2002 [6]	4.5	24	0.5	3	13.5	73	18.4
2003 [6]	5.9	53	0.9	8	4.3	39	11.1
2004	4.5	21	1.4	7	15.2	72	21.1

1. *Includes only spring chinook destined for the Willamette River. Willamette stock spring chinook are released at other locations in the Columbia River Basin below Bonneville Dam.*
2. *Includes spring chinook destined for the Cowlitz, Kalama, Lewis, and Sandy rivers plus Select Area sites in Youngs Bay (since 1992), Tongue Point (since 1998), Blind Slough (since 1998), and Deep River (since 2001).*
3. *Individual catch columns may not add up to total catch because of rounding errors. Percentages calculated using unrounded numbers. Includes kept catch only. Only adipose fin-clipped chinook could be retained in sport fisheries effective in 2001 and mainstem commercial fisheries in 2002.*
4. *Does not include 700 and 400 spring chinook catch from late January-early February 1986 and 1987 sturgeon seasons. Includes tangle net landings of spring chinook beginning in 2002.*
5. *Includes the April 5-15 terminal fishery at the mouth of Multnomah Channel.*
6. *Includes catch during May 5-15 in 2002 and May 1-15 in 2003.*

Table 2. Components (in Thousands) of the Minimum Willamette River Spring Chinook Run and Percentage Caught in Lower Willamette Sport Fishery, 1970-2004.

Year	Minimum Run Entering Columbia R. [1]	Mainstem Columbia River Catch		Run Entering Willamette R.	Lower Willamette R. Sport Catch		Willamette Falls Count	Run Entering Clackamas R.
		Comm. [2]	Sport [3]		Number [4]	% of Run		
1970-1974 Average	71.6	10.1	2.6	58.9	18.2	31	38.3	2.1
1975-1979 Average	56.6	5.4	1.6	49.5	15.1	32	31.1	3.0
1980	43.3	0.3	0.6	42.4	7.0 [5]	17 [5]	27.0	8.2
1981	56.3	4.8	2.9	48.6	10.5	22	30.1	7.7
1982	78.0	3.6	1.9	72.5	18.9	26	46.2	6.9
1983	62.2	5.3	1.8	55.1	13.8	25	30.6	9.8
1084	84.2	8.2	1.5	74.5	19.4	26	43.4	10.9
1980-1984 Average	64.8	4.4	1.7	58.6	13.9	23	35.5	8.7
1985	68.1	10.0	1.0	57.1	15.5	27	34.5	6.2
1986 [6]	73.6	8.0	3.1	62.5	15.0	24	39.2	7.4
1987 [6]	93.6	8.8	1.9	82.9	18.9	23	54.8	8.4
1988	118.1	11.3	2.9	103.9	24.6	24	70.4	8.6
1989	114.9	10.9	2.0	102.0	24.2	24	69.2	7.9
1985-1989 Average	93.7	9.8	2.2	81.7	19.6	24	53.6	7.7
1990	130.6	15.5	8.8	106.3	23.0	22	71.3	11.1
1991	109.9	11.2	3.5	95.2	30.5	32	52.5	11.6
1992	75.0	3.9	3.1	68.0	13.5	20	42.0	11.4
1993	65.9	0.8	1.1	63.9	20.7	32	32.0	10.5
1994	49.6	1.0	1.3	47.2	11.5	24	26.1	7.4
1990-1994 Average	86.2	6.5	3.5	76.1	19.8	26	44.8	10.4
1995	42.6	0.1	0.0	42.6	14.7	35	20.6	6.4
1996	34.8	0.1	0.0	34.6	6.1	18	21.6	5.9
1997	35.3	0.3	0.0	35.0	1.9	5	26.9	5.8
1998	45.1	0.1	0.0	45.0	2.8	6	34.5	7.4
1999	54.2	0.3	0.0	53.9	5.5	10	40.4	7.4
1995-1999 Average	42.4	0.2	0.0	42.2	6.2	14	28.8	6.6
2000	57.5	1.1	0.2	56.2	9.0	16	39.1	7.8
2001	80.3	3.5	3.8	72.9	7.6	9	54.0	10.8
2002	121.7	7.4	5.2	109.1	10.8	9	83.1	14.4
2003	126.6	1.8	7.2	117.6	13.5	11	87.7	15.4
2004	143.7	6.3	5.5	130.9	11.7	8	96.0	22.3
2000-2004 Average	106.0	4.0	4.4	97.3	10.5	10	71.9	14.1

1. *Includes small numbers of observed or estimated losses below Willamette Falls each year.*
2. *Includes spring chinook destined for the Willamette River landed in Select Area commercial fisheries of Youngs Bay (since 1992), Tongue Point (since 1998), and Blind Slough (since 1998).*
3. *Includes spring chinook destined for the Willamette River landed in Columbia River boat and/or bank fisheries.*
4. *Lower Willamette sport fishery managed for quotas of 6,000 in 1996, 1,900 in 1997, 2,000 in 1998, 4,600 in 1999, and 7,850 in 2000. Additional fishing was allowed in 1998 and 1999 when run size was greater than expected and in 2000 during an adipose fin-clipped only experimental fishery. Includes hook and release mortalities beginning in 2000.*
5. *Early closure on April 28 reduced catch and harvest rate.*
6. *Includes 700 and 400 spring chinook catch from late January-early February 1986 and 1987 sturgeon seasons.*

Table 3. Predicted and Actual Spring Chinook Runs (in Thousands) Entering the Columbia River, 1980-2004 and 2005 Projections.

	Willamette River (All Age Classes)			Cowlitz, Kalama, & Lewis Rivers Combined (Adults)			Upriver (Age 4 & 5 Adults) [5]		
Year	Preseason Forecast	Actual Return	% of Predicted	Preseason Forecast	Actual Return	% of Predicted	Preseason Forecast	Actual Return	% of Predicted
1980	42.5	43.3	102	--	--	--	25.6	<52.6	206
1981	52.0	56.3	108	--	--	--	64.9	<63.6	99
1982	65.0	78.0	120	--	--	--	48.7	71.1	146
1983	72.0	62.2	86	--	--	--	51.8	55.9	108
1984	65.0	84.2	130	--	--	--	44.2	47.1	107
1985	70.0	68.1	97	--	--	--	52.6	84.7	161
1986	65.0	73.6	113	--	--	--	115.0	120.6	105
1987	78.0	93.6	120	--	--	--	79.7	99.8	125
1988	97.0	118.1	122	32.0	24.8	78	53.4	97.0	182
1989	102.0	114.9	113	16.1	22.3	139	92.7 [1]	82.6	89
1990	128.0	130.6	102	18.6	18.9	102	120.8	99.1	82
1991	110.0	109.9	100	19.7	19.8	101	61.9 [2]	59.2	96
1992	106.0	75.0	71	26.6 [3]	18.4 [3]	69	71.4	89.8	126
1993	70.0	65.9	94	21.3 [3]	19.0 [3]	89	76.2	111.0	146
1994	75.0	49.6	66	12.3 [3]	7.4 [3]	60	49.0	20.8	42
1995	49.0	42.6	87	4.6	6.6	144	12.0	9.8	82
1996	41.0	34.8	85	4.4	4.1	93	37.2	51.5	138
1997	30.0	35.3	118	4.5	4.6	102	67.8	114.0	168
1998	33.7	45.1	134	2.9	3.1	107	36.2	38.3	106
1999	46.5	54.2	117	3.9	4.9	126	24.6	38.7	157
2000	59.9	57.5	96	6.0	6.1	102	134.0	178.6	133
2001	61.0	80.3	132	4.8	7.2	150	364.6	416.5	114
2002	73.8	121.7	165	6.7	11.5	172	333.7	295.1	88
2003	109.8	126.6	115	11.6	25.5	220	145.4	208.9	144
2004 [4].	109.4	143.7	131	27.3	32.4	119	360.7	193.4	54
2005	116.9	--	--	24.8	--	--	254.1	--	--

1. *New upriver predictor developed by Joint Staff and approved by TAC.*
2. *New upriver predictor refined by Joint Staff and approved by TAC.*
3. *Excludes Willamette stock released in Lewis River.*
4. *Actual returns are preliminary.*
5. *Includes Snake River summer chinook since 2005.*

Table 4. Willamette Falls Spring Chinook Escapement, Upper Willamette Sport Catch, Number Returning to Hatcheries, Surplus Sales, and Tribal Use, 1980-2004.

		U. Willamette Sport Catch		U. Will. Hatchery Return		Clackamas	Surplus Sales		Received by
	Willamette		% of Will.		% of Will.	Hatchery	U. Will.	Clackamas	Columbia River
Year	Falls Count [1]	Number	Falls Count	Number	Falls Count	Return	Hatcheries	Hatchery	Tribes [2]
1980	26,973	1,954	7	8,302	31	1,024	0	0	--
1981	30,057	2,241	7	9,198	31	1,065	6,614	0	--
1982	46,195	3,687	8	13,780	30	573	3,114	0	--
1983	30,589	1,877	6	10,372	34	1,923	2,186	0	--
1984	43,452	3,123	7	15,433	36	2,521	6,570	751	--
1985	34,533	2,510	7	10,785	31	944	119	101	--
1986	39,155	2,708	7	12,591	32	776	5,509	64	--
1987	54,832	6,442	12	16,517	30	1,005	7,175	282	--
1988	70,451	8,536	12	22,534	32	1,253	8,040	209	3,700
1989	69,180	9,375	14	27,349	40	865	12,704	103	2,520
1990	71,273	10,856	15	29,692	42	1,847	13,958	371	1,425
1991	52,516	8,323	16	20,685	39	2,776	4,681	1,201	2,992
1992	42,004	7,424	18	15,743	37	4,535	4,350	3,294	2,206
1993	31,966	8,161	26	14,636	46	4,635	1,676	2,577	1,386
1994	26,102	4,273	16	9,795	38	3,675	461	746	3,193 [3]
1995	20,592	3,380	16	8,757	43	3,112	688	400	1,504 [4]
1996	21,605	5,041	23	10,056	47	3,044	0	0	4,386 [5]
1997	26,885	4,022	15	14,752	55	2,670	255	179	539
1998	34,461	6,125	18	16,414	48	4,530	960	859	7,590
1999	40,410	6,367	16	18,725	46	4,562	0	551	7,689
2000	39,073	5,721	15	16,158	41	4,296	0	1,847	0
2001	53,973	NA	--	20,256	38	6,155	0	3,711	0
2002	83,136	NA	--	32,049	39	6,256	0	4,004	0
2003	87,749	NA	--	25,528	29	3,532	NA	NA	0
2004	95,970	NA	--	33,560	35	11,530	NA	NA	0

1. *Includes jacks.*
2. *Given toward the tribes' minimum ceremonial and subsistence entitlement per the Columbia River Fish Management Plan.*
3. *Columbia treaty tribes at Willamette Falls also harvested 759 chinook and 396 marked summer steelhead May 9-28 and July 5, 1994.*
4. *Columbia treaty tribes at Willamette Falls also harvested 29 chinook June 12-17 and 112 summer steelhead in mid-July, 1995.*
5. *Columbia treaty tribes at Willamette Falls also harvested 12 chinook June 1, 1996.*

Table 5. Minimum Adult Spring Chinook Run (in Thousands) Entering Other Lower River Tributaries, 1980-2004. [1]					
Year	Cowlitz River	Kalama River	Lewis River	Sandy River	Total
1980	23.7	2.5	2.3	1.8	30.3
1981	27.9	3.3	3.0	2.8	37.0
1982	19.3	8.4	3.9	1.4	33.0
1983	21.4	4.9	3.7	1.8	31.8
1984	21.3	1.8	6.4	2.3	31.8
1980-1984 Average	22.7	4.2	3.9	2.0	32.8
1985	9.9	0.3	4.1	1.4	15.7
1986	7.3	1.1	8.3	1.3	18.0
1987	18.0	2.4	16.5	2.4	39.3
1988	12.3	1.9	10.6	2.9	27.7
1989	8.3	2.0	12.0	2.0	24.3
1985-1989 Average	11.2	1.5	10.3	2.0	25.0
1990	7.6	2.0	9.3	3.5	22.4
1991	8.9	2.6	8.3	3.7	23.5
1992	10.4	2.4	5.6 [2]	9.2	27.6
1993	9.5	2.9	6.6 [2]	6.4	25.4
1994	3.1	1.3	3.0 [2]	3.5	10.9
1990-1994 Average	7.9	2.2	6.6	5.3	22.0
1995	2.1	0.7	3.7	2.5	9.1
1996	1.8	0.6	1.7	4.1	8.2
1997	1.9	0.5	2.2	5.2	9.9
1998	1.1	0.4	1.6	4.2	7.3
1999	2.1	1.0	1.8	3.3	8.2
1995-1999 Average	1.7	0.6	2.2	3.9	8.4
2000	2.2	1.4	2.5	3.8	9.9
2001	1.6	1.8	3.8	5.6	12.8
2002	5.0	2.9	3.6	7.0	18.5
2003	15.9	4.5	5.1	6.4	31.9
2004 [3]	16.7	4.6	11.1	13.4	45.8
2000-2004 Average	8.3	3.0	5.2	7.2	23.8

1. *Run includes hatchery returns or dam counts, sport catch estimates, and except for the Sandy River, estimates of natural spawning populations.*
2. *Excludes Willamette stock released in Lewis River.*
3. *Preliminary*

Table 6. Adult Spring Chinook Sport Catch and Run Size (in Thousands), and Harvest Rates for the Cowlitz, Kalama, and Lewis Rivers, 1980-2004.

	Cowlitz River			Kalama River			Lewis River			Total		
Year	Sport Catch	Run Size	Harvest Rate (%)	Sport Catch	Run Size	Harvest Rate (%)	Sport Catch	Run Size	Harvest Rate (%)	Sport Catch	Run Size	Harvest Rate (%)
1980-1984 Average	7.1	22.7	32	1.3	4.2	32	2.5	3.9	65	10.9	30.8	36
1985	2.9	9.9	29	0.2	0.3	72	3.2	4.1	78	6.3	14.3	44
1986	2.1	7.3	29	0.4	1.1	41	5.9	8.3	72	8.4	16.7	50
1987	4.2	18.0	24	0.9	2.4	38	9.5	16.5	57	14.6	36.9	40
1988	3.1	12.3	25	0.5	1.9	28	5.0	10.6	47	8.6	24.8	35
1989	2.1	8.3	25	0.7	2.0	36	7.7	12.0	64	10.5	22.3	47
1985-1989 Average	2.9	11.2	26	0.5	1.5	43	6.3	10.3	64	9.7	23.0	43
1990	2.6	7.6	35	0.9	2.0	45	7.1	9.3	77	10.6	18.9	56
1991	3.4	8.9	38	1.4	2.6	54	6.2	8.3	74	11.0	19.8	56
1992	2.1	10.4	21	0.7	2.4	31	4.4	6.1	73	7.2	18.8	38
1993	2.9	9.5	31	1.5	2.9	51	6.1	8.2	74	10.5	20.6	51
1994	1.1	3.1	34	0.2	1.3	18	1.9	3.1	61	3.2	7.5	43
1990-1994 Average	2.4	7.9	32	0.9	2.3	40	5.1	7.0	72	8.5	17.1	49
1995 [1]	0.2	2.2	7	<0.1	0.7	1	2.4	3.7	65	2.5	6.6	38
1996 [1]	<0.1	1.8	1	0.2	0.6	31	0.3	1.7	20	0.5	4.1	12
1997 [1]	0.1	1.9	8	0.1	0.5	3	0.8	2.2	36	1.0	4.6	21
1998 [1]	0.0	1.1	0	0.0	0.4	0	0.2	1.6	14	0.2	3.1	6
1999 [1]	0.5	2.1	24	<0.1	1.0	1	0.7	1.8	40	1.2	4.9	24
1995-1999 Average	0.2	1.7	9	<0.1	0.6	7	0.9	2.2	35	1.0	4.6	19
2000 [1]	0.5	2.2	24	0.4	1.4	28	1.3	2.5	50	2.2	6.1	36
2001 [1]	0.1	1.6	6	0.4	1.8	22	2.0	3.8	53	2.5	7.2	35
2002	1.5	5.0	29	0.5	2.9	17	1.3	3.6	36	3.3	11.5	29
2003	2.9	15.9	19	0.8	4.5	18	1.9	5.1	37	5.6	25.5	22
2004	2.1	16.7	13	1.2	4.6	26	6.5	11.1	59	9.8	32.4	30
2000-2004 Average	1.4	8.3	17	.7	3.0	23	2.6	5.2	50	4.7	16.5	28

1. Harvest rates reflect fishery restrictions due to extremely low returns.

Table 7. Estimated Numbers of Upriver Adult Spring Chinook Entering the Columbia River, Mainstem Harvest, and Escapement, 1979-2004.

		Zones 1-5 Non-Indian [1]					Zone 6 Treaty Indian[5]				Zones	Escapement	
Year	Upriver Run	Comm.	Sport [2]	Misc. [3]	Rate (%)	Bonneville Counts [4]	Comm Gillnet	C & S Gillnet	Platform and Hook + Line	Rate (%)	1-6 Rate (%)	Number [6]	% of Run
1979	108,205	0	0	53,858	49.8	54,347	489	0	1,601	1.9	51.7	52,257	48.3
1980	57,199	0	0	122	0.2	57,077	29	0	1,826	3.2	3.5	55,222	96.5
1981	67,023	611	207	130	1.4	66,075	1,595	0	1,803	5.1	6.5	62,677	93.5
1982	76,938	508	559	291	1.8	75,580	3,308	0	2,000	6.9	8.7	70,272	91.3
1983	62,481	2,225	548	248	4.8	59,460	31	0	2,500	4.1	8.9	56,929	91.1
1984	52,123	1,409	285	119	3.5	50,310	75	0	3,400	6.7	10.1	46,835	89.9
1985	91,722	2,831	364	157	3.7	88,370	111	0	3,024	3.4	7.1	85,235	92.9
1986	127,759	1,082	1,288	284	2.1	125,105	359	0	7,078	5.8	7.9	117,668	92.1
1987	109,883	987	396	351	1.6	108,149	279	0	6,410	6.1	7.7	101,460	92.3
1988	105,326	5,130	1,435	222	6.4	98,539	204	0	6,802	6.7	13.1	91,533	86.9
1989	89,493	1,508	547	95	2.4	87,343	86	0	6,640	7.5	9.9	80,617	90.1
1990	105,213	2,082	3,115	150	5.1	99,866	4	0	6,924	6.6	11.7	92,938	88.3
1991	64,233	897	1,537	120	4.0	61,679	5	0	3,871	6.0	10.0	57,803	90.0
1992	95,323	235	1,187	162	1.7	93,739	48	0	5,711	6.0	7.7	87,980	92.3
1993	119,203	238	413	373	0.9	118,179	0	0	7,296	6.1	7.0	110,883	93.0
1994	23,809	441	409	86	3.9	22,873	10	0	1,151	4.9	8.8	21,712	91.2
1995	12,634	0	5	2	0.1	12,627	13	0	620	5.0	5.1	11,994	94.9
1996	55,299	5	17	41	0.1	55,236	0	0	2,911	5.3	5.4	52,325	94.6
1997	123,824	9	13	44	0.1	123,758	14	0	8,309	6.7	6.8	115,435	93.2
1998	43,512	0	14	27	0.1	43,471	1	0	2,224	5.1	5.2	41,246	94.8
1999	42,582	2	21	26	0.1	42,533	1	0	1,983	4.7	4.8	40,549	95.2
2000	186,141	88	102	177	0.2	185,774	6	1,348	9,973	6.1	6.3	174,447	93.7
2001	437,910	1,579	22,714	964	5.8	412,653	85	43,630	10,985	12.5	18.3	357,953	81.7
2002	331,303	9,483	16,213	667	8.0	304,940	45	24,209	9,208	10.1	18.3	271,478	81.9
2003	242,638	2,759	9,615	765	5.4	229,499	857	8,348	9,090	7.5	13.5	211,204	87.0
2004	221,600	5,989	17,041	245	10.5	198,325	2	8,368	9,114	7.9	19.0	180,841	81.6

1. *Through 1979 all fish caught in April and May were considered upriver stocks. From 1980 to 1987 the February-March incidental catch in Zone 1-5 and lower Columbia River sport were calculated on the basis of CWT recoveries. Since 1988, incidental commercial catch was based on GSI analysis and incidental sport catch was based on VSI analysis. Commercial fishery is selective beginning 2002.*

2. *Includes mainstem fisheries up to McNary Dam. Sport fishery is selective beginning in 2001.*

3. *Miscellaneous fisheries include Select Area, test fisheries, mortalities from area 2S shad fisheries and selective tangle net experimental fishery in 2001.*

4. *Chinook passing from January 1 through June 15 are considered spring chinook. Dam counts in 1980, and 1981 were not adjusted for fallback; runsize and escapements are maximum in those years.*

5. *Tribal commercial catches include any spring chinook sold in winter season gillnet fishery. Ceremonial and subsistence include catch by gillnet, dipnet, and hook and line since 1982.*

6. *Bonneville count minus Zone 6 harvest.*

Table 8. Estimated Numbers of Adult Upper Columbia Summer Chinook Entering the Columbia River, Mainstem Harvest, and Escapement, 1979-2004.

		Zones 1-5 Non-Indian					Zone 6 Treaty Indian		Escapement		Dam Counts	
Year	Upriver Run	Sport [1]	Comm.[2] / Shad	Misc .[3]	Rate (%)	Bonneville Counts. [4]	Catch [5]	Rate %	Number [6]	% of Run	Priest Rapids	Wells Dam
1979	22,142		147	0	0.7	21,995	987	4.5	21,008	94.9	20,321	7,995
1980	22,991		16	0	0.1	22,975	1,181	5.1	21,794	94.8	16,000	3,910
1981	19,124		9	0	0.0	19,115	1,364	7.1	17,751	92.8	11,600	3,141
1982	14,677		117	0	0.8	14,560	1,295	8.7	13,265	90.4	8,800	2,223
1983	13,576		92	0	0.7	13,484	297	2.2	13,187	97.1	8,500	2,002
1984	18,999		22	0	0.1	18,977	457	2.4	18,520	97.5	16,200	4,768
1985	19,084		36	0	0.2	19,048	1,353	7.1	17,695	92.7	15,910	4,018
1986	19,307	0	109	0	0.6	19,198	1,116	5.7	18,082	93.7	16,161	3,787
1987	23,604	5	141	0	0.6	23,457	1,684	7.0	21,773	92.2	14,131	2,790
1988	23,397	8	81	0	0.4	23,308	1,497	6.4	21,811	93.2	13,400	2,411
1989	22,739	17	9	0	0.1	22,713	100	0.4	22,613	99.4	19,659	3,115
1990	19,296	6	15	0	0.1	19,275	111	0.6	19,164	99.3	15,576	3,207
1991	14,569	3	9	0	0.1	14,557	171	1.2	14,386	98.7	14,815	1,774
1992	9,796	12	35	0	0.5	9,749	46	0.5	9,703	99.0	8,523	1,343
1993	14,781	15	81	0	0.6	14,686	328	2.2	14,358	97.1	16,377	3,404
1994	14,977	27	23	0	0.3	14,927	171	1.1	14,756	98.5	14,859	4,613
1995	12,615	18	0	0	0.1	12,597	417	3.3	12,180	96.6	12,162	2,767
1996	12,333	27	15	0	0.3	12,291	374	3.0	11,917	96.6	10,995	2,225
1997	18,277	19	6	0	0.1	18,252	270	1.5	17,982	98.4	13,107	2,424
1998	16,332	27	1	0	0.2	16,304	335	2.1	15,969	97.8	13,387	3,385
1999	22,347	41	1	0	0.2	22,305	411	1.8	21,894	98.0	22,898	7,210
2000	23,169	25	0	0	0.1	23,144	209	0.9	22,935	99.0	22,306	6,447
2001	54,935	64	1	0	0.1	54,870	692	1.3	54,178	98.6	53,170	33,244
2002	92,820	1,503	8	0	1.6	91,309	2,019	2.2	89,225	96.1	96,326	7,585
2003	83,120	2,007	0	36	2.5	81,077	4,437	5.3	76,511	92.0	83,004	46,649
2004	65,213	1,240	233	3	1.9	63,970	4,437	5.3	55,381	84.9	67,060	31,380
2000-2004 Average	63,852										64,373	

1. *Blank indicates data are not available.*
2. *2004 data includes commercial summer season landings of 186 summer chinook.*
3. *Includes incidental non-retention mortality in commercial shad and sockeye fishery.*
4. *Source of dam counts: ODFW/WDFW Status Report and USACE preliminary counts. Counts are from June 16 through July 31.*
5. *Counts include commercial and C&S catches.*
6. *Bonneville counts minus Zone 6 harvest.*

Table 9. Columbia River Fisheries and Passage Loss Impacts on the Adult Snake River Wild Spring/Summer Chinook Run and Escapement, 1979-2004.

		Non-Indian Fisheries Mortality [1]		Treaty Indian Catch [2]		Fisheries Total		Bonn.-L. Gr. Passage Loss		Snake River Escapement [3]	
Year	Snake River Wild Run Size	No.	%	No.	%	No.	%	No.	%[4]	No.	% [4]
1979	14,790	62		566	3.8	628	4.2	7,975	56.3	6,181	43.7
1980	18,660	31	0.2	605	3.2	636	3.4	11,370	63.1	6,646	36.9
1981	19,520	266	1.4	990	5.1	1,256	6.4	6,128	33.6	12,127	66.4
1982	26,652	464	1.7	1,839	6.9	2,303	8.6	12,531	51.5	11,812	48.5
1983	20,100	971	4.8	814	4.1	1,785	8.9	7,897	43.1	10,417	56.9
1984	13,876	479	3.5	925	6.7	1,404	10.	4,202	33.7	8,266	66.3
1985	14,404	523	3.6	492	3.4	1,015	7.0	2,612	19.5	10,773	80.5
1986	17,736	363	2.0	1,032	5.8	1,396	7.9	5,597	34.3	10,739	65.7
1987	14,938	232	1.6	909	6.1	1,141	7.6	3,595	26.1	10,198	73.9
1988	17,633	1,132	6.4	1,173	6.7	2,305	13.	4,108	26.8	11,217	73.2
1989	13,953	333	2.4	1,049	7.5	1,381	9.9	5,781	46.0	6,788	54.0
1990	15,388	775	5.0	1,013	6.6	1,789	11.	3,756	27.6	9,836	72.4
1991	11,745	463	3.9	709	6.0	1,172	10.	4,555	43.1	6,013	56.9
1992	18,862	307	1.6	1,140	6.0	1,446	7.7	4,330	24.9	13,079	75.1
1993	15,080	125	0.8	923	6.1	1,048	6.9	1,197	8.5	12,831	91.5
1994	3,166	126	4.0	154	4.9	280	8.8	933	32.3	1,954	67.7
1995	2,964	2	0.1	148	5.0	150	5.1	1,628	57.8	1,186	42.2
1996	8,461	10	0.1	445	5.3	455	5.4	4,218	52.7	3,788	47.3
1997	8,024	4	0.1	539	6.7	544	6.8	3,071	41.1	4,409	58.9
1998	12,719	12	0.1	650	5.1	662	5.2	4,665	38.7	7,391	61.3
1999	5,380	6	0.1	251	4.7	257	4.8	2,267	44.3	2,856	55.7
2000	12,858	25	0.2	782	6.1	807	6.3	3,795	31.5	8,255	68.5
2001	60,160	896	1.5	7,894	13.	8,790	14.	6,363	12.3	45,281	87.7
2002	46,824	840	1.8	5,053	10.	5,894	12.	10,653	26.1	30,213	73.9
2003	52,025	810	1.6	4,074	7.8	4,884	9.4	14,418	30.8	32,325	69.2
2004	32,901	699	2.1	2,822	8.6	3,521	10.	7,609	26.3	21,367	73.7

1. *Includes incidental mortalities in mainstem sport and commercial fisheries and Snake River sport fisheries.*
2. *Includes winter season commercial sales and spring C&S catches. Since 1982 C&S catch includes gill net, dip net and hook and line.*
3. *Includes Lower Granite Dam passage and Tucannon River wild escapement.*
4. *Percentage of Zone 6 escapement.*

Table 10. Columbia River Fisheries and Passage Loss Impacts on the Adult Upper Columbia Wild Spring Chinook Run and Escapement, 1979-2004.

		Non-Indian		Treaty Indian				Bonn. - McN		Priest Rapids Dam	
	Upper Columbia	Fisheries Mortality [1]		Catch		Fisheries Total		Passage Loss		Escapement	
Year	Wild Run Size	No.	%	No.	%	No.	%	No.	% [2]	No.	% [2]
1979	8,702	40	0.5	333	3.8	373	4.3	4,610	55.3	3,719	44.7
1980	8,206	17	0.2	266	3.2	283	3.4	4,336	54.7	3,586	45.3
1981	9,831	139	1.4	498	5.1	637	6.5	2,499	27.2	6,695	72.8
1982	7,514	133	1.8	518	6.9	651	8.7	3,150	45.9	3,714	54.1
1983	8,431	408	4.8	342	4.1	750	8.9	2,524	32.9	5,158	67.1
1984	7,159	249	3.5	477	6.7	726	10.1	1,427	22.2	5,006	77.8
1985	10,895	398	3.6	372	3.4	770	7.1	788	7.8	9,336	92.2
1986	8,069	168	2.1	470	6.2	679	8.2	1,715	24.4	5,716	75.6
1987	7,345	116	1.6	447	6.7	601	8.2	1,408	19.7	5,374	80.3
1988	5,387	347	6.9	358	7.2	775	14.1	803	17.9	3,878	82.1
1989	6,433	155	2.5	484	8.1	668	10.6	2,063	33.8	3,732	66.2
1990	5,549	282	5.3	365	7.0	710	12.3	894	20.9	4,007	79.1
1991	2,474	98	4.2	149	6.5	284	10.7	490	26.9	1,736	73.1
1992	4,897	81	1.7	296	6.4	391	8.1	540	10.7	3,980	89.3
1993	5,146	44	0.8	315	6.5	374	7.3	109	1.5	4,678	98.5
1994	1,679	66	4.3	82	5.3	140	9.7	376	11.4	1,155	88.6
1995	284	0	0.0	14	6.1	15	6.1	113	34.0	157	66.0
1996	293	0	<0.1	15	5.4	18	5.5	105	44.6	173	55.4
1997	1,057	1	0.0	71	7.3	82	7.3	330	37.1	655	62.9
1998	391	0	<0.1	20	5.7	25	5.8	87	28.9	284	71.1
1999	619	1	0.1	29	5.1	35	5.1	139	29.3	451	70.7
2000	2,929	6	0.2	178	6.3	105	6.5	646	20.1	2,098	79.9
2001	9,892	154	1.4	1,308	13.1	1,730	14.6	512	15.6	8,047	84.4
2002	5,492	107	2.1	598	11.2	840	13.3	796	18.1	4,037	81.9
2003	2,528	39	1.5	200	7.9	239	9.4	505	22.1	1,785	77.9
2004	3,141	66	2.1	272	8.7	338	10.8	523	18.8	2,264	81.2

1. *Includes incidental mortalities in the mainstem commercial and sport fisheries and Wanapum tribal fisheries.*

2. *Percentage of Zone 6 escapement.*

Table 11. Estimated Number of Sockeye Entering the Columbia River, Mainstem Harvest, and Escapement, 1980-2004.

Year	Return to Columbia River Mouth [1]	Non-Indian Fisheries Mortality	Bonn. Dam Count	Treaty Indian Catch		Dam Counts		Snake River Sockeye			
				Comm.	C & S	Priest Rapids [2]	Snake River [3]	At River Mouth	Non-Indian Impacts	Treaty Indian Harvest	Lower Granite Esc. [4]
1980	58,886	4	58,882	14	622	52,055	96	108	0	1	96
1981	56,037	0	56,037	7	1,500	51,460	218	236	0	6	218
1982	50,319	100	50,219	130	645	40,461	211	261	1	4	211
1983	100,628	83	100,545	1,849	1,500	90,008	216	241	0	8	122
1984	161,886	9,345	152,541	22,485	2,131	114,761	105	148	9	23	49
1985	200,747	32,213	166,340	49,393	576	118,542	35	59	10	15	35
1986	59,963	1,840	58,123	4,272	2,400	43,084	20	28	2	3	15
1987	145,546	28,553	116,993	39,460	100	76,578	29	55	11	15	29
1988	99,779	17,632	79,714	30,990	0	51,135	23	45	8	14	23
1989	47,477	36	41,884	38	2,100	45,301	4	4	0	0	2
1990	49,754	173	49,581	2	2,714	46,331	1	1	0	0	0
1991	76,484	3	76,481	5	3,266	71,245	9	10	0	0	8
1992	85,000	8	84,992	5	2,180	77,737	33	36	0	1	15
1993	84,273	64	80,178	7	5,013	79,172	17	18	0	1	12
1994	12,679	1	12,678	0	472	11,800	5	5	0	0	5
1995	9,178	1	8,773	0	445	8,727	5	5	0	0	3
1996	30,280	25	30,255	0	1,414	27,981	3	3	0	0	3
1997	46,939	12	46,927	0	2,046	42,233	17	19	0	1	17
1998	13,220	2	13,218	0	425	10,015	3	4	0	0	3
1999	17,878	1	17,877	0	704	15,282	18	21	0	1	18
2000	93,757	366	93,391	360	2,550	83,279	337	378	1	11	337
2001	116,623	1,675	114,933	5,580	1,720	103,533	45	51	0	3	43
2002	49,629	18	49,610	0	2,564	44,531	73	81	0	4	65
2003	39,375	0	39,375	10	1,080	33,474	26	30	0	1	14
2004	123,992	672	123,320	1,727	2,590	116,197	113	120	1	5	113

1. *Upriver run is larger of (Bonn. Count + Zones 1-5 harvest) or (Priest Rapids Dam count + Snake River count + Zones 1-6 harvest).*
2. *Counts have been adjusted from the actual 24-hour counts to 16-hour counts to maintain a consistent database since 1992.*
3. *Greater of Ice Harbor and Lower Granite dam counts. Since 1992, video counts at Lower Granite Dam were used (adjusted for 1989 and 1991 average conversion between Ice Harbor Dam and Lower Granite dams). Kokanee-size fish are not included.*
4. *Prior to 1992, Lower Granite Dam counts may include kokanee. Beginning in 1992, video counts at LWG were used to identify true sockeye.*

Table 12. Minimum Numbers (in Thousands) of Lower River Summer Steelhead Entering the Columbia River, 1969-2004.

Year	Lower Columbia Sport Catch (May-June) [1]	Tributary Dam Counts [2]	Hatchery Returns [3]	Tributary Sport Catch [4]		Minimum Run
				OR	WA	
1969	0	0.0	3.6	--	14.7	18.3
1970	0.0	0.1	4.6	--	13.8	18.5
1971	0.0	2.3	4.4	--	17.3	24.0
1972	0.0	0.9	5.6	--	25.8	32.3
1973	0.0	1.8	2.7	--	24.6	29.1
1974	0.0	5.7	3.9	--	14.5	24.1
1975	0.0	5.2	4.2	0.5	11.4	21.3
1976	0.0	5.4	3.2	0.5	16.3	25.4
1977	0.7	12.7	6.8	1.2	21.7	43.1
1978	1.2	20.2	5.7	2.1	21.5	50.7
1979	0.6	13.9	4.0	2.1	12.2	32.8
1980	0.3	20.5	5.1	3.8	18.1	47.8
1981	1.9	23.0	6.3	2.5	22.9	56.6
1982	1.8	19.2	5.8	3.6	18.7	49.1
1983	0.8	8.6	2.0	1.5	6.8	19.7
1984	2.7	43.7	4.6	6.2	11.3	68.5
1985	1.8	32.3	3.0	3.9	15.9	56.9
1986	3.0	53.3	2.3	4.4	26.9	89.9
1987	1.6	33.6	1.6	4.2	17.4	58.4
1988	2.7	50.7	3.3	7.0	14.2	77.9
1989	1.7	13.4	3.8	3.5	12.6	35.0
1990	2.2	31.8	5.6	5.1	17.2	61.9
1991	1.2	10.4	2.2	3.0	15.0	31.8
1992	1.2	23.1	3.1	3.0	17.6	48.0
1993	1.8	17.3	4.7	3.2	20.0	47.0
1994	1.2	15.4	5.6	2.1	23.0	47.3
1995	1.4	15.1	7.8	1.5	13.0	38.8
1996	1.2	7.8	9.9	1.0	15.1	35.0
1997	1.9	17.5	3.7	1.4	6.0	30.5
1998	1.2	15.3	5.4	1.4	5.0	28.3
1999	1.3	12.4	4.6	1.2	6.3	25.8
2000	1.6	13.1	9.6	(1.3)	(10.2)	(35.8)
2001	2.0	28.4	16.4	(1.3)	(8.5)	(56.6)
2002	4.4	39.0	33.8	(1.3)	(7.2)	(85.7)
2003	2.7	17.5	(23.0)	(1.3)	(7.4)	(51.9)
2004 [5]	3.0	36.4	--	(1.3)	--	--

1. *Beginning in 1977, May-June lower Columbia recreational catch determined to be mostly lower river stock.*
2. *Willamette Falls (Willamette R.), North Fork Dam (Clackamas R.), and Marmot Dam (Sandy R.); hatchery fish.*
3. *Skamania, Lewis River, and Cowlitz hatcheries and beginning in 1998 Kalama River hatcheries.*
4. *From Oregon and Washington catch record estimates, Washington catches prior to 1975 not corrected for non-response bias.*
5. " --" indicates data not available.

( ) Indicates preliminary.

Table 13. Minimum Numbers (in Thousands) of Group A and Group B Summer Steelhead Entering the Columbia River, 1969-2004.

	Lower Columbia Catch								
	Sport [1]		Commercial [2]		Bonneville Dam Counts [3]		Minimum Run		
Year	Group A	Group B	Group A	Group B	Group A	Group B	Group A	Group B	Total
1969	9.3	2.0	11.4	9.9	103.1	36.2	123.8	48.1	171.9
1970	7.8	1.6	5.0	11.1	77.9	35.1	90.7	47.8	138.5
1971	9.1	1.7	6.7	13.9	140.6	52.5	156.4	68.1	224.5
1972	12.1	3.3	12.8	12.1	106.7	78.5	131.6	93.9	225.5
1973	6.7	1.8	6.3	16.4	99.2	57.5	112.2	75.7	187.9
1974	4.0	1.5	1.2	2.8	112.2	23.1	117.4	27.4	144.8
1975	0.0	0.0	--	--	70.5	13.6	70.5	13.6	84.1
1976	0.0	0.0	--	--	91.1	31.3	91.1	31.3	122.4
1977	2.2	1.5	--	--	112.5	79.2	114.7	80.7	195.4
1978	1.5	0.0	--	--	62.4	39.9	63.9	39.9	103.8
1979	1.2	0.0	--	--	78.1	34.2	79.3	34.2	113.5
1980	2.0	0.0	--	--	83.9	43.7	85.9	43.7	129.6
1981	2.7	0.5	--	--	120.7	37.2	123.4	37.7	161.1
1982	2.6	0.0	--	--	101.9	54.3	104.5	54.3	158.8
1983	2.8	0.1	--	--	148.4	69.2	151.2	69.3	220.5
1984	4.3	1.1	--	--	188.8	125.7	193.1	126.8	319.9
1985	4.1	2.0	--	--	250.7	91.6	254.8	93.6	348.4
1986	6.0	2.0	--	--	276.4	99.9	282.4	101.9	384.3
1987	3.4	1.5	--	--	222.8	78.3	226.2	79.8	306.0
1988	5.8	1.9	--	--	188.9	88.3	194.7	90.2	284.9
1989	4.7	1.7	--	--	170.8	115.6	175.5	117.3	292.8
1990	2.7	1.3	--	--	94.1	87.4	96.8	88.7	185.5
1991	3.2	2.8	--	--	149.9	123.3	153.1	126.1	279.2
1992	6.4	3.8	--	--	174.6	139.3	181.0	143.1	324.1
1993	3.8	4.7	--	--	99.2	88.1	103.0	92.8	195.8
1994	2.3	1.7	--	--	82.4	78.4	84.7	80.1	164.8
1995	4.7	2.1	--	--	123.3	78.2	128.0	80.3	208.3
1996	4.0	1.1	--	--	135.8	68.2	139.8	69.3	209.1
1997	4.6	0.6	--	--	174.8	82.0	179.4	82.6	262.0
1998	1.7	2.0	--	--	83.8	100.6	85.5	102.6	188.1
1999	3.8	2.1	--	--	137.9	67.8	141.6	69.9	211.5
2000	6.3	1.9	--	--	184.3	89.9	190.6	91.8	282.4
2001	7.8	1.7	--	--	434.0	196.2	441.8	197.9	639.7
2002	6.7	0.8	--	--	284.3	193.7	291.0	194.5	485.5
2003	6.0	0.9	--	--	227.0	130.2	233.0	131.1	364.1
2004	5.5	0.3	--	--	254.8	33.2	260.3	33.5	293.8

1. *Sport catch based on timing of the catch Group A--May 1-Aug 15 (1969-1976) and July 1-Aug 15 beginning in 1977; Group B--Aug 16-Oct 31. Includes catches from estuary recreational (Buoy 10) fishery beginning in 1992.*
2. *Commercial catch of steelhead by non-Indians (1969-1974) was based on timing of the catch: Group A--spring through first two fishing weeks of August; Group B--remainder of August through October. Sale of steelhead by non-Indians prohibited since 1975.*
3. *Dam counts distributed to Group A and Group B categories based on size determined from sub-sampling at the dam.*

Table 14. Skamania Index, Group A Index, and Group B Index Returns of Summer Steelhead to Bonneville Dam During 1984-2004.

	Skamania Index			Group A Index (<78 cm)			Group B Index (>78cm)		
Year	Number Wild	Number Hatchery	Total	Number Wild	Number Hatchery	Total	Number Wild	Number Hatchery	Total
1984	2,500	18,300	20,800	52,400	143,300	195,700	13,800	84,200	98,000
1985	3,700	16,300	20,000	51,900	229,600	281,500	13,000	27,900	40,900
1986	5,500	19,300	24,800	56,600	230,900	287,500	10,000	54,000	64,000
1987	7,400	10,400	17,800	106,700	131,600	238,300	14,000	31,000	45,000
1988	4,200	18,200	22,400	64,300	108,800	173,100	17,700	63,900	81,600
1989	3,800	11,900	15,700	57,500	135,600	193,100	12,400	65,200	77,600
1990	3,700	15,000	18,700	27,100	88,500	115,600	8,800	38,400	47,200
1991	1,200	9,700	10,900	60,300	173,800	234,100	6,200	22,100	28,300
1992	2,900	12,000	14,900	44,300	197,200	241,500	12,700	44,700	57,400
1993	1,300	13,100	14,400	28,600	108,100	136,700	4,400	31,800	36,200
1994	1,400	10,900	12,300	21,200	99,800	121,000	5,200	22,300	27,500
1995	1,100	7,100	8,200	26,000	154,000	180,000	1,800	11,400	13,200
1996	1,300	9,500	10,800	25,700	148,600	174,300	3,900	14,900	18,800
1997	900	11,000	11,900	30,900	177,400	208,300	3,900	32,700	36,600
1998	1,600	7,800	9,400	34,800	99,900	134,700	3,400	36,800	40,200
1999	1,300	5,900	7,200	56,600	119,800	119,800	3,700	18,400	22,100
2000	5,700	10,900	16,600	63,600	153,100	216,700	8,400	32,500	40,900
2001	7,900	20,800	28,700	137,200	377,900	515,100	12,100	74,300	86,400
2002	9,700	15,300	25,000	87,300	235,800	323,100	32,300	97,600	129,900
2003[1]	4,700	9,500	14,200	66,400	238,100	304,500	6,500	32,000	38,500
2004[1]	8,000	13,000	21,000	62,500	192,300	254,800	7,400	25,800	33,200

[1] 2003 and 2004 "Skamania" counts based on total marked and unmarked fish in Bonneville Dam count, April 1st- June 30th. Not corrected for miss marked hatchery fish or for winter steelhead that are also present during the counting period.

Table 15. Steelhead Counts by Run Year at Lower Granite Dam with Wild Steelhead Estimates and Goals, 1984-2004.				
	Run Year	Wild [1]		Percent of
Run Year	Totals	Number	Percent	30.000 Goal
1984-1985	104,400	24,500	23	82
1985-1986	116,300	26,700	23	89
1986-1987	130,000	22,000	17	73
1987-1988	71,300	25,500	36	85
1988-1989	87,100	21,000	24	70
1989-1990	131,400	25,000	19	83
1990-1991	56,900	9,300	16	31
1991-1992	99,100	17,300	17	58
1992-1993	128,300	19,400	15	65
1993-1994	59,800	7,400	12	25
1994-1995	47,300	7,500	16	25
1995-1996	79,100	8,000	10	27
1996-1997	83,300	7,300	9	24
1997-1998	87,000	8,600	10	29
1998-1999	70,700	9,300	13	31
1999-2000	73,800	12,100	16	40
2000-2001	116,300	21,400	18	71
2001-2002	269,300	40,400	15	135
2002-2003	222,200	43,100	19	144
2003-2004[2]	(153,400)	(36,100)	(24)	(120)

1. *The database has been updated since 1994 and is based on fin sampling data from the trap at Lower Granite Dam. Percentages are calculated before rounding.*
2. *() Preliminary, based on 2004 dam counts not corrected for fin sampling.*

Table 16. Commercial Landings of Shad in Area 2S and Washougal Reef Fisheries and Minimum Shad Run Size (in Thousands) 1977-2004.

	Area 2S		Washougal Reef		Total Zone 1-5		% of Run
Year	Days	Catch [1]	Days	Catch [1]	Commercial Catch [2]	Run Size	Landed
1977	12	42.4	39	--	61.9	929.4	7
1978	19	101.7	28	--	113.6	1,369.8	8
1979	14	117.4	28	-	120.3	1,548.7	8
1980	19	21.9	32	--	23.2	1,223.8	2
1981	19	15.5	32	--	21.8	1,159.9	2
1982	19	72.5	29	--	75.0	1,133.4	7
1983	19	84.9	29	--	85.0	2,082.6	4
1984	14	14.4	24	--	18.1	1,336.1	1
1985	15	33.7	20	--	35.4	1,455.0	2
1986	19	80.5	24	7.6	88.2	1,474.9	6
1987	21	103.2	26	4.1	108.7	1,417.8	8
1988	19	97.4	24	8.9	108.4	2,156.1	5
1989	19	36.2	28	15.4	51.6	3,105.3	2
1990	19	161.8	29	6.0	167.8	4,011.6	4
1991	19	38.8	29	4.9	43.7	2,362.7	2
1992	17	130.2	22	11.1	141.3	3,070.3	5
1993	16	139.2	21	5.3	144.7	2,671.3	5
1994	15	46.9	30	10.8	57.7	1,996.2	3
1995	22	54.4 [3]	29	6.7	61.1	2,159.5	3
1996	24	60.1	29	1.0	61.1	2,905.8	2
1997	24	20.3	30	4.6	24.9	2,748.1	1
1998	24	24.4	31	0.0	24.5	2,304.9	1
1999	24	39.7	31	0.0	39.7	1,880.5	2
2000	29	30.4	34	0.0	30.5	1,699.4	2
2001	29	17.0	--	--	26.2 [4]	2,888.4	1
2002	29	37.1	--	--	37.1	3,429.2	1
2003	29	79.2	--	--	79.2	4,790.1	2
2004	29	48.4	--	--	48.4	5,571.0	1

1. *Washougal Reef landings included in Area 2S landings until 1986. No season set during 2001-2004.*
2. *Includes landings during sockeye seasons, Select Area fisheries, and John Day River shad fisheries in some years.*
3. *Limited experimental fishery with three boats.*
4. *Includes shad caught in experimental tangle net permit fishery for spring chinook.*

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Table 17. Season Dates, Gear Restrictions, and Commercial Landings During Non-Indian Winter (January-March) Mainstem Seasons, 1970-2004.

Year	Season	Fishing Days	Mesh Size	Commercial Landings [1] Chinook	White Sturgeon
1970-1974 Average		13	7-1/4" min.	14,400	1,500
Range	Feb 19-Mar 10	9-15		12,500-17,200	800-3,400
1975-1979 Average		8	8" min.	7,900	2,100
Range	Feb 26-Mar 11	5-11		4,700-13,500	1,000-2,700
1980	Feb 27-Feb 28	1	"	400	900
1981	Feb 23-Mar 3	6	"	7,400	3,700
1982	Feb 24-Mar 4	8	"	5,100	1,900
1983	Feb 16-Mar 4	12	"	7,600	1,900
1984	Feb 19-Mar 6	12	"	9,600	3,200
1980-1984 Average		8		6,000	2,300
1985	Feb 18-Mar 7	13	"	12,700	1,400
1986	Jan 27-Feb14	12	9" min.	700	1,100
	Feb 23-Mar 6	8	8" min.	9,000	1,000
1987	Jan 25-Feb 6	10	9" min.	400	700
	Feb 18-Mar 2	8	8" min.	11,200	1,000
1988	Feb 16-Mar 6	15	"	18,300	1,700
1989	Feb 15-Mar 9	17	"	13,900	500
1985-1989 Average		17		13,200	1,500
1990	Feb 11-Mar 9	20	"	18,300	700
1991	Feb 10-Mar 1	13	"	12,600	800
1992	Feb 16-28	10	"	5,100	1,200
1993	Feb 16-19 & Mar 2-5	6	8"-9.75"	1,500	1,000
1994	Feb 15-Mar 9	15	"	1,900	3,000
1990-1994 Average		13		7,900	1,300
1995	None	0	--	--	--
1996	Feb 18-22	3	8"- 9.75"	100	600
1997	Jan 27-Feb 18	7	8.75"- 9.75"	100	2,700
1998	Jan 12-Feb 13	10	9" – 9.75"	<100	2,700
1999	Jan 11-Feb 26	13	9" – 9.75"	<100	1,800
1995-1999 Average		7		<100	1,600
2000	Jan 10-Feb 11	10	9" -9.75"	17	1,200
	Feb 13-29	7	9" – 9.75"; above Kelley Pt.	0	325
			8" -9.75"; below Kelley Pt.	479	736
2001	Jan 8-Feb 9	10	9" - 9.75"	71	2,634
	Feb 26-Mar 9	6	8" -9.75"; below Kelley Pt.	5,373	425
2002	Jan 7-Feb 15	11	9"- 9.75"	146	2,625
	Feb 25-Mar 27	15	5.5" max.	14,238	99
2003	Jan 7-28	4	9"- 9.75"	2	1,490
	Feb 17 and 19	2	8" -9.75"	519	21
	Mar 21	1	4.25" max.	2,527	6
2004	Jan 13-Feb 11	5	9"-9.75"	48	1,696
	Mar 2-Mar 19	6	9" min	3,490	159
	Mar 23-Mar 30	3	4.25" max.	9,620	15
2000-2004 Average		16		7,306	2,287

1. Sale of steelhead prohibited since 1975. Catches ranged from 2,100 to 8,500 steelhead during 1970-74.

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Table 18. Winter Season Commercial Gillnet Landings in the Zone 6 Treaty Indian Fishery, 1977-2004.

Year	Season [1]	Peak Net Count	Numbers of Fish Landed [2]			
			Chinook	Steelhead	Sturgeon	Walleye
1977-1981 Average	Feb 1-Apr 1 [3]	170	1,400	3,700	110	--
Range		87-246	30-2,800	2,600-4,900	20-220	
1982-1986 Average	Feb 1-Mar 21 [4,5]	107	50	4,700	670	--
Range		61-180	5-100	3,000-7,800	70-1,700	
1987-1991 Average	Feb 1-Mar 21 [4,5]	183	100	6,700	2,100	500
Range		124-299	0-280 [6]	2,100-10,800	1,300-3,100	130-1,030
1992	Feb 1-Mar 21 (48 days)	161 (Mar 9)	47	4,600	625 [7]	350
1993	Feb 1-Mar 20 (47 days)	78 (Mar 18)	0	2,400	2,000	180
1994	Feb 1-Mar 19 (34 days)	120 (Mar 16)	10	2,100	1,500	190
1995	Feb 1-Mar 18 (33 days)	83 (Mar 16)	13	2,100	1,950	730
1996	Feb 1-Mar 16 (32 days)	--	0	90	480	230
1997	Feb 3-Mar 21 (35 days)	--	14	220	2,600	190
1998	Feb 2-Mar 14 (30 days)	--	1	150	2,800	120
1999	Feb 1-Mar 20 (40 days)	--	1	89	1,700	160
2000	Feb 1-Mar 21 (48 days)	--	31	2	2,251	307
2001	Feb 1-Mar 14 (41 days)	--	160	230	1,961	86
2002	Feb 1-Mar 21 (48 days)	--	45	78	1,529	76
2003	Feb 1- Mar 21 (48 days)	--	857	788	1,339	113
2004 [8]	Feb 2-Mar 10 [9] (37 days)	--	2	66	1,840	49

1. *Season dates during 1994-1999 (except March, 1999) include weekend closures of 42-48 hours.*
2. *Treaty Indian sales to licensed fish buyers.*
3. *The 1980 season ended on March 15. The ending date for all other years was April 1.*
4. *The 1989 season ended on March 26 due to unusually cold weather during regular season. The ending date for all other years was March 21.*
5. *Walleye sales not accounted for prior to 1989.*
6. *Includes two late fall chinook in 1991.*
7. *Sturgeon sales prohibited beginning noon March 5.*
8. *Catch statistics preliminary.*
9. *The closing date for the John Day Pool was March 21 (48 days).*