



**JOINT STAFF REPORT
CONCERNING COMMERCIAL SEASONS FOR
SPRING CHINOOK, STEELHEAD, STURGEON, SHAD, SMELT,
AND OTHER SPECIES AND MISCELLANEOUS
REGULATIONS FOR 2006**

Joint Columbia River Management Staff

Oregon Department of Fish & Wildlife

Washington Department of Fish & Wildlife

January 18, 2006

CONTENTS

	<u>Page</u>
CONTENTS.....	ii
LIST OF TABLES.....	v
LIST OF FIGURES	vi
INTRODUCTION	7
THE COMPACT	7
SEASONS CONSIDERED	7
STOCKS CONSIDERED.....	8
SPRING CHINOOK	8
WILLAMETTE RIVER SPRING CHINOOK	8
2005 Return	9
2005 Sport Fishery	9
2005 Escapement.....	10
2006 Forecast.....	10
CLACKAMAS RIVER SPRING CHINOOK	10
2005 Return	10
2005 Sport Fishery	11
2005 Escapement.....	11
SANDY RIVER SPRING CHINOOK	11
2005 Sport Fishery	12
WASHINGTON LOWER RIVER SPRING CHINOOK.....	12
Cowlitz River Returns.....	13
Kalama River Returns.....	13
Lewis River Returns.....	13
SELECT AREA SPRING CHINOOK	13
2005 Returns.....	14
2006 Forecast.....	15
UPRIVER SPRING CHINOOK	15
2005 Run.....	16
2006 Forecast.....	16
UPPER COLUMBIA RIVER SUMMER CHINOOK.....	16
2005 Run.....	17
2006 Forecast.....	17
WILD WINTER STEELHEAD	17
2004-2005 Run.....	17
2005-2006 Forecast.....	17

SUMMER STEELHEAD	19
2005-2006 <i>Run</i>	20
2006-2007 <i>Forecast</i>	20
SHAD.....	20
2005 <i>Run</i>	20
REVIEW OF MAINSTEM AND SELECT AREA FISHERIES.....	21
NON-INDIAN FISHERIES.....	21
<i>Past Lower River Mainstem Winter Gillnet Sturgeon and Salmon Seasons</i>	21
2005 <i>Lower River Winter Sturgeon Gillnet Season</i>	23
2005 <i>Lower River Winter Commercial Salmon Season</i>	23
<i>Past Lower Columbia River Spring Chinook Sport Fisheries</i>	25
2005 <i>Lower Columbia River Spring Chinook Sport Fishery</i>	25
<i>Past Columbia River Summer Steelhead and Summer Chinook Sport Fisheries</i>	27
2005 <i>Columbia River Summer Steelhead and Summer Chinook Sport Fisheries</i>	28
<i>Spring Chinook Fisheries Above McNary Dam</i>	28
<i>Past Select Area Fisheries</i>	28
2005 <i>Youngs Bay Winter/Spring/Summer Gillnet Season</i>	30
2005 <i>Blind Slough/Knappa Slough Winter/Spring Gillnet Season</i>	31
2005 <i>Deep River Experimental Spring Gillnet Season</i>	32
2005 <i>Commercial Shad Seasons</i>	32
2005 <i>Non-Indian Impacts to ESA Listed Stocks</i>	33
TREATY INDIAN FISHERIES.....	34
2005 <i>Treaty Indian Winter Commercial Season</i>	34
2005 <i>Treaty Indian Mainstem Spring and Summer Chinook and Sockeye Fisheries</i>	34
2005 <i>Ceremonial and Subsistence Entitlement</i>	35
2005 <i>Shad Fisheries</i>	35
2006 MANAGEMENT GUIDELINES	36
ENDANGERED SPECIES ACT.....	36
<i>Salmon and Steelhead</i>	36
<i>Wild Winter Steelhead Management</i>	37
<i>Marbled Murrelet</i>	37
2006 COLUMBIA RIVER SALMON MANAGEMENT GUIDELINES	37
<i>Upriver Spring Chinook</i>	37
<i>Upper Columbia River Summer Chinook</i>	39
<i>Sockeye</i>	39
NON-INDIAN ALLOCATION OF UPRIVER IMPACTS	40
WILLAMETTE SPRING CHINOOK MANAGEMENT.....	41
<i>Fishery Management and Evaluation Plan For Willamette Spring Chinook</i>	41
<i>Willamette River Basin Fish Management Plan</i>	41
LOWER COLUMBIA RIVER STURGEON MANAGEMENT.....	43
2006 WINTER, SPRING, AND SUMMER SEASON RECOMMENDATIONS.....	43
2006 NON-INDIAN FISHERIES.....	43
<i>Commercial Winter Sturgeon Fishery</i>	43

<i>Commercial Spring Chinook Fisheries</i>	44
<i>Lower Columbia River Spring Chinook Sport Fishery</i>	44
<i>Select Area Commercial Fisheries</i>	45
<i>Columbia River Steelhead Sport Fishery</i>	45
<i>Columbia River Summer Chinook Sport and Commercial Fisheries</i>	45
<i>Area 2S Shad Fishery</i>	46
<i>Washougal Reef Shad Fishery</i>	46
2006 TREATY INDIAN FISHERIES.....	47
<i>2006 Treaty Winter Commercial Fisheries</i>	47
<i>2006 Treaty Indian Spring Season Fisheries</i>	47
<i>2006 Treaty Indian Summer Season Fisheries</i>	48
<i>2006 Treaty Indian Shad Fisheries</i>	48
MISCELLANEOUS REGULATIONS	49
Bibliography	50

LIST OF TABLES

	<u>Page</u>
Table 1. Estimates of the Spring Chinook Stock Composition (in Thousands) in Lower Columbia Fisheries, 1990-2005.....	52
Table 2. Components (in Thousands) of the Minimum Willamette River Spring Chinook Run and Percentage Caught in Lower Willamette Sport Fishery, 1970-2005.....	53
Table 3. Predicted and Actual Spring Chinook Entering the Columbia River, 1985-2005 and 2006 Projections.....	55
Table 4. Willamette Falls Spring Chinook Escapement, Upper Willamette Sport Catch, Number Returning to Hatcheries, and Tribal Use, 1980-2005.....	56
Table 5. Minimum Adult Spring Chinook Run Entering Other Lower River Tributaries, 1980-2005.....	57
Table 6. Adult Spring Chinook Sport Catch and Harvest Rates for the Cowlitz, Kalama, and Lewis Rivers, 1980-2005.....	58
Table 7. Estimated Numbers of Upriver Adult Spring Chinook Entering the Columbia River, Mainstem Harvest, and Escapement, 1980-2005.....	59
Table 8. Estimated Numbers of Adult Upper Columbia Summer Chinook Entering the Columbia River, Mainstem Harvest, and Escapement, 1980-2005.....	60
Table 9. Columbia River Fisheries and Passage Loss Impacts on the Adult Snake River Wild Spring/Summer Chinook Run and Escapement, 1980-2005.....	61
Table 10. Columbia River Fisheries and Passage Loss Impacts on the Adult Upper Columbia Wild Spring Chinook Run and Escapement, 1980-2005.....	62
Table 11. Estimated Number of Sockeye Entering the Columbia River, Mainstem Harvest, and Escapement, 1980-2005.....	63
Table 12. Minimum Numbers (in Thousands) of Lower River Summer Steelhead Entering the Columbia River, 1969-2005.....	64
Table 13. Minimum Numbers (in Thousands) of Upriver Summer Steelhead Entering the Columbia River, 1969-2005.....	65
Table 14. Skamania Index, Group A Index, and Group B Index Returns of Summer Steelhead to Bonneville Dam During 1984-2005.....	66
Table 15. Steelhead Counts by Run Year at Lower Granite Dam with Wild Steelhead Estimates and Goals, 1984-2005.....	67
Table 16. Commercial Landings of Shad in Area 2S and Washougal Reef Fisheries and Minimum Shad Run Size (in Thousands) 1977-2005.....	68
Table 17. Season Dates, Gear Restrictions, and Commercial Landings During Non-Indian Winter (January-March) Mainstem Seasons, 1970-2005.....	69
Table 18. Winter Season Commercial Gillnet Landings in the Zone 6 Treaty Indian Fishery, 1977-2005.....	70

LIST OF FIGURES

	<u>Page</u>
Figure 1. Average Daily Counts of Salmon, Steelhead, and Shad at Bonneville Dam, 1986-2004.....	18
Figure 2. Map of the Columbia River Below McNary Dam Showing Areas Open to Commercial Fishing.	22

JOINT STAFF REPORT CONCERNING COMMERCIAL SEASONS FOR SPRING CHINOOK, STEELHEAD, STURGEON, SHAD, SMELT, AND OTHER SPECIES AND MISCELLANEOUS REGULATIONS FOR 2006

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 2006 management will begin at 10 AM, Thursday January 26, at the Museum of the Oregon Territory, 211 Tumwater Drive, Oregon City, Oregon. Members of the *US v Oregon* Technical Advisory Committee (TAC) reviewed the data and recommendations in this report.

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).

SEASONS CONSIDERED

On January 26, 2006, the Compact will consider non-Indian and treaty Indian commercial winter seasons for spring Chinook, steelhead, sturgeon and spring/summer seasons for 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. At this time, commercial sockeye seasons are not anticipated in 2006. Non-Indian commercial sturgeon (January through mid-February) and smelt (January through March) seasons were adopted at the December 15, 2005 Compact hearing and modifications to these seasons may be considered at the January 26, 2006 Compact hearing. General permanent commercial fishery rules may also be considered at this Compact hearing. Other commercial seasons or modifications to seasons adopted at the January 26, 2006 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 during mid-February to mid-March are predominantly larger, 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 returning to the river system above Bonneville Dam begin to enter the Columbia River in substantial numbers after mid-March and generally reach peak abundance 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 or lower river tributaries such as the Cowlitz, Kalama, Lewis, and Sandy rivers, plus Select Area sites at Youngs Bay, Blind Slough, and Deep River (Table 1). Early April sport fisheries and spring commercial season landings include increasing numbers of upriver stock spring Chinook and 4-year old spring Chinook fish destined for lower river tributaries. Catches during late April seasons are predominately upriver spring Chinook and 4-year old Willamette River spring Chinook.

Willamette River Spring Chinook

The Willamette River Spring Chinook 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 Willamette 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.

Hatchery egg-take needs for the combined Willamette and Clackamas River programs have been met annually since 1980, 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.

2005 Return

The Willamette River return of 61,000 spring Chinook entering the Columbia River in 2005 was a 58% reduction from the record 143,700 return of 2004 (Table 2). The 2005 return was 48% less than the preseason forecast of 116,900; was well below the recent 5-year average of 106,000; and did not meet the old Willamette Basin Fish Management Plan (WFMP) objective of 100,000 Willamette River spring Chinook entering the Columbia River for the first time since 2001 (Table 3). The majority of the shortfall in the 2005 return was in the 5-year old component, which was anticipated to comprise nearly 75% of the return. Wild fish are estimated to comprise about 10% of the 2005 Willamette spring Chinook run; similar to recent years.

2005 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 2005, 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 2005 lower Willamette River sport catch totaled 7,463 spring Chinook (5,572 kept and 1,891 released). The 2005 kept catch of 5,572 was 52% lower than the 2004 kept catch of 11,640 and 47% lower than the recent 5-year average catch (excluding release mortalities) of 10,100 (Table 2). Angler effort in 2005 (78,677 trips) was lower than in 2004 (110,760 trips), and the catch rate of 0.09 spring Chinook per angler day was less than the 0.13 catch rate observed in 2004. The total number of angler trips in the lower Willamette River during 2005 was much higher than effort totals from the late 1990's but only one third 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 2001-2005 sport catches for the fishery above Willamette Falls are not currently available because of delays in receiving and processing angler returned catch records.

2005 Escapement

Unlike the previous three years, Willamette Falls escapement of spring Chinook declined in 2005 with only 36,633 passing the falls. This was only 51% of the recent 5-year average of 72,000 fish (Table 2). Since 1971, the number of spring Chinook passing Willamette Falls has ranged from 20,600 to 95,970 and averaged 43,400 fish. The escapement goal of 34,000 spring Chinook at Willamette Falls was achieved in 2005 as well as the 3,600 Clackamas Hatchery escapement goal.

With good returns of upriver spring and summer Chinook in 2005, 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.

2006 Forecast

The ODFW staff is forecasting a return of 46,500 Willamette River spring Chinook to the Columbia River mouth in 2006 which includes adjustments for expected ocean harvest in Canadian and Southeast Alaskan fisheries. The 2006 forecast is similar to the 1995-1999 average return of 42,400, and less than half the 2005 preseason forecast of 116,900 (Table 2 and 3). Age-specific returns for 2006 are expected to total 1,900 3-year olds, 22,200 4-year olds, 21,700 5-year olds, and 700 6-year olds. The 2006 return is expected to include about 4,700 wild fish (10% of total return), which would be less than the preliminary estimated return of 6,100 wild fish in 2005.

Clackamas River Spring Chinook

2005 Return

The return of spring Chinook (including jacks) to the Clackamas River in 2005 totaled 12,657 fish, which is 90% of the recent 5-year average of 14,100 (Table 2). Wild fish comprised

approximately 28% (3,522 fish) of the 2005 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 2005 Clackamas River return exceeded the average annual run size goal (12,400 fish entering the Clackamas River) of the Clackamas River spring Chinook chapter of the WFMP for the fourth consecutive year.

2005 Sport Fishery

The 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 in the lower Clackamas River. Anglers in the 2005 lower Clackamas River sport fishery caught an estimated 1,550 spring Chinook (1,240 kept and 310 released) from 9,792 angler trips. The kept catch was below the recent 5-year average of 1,440 fish and effort was well below the recent 5-year average of 12,700 trips. The catch rate of 6.3 angler days to catch one Clackamas River spring Chinook was slightly better than the recent 5-year average of 8.8 angler days per fish.

2005 Escapement

The North Fork Dam count of 5,866 spring Chinook in 2005 included 2,908 unmarked fish that were passed upstream and 710 marked fish that were recycled downstream to provide additional sport fishing opportunity. An additional 2,248 spring Chinook were taken to Clackamas Hatchery for processing. These fish were recycled or utilized accordingly. Furthermore, an estimated 720 fish remained below North Fork Dam with some probably spawning naturally. The 2,908 spring Chinook that were passed over North Fork Dam exceeded not only the interim escapement goal of 400-800 adults set in the Clackamas River spring Chinook chapter of the WFMP, but also surpassed the WFMP's long term escapement goal of 2,900 adults past North Fork Dam. 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 3,600 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.

Sandy River Spring Chinook

Beginning in 1976, spring Chinook smolts from hatchery stocks in the Willamette River system were released into the Sandy River to supplement the depressed native spring Chinook run. Hatchery releases of Willamette spring Chinook into the Sandy were doubled in the mid-1980s and have been mass marked with an adipose fin-clip beginning in 1999. Subsequently, the Marmot Dam count 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. Beginning with the 2000 brood, large scale releases of spring Chinook smolts from wild, local broodstock were initiated at Sandy

River Hatchery. Since 2002, only wild spring Chinook trapped at Marmot Dam have been used for Sandy River broodstock. 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 the Marmot Dam count, Sandy hatchery return, and sport catch below Marmot Dam. The preliminary 2005 Sandy River run size of 9,400 adults was the second largest return on record and was 127% of the preseason forecast. The 2006 Sandy River forecast of 8,200 spring Chinook is based on the recent five-year average and is slightly less than the 2005 return (Table 5). The total adult spring Chinook return to Marmot Dam in 2005 was 4,000 fish and included 1,880 wild fish, of which the majority were passed upstream to spawn naturally in the upper Sandy River Basin. Of the 1,880 wild fish trapped at Marmot, 200 were collected for broodstock. Hatchery spring Chinook returns in 2005 consisted of 1,730 adults collected at Sandy River Hatchery and 2,120 adults trapped at Marmot Dam.

2005 Sport Fishery

For the fourth consecutive 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 usually estimated from angler returned catch records. However, catch records for 2004-2005 are not available at this time due to delays in receiving and processing angler catch record cards. An alternate method of estimating catch utilizes recent harvest rates and escapement data. Since 1986, annual harvest rates on the Sandy River have ranged between 26% and 58%, averaging 39%. Based on the recent five-year average harvest rate of 36% and the 2005 Marmot Dam and hatchery return total of 5,730 fish, the estimated sport catch for 2005 was 3,650 adult spring Chinook.

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 9,200 spring Chinook in 2005 was less than the 2004 return of 16,700. The hatchery escapement of 7,650 adults surpassed the 1,150 fish escapement goal. The preseason forecast provided for a liberal sport fishery that produced a total catch of 1,200 hatchery fish (Table 6).

The forecast for the Cowlitz River in 2006 is for a return of 8,700 adult spring Chinook. The 2006 forecast is slightly lower than the large returns of 2004 and 2005. 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.

Kalama River Returns

The adult spring Chinook return of 3,100 fish to the Kalama River in 2005 compared to the preseason forecast of 4,500 fish. The hatchery return of 1,700 adults exceeded the hatchery escapement goal of 450. 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 2005 with a catch of nearly 1,000 hatchery fish (Table 6).

The forecast for the Kalama River in 2006 is estimated to total 2,100 fish. 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.

Lewis River Returns

The adult spring Chinook return of 3,400 fish to the Lewis River in 2005 was less than the recent 5-year average with 2004 as the strongest return observed since 1989. The hatchery return of 1,800 adults achieved the hatchery escapement goal of 700. Natural spawn escapement was estimated at just over 100 adults. The sport fishery was not restricted by area and daily catch limits due to the strong preseason forecast. Sport catch totaled 1,500 hatchery adults in 2005 (Table 6).

The forecast for the Lewis River in 2006 is expected to total 4,400 fish. 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.

Select Area Spring Chinook

The spring Chinook program in the Youngs Bay terminal fishing area began in 1989 with modest releases by the Clatsop County Economic Development Council's Fisheries Project (CEDC). Beginning in 1993 the Bonneville Power Administration (BPA) funded the Select Area Fisheries Evaluation (SAFE) Project which allowed for increased production of spring Chinook in Youngs Bay and expansion to other Select Area fishing sites. 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. In addition, spring Chinook production was initiated at the South Fork Klaskanine Hatchery in 2004 (2002 brood); however, this program was recently terminated following early

release of the 2004 brood production group due to chronic Bacterial Kidney Disease and loss of year-round water rights for the hatchery. 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.

During 1995-2003, annual releases of spring Chinook in Youngs Bay ranged between 426,400 and 537,900 smolts (464,500 average). With additional production from the South Fork Klaskanine Hatchery, annual releases in the Youngs Bay drainage doubled to an average of 1,006,000 smolts during 2004-2005. Releases of spring Chinook smolts into Tongue Point and Blind Slough began in 1996. Since then, smolt releases into Blind Slough have averaged 292,500 fish annually (range 171,200-433,000). During 1996-2000 releases into Tongue Point averaged 254,400 smolts annually; however, excessive straying of early releases resulted in termination of the program following the 2000 release. To evaluate the feasibility of reinstating production-level releases at the Tongue Point fishing area, a new rearing site has been developed at the MERTS dock approximately 1.2 miles upstream (east) of the present site. During 2003-2005, experimental groups of 20,900-30,400 spring Chinook treated with a chemo-attractant (morpholine) were released each year from this site along with a non-treated control group of ~27,000 smolts released approximately 3.0 miles up the nearby John Day River. During April and May 2005, test fishing with tangle nets was conducted in the Tongue Point fishing area to recover returns of age-3 and age-4 adults to evaluate relative survival and homing of the 2001-2002 brood year release groups. However, few target fish were collected based on coded-wire tag recoveries; likely a result of poor survival observed for all 2001 brood SAFE spring Chinook. Releases into Deep River began in 1998 and have ranged from 39,700-159,600 (86,400 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 to 1.50-1.65 million smolts annually in 2004 and 2005 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.

2005 Returns

Since Select Area spring Chinook originate from annual egg and/or smolt transfers, 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 2005 Select Area winter-summer fisheries totaled 2,406 Chinook (2,344 spring Chinook) of which 969 were landed in Youngs Bay, 1,377 were landed in Blind Slough, and 60 in Deep River. Landings in 2005 winter-summer SAFE fisheries were the lowest since 1999, primarily due to extremely poor survival of age-4 adults.

2006 Forecast

The 2006 Select Area spring Chinook return will be comprised of age-4 and age-5 adults from smolt releases of 1.08 and 1.65 million smolts annually in 2003 and 2004, respectively. Based on these releases, site and year-specific survival rates, and average non-target harvest rates, the expected SAFE harvest in 2006 is for 3,100 adult Chinook of which 2,000 will be destined for Youngs Bay, 900 for Blind Slough, <200 for Deep River, and <100 for Tongue Point. This reduced forecast is primarily driven by the very poor survival rates observed for age-4 fish returning in 2005 which will likely affect returns of age-5 fish in 2006. A return of 3,100 Chinook to Select Areas would be slightly higher than the poor 2005 actual return but well below the 2000-2004 average annual harvest of 9,200 fish.

Upriver Spring Chinook

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 plus 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 areas above 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 poor in the early 1980's averaging 63,200 fish with a range of 52,100-76,900 fish. The returns in 1985-1989 showed improvement, with an average run size of 104,800 fish, ranging from 89,500-127,800 fish. The average return between 1990 and 1994 totaled 81,600 fish (range 23,800-119,200 fish), which was comparable to the 10-year average of the 1980's. The average run size between 1995-1999 was 55,600 fish (range 12,600-123,800 fish), which was less than the average run size of the 1980's and the average 1990-1994 run sizes. The 1995 run size marked an all-time low of 12,600 fish. The 2000-2004 run sizes proved to be excellent, with an average of 283,900 upriver fish returning annually and an all time record high of 437,900 fish in

2001. Run sizes have declined since the peak of 2001, but have remained strong overall, with over 200,000 upriver spring Chinook returning annually.

The 2004 return of upriver spring Chinook totaled 221,600 adults, which continues the trend of strong returns (Table 7). The 2004 Snake River wild spring/summer Chinook run size was less than 2003 with 33,000 fish returning, and the 2004 upper Columbia River wild spring Chinook run size of 3,200 fish was slightly improved compared to 2003 (Table 9 and 10).

2005 Run

The 2005 upriver spring Chinook run was predicted to total 254,100 fish. The run forecast included 128,100 adult Snake River spring/summer Chinook and 47,200 adult upper Columbia Chinook. Actual returns in 2005 totaled 106,900 fish, which included 51,400 Snake River spring/summer Chinook and 19,700 upper Columbia Chinook. The 2005 Snake River wild spring/summer Chinook run size was 13,100, which is the smallest since 1999 (Table 9). The 2005 upper Columbia River wild spring Chinook return was 2,500 fish, slightly less than the 2004 return (Table 10).

2006 Forecast

The 2006 forecast is for a return of 88,400 adult upriver spring Chinook to the Columbia River. This projected return is less than that seen in recent years, but still a good return compared to those of the 1980's and 1990's. The 2006 forecast includes 46,200 Snake River spring/summer Chinook (14,600 wild) and 12,600 upper Columbia spring Chinook (1,600 wild).

Upper Columbia River Summer Chinook

Upper Columbia summer Chinook are destined for production areas and hatcheries above Priest Rapids Dam. Historically, Upper Columbia summer Chinook spawned in the Columbia, Wenatchee, Okanogan, and Similkameen rivers. Since completion of the Columbia River hydropower system, summer Chinook redds are found in Columbia, Wenatchee, Okanogan, Methow, Similkameen, Chelan and Entiat rivers. Artificial production programs release more than 2 million yearlings and over 1.5 million sub-yearlings annually. Since 2002, the majority of the hatchery production returning to the Columbia River Basin was mass marked with an adipose fin-clip. Natural spawning populations also contribute to the run. Beginning in 2005 the Columbia River summer Chinook run consists only of the upper Columbia component, and run size is calculated by the sum of the Bonneville Dam count plus the number of fish caught in lower river fisheries during June 16 through July 31. Snake River summer Chinook are now a component in the upriver spring Chinook run. Upper Columbia summer Chinook are not ESA-listed and the population is currently considered healthy.

The upper Columbia summer Chinook run size remained at low levels throughout the 1980's and 1990's, with runs averaging 19,800 fish in the 1980's and 15,600 fish in the 1990's. Supplementation programs and improved natural habitat have played a significant role in the increased abundance trends observed since 1999. The average run size between 2000 and 2004 is 63,900, which is three times greater than the average run size of the 1980's and four times greater than the average run size of the 1990's (Table 8).

2005 Run

The upper Columbia summer Chinook run size for 2005 totaled 60,000, compared to the preseason forecast of 62,400. The 2005 run was the fourth largest since 1980 and continued the positive abundance trend.

2006 Forecast

The forecast for the 2006 upper Columbia River summer Chinook run is 49,000 adults to the Columbia River. The 2006 forecasted return is less than the 2005 return and would be the sixth largest return since 1980, and though slightly less than recent years, still continues a positive abundance trend compared to the last two decades (Table 8).

Wild Winter Steelhead

Winter steelhead enter the Columbia River during November through May and spawn during March through June. Most lower Columbia steelhead spend two summers in the ocean before they return as adults to spawn in natal streams. Juvenile wild steelhead usually rear in freshwater for one to three years before undergoing a physiological change to become smolts and out-migrating to sea. Wild steelhead smolts migrate from freshwater to saltwater during March through June. The range of winter steelhead includes all tributaries of the Columbia River upstream to Fifteenmile Creek on the Oregon shore and the Klickitat River on the Washington shore. Major spawning areas include the Hood, Sandy, Clackamas, Molalla, Santiam, and Calapooia rivers in Oregon, and the Klickitat, Wind, Lewis, Kalama, Cowlitz, and Grays rivers in Washington. All wild winter steelhead are ESA listed except those within the Southwest Washington ESU. This ESU includes all naturally spawned populations of winter-run steelhead in river basins of, and tributaries to, Grays Harbor, Willapa Bay, and the Columbia River below the Cowlitz River in Washington and the Willamette River in Oregon.

The total wild winter return for 2001 was 21,800 fish and the 2002 return was a strong return estimated at 33,700 fish. The 2003 return of 23,500 fish was less than the 2004 run size of 29,600 wild winter steelhead.

2004-2005 Run

The 2005 forecast for wild winter steelhead totaled 27,000 fish returning to the Columbia River mouth and the actual return was 14,700 fish.

2005-2006 Forecast

The 2006 forecast is for 16,000 wild winter steelhead returning to the Columbia River mouth.

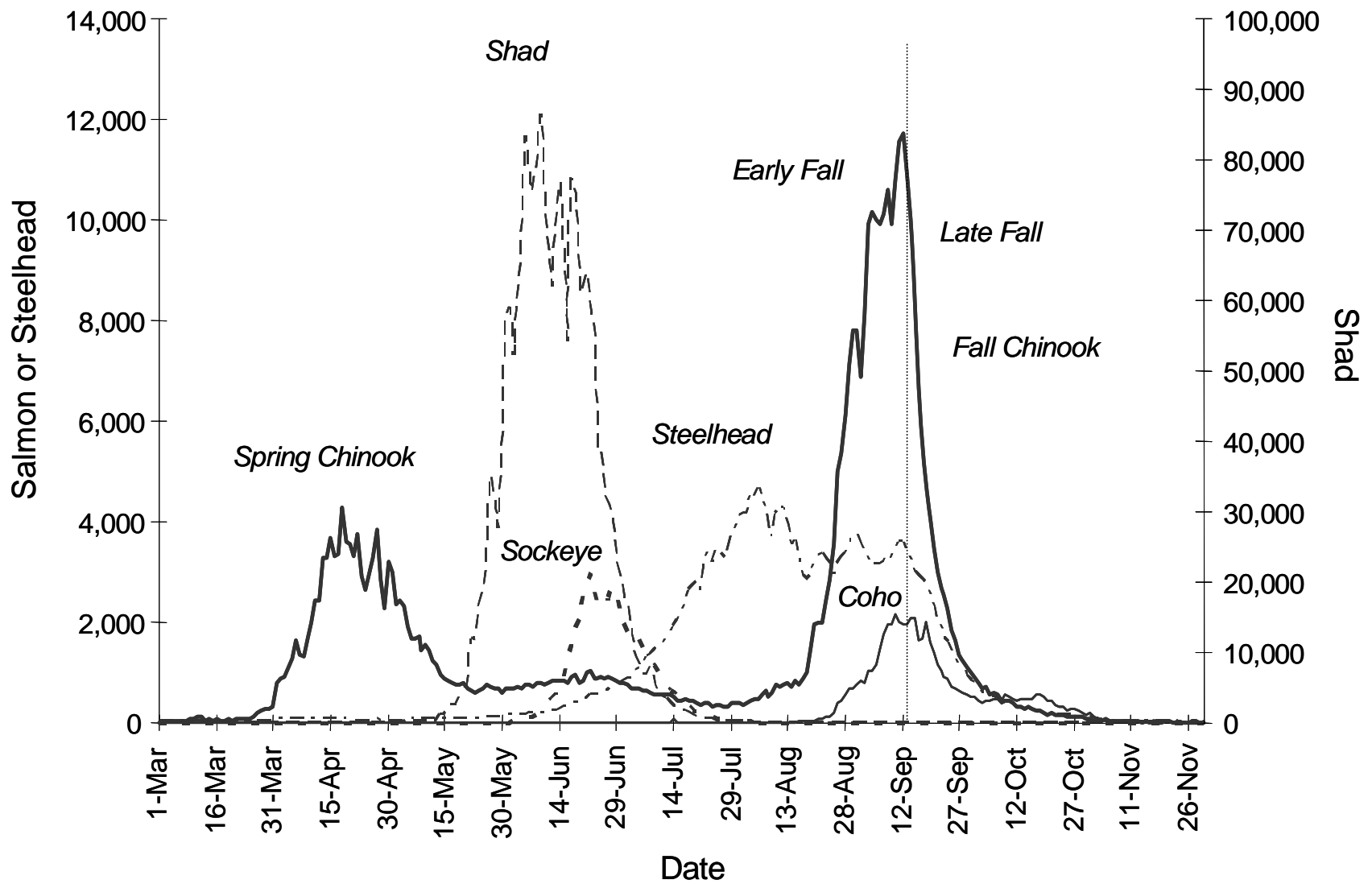


Figure 1. Average Daily Counts of Salmon, Steelhead, and Shad at Bonneville Dam, 1986-2004.

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 wild fish and 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. 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. 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. The lower Columbia River steelhead ESU 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 (Figure 1 and Table 13). 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 ESUs: (1) the middle Columbia ESU which was listed as threatened on May 24, 1999, (2) the upper Columbia ESU which was listed as endangered on May 24, 1999, and (3) the Snake River ESU (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. The TAC developed a new method of assessing the relative returns of Group A and Group B steelhead 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. 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. In 2005, sampling only occurred for a short period in

September and October. In season, TAC used preseason stock proportions applied to cumulative steelhead passage from July 1 forward to update the run.

2005-2006 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). Based on preliminary run reconstruction data, the total 2005-2006 summer steelhead run was 388,200 fish. Run size estimates for lower river and upriver summer steelhead are presented in Tables 12-13. The total return to Bonneville Dam of upriver summer steelhead was 312,500 with 300,600 (68,500 wild fish) during the July through October period (Table 14). The estimated Group A Index steelhead total return was 251,600 fish and the Group B Index steelhead total return was 49,000 fish. Run size and wild escapement at Lower Granite Dam are included in Table 15; however, the 2005-2006 count at Lower Granite Dam will not be complete until May 31, 2006. Final run size data will be included in the *"Joint Staff Report Concerning 2006 Fall In-River Commercial Harvest of Columbia River Fall Chinook Salmon, Summer Steelhead, Coho Salmon, Chum Salmon, and Sturgeon"* which will be available July 2006.

2006-2007 Forecast

The TAC has not yet developed a 2006-2007 run forecast for summer steelhead. A forecast for the total run will be available in early 2006.

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 six million in 2005. Shad run timing extends from mid-May through early August at Bonneville Dam, with peak daily counts occurring in June (Figure 1). Since the timing of the shad run overlaps with upriver Chinook, sockeye, and steelhead runs, harvest opportunities for shad are strictly regulated to minimize handle and impact on ESA listed salmonids.

2005 Run

The 2005 minimum shad run size was 6,303,207, with a minimum spawning escapement of over 6,067,047 above The Dalles Dam, plus an unknown number below The Dalles Dam. The non-Indian (lower Columbia and Willamette River) sport and commercial combined catch of 236,161 shad was the highest since 1993 and amounted to 3.7% of the estimated total minimum run size. The 2005 shad run in the Columbia River, at over 6.3 million fish, is the largest shad run on record, surpassing the previous record return of 5.7 million fish in 2004 (Table 16).

REVIEW OF MAINSTEM AND SELECT AREA FISHERIES

Non-Indian Fisheries

Past Lower River Mainstem Winter Gillnet Sturgeon and Salmon Seasons

Reduced salmon fishing opportunities during the mid-1970's through the late 1990's greatly increased the popularity and importance of sturgeon for both commercial and sport fisheries. The healthy white sturgeon population allowed the commercial industry to develop stable, dependable fisheries in a time when commercial salmon fishing opportunities had been drastically reduced. Under the Olympia Accord, target sturgeon seasons were allowed for the purpose of providing the commercial fishery access to the commercial catch guideline while minimizing impacts on listed or depressed salmon stocks and improving market stability for white sturgeon. Since the adoption of the first Joint State Sturgeon Management Agreement in 1997, commercial fisheries have been managed to remain within catch guidelines while maximizing economic benefit consistent with conservation objectives for other species. Commercial fisheries have been developed with input from industry representatives and resulted in predictable and consistent commercial fishing opportunities.

Season structure of winter commercial sturgeon fisheries has been similar in recent years with one 24-hour weekly fishing period conducted between early to mid January through mid-February. No weekly sturgeon landing limits are initially adopted, and would be used in-season only if the winter guideline may be exceeded. Protocol for management of white sturgeon retention in 2006 is also similar to that of recent years. Commercial fisheries are allocated 20% (8,000 sturgeon) of the total harvest guideline. In order to provide market stability and allow sales of sturgeon during salmon seasons, guidelines for each fishing season were developed to further allocate the harvestable sturgeon. 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 2006*". Winter season fishing dates, mesh size restrictions, and landings since 1970 are included in Table 17.

Winter gillnet salmon seasons have been established since 1878. No winter gillnet salmon seasons occurred in the lower river during 1995 and 1997-1999; however, small numbers of spring Chinook were landed in conjunction with winter target sturgeon seasons during these years.

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). 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. Winter season fishing dates, mesh size restrictions, and landings since 1970 are included in Table 17. 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.

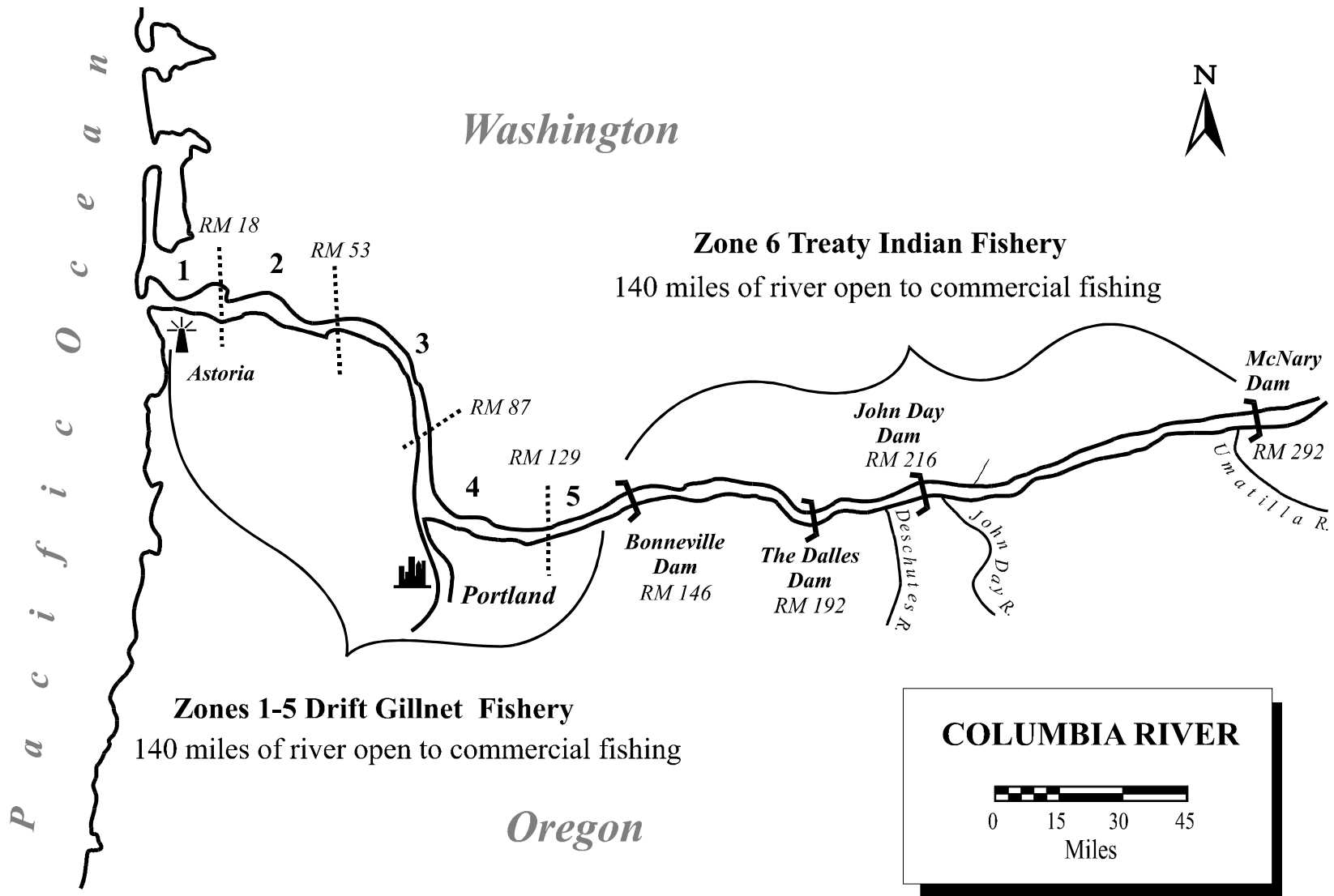


Figure 2. Map of the Columbia River Below McNary Dam Showing Areas Open to Commercial Fishing.

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.

In 2002 the first live capture demonstration commercial fishery that allowed participation of the entire fleet took place. The fishery was limited to commercial fishers with appropriate licenses and legal gear that attended a state-sponsored workshop concerning live captive commercial fishing techniques and possessed a certificate proving attendance of the workshop. 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 2003 winter salmon fishery incorporated regulations similar to those of 2002 in order to maximize harvest of the target Willamette hatchery spring Chinook and minimize handle of ESA-listed Chinook and steelhead. New gear regulations were adopted, with large mesh nets (8-inch minimum) being 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 (from 5½ -inches) to increase the rate of capture by tangling for both spring Chinook and steelhead.

The 2004 season was conducted with guiding principles and fishery management objectives in place that were adopted by the Washington and Oregon Fish and Wildlife Commissions to provide the Joint Staff with guidance when shaping fisheries preseason and managing fisheries in season during 2004 and 2005. In addition, a winter season fishing plan was adopted which gave the commercial industry some structure for marketing and provided the data necessary for making fishery management decisions. 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 wild winter steelhead. This routine would continue until the upriver Chinook allocation was reached or until the wild winter steelhead impact limit was reached. The 2004 winter season consisted of six fishing periods utilizing large-mesh gear and three fishing periods utilizing small mesh (tangle net) gear.

2005 Lower River Winter Sturgeon Gillnet Season

The winter sturgeon gillnet fishery initially consisted of five 24-hour weekly fishing periods (6 AM Tuesday through 6 AM Wednesday) during January 18 through February 16. A harvest guideline of 2,000 sturgeon was in place for the winter-summer timeframe. With catch significantly below expectations, two additional 24-hour periods were adopted for Tuesday February 22-23 (6 AM-6 AM) and Thursday February 24-25 (6 AM-6 AM). The winter fishery landed 473 white sturgeon and zero green sturgeon. A total of 94 adipose fin-clipped spring Chinook were also landed.

2005 Lower River Winter Commercial Salmon Season

Based on 2005 preseason run size forecasts an impact rate on listed upriver spring Chinook of 2% was allocated to non-Indian fisheries. In addition, the states were operating under a two-year agreement (2004-2005) 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. Additional ESA restrictions included a total non-Indian fishery impact rate of 6% for wild winter steelhead ESUs.

The 2005 commercial fishery was conducted under the same guiding principles, management objectives and fishing plan that was adopted for 2004. The fishery was managed in accordance with the Willamette FMEP, which set forth a commercial catch allocation of 18,100 Willamette hatchery spring Chinook (30% of the harvestable number). The allowable impact rate for wild Willamette River spring Chinook was 15% for all freshwater fisheries. The 2005 expected mark rate was 87% for Willamette River spring Chinook.

The 2005 fishery occurred from the mouth upstream to Kelley Point (Zones 1-4) with allowable sales of adipose fin-clipped salmon and sturgeon. Regulations and restrictions used in previous years were also implemented.

Voluntary test fishing using 4¼-inch nets was initiated on Sunday February 27, 2005. Data collected from test fishing resulted in the Compact adopting a 12-hour (5 PM-5 AM) fishing period occurring on March 1-2, 2005. Results of the fishery were within management expectations and the Compact adopted a second fishery, which took place between 6 PM and 6 AM during March 3-4. Following the structure set forth in the 2005 fishing plan, test fishing was conducted on March 6, which resulted in the Compact adopting an additional fishing period between 6 PM-6 AM during March 8-9 and, based on landings/monitoring data from the March 8-9 fishery, another fishing period was adopted between 6 PM and 2 PM during March 10-11. Test fishing was conducted on March 13 and a fifth fishing period took place from 6 PM-6 AM during March 15-16. A 9-inch minimum mesh size restriction was required during these fishing periods. Monitoring results collected during the March 15-16 fishery, and poor upriver spring Chinook passage at Bonneville Dam prompted the Joint Staff to recommend one of two options: either adopt a short, 8-hour small mesh fishery, or conduct no fishery and test fish again on the following Sunday. The Compact opted for test fishing. Three test fishing periods were conducted on March 20, March 22, and March 27. The Compact adopted two eight-hour commercial fishing periods on March 29-30 (9 PM-5 AM) and again on March 31-April 1 (10 PM- 6 AM) using tangle-net gear (4¼-inch mesh). Test fishing was conducted again on April 3; however, no additional fishing periods were adopted due to declining optimism that the upriver spring Chinook run would meet the preseason forecast. The commercial fishery was near 50% of the preseason allocation, based on the preseason forecast.

For the five large-mesh fishing periods, landings totaled 1,489 spring Chinook. During the two tangle-net fishing periods, an additional 3,606 spring Chinook were landed. Total landings for the 2005 commercial fishery included 70 white sturgeon and 5,190 spring Chinook, which was a mere 40% of the total spring Chinook catch of 2004. Based on CWT and VSI data, the spring Chinook harvest during non-Indian winter commercial seasons was comprised of 39% upriver stock, 40% Willamette stock; and 21% Cowlitz, Kalama, Lewis, and Sandy stock while the released catch was comprised of 59% upriver stock; 25% Willamette stock; and 16% Cowlitz, Kalama, Lewis, and Sandy stock. A total of 919 steelhead were handled, of which 309 were unmarked. Unmarked steelhead included wild fresh run winter and summer steelhead, and unmarked hatchery winter and summer steelhead. Wild winter steelhead mortalities resulting from incidental handle are estimated at 65 fish.

Past Lower Columbia River Spring Chinook Sport Fisheries

Under permanent regulations, the main stem Columbia River from the mouth to the I-5 Bridge (RM 106) is open to angling for Chinook salmon January 1 through March 31 and closed April 1 through July 31. 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. Historically, the purpose of these regulations was to target early migrating Willamette spring Chinook and 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 main stem 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.

The 2001 total expected return of 434,000 adult spring Chinook, including lower river spring Chinook stocks, to the Columbia River with a majority of adipose fin-clipped fish allowed the states to adopt the first-ever selective recreational fishery for adipose fin-clipped spring Chinook on the lower Columbia River. 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. 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. In-season management action was necessary to maintain the fishery within ESA guidelines and resulted in a brief 7-day closure. A limited selective fishery was also adopted for the main stem 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.

Spring Chinook fisheries have continued to be characterized by high effort and catch rates. The 2002 fishery below Bonneville Dam occurred during February 1-April 27 and May 5-15 and produced a record high effort (175,100 trips) for the spring Chinook fishery. The fishery above Bonneville Dam also concluded on May 15. The 2003 spring Chinook fishery below Bonneville Dam ended on May 15 as did the fishery above Bonneville Dam.

During 2004, a new regulation prohibiting the removal of unmarked fish from the water was added to provide additional protection for released fish. The 2004 spring Chinook fishery began slowly, as cold, often turbid river flows made fishing difficult. As the fishery moved into April, catch rates improved dramatically, particularly in the area immediately below Bonneville Dam. On April 21 the states closed the fishery between I-5 and Bonneville because such a large proportion of the cumulative upriver impact had occurred in this fishery. The fishery below the I-5 Bridge closed May 1. The sport fishery above Bonneville Dam closed on May 6.

2005 Lower Columbia River Spring Chinook Sport Fishery

In 2005, the total spring Chinook run size was forecast to be 413,400 adults to the mouth of the Columbia, comprised of an upriver component of 254,100 fish, and a lower river component of

159,300 fish, including 116,900 Willamette spring Chinook. The *2005-2007 Interim Management Agreement* provided for a 2% impact to ESA-listed upriver spring Chinook in all non-Indian fisheries in 2005, based on the preseason forecast of 254,100. The 2.0% allocation was further divided 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). Of the total sport fishing impact, the states planned to use about 0.79% in the fishery between Buoy 10 and Bonneville Dam.

Sport fishing regulations for the 2005 spring Chinook fishery were adopted at the January 28 Compact hearing. The adopted sport season was January 1-May 15 (or until guideline was reached) for the Columbia River from Buoy 10 to the I-5 Bridge and March 16-May 15 (or until guideline was reached) for the Columbia River from I-5 to Bonneville Dam, from Tower Island upstream to McNary Dam, and from the Oregon bank between Bonneville Dam and Tower Island. Regulations adopted for the 2005 season included a seven-day per week fishery with a two fish bag limit for the Columbia River from Buoy 10 to Rooster Rock (RM 128) and from Bonneville Dam to McNary Dam. The Columbia River from Rooster Rock to Bonneville Dam was open three days per week (Sunday, Monday, and Tuesday) with a one fish bag limit to maintain fishing opportunity through a greater portion of the season. Selective adipose fin-clipped regulations for spring Chinook were permanently adopted in 2002 for January 1-March 31 and extended for the duration of the 2005 fishery. For the second year, regulations prohibited the removal of unmarked fish from the water to provide additional protection for released fish.

The Columbia River was low, clear, and cold at the start of 2005 with below average flow and temperature well into March. The first spring Chinook was sampled on February 11, 2005 at Dibblee Beach, but effort and catch were light during February and early March. In February, anglers caught 39 spring Chinook (all kept) and 67 steelhead (26 adipose fin-clipped fish kept and 41 unmarked fish released) from 7,551 trips. VSI sampling indicated that 100% of the February spring Chinook catch was comprised of lower river fish. Angler effort and catch increased during March as more fish entered the river, but the fishery continued to be limited by cold water conditions for most of the month. In addition, heavy rains in late March discolored the Willamette and Cowlitz rivers, resulting in poor fishing conditions in much of the lower Columbia River. The total catch in March was 2,441 spring Chinook (1,899 kept and 542 released) and 211 steelhead (125 kept and 86 released) from 36,865 angler trips. The 2005 spring Chinook catch for March was only about half of the 2001-2004 average for that month. Based on VSI sampling the March catch consisted of 51% lower river fish.

As water conditions in the Columbia River improved in April, catch rates increased significantly, particularly in the area below Bonneville Dam. The catch rate for boat anglers in the Bonneville area during April was 1.02 Chinook per boat, or nearly four times the average catch rate for boats in the rest of the lower river. By April 17, only 36% of the upriver impact (0.79%) reserved for the main stem sport fishery below Bonneville Dam had been utilized; however, record low counts of upriver spring Chinook at Bonneville Dam raised concerns that the upriver run would be significantly smaller than originally forecast. Through April 18, the Bonneville Dam count was only 1,545 adult spring Chinook, the lowest cumulative total count for that date on record. Because a lower run size would translate into higher impacts for fisheries that had already occurred, the states decided to close the entire Columbia River to salmon and steelhead angling effective April 21. During April, anglers made 65,705 trips and caught 11,042 spring

Chinook (8,653 kept and 2,389 released) and 219 steelhead (191 kept and 28 released). Upriver fish comprised 69% of the spring Chinook catch during April.

On May 31, the TAC revised the upriver run size to 95,000 spring Chinook. Conservative management of the recreational fishery during April allowed managers to reopen the spring Chinook sport fishery during June 4-15 from Tongue Point to the Hwy 395 Bridge near Pasco, Washington. All areas of the river were open seven days per week with a two fish bag limit during June 4-15. Angler participation during the re-opener was high with 10,134 trips below Bonneville Dam, producing catches of 1,195 spring Chinook (724 kept and 471 released) and 680 steelhead (609 kept and 71 released). Between May 22 and June 3, an additional 158 adult Chinook were released during the steelhead fishery. The total catch for the 2005 spring Chinook sport fishery below Bonneville Dam was 14,875 adult spring Chinook (11,315 kept and 3,560 released), 39 spring Chinook jacks, and 1,646 steelhead (1,379 kept and 267 released) from 124,695 angler trips. Both effort and catch were the lowest since selective spring Chinook fisheries were initiated in 2001. Upriver spring Chinook comprised 65% of the total number of spring Chinook handled. The final catch for the fishery above Bonneville Dam was 791 spring Chinook (419 kept and 291 released) from 2,707 angler trips. Both effort and catch in 2005 were well below the 2001-2004 average for the Zone 6 fishery.

Past Columbia River Summer Steelhead and Summer Chinook Sport Fisheries

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. In 2000, the states modified the regulation to allow the retention of Chinook jacks ($\leq 24''$).

In 2002 the states opened a summer Chinook fishery below Bonneville Dam for the first time since 1973 when the summer Chinook in season run size was upgraded to 140,000. A high mark rate of hatchery summer Chinook allowed the states to adopt selective fishery regulations to provide an opportunity to harvest hatchery Chinook while limiting the impact to ESA-listed summer Chinook to less than 1%. In July, the states also opened the area from Bonneville Dam upstream to the Oregon/Washington border for the retention of adipose fin-clipped summer Chinook.

In 2003, the summer Chinook return was predicted 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.

Expectations in 2004 were for a summer Chinook run of 102,800 adults entering the Columbia River. 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

2005 Columbia River Summer Steelhead and Summer Chinook Sport Fisheries

In 2005 the summer steelhead fishery below the I-5 Bridge was delayed until May 22 because of concerns regarding the size of the upriver spring Chinook run. When the spring Chinook fishery was reopened on June 4, the summer steelhead fishery above the I-5 Bridge was also opened on the same date. During May 22-June 15, anglers on the lower Columbia River made 14,574 trips and caught 1,149 summer steelhead (1,037 kept and 112 released), 28 Chinook jacks (all kept), and 1,353 adult spring Chinook (724 kept and 629 released).

With the new summer management timeframe in place (June 16- July 31) all Chinook harvested during the summer season are considered upper Columbia summer Chinook, which are not listed under the ESA. Because of the shortfall in the 2005 upriver spring Chinook run size, the Compact adopted conservative regulations to begin the summer Chinook fishery. Selective fishing regulations were adopted until a run size update was available (around July 1). Therefore, on June 2, 2005 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, with selective fishing rules in place. The daily bag limit was two adipose fin-clipped adult summer Chinook. Sockeye retention was not allowed.

At a Joint State hearing on June 28, the states decided to allow the retention of non-adipose fin-clipped summer Chinook from July 1 to July 31 as the summer Chinook run appeared to be tracking close to the forecast. During June 16-July 31, anglers made 38,505 trips below Bonneville Dam and caught 2,071 adult summer Chinook (1,571 kept and 500 released), 39 Chinook jacks, and 5,729 steelhead (3,718 kept and 2,011 released). The total catch in the lower Columbia River during May 22-July 31, 2005 was 1,353 spring Chinook adults (724 kept and 629 released), 2,071 summer Chinook adults (1,571 kept and 500 released), 67 Chinook jacks, and 6,878 summer steelhead (4,755 kept and 2,123 released). During the 2005 summer Chinook fishery above Bonneville Dam, anglers made 350 trips and caught 74 adult summer Chinook.

Spring Chinook Fisheries Above McNary Dam

A selective sport fishery occurred in 2005 on the Snake River upstream of Little Goose Dam from June 11 through June 30. The fishery was open seven days a week during daylight hours with a daily limit of one adipose fin-clipped Chinook. The total kept catch was 75 adult spring Chinook and 83 unmarked adult Chinook were released. Angler effort is estimated at 967 trips. The Wanapum Tribe did not conduct a C&S fishery in the mainstem Columbia River below Priest Rapids Dam during the spring of 2005.

Past Select Area Fisheries

Spring Chinook commercial fisheries in Select Areas were initiated in Youngs Bay in 1992. Through 1996, fishing time was limited to less than 15 days each year with annual landings ranging from 155-851 spring Chinook. With the exception of 2005, 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 spring seasons only until 2000, when the first winter season was established. Nighttime weekday fishing periods (7PM-5AM or 7PM-7AM) were consistently adopted to minimize interactions with recreational boaters. Annual landings increased steadily during 1998-2000, stabilized at approximately 2,030 fish during 2001-2003, but increased to about 3,500 fish harvested in 2004. Similar to Youngs Bay, landings declined significantly in 2005 due to a lack of 4-year old fish in the catch. In most years, fishing periods have opened concurrent with Youngs Bay and other Select Areas to minimize congestion. The fishing area was initially limited to Blind Slough 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. A one-year trial summer season was adopted in Blind Slough in 1999 but resulted in a harvest of only three spring Chinook.

Spring commercial fisheries in Tongue Point were initiated in 1998 and continued through 2003 with additional winter seasons occurring in 2000-2001. In most years, seasons and open hours were consistent with Blind/Knappa Slough. The fishing 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 have been adopted since 2004. Future full-fleet 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, production has been limited with 39,700-159,600 smolts released annually (except for 2000 when no fish were released). The first commercial fishery occurred in 2003 with harvest ranging between 49-117 fish annually during 2003-2005

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 1998-2005 was 53 fish per year (range 9-121) with success usually dictated by water conditions. In Blind Slough/Knappa Slough an average of 302 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 but catches declined to 157 in 2005 likely due to poor returns.

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. Brief springtime recreational fishing closures were enacted in Select Areas during 2004 and 2005 when the potential for additional impacts to upriver spring Chinook forced closure of Select Area commercial fisheries.

2005 Youngs Bay Winter/Spring/Summer Gillnet Season

A winter commercial fishery was adopted for the eighth 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. Similar to 2004, the winter season consisted of two, 12-18 hour fishing periods weekly (nine total periods each year) during mid-February through mid-March. In both these years, winter season opportunity was expanded from the 2-6 fishing periods allowed during 1998-2003 to maximize harvest of early-returning fish that have a high ex-vessel value. With the exception of 2003 when an unanticipated high abundance of upriver stocks prompted an emergency closure, this season structure has effectively allowed for harvest of early returning local stock adults while minimizing impacts on listed stocks.

As occurred in 2004, the 2005 winter fishery in Youngs Bay was originally adopted as seven fishing periods (four 12-hour and three 18-hour) between February 16 and March 10, but based on low impacts to upriver spring Chinook and an industry request for additional fishing opportunity, two additional winter fishing periods were adopted for March 12 (18 hours) and March 16 (12 hours). The minimum mesh size for all winter fishing periods was reduced to 7-inches since steelhead handle is minimal in this fishery. As is the case for all commercial fisheries in Youngs Bay, maximum net length was restricted to 250-fathoms with no more than two pounds of leadline per fathom of net. The nine fishing periods resulted in landings of 144 spring Chinook and 6 white sturgeon, a substantial reduction from the record 2004 winter season harvest of 1,050 Chinook.

Based on results of the 2002-2003 Select Area spring seasons when impacts to upriver spring Chinook increased beyond historic levels, the 2005 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 21-22 (12-hours) in the entire Youngs Bay area, a lower than anticipated upriver run size inflated mainstem commercial impacts, thereby requiring in season action for Select Area fisheries. Select Area fishing periods adopted for April 21-May 3 were rescinded, and periods scheduled for May 5-20 were modified to further limit the potential for additional commercial impacts to upriver spring Chinook. Modifications included reduced hours for all periods and restriction of fishing to the

area upstream of the “old” Youngs Bay Bridge on May 5. Because of a very low probability of accruing additional upriver impacts in Select Areas after mid-May, fishing periods previously adopted for May 23-June 17 were allowed to resume unchanged. The combined fishing period modifications for winter and spring seasons in Youngs Bay resulted in a net loss of about 164 fishing hours for the 2005 season. The modified 2005 Youngs Bay spring fishery landed 137 white sturgeon and 730 Chinook, which is the lowest Chinook harvest for this season since 1995. 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 (June 22-July 28). The 2005 summer season was open two days weekly (noon Wednesday through noon Friday) during the first two weeks and one day per week (noon Wednesday through noon Thursday) during the remainder of the season. An 8-inch maximum mesh size restriction was adopted to target Chinook instead of sturgeon. The Youngs Bay summer fishery yielded landings of 67 white sturgeon and 95 Chinook which is the lowest summer season Chinook harvest since this season was first established in 1999.

The combined Youngs Bay winter/spring/summer fishery stock composition was based on VSI and CWT analysis with a total of 555 Chinook (57% of the combined catch of 969 Chinook) examined for fin marks and CWTs and 113 snouts being collected. Based on scale readings, verified with CWTs, the age composition of the catch was 1% age-3, 17% age-4, 81% age-5, and 1% age-6 fish. The 2005 combined winter/spring/summer catch was comprised of 77.7% spring Chinook and 5.4% SAB fall Chinook destined for Select Area sites; 1.2% spring Chinook and 0.2% summer (upper Columbia) Chinook destined for locations above Bonneville Dam; 11.7% Willamette River spring Chinook; and 3.8% spring Chinook destined for the Cowlitz, Kalama, or Lewis rivers.

2005 Blind Slough/Knappa Slough Winter/Spring Gillnet Season

Similar to 2000-2004, a winter gillnet season was adopted for the Blind Slough area only in 2005 to harvest early arriving, larger 5-year old Chinook. Similar to Youngs Bay, a 7-inch minimum mesh restriction was in place during the winter fishery. The season was set at the January 28, 2005 Compact hearing for seven 12-hour periods (7 PM-7 AM) on Wednesday and Saturday nights during February 16-March 10. As occurred in Youngs Bay, two additional winter fishing periods were adopted for March 12-13 and March 16-17 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 again restricted to Blind Slough only. During the nine winter fishing periods in 2005, a total of 46 spring Chinook and three white sturgeon were landed which was substantially less than the 290 Chinook landed in 2004 but the second highest winter harvest since this season was first adopted in 2000.

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. For both the winter and spring fisheries in Blind/Knappa sloughs, net length was limited to 100-fathoms with no weight restrictions on the leadline including allowed use of additional weights and anchors. The 2005 spring fishery was intended to consist of 17,

12-hour (7 PM-7 AM) fishing periods occurring one or two weeknights each week between April 21 and June 17. However, similar to Youngs Bay, the first four planned fishing periods were rescinded to avoid additional commercial impacts to the unexpected low return of upriver spring Chinook. Commercial fishing periods resumed on May 5 with an abbreviated 6-hour fishing period and the May 9 fishing period was delayed one day. All other fishing periods continued as planned through June 17 for a total of one, 4-hour and 12, 12-hour fishing periods (13 total fishing periods). The combined modifications to the 2005 winter and spring seasons in Blind and Knappa sloughs resulted in a net loss of 2½ fishing days. The modified 2005 Blind/Knappa Slough spring fishery landed 57 white sturgeon and 1,331 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 1,170 Chinook (85% of the combined catch) examined for fin marks and CWTs and 640 snouts being collected. Based on scale readings, verified with CWTs, the age composition of the catch was <1% age-3, 6% age-4, 90% age-5, and 3% age-6 fish. The 2005 Blind Slough/Knappa Slough catch was comprised of 98.6% spring Chinook destined for Select Area sites; 0.1% upriver spring Chinook; 0.1% summer Chinook; 1.1% Willamette River spring Chinook; and 0.1% spring Chinook destined for the Cowlitz, Kalama, or Lewis rivers.

2005 Deep River Experimental Spring Gillnet Season

A spring fishery was established in the Deep River fishing site for the third year in 2005. Similar to Blind Slough, a total of 17 spring fishing periods (7 PM-7 AM) occurring one or two nights weekly between April 21 through June 17 were adopted at the January 28, 2005 Compact hearing but was later modified to reduce potential impacts to upriver spring Chinook. The final season structure was identical to Blind Slough with 13 total fishing periods. The fishing area during all periods was restricted to the area from markers at navigation marker #16 upstream to the Highway 4 Bridge. Gear regulations included a 100-fathom maximum length, an 8-inch maximum mesh size, and no weight restrictions. As in Blind Slough and Knappa Slough, the use of additional weights or anchors was also allowed. As has been the case in other SAFE sites, the 2003-2005 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 49 Chinook and 9 white sturgeon were landed in this fishery.

2005 Commercial Shad Seasons

The Compact adopted a 29-day commercial shad season for Area 2S in 2005 which included all weekdays (except Memorial Day) from May 16 to June 24 during the hours of 3 PM to 10 PM. Additionally, the Compact adopted a 30-day commercial shad season for the Camas-Washougal Reef in 2005, occurring weekly from Sunday through Thursday during May 15-June 23 and the hours of 8 PM to midnight. Until 2000, the Compact had adopted a long-standing Washougal Reef commercial shad fishery annually. The physical characteristics of this area allowed shad to be harvested without incidental handling 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 was adopted during 2000-2004, but a season was adopted in 2005 after a request was made by the commercial industry (Table 16).

Regulations for the Area 2S shad fishery included the following gear specifications designed to minimize the handle of salmonids since 1996: mesh size restriction of 5³/₈ to 6¹/₄-inches, 10-lb. breaking strength, and net not to exceed 40 meshes in depth or 150 fathoms in length. The shallower and shorter nets have proven to substantially reduce the handle of salmonids compared to the traditional gear used in shad fisheries prior to 1996. In both fisheries, only shad could be kept and sold and all salmon, steelhead, walleye, and sturgeon were required to be released immediately.

In response to the low spring Chinook passage over Bonneville Dam and with the concern for exceeding the ESA impact limit to upriver spring Chinook, the Compact delayed the seasonal opening of commercial shad fisheries in the 2S area. The Washougal Reef area did remain open however, as the physical characteristics of this area allowed shad to be harvested without incidental handling of upriver Chinook. On May 23 the Compact allowed the commercial shad fishery to be conducted in the 2S area as adopted initially at the January 28 hearing. On-board monitoring was in place during the first two evenings to ensure Chinook handle was within management expectations. The season was able to continue without further interruption and two additional fishing days were adopted for the Area-2S fishery during June 29-30, as per industry request.

As has been the case in recent years, participation during the 2005 shad fishery was low with only 3-6 boats participating in Area 2S and none in the Camas-Washougal Reef. A total of 48,789 shad (131,738 pounds) were landed in the Area 2S fishery and zero in the Washougal Reef; with a salmonid handle of 26 spring Chinook and zero summer steelhead and sockeye based on monitoring observations of salmonids handled per shad landed (Table 16). The total estimated release mortality in the Area 2S fishery was 6 adult spring Chinook.

2005 Non-Indian Impacts to ESA Listed Stocks

The impact guideline for listed upriver spring Chinook in non-Indian Columbia River fisheries was 2.0% in 2005. The 2% impact rate was allocated 60% to sport fisheries including fisheries above McNary Dam, and 40% to commercial fisheries including SAFE. The impact rate for all listed upriver spring Chinook totaled 1.71% combined, compared to the ESA limit of 2.00%. The impact rate from non-Indian fisheries in 2005 on Snake River wild spring Chinook was 1.71% and 1.64% to upper Columbia wild spring Chinook.

The impact rate on listed upriver spring Chinook in the sport fisheries below Bonneville Dam was 0.91% and 0.15% in fisheries occurring above Bonneville Dam. Combined sport fishery impacts to ESA-listed upriver spring Chinook, was 1.06% compared to the allocation of 1.20%. The impact rate on ESA-listed upriver spring Chinook was 0.64% in the mainstem commercial fishery and 0.01% in the SAFE commercial fisheries. Combined commercial fishery impacts to ESA-listed upriver spring Chinook were 0.65%, compared to the allocation of 0.80%. The sport/commercial share of the impact rate was 62% sport and 38% commercial, consistent with the allocation sharing guideline of 60% sport and 40% commercial.

Impacts to wild winter steelhead are estimated to be 0.54% (0.44% commercial and 0.10% sport), compared to the 6% impact rate limit allowed by NMFS during 2005.

Total impacts to Snake River sockeye are estimated to be zero in 2005, compared to the allowable impact rate of 1%. It is estimated that no Snake River sockeye mortalities occurred as a result of non-Indian fisheries conducted during 2005.

Treaty Indian Fisheries

2005 Treaty Indian Winter Commercial Season

The 2005 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 41 days from February 2 through March 16 in the Bonneville and

2005 Winter Commercial Landings					
Pool	Steelhead	White Sturgeon		Walleye	Chinook
		Setline	Gillnet		
Bonneville	8	0	550	24	1
The Dalles	6	0	741	0	0
John Day	3	0	360	34	0
Total	17	0	1,651	58	1

the John Day pools and 44 days from February 2 through March 19 in The Dalles Pool. The 2005 winter gillnet season commercial sturgeon catches were more than those observed during 2004 with 1,651 sturgeon caught. The steelhead and Chinook catches were less than 2004 with a total catch of 17 steelhead, 1 spring Chinook, and 58 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 16.

2005 Treaty Indian Mainstem Spring and Summer Chinook and Sockeye Fisheries

Tribal intent for 2005 spring Chinook fisheries was to remain within impact rates allowed by the 2005-2007 Interim Management Agreement. The preseason planning for the 2005 treaty mainstem harvest was 25,410 spring Chinook (10% of the 254,100 forecasted run). Additionally, preseason planning was for 15,000 summer Chinook (24.0% of 62,400 forecasted run), and 4,949 sockeye (7.0% of 70,700 forecasted run). The actual run sizes were 106,900 spring Chinook, 60,000 summer Chinook and 72,400 sockeye. The four tribes issued permits for gillnet C&S fisheries for spring Chinook from March through June 15, and allowed the platform/hook and line fishery to retain spring Chinook for subsistence purposes. There were no spring season commercial fisheries in 2005. The estimated C&S gillnet permit catch was 4,963 spring Chinook (4.6% of 106,900 upriver run). Additionally, 1 spring Chinook was caught during the winter commercial fishery. The estimated catches for the platform and hook-and-line C&S fisheries were 1,200 spring Chinook (1.1% of 106,900 upriver run) and 600 summer Chinook (1.0% of 60,000 upriver run). There were also 6,415 summer Chinook harvested in four commercial gillnet openings. There were 627 summer Chinook harvested in C&S permit gillnet fisheries. During 2005 spring Chinook harvest totaled 6,164 and summer Chinook harvest was 7,642. 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 106,900 which resulted in an allowed harvest rate of 7.0%. Winter and spring fisheries harvested 5.8% of the upriver spring Chinook return (Table 7). The summer Chinook catch of 7,642 was 12.7% of the actual 2005 summer Chinook return of 60,000.

There were 1,680 sockeye caught in platform and hook-and-line C&S fisheries and 1,085 sockeye caught in commercial gillnet fisheries and 1 in C&S permit gillnet fisheries. The overall catch of 2,766 was 3.8% of the return of 72,452 as compared to the allowed harvest rate of 7%.

The TAC estimated that less than one of the sockeye caught were Snake River sockeye (Table 11).

Steelhead harvest during winter and spring fisheries was less than 2004 with tribal fishers harvesting 172 steelhead during winter and spring fisheries. Harvest was also less than 2004 in the summer fisheries with 3,552 steelhead landed. Many of the 3,724 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 2004-2005 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.

2005 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. The upriver spring and summer Chinook returns were sufficient enough to allow for the full entitlement, without using surplus fish from ODFW or WDFW.

2005 Ceremonial and Subsistence Entitlement Summary		
C&S permit gillnet spring fishery	4,963	spring Chinook
Winter gillnet fishery	1	spring Chinook
C&S platform winter/spring fishery	1,200	spring Chinook
C&S permit gillnet summer fishery	627	summer Chinook
C&S platform summer fishery	600	summer Chinook
Commercial gillnet fishery	6,415	summer Chinook
Total	25,878	Spring and summer Chinook

2005 Shad Fisheries

In 2005, 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.

2006 MANAGEMENT GUIDELINES

Endangered Species Act

Salmon and Steelhead

Status reviews occurring since 1991 have resulted in the majority of Columbia Basin salmon and steelhead stocks being listed under the ESA. In order to facilitate consultations with the National Marine Fisheries Service (NMFS) for past mainstem treaty Indian and non-Indian fisheries, the *U.S. v Oregon* TAC has prepared biological assessments for combined fisheries based on relevant *U.S. v Oregon* management plans and agreements. The TAC has completed Biological Assessments (BAs) of impacts to all ESA-listed salmonid stocks (including steelhead) for all mainstem Columbia River fisheries since January 1992 and for Snake River Basin fisheries since January 1993. The table below describes the status of Columbia River basin ESUs. Unless otherwise noted, the listed component includes wild/natural populations only.

<i>Federally-listed Salmon and Steelhead of the Columbia River Basin.¹</i>			
Species - ESU	Designation	Listing Date	Effective Date
<u>Chinook</u>			
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	--	--
<u>Steelhead</u>			
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
<u>Sockeye</u> – Snake River	Endangered	November 20, 1991	December 20, 1991
<u>Chum</u> – Columbia River	Threatened	March 25, 1999	May 24, 1999
<u>Coho</u> – Columbia River ³	Threatened	June 28, 2005	August 26, 2005

¹. The ESUs 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. 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. Lower Columbia River coho destined for Oregon tributaries were listed as an endangered species under Oregon state law in July 1999.

A Biological Assessment concerning Columbia River treaty Indian and non-Indian fisheries as described in the recently adopted “2005-2007 Interim Management Agreement for Upriver

Chinook, Sockeye, Steelhead, Coho and White Sturgeon” was submitted and a Biological Opinion was issued by NMFS.

Wild Winter Steelhead Management

Non-Indian fisheries conducted during the winter season incidentally handle wild winter steelhead while targeting hatchery Chinook or hatchery steelhead. Historically, recreational fisheries occurring in the mainstem Columbia River have had minimal handle of wild winter steelhead, as Chinook is the target species. Most impacts on wild winter steelhead populations occur in the tributaries of the Columbia River where hatchery steelhead are a target species. Tributary fisheries are conducted under a separate permit issued by NMFS and the associated impacts are considered separately from mainstem fisheries.

Prior to 1975, winter steelhead were an important species targeted by lower Columbia River commercial fisheries during December through March. After commercial sales were eliminated in the mid 1970s, steps were taken to minimize the incidental impact to winter steelhead during commercial fisheries targeting Willamette hatchery spring Chinook. When lower Columbia and upper Willamette steelhead were listed under the federal ESA, a 2% annual impact rate was institutionalized as part of the Biological Assessment and Biological Opinion for mainstem spring Chinook fisheries. The 2% level was set based on an estimate of the likely maximum mortality rate of incidentally caught steelhead given the intended implementation plan for the fisheries.

In 2005, the NMFS increased the allowable ESA impact limit to wild winter steelhead to 6.0%. The states managed the fisheries during 2005 to remain within a 2% impact guideline.

Marbled Murrelet

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.

2006 Columbia River Salmon Management Guidelines

The Columbia River Fish Management Plan (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. This interim agreement titled “2005-2007 Interim Management Agreement for Upriver Chinook, Sockeye, Steelhead, Coho and White Sturgeon” provides specific fishery management constraints for upriver spring and summer Chinook, steelhead and sockeye. Guidelines from the Interim Management Agreement, and other agreements, are highlighted below.

Upriver Spring Chinook

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 2006 preseason forecasts, the spring Chinook harvest allocation table allows for non-Indian impacts up to 2.0% of the upriver spring Chinook run and treaty Indian impacts up to 7.0%.

Table A1. Spring Management Period Chinook Harvest Rate Schedule

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:

<i>Upper Columbia Summer Chinook Harvest Rate Schedule</i>		
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 <i>(125% of 29,000 goal)</i>	10%	7%
36,250-50,000	50% of total harvestable¹	50% of total harvestable¹
>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: $(0.75 * (\text{runsize}-50,000)) + 21,000$.

Based on the run forecast for 2006 of 49,000 upper Columbia summer Chinook at the mouth of the Columbia River, the available harvest is 20,000 fish divided equally between all non-Indian fisheries, including sport and tribal fisheries above McNary Dam and treaty Indian fisheries.

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 impacts on listed sockeye will be minimized, and 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:

<i>Treaty Indian Sockeye Harvest Rate Schedule</i>	
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 2006, based on the preseason forecast. A policy decision concerning the allocation of non-Indian upriver spring Chinook impacts between sport and commercial fisheries for 2006 is expected to be in place prior to initiation of 2006 spring Chinook fisheries. Guiding principles and fisheries management objectives are adopted to provide staff with guidance when shaping fisheries preseason and managing fisheries in season. Guidelines for fisheries in 2006 are expected to be similar to those adopted during 2004-2005, which are shown below.

<i>Mainstem Columbia River Spring Chinook Allocation For Non-Indian Fisheries, 2004-2005</i>
Guiding Principles
<ul style="list-style-type: none"> • 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 <i>U.S. v Oregon</i> 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
<ul style="list-style-type: none"> • 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 will provide staff with additional guidance for implementing OFWC and WFWC Commission policies concerning allocation of non-Indian spring Chinook impacts between sport and commercial fisheries.

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 is conducting a comprehensive review of this plan to evaluate whether fisheries and wild populations are performing as expected. Comprehensive reviews will be repeated by the ODFW at 5-year intervals until such time as wild stocks are recovered or delisted. In accordance with the FMEP, sport and commercial fisheries occurring in 2006 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 2006 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.

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. However, since wild fish escapements are now protected through the full implementation of mark selective fisheries, the sliding scale for escapement was designed to provide for enhanced tributary fisheries when runs are large. 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.

<i>Hatchery Spring Chinook Escapement Goals at Willamette Falls And the Clackamas River</i>			
Predicted Hatchery Return	Hatchery Fish Escapement		
	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		
Predicted Hatchery Return	Allocation of Harvestable Numbers	
	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

A Joint State Agreement has been in effect and renewed every three years since 1997 with adjustments as necessary to protect sturgeon populations while maintaining harvest opportunity. The most recent agreement expired at the end of 2005. A new agreement for 2006-2008 is being developed by the states of Oregon and Washington, with guidance from both state commissions. A new sturgeon management plan will provide guidance on season structure, allocation and other issues for mainstem Columbia River and SAFE fisheries for both recreational and commercial industries.

2006 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*”.

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 88,400 upriver spring Chinook, the total harvest rate on upriver spring Chinook will be 9% with 2% allocated to non-Indian fisheries and 7% allocated to treaty Indian fisheries. 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 in season 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 A1). Impacts to listed sockeye will vary depending on run size, which will be updated in season. Impacts to steelhead in non-Indian fisheries will occur as release mortalities during selective sport and commercial fisheries. Recognizing the complexities of managing a mixed stock fishery, the Compact will have to continue to be cautious and creative in shaping and adopting seasons that minimize impacts on listed and depressed runs. Potential mainstem Columbia River commercial fisheries for the 2006 winter, spring, and summer season time frames listed here will be considered at the January 26 Compact hearing. Ongoing or other potential fisheries will be considered at future Compact hearings and other management forums.

2006 Non-Indian Fisheries

Commercial Winter Sturgeon Fishery (Adopted by the Compact on December 15, 2005)

The currently adopted season consists of seven 24-hour fishing periods (6 AM Tuesday to 6 AM Wednesday) in all of Zones 1-5 from January 10, 2006 through February 22, 2006. Season dates, gear restrictions, and expected catches are included in the 2006 Winter Fact Sheet #1 and action notices dated December 15, 2005. 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.

***Commercial Spring Chinook Fisheries
(Compact consideration January 26, 2006)***

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 will be determined by the commissions in January 2006. Based on a total run size expectation of 46,500 Willamette spring Chinook the commercial fishery will be allocated 2,500 Willamette hatchery spring Chinook.

Regulations will most likely 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 (8-9-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 developed prior to initiation of commercial spring Chinook fisheries. The fishing plan is expected to be similar to those developed for 2004 and 2005, which included 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 26, 2006)***

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. Based on a run size expectation of 46,500 Willamette River spring Chinook, the sport fishery below Willamette Falls (including the mainstem Columbia River) will be allocated a catch of 14,000 Willamette hatchery spring Chinook. Allocation of upriver spring Chinook impacts will be determined by the commissions in January 2006.

Under permanent regulations, 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, 2006. This fishery may be extended in area and time. The extension may include areas between the I-5-Bridge upstream 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 remained closed to spring Chinook fishing. The staff will develop a

fishing plan in cooperation with the Columbia River Recreational Advisory Group (January 17) and proposed fishery regulations will most likely be included in the Fact Sheet prepared for the January 26, 2006 Joint State meeting.

Select Area Commercial Fisheries
(Compact and State consideration January 26, 2006)

Proposed seasons for 2006 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 26, 2006 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 2006 will be similar to those proposed in 2005 but will be finalized based on input from a public meeting concerning spring Select Area fisheries scheduled for January 19, 2006 in Astoria, Oregon. To help facilitate recovery of coded-wire tags from experimental releases at the Tongue Point fishing site, a limited-participation fishery may be considered in late April and May if cumulative commercial impacts to upriver spring Chinook allow for additional fisheries. In addition, 4-year old spring Chinook from 2004 CEDC's South Fork Klaskanine Hatchery releases will begin returning to Youngs Bay in 2006. Considering these fish may be prone to upstream migration rather than milling in the lower bay area similar to net-pen reared spring Chinook, additional fishing time in upper Youngs Bay may be considered if supported by industry.

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

Based on the preseason run size forecasts the retention of sockeye is not expected to be allowed in Oregon or Washington waters during 2006, but the retention of summer Chinook will likely be allowed during a portion of this fishery.

Columbia River Summer Chinook Sport and Commercial Fisheries

Based on the preseason forecast, a total of 10,000 summer Chinook are available for harvest in non-treaty Indian fisheries during the June 16 to July 31 time frame. The commissions will provide guidance regarding allocation of harvestable fish. The states will structure summer Chinook fisheries during the North of Falcon process in March, based on commission guidance.

Area 2S Shad Fishery
(Compact consideration January 26, 2006)

For 2006, it is recommended that the Area 2S shad fishery operate using modified gill nets and restricted hours as during 1996-2005. 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 2006 Area 2S shad fishery is expected to be similar to the low levels observed during 1996-2005 fisheries.

Season: Daily 3 PM-10 PM

May 15-19 (5 days)

May 22-26 (5 days)

May 30-June 2 (4 days)

June 5-9 (5 days)

June 12-16 (5 days)

June 19-23 (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, 5 $\frac{3}{8}$ -6 $\frac{1}{4}$ -inch mesh, 10-lb breaking strength (in effect since 1976), may not exceed 150 fathoms in length or 40 meshes in depth (in effect since 1996).

Expected catch: Up to 50,000 shad

Expected spring/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: <6 fish (two mortalities)

Washougal Reef Shad Fishery
(Compact consideration January 26, 2006)

Season: Daily 8 PM-12 AM

May 14-18 (5 days)

May 21-25 (5 days)

May 28 – June 1 (5 days)

June 4-8 (5 days)

June 11-15 (5 days)

June 18-22 (5 days)

Area: Camas-Washougal Reef Area means those waters of the Columbia inside of a line commencing at the white six-second equal-interval light approximately $\frac{3}{4}$ 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, 5³/₈-6¹/₄-inch mesh, 30-lb breaking strength (in effect since 1977, except 1982).

Expected catch: Up to 5,000 shad

Expected spring/summer Chinook handle: zero

Expected sockeye handle: zero

Expected steelhead handle: <10 fish (4 mortalities)

Expected wild steelhead handle: <6 fish (two mortalities)

2006 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 2000-2004. Additionally, a few spring Chinook are incidentally harvested in the winter season sturgeon 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.

2006 Treaty Winter Commercial Fisheries (Compact consideration January 26, 2006)

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 2006 winter gillnet fishery is expected to be open in all of Zone 6 from February 1 to 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. 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 2006 winter season fisheries are expected to have similar catches and effort as in recent years.

2006 Treaty Indian Spring Season Fisheries

The treaty tribes have not yet determined the structure of their 2006 spring Chinook fisheries. 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 the Interim Management Agreement and the pre-season forecast run size, the tribes will manage for a 7% harvest rate on upriver spring Chinook. The

tribes anticipate that no more than 1,000 steelhead will be caught in spring fisheries. The majority of the catch would be Skamania stock hatchery returns, holdovers, and kelts.

2006 Treaty Indian Summer Season Fisheries

The treaty tribes have not yet determined the structure of their 2006 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.

Summer season fisheries will target unlisted upper Columbia summer Chinook. Based on the pre-season forecast, treaty fisheries will be allowed a Chinook catch of approximately 10,000. The 2006 summer steelhead harvest is expected to be similar or less than that of recent years.

2006 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 with zero mortalities. 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.

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 any recommended changes to miscellaneous regulations in the January 26, 2006 Fact Sheet.

The Sturgeon Management Task Force (SMTF) will meet in January to discuss and develop a management plan for 2006 Zone 6 sturgeon fisheries. Results of the SMTF meetings will be presented at the January 26, 2006 Compact hearing.

Oregon Department of Fish and Wildlife
Washington Department of Fish and Wildlife
January 18, 2006

Bibliography

- Frederick, D., February 9, 1994. Letter - winter season commercial salmon gillnet fishery not likely to adversely affect the marbled murrelet. United States Fish and Wildlife Service (USFWS). Olympia, WA. 2 pp.
- Frederick, D., February 9, 1994. Letter - commercial smelt fishery not likely to adversely affect the marbled murrelet. USFWS. Olympia, WA. 1 p.
- Mattson, C.R. 1963. An investigation of spring chinook salmon of the Willamette River system, 1946-51. Fish Commission of Oregon. Portland, OR.
- Miller, M., et al. August 1993. Genetic stock identification estimates of spring chinook stock composition in the Columbia River winter gillnet fishery 1987-92. WDF. Olympia, WA. Technical Report No. 121. 18 pp.
- NMFS. 2005. Biological Opinion on Impacts of Treaty Indian and Non-Indian Fisheries in the Columbia River Basin in Years 2005-2007, on Salmon and Steelhead Listed Under the Endangered Species Act, Conference on Lower Columbia Coho, and Magnuson-Stevens Act Essential Fish Habitat Consultation. National Marine Fisheries Service – Sustainable Fisheries Division, Northwest Region. May 9, 2005.
- Nicholas J., et al. November 1995. Status of Willamette spring run chinook salmon relative to federal Endangered Species Act consideration. ODFW. Portland, OR. 44 pp.
- North, J. A. and eight co-authors. 2004. Select Area Fishery Evaluation Project, 1993-2004 Final Project Completion Report. Prepared for the Bonneville Power Administration, Portland, OR. 142 pp.
- ODFW. 1992. Main-stem Willamette subbasin fish management plan. Fish Division, Portland, OR. 109 pp.
- ODFW. 1992. Clackamas River subbasin fish management plan. Fish Division, Portland, OR. 174 pp.
- ODFW, March 1998. Spring Chinook Chapters Willamette Basin Fish Management Plan, Fish Division, Portland, OR. 39 pp.
- ODFW/WDFW. August 2002. Status Report-Columbia River fish runs and fisheries, 1938-2000. Joint Columbia River Management Staff. Clackamas OR/Vancouver, WA. 324 pp.
- ODFW/WDFW. January 2005. Joint Staff Report concerning commercial seasons for spring chinook, steelhead, sturgeon, shad, smelt, and other species and miscellaneous regulations for 2005. Joint Columbia River Management Staff. Clackamas, OR/Vancouver, WA. 64 pp.
- Parties to U.S. v. Oregon. 1987. Columbia River fish management plan. Columbia River Inter-tribal Fish Commission. Portland, OR. 61 pp.
- Parties to U.S. v. Oregon. 2005. 2005-2007 Interim Management Agreement for Upriver Chinook, Sockeye Steelhead, Coho and White Sturgeon. Columbia River Inter-tribal Fish Commission. Portland, OR. 60 pp.
- Technical Advisory Committee. 1997. 1996 All Species Review, Columbia River Fish Management Plan. ODFW. Columbia River Management, Clackamas, OR.
- Watts, J. January 2003. The 2001 lower Columbia River and Buoy 10 recreational fisheries. ODFW. Columbia River Management, Clackamas, OR. 99 pp.

- WDF et al. December 1, 1993. Biological Assessment of the affects of the Columbia River commercial smelt fishery on marbled murrelets. NMFS. Northwest Region, Seattle, WA. 42 pp.
- WDF et al. December 1, 1993. Biological Assessment of the affects of the Columbia River winter season commercial salmon gillnet fishery on marbled murrelets. NMFS. Northwest Region, Seattle, WA. 31 pp.
- WDFW/ODFW. December 2005. Joint Staff Report concerning commercial seasons for sturgeon and smelt in 2006. Joint Columbia River Management Staff. Vancouver, WA/Clackamas, OR. 43 pp.
- WDFW/ODFW. January 2004. Biological Assessment of incidental impacts on winter steelhead listed under the Endangered Species Act in non-Indian mainstem Columbia River fisheries. Joint Columbia River Management Staff. Vancouver, WA/Clackamas, OR. 26 pp.
- WDFW/ODFW. January 2004. ESA Section 7/10 Application for the incidental take of listed species in Washington and Oregon Select Area fisheries of the lower Columbia River. Joint Columbia River Management Staff. Vancouver, WA/Clackamas, OR. 51 pp.

Table 1. Estimates of the Spring Chinook Stock Composition (in Thousands) in Lower Columbia Fisheries, 1990-2005.

Year	Willamette River ¹		Other Lower River ²		Upriver		Total ³ Catch
	No.	%	No.	%	No.	%	
<u>Winter Commercial Season (Feb-Mar) ⁴</u>							
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
2005	2.1	40	1.1	21	2.0	39	5.2
<u>Main-Stem Sport Fishery (Feb-Mar)</u>							
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
2005	0.7	39	0.4	21	0.8	43	1.9
<u>Main-Stem Sport Fishery (April)</u>							
1990	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 ⁵	4.5	24	0.5	3	13.5	73	18.4
2003 ⁵	5.9	53	0.9	8	4.3	39	11.1
2004	4.5	21	1.4	6	15.2	72	21.1
2005	1.9	22	1.0	12	5.7	66	8.7

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. Effective in 2001 in sport fisheries and 2002 in mainstem commercial fisheries only adipose fin-clipped Chinook could be retained.

⁴ Includes tangle net landings of spring Chinook beginning in 2002.

⁵ 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, 1970-2005.

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	10	54.0	10.8
2002	121.7	7.4	5.2	109.1	10.8	10	83.1	14.4
2003	126.6	1.8	7.2	117.6	13.5	11	87.7	15.4
2004	143.7	7.2	5.9	130.5	12.0	9	96.0	21.9
2000-2004 Average	106.0	4.2	4.5	97.3	10.6	11	72.0	14.1
2005	61.0	2.3	2.8	55.8	5.8	10	36.6	12.7

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). Also, includes estimated release mortalities from Lower Columbia mainstem commercial selective fisheries since 2001.

³ Includes spring Chinook destined for the Willamette River landed in Columbia River boat and/or bank fisheries. Also includes estimated hook and release mortalities in the Lower Columbia mainstem selective sport fishery since 2001.

⁴ Lower Willamette sport fishery managed for quotas in 1996 (6,000 fish) 1997 (1,900 fish), 1998 (2,000 fish), 1999 (4,600 fish), and 2000 (7,850 fish). 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 estimated hook and release mortalities in the Lower Willamette selective sport fishery of 299 in 2000, 706 in 2001, 369 in 2002, 373 in 2003, 327 in 2004, and 231 in 2005.

^{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 Entering the Columbia River, 1985-2005 and 2006 Projections.

Year	Willamette River (All Age Classes)			Cowlitz, Kalama, & Lewis Rivers Combined (Adults)			Upriver (Age 4 & 5 Adults) ¹		
	Preseason Forecast	Actual Return	% of Predicted	Preseason Forecast	Actual Return	% of Predicted	Preseason Forecast	Actual Return	% of Predicted
1985	70,000	68,100	97	--	--	--	52,600	84,700	161
1986	65,000	73,600	113	--	--	--	115,000	120,600	105
1987	78,000	93,600	120	--	--	--	79,700	99,800	125
1988	97,000	118,100	122	32,000	24,800	78	53,400	97,000	182
1989	102,000	114,900	113	16,100	22,300	139	92,700	82,600	89
1990	128,000	130,600	102	18,600	18,900	102	120,800	99,100	82
1991	110,000	109,900	100	19,700	19,800	101	61,900	59,200	96
1992	106,000	75,000	71	26,600 ⁴	18,400 ⁴	69	71,400	89,800	126
1993	70,000	65,900	94	21,300 ⁴	19,000 ⁴	89	76,200	111,000	146
1994	75,000	49,600	66	12,300 ⁴	7,400 ⁴	60	49,000	20,800	42
1995	49,000	42,600	87	4,600	6,600	143	12,000	9,800	82
1996	41,000	34,800	85	4,400	4,100	93	37,200	51,500	138
1997	30,000	35,300	118	4,500	4,600	102	67,800	114,000	168
1998	33,700	45,100	134	2,900	3,100	107	36,200	38,300	106
1999	46,500	54,200	117	3,900	4,900	126	24,600	38,700	157
2000	59,900	57,500	96	6,000	6,100	102	134,000	178,600	133
2001	61,000	80,300	132	4,800	7,200	150	364,600	416,500	114
2002	73,800	121,700	165	6,700	11,500	172	333,700	295,100	88
2003	109,800	126,600	115	11,600	25,500	220	145,400	208,900	144
2004	109,400	143,700	131	27,300	32,400	119	360,700	193,400	54
2005 ⁵	116,900	61,000	52	24,800	15,700	63	254,100	106,900	42
2006	46,500	--	--	15,200	--	--	88,400	--	--

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

Table 4. Willamette Falls Spring Chinook Escapement, Upper Willamette Sport Catch, Number Returning to Hatcheries, and Tribal Use, 1980-2005.

Year	Willamette Falls Count ¹	U. Willamette Sport Catch		U. Will. Hatchery Return		Clackamas Hatchery Return	Received by Columbia River Tribes ²
		Number	% of Will. Falls Count	Number	% of Will. Falls Count		
1980	26,973	1,954	7	8,302	31	1,024	--
1981	30,057	2,241	7	9,198	31	1,065	--
1982	46,195	3,687	8	13,780	30	573	--
1983	30,589	1,877	6	10,372	34	1,923	--
1984	43,452	3,123	7	15,433	36	2,521	--
1985	34,533	2,510	7	10,785	31	944	--
1986	39,155	2,708	7	12,591	32	776	--
1987	54,832	6,442	12	16,517	30	1,005	--
1988	70,451	8,536	12	22,534	32	1,253	3,700
1989	69,180	9,375	14	27,349	40	865	2,520
1990	71,273	10,856	15	29,692	42	1,847	1,425
1991	52,516	8,323	16	20,685	39	2,776	2,992
1992	42,004	7,424	18	15,743	37	4,535	2,206
1993	31,966	8,161	26	14,636	46	4,635	1,386
1994	26,102	4,273	16	9,795	38	3,675	3,193 ³
1995	20,592	3,380	16	8,757	43	3,112	1,504 ⁴
1996	21,605	5,041	23	10,056	47	3,044	4,386 ⁵
1997	26,885	4,022	15	14,752	55	2,670	539
1998	34,461	6,125	18	16,414	48	4,530	7,590
1999	40,410	6,367	16	18,725	46	4,562	7,689
2000	39,073	5,721	15	16,158	41	4,296	0
2001	53,973	NA	--	20,256	38	6,155	0
2002	83,136	NA	--	32,049	39	6,256	0
2003	87,749	NA	--	25,528	29	3,532	0
2004	95,970	NA	--	33,560	35	11,530	0
2005	36,633	NA	--	15,386	42	4,464	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.

^{4.} Columbia treaty tribes at Willamette Falls also harvested 29 Chinook June 12-17 and 112 summer steelhead.

^{5.} Columbia treaty tribes at Willamette Falls also harvested 12 Chinook.

Table 5. Minimum Adult Spring Chinook Run Entering Other Lower River Tributaries, 1980-2005. ¹					
Year	Cowlitz River	Kalama River	Lewis River	Sandy River	Total
<i>1980-1984 Average</i>	22,737	4,165	3,834	2,020	30,736
<i>1985-1989 Average</i>	11,176	1,552	10,312	1,980	25,040
1990	7,555	1,987	9,299	3,527	22,368
1991	8,945	2,613	8,334	3,652	23,544
1992	10,353	2,430	6,025	9,234	28,042
1993	9,458	2,874	8,195	6,369	26,896
1994	3,149	1,265	3,068	3,498	10,980
<i>1990-1994 Average</i>	7,892	2,234	6,984	5,256	22,366
1995	2,102	697	3,726	2,686	9,211
1996	1,787	627	1,730	3,997	8,317
1997	1,877	505	2,196	4,625	9,181
1998	1,055	407	1,611	3,768	7,292
1999	2,069	977	1,753	3,985	8,197
<i>1995-1999 Average</i>	1,778	643	2,203	3,812	8,440
2000	2,199	1,418	2,515	3,778	9,980
2001	1,649	1,784	3,777	5,742	12,847
2002	5,019	2,883	3,554	6,366	18,438
2003	15,890	4,528	5,104	5,848	31,922
2004	16,712	4,573	11,090	13,320	45,775
<i>2000-2004 Average</i>	8,294	3,037	5,208	7,011	23,792
2005 ³	9,200	3,100	3,400	9,327	25,027

^{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 Harvest Rates for the Cowlitz, Kalama, and Lewis Rivers, 1980-2005.

Year	Cowlitz River		Kalama River		Lewis River		Total	
	Sport Catch	Harvest Rate (%)	Sport Catch	Harvest Rate(%)	Sport Catch	Harvest Rate (%)	Sport Catch	Harvest Rate (%)
1980-1984 Average	7,100	31	1,292	31	2,554	67	10,946	36
1985-1989 Average	2,888	26	584	38	6,262	61	9,734	42
1990	2,636	35	887	45	7,143	77	10,666	57
1991	3,417	38	1,404	54	6,201	74	11,022	55
1992	2,134	21	749	31	4,385	73	7,268	39
1993	2,897	31	1,472	51	6,102	74	10,471	51
1994	1,076	34	229	18	1,942	63	3,247	43
1990-1994 Average	2,432	32	948	40	5,155	72	8,535	49
1995 ¹	33	2	3	0	2437	65	2,473	38
1996 ¹	29	2	190	30	351	20	570	14
1997 ¹	144	8	5	1	781	36	930	20
1998 ¹	0	0	0	0	228	14	228	7
1999 ¹	491	24	8	1	692	39	1,191	25
1995-1999 Average	139	7	41	7	898	35	1,078	21
2000 ¹	538	24	397	28	1,260	50	2,195	36
2001 ¹	94	6	395	22	2,020	53	2,509	35
2002	1,466	29	510	18	1,293	36	3,269	29
2003	2,947	19	805	18	1,865	37	5,617	22
2004	2,127	13	1,210	26	6520	59	9,857	30
2000-2004 Average	1,434	18	663	22	2,592	47	4,689	30
2005	1,166	13	979	31	1,472	43	5,803	23

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, 1980-2005.

Year	Unriver Run	Zones 1-5 Non-Indian ²				Bonneville Counts ⁵	Zone 6 Treaty Indian ¹			Zones 1-6		Escapement	
		Comm.	Sport ³	Misc. ⁴	Rate (%)		Comm Gillnet	C & S Gillnet	Platform and Hook + Line	Rate (%)	Rate (%)	Number ⁶	% of Run
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
2005	106,935	2,246	7,235	57	8.9	97,397	1	0	6,163	5.8	15.1	91,233	85.3

- ¹ Tribal commercial catches include any spring Chinook sold in the winter season gillnet fishery. Ceremonial and subsistence include catch by gillnet, dipnet, and hook and line since 1982.
- ² 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 catch was based on CWT recoveries. Since 1988, incidental commercial catch was based on GSI analysis and incidental sport catch was based on VSI analysis. Commercial fishery became selective beginning 2002.
- ³ Includes mainstem fisheries up to McNary Dam. Sport fishery became selective beginning in 2001.
- ⁴ Miscellaneous fisheries include Select Area, test fisheries, mortalities from area 2S shad fisheries and selective tangle net experimental fishery in 2001.
- ⁵ 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.
- 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, 1980-2005.

Year	Upriver Run	Zones 1-5 Non-Indian				Bonneville Counts ⁴	Zone 6 Treaty Indian		Escapement		Dam Counts	
		Sport ¹	Comm. ² / Shad	Misc. ³	Rate (%)		Catch ⁵	Rate %	Number ⁶	% of Run	Priest Rapids	Wells Dam
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	2,061	2.2	89,225	96.1	96,326	7,585
2003	83,120	2,007	0	36	2.5	81,077	4,297	5.2	76,511	92.0	83,004	46,649
2004	65,446	1,240	233	3	2.3	63,970	8,394	12.8	55,381	84.9	67,060	31,380
2005	60,038	1,622	2,552	0	7.0	55,864	7,642	12.7	47,810	79.6	61,227	31,066

^{1.} Blank indicates data are not available.

^{2.} 2004 and 2005 data includes commercial landings of 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, 1980-2005.

Year	Snake River Wild Run Size	Non-Indian Fisheries Mortality ¹		Treaty Indian Catch ²		Fisheries Total		Bonn.-L. Gr. Passage Loss		Snake River Escapement ³	
		No.	%	No.	%	No.	%	No.	% ⁴	No.	% ⁴
1980	18,660	31	0.2	605	3.2	636	3.4	11,370	63.1	6,646	36.9
1981	19,819	266	1.4	1,005	5.1	1,275	6.4	6,407	34.5	12,127	65.4
1982	27,050	464	1.7	1,866	6.9	2,337	8.6	12,894	52.2	11,812	47.8
1983	20,363	971	4.8	825	4.1	1,808	8.9	8,137	43.9	10,417	56.1
1984	14,052	479	3.5	937	6.7	1,422	10.1	4,361	34.5	8,266	65.4
1985	14,551	523	3.6	497	3.4	1,025	7.0	2,749	20.3	10,773	79.6
1986	17,969	363	2.0	1,046	5.8	1,414	7.9	5,811	35.1	10,739	64.9
1987	15,424	232	1.6	939	6.1	1,178	7.6	4,043	28.4	10,198	71.6
1988	17,963	1,132	6.3	1,195	6.7	2,348	13.1	4,394	28.1	11,217	71.8
1989	14,271	333	2.4	1,073	7.5	1,413	9.9	6,068	47.2	6,788	52.8
1990	15,649	775	5.0	1,030	6.6	1,819	11.6	3,987	28.8	9,836	71.1
1991	11,935	463	3.9	720	6.0	1,191	10.0	4,727	44.0	6,013	56.0
1992	19,283	307	1.6	1,165	6.0	1,479	7.7	4,719	26.5	13,079	73.5
1993	15,435	125	0.8	945	6.1	1,072	6.9	1,527	10.6	12,831	89.3
1994	3,401	126	4.0	166	4.9	301	8.8	1,147	37.0	1,954	63.0
1995	3,017	2	0.1	151	5.0	153	5.1	1,678	58.6	1,186	41.4
1996	8,896	10	0.1	468	5.3	478	5.4	4,629	55.0	3,788	45.0
1997	8,126	4	0.1	546	6.7	551	6.8	3,169	41.8	4,406	58.2
1998	13,062	12	0.1	668	5.1	680	5.2	4,990	40.3	7,391	59.7
1999	5,579	6	0.1	260	4.7	266	4.8	2,457	46.2	2,856	53.8
2000	13,201	26	0.2	803	6.1	829	6.3	4,116	33.3	8,255	66.7
2001	60,977	907	1.5	8,001	13.1	8,908	14.6	7,064	13.6	45,281	87.0
2002	49,004	878	1.8	5,289	10.8	6,166	12.6	12,555	29.3	30,213	70.5
2003	52,994	825	1.6	4,155	7.8	4,980	9.4	15,350	32.0	32,325	67.3
2004	33,008	701	2.1	2,846	8.6	3,547	10.7	7,849	26.7	21,367	72.5
2005	13,064	224	1.7	812	6.2	1,036	7.9	3,518	29.3	8,445	70.2

- 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, 1980-2005.

Year	Upper Columbia Wild Run Size	Non-Indian Fisheries Mortality ¹		Treaty Indian Catch		Fisheries Total		Bonn-McN Passage Loss		Priest Rapids Dam Escapement	
		No.	%	No.	%	No.	%	No.	% ²	No.	% ²
1980	8,206	17	0.2	266	3.2	284	3.5	4,336	54.7	3,586	45.2
1981	9,982	141	1.4	506	5.1	647	6.5	2,639	28.3	6,695	70.7
1982	7,626	135	1.8	526	6.9	661	8.7	3,252	46.7	3,714	52.3
1983	8,542	413	4.8	346	4.1	759	8.9	2,624	33.7	5,158	62.9
1984	7,250	252	3.5	483	6.7	736	10.1	1,509	23.2	5,006	74
1985	11,006	402	3.7	376	3.4	778	7.1	891	8.7	9,336	87.8
1986	8,175	170	2.1	476	5.8	646	7.9	1,813	24.1	5,716	74.2
1987	7,584	120	1.6	462	6.1	581	7.7	1,628	23.3	5,374	75.5
1988	5,488	354	6.4	365	6.7	719	13.1	891	18.7	3,878	75.7
1989	6,580	158	2.4	495	7.5	653	9.9	2,195	37	3,732	61.3
1990	5,643	287	5.1	372	6.6	658	11.7	977	19.6	4,007	76
1991	2,514	100	4.0	152	6.0	252	10	526	23.2	1,736	73.5
1992	5,007	83	1.7	302	6.0	386	7.7	641	13.9	3,980	84.6
1993	5,268	45	0.9	322	6.1	368	7	222	4.5	4,678	94.6
1994	1,804	71	3.9	88	4.9	159	8.8	490	29.8	1,155	67.3
1995	290	0	0.1	15	5.0	15	5.1	118	42.9	157	57
1996	308	0	0.1	16	5.3	17	5.4	119	40.8	173	59.1
1997	1,071	1	0.1	72	6.7	73	6.8	343	34.4	655	65.6
1998	401	0	0.1	21	5.1	21	5.2	97	25.4	284	74.5
1999	642	1	0.1	30	4.7	31	4.8	160	26.2	451	73.7
2000	3,007	6	0.2	183	6.1	189	6.3	720	25.5	2,098	74.3
2001	10,026	156	1.6	1,326	13.2	1,482	14.8	628	7.4	8,047	92.5
2002	5,975	116	1.9	650	10.9	766	12.8	1,061	20.4	4,197	78.8
2003	2,602	40	1.5	205	7.9	245	9.4	556	23.6	1,800	75.1
2004	3,213	67	2.1	278	8.6	345	10.7	554	19.3	2,297	78.3
2005	2,474	41	1.6	154	6.2	195	7.9	492	21.6	1,778	76.6

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, 1980-2005.

Year	Return to Columbia River Mouth ¹	Non- Indian Fisheries Mortality	Bonn. Dam Count	Treaty Indian		Dam Counts		Snake River Sockeye			
				Harvest		Priest	Snake	At	Non-	Treaty	Lower
				Comm	C&S	Rapids ²	River ³	River	Indian	Indian	Granite
								Mouth	Impacts	Harvest	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	200,759	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	99,780	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	1,690	114,933	5,580	1,720	103,533	45	51	0	3	43
2002	49,629	19	49,610	0	2,564	44,531	73	81	0	4	65
2003	39,375	0	39,375	10	1,080	33,747	26	30	0	1	14
2004	123,992	672	123,320	1,727	2,590	116,197	113	120	1	5	113
2005	72,452	4	72,448	1,085	1,681	69,344	19	20	0	0	10

- ^{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, 1969-2005.

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	0.0	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	1.5	6.3	26.1
2000	1.6	13.1	9.6	1.9	10.2	36.4
2001	2.0	28.4	16.4	4.1	19.7	70.6
2002	4.4	35.2	33.8	8.1	33.3	114.8
2003	2.7	17.5	23.0	3.2	26.1	72.5
2004	3.0	36.4	23.1	(4.0)	42.4	(108.9)
2005	2.0	14.6	(23.2)	(4.3) ⁵	(26.3) ⁵	(70.4)

- 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. Oregon catch unavailable for 1969-1974.
 - ⁵. Based on recent 5-year average.
- () Indicates preliminary.

Table 13. Minimum Numbers (in Thousands) of Upriver Summer Steelhead Entering the Columbia River, 1969-2005.

Year	Lower Columbia Catch		Bonneville Dam Counts ³	Minimum Run
	Sport ¹	Commercial ²		
1969	11.3	21.3	139.3	171.9
1970	9.4	16.1	113.0	138.5
1971	10.8	20.6	193.1	224.5
1972	15.4	24.9	185.2	225.5
1973	8.5	22.7	156.7	187.9
1974	5.5	4.0	135.3	144.8
1975	0.0	--	84.1	84.1
1976	0.0	--	122.4	122.4
1977	3.7	--	191.7	195.4
1978	1.5	--	102.3	103.8
1979	1.2	--	112.3	113.5
1980	2.0	--	127.6	129.6
1981	3.2	--	157.9	161.1
1982	2.6	--	156.2	158.8
1983	2.9	--	217.6	220.5
1984	5.4	--	314.5	319.9
1985	6.1	--	342.3	348.4
1986	8.0	--	376.3	384.3
1987	4.9	--	301.1	306.0
1988	7.7	--	277.2	284.9
1989	6.4	--	286.4	292.8
1990	4.0	--	181.5	185.5
1991	6.0	--	273.2	279.2
1992	10.2	--	313.9	324.1
1993	8.5	--	187.3	195.8
1994	4.0	--	160.8	164.8
1995	6.8	--	201.5	208.3
1996	5.1	--	204.0	209.1
1997	5.2	--	256.8	262.0
1998	3.7	--	184.4	188.1
1999	5.9	--	205.7	211.6
2000	8.2	--	274.2	282.4
2001	9.5	--	630.2	639.7
2002	7.5	--	478.0	485.5
2003	6.9	--	357.2	364.1
2004	5.8	--	309.0	314.8
2005	5.3	--	312.5	317.8

^{1.} Sport catch based on timing of the catch: May 1-October 31 (1969-1976) and July 1-October 31 beginning in 1977. 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: spring through October. Sale of steelhead by non-Indians prohibited since 1975.

^{3.} Dam counts include Skamania Index, Group A Index, and Group B Index steelhead counted from April 1-October 31.

Table 14. Skamania Index, Group A Index, and Group B Index Returns of Summer Steelhead to Bonneville Dam During 1984-2005.

Year	Skamania Index			Group A Index (<78 cm)			Group B Index (>78 cm)		
	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	176,400	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	1,800	12,400	14,200	66,400	238,100	304,500	6,500	32,000	38,500
2004 ¹	4,100	16,900	21,000	60,400	190,200	250,600	9,200	28,200	37,400
2005 ²	2,800	9,100	11,900	58,900	197,700	251,600	9,600	39,400	49,000

¹ Due to limited biological sampling at Bonneville Dam, 2004 Skamania Index is based on historic proportions of hatchery to wild fish applied to April- June passage and 2004 Group A and Group B data also adjusted by TAC.

² Due to limited biological sampling at Bonneville Dam, the 2005 Skamania, group A and Group B data is based on the 2005 pre-season proportions applied to April through June passage for Skamania stock and between July1- October 31 for Group A and B stocks.

Table 15. Steelhead Counts by Run Year at Lower Granite Dam with Wild Steelhead Estimates and Goals, 1984-2005.

Run Year	Run Year Totals	Wild ¹		Percent of 30,000 Goal
		Number	Percent	
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)
2004-2005 ²	(152,700)	(35,200)	(23)	(117)

^{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) 1977-2005.

Year	Area 2S		Washougal Reef		Total Zone 1-5 Commercial Catch ²	Run Size	% of Run Landed
	Days	Catch ¹	Days	Catch ¹			
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	4,012.0	4
1991	19	38.8	29	4.9	43.7	2,363.1	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	2,294.9	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	2,908.3	1
2002	29	37.1	--	--	37.1	3,430.2	1
2003	29	79.2	--	--	79.2	4,791.2	2
2004	29	48.4	--	--	48.4	5,678.3	1
2005	26	48.8	30	0.0	48.8	6,303.2	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.

Table 17. Season Dates, Gear Restrictions, and Commercial Landings During Non-Indian Winter (January-March) Mainstem Seasons, 1970-2005.

Year	Season	Fishing		Commercial Landings ¹	
		Days	Mesh Size ²	Chinook	White Sturgeon
1970-1974 Average		13	7¼" 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-Feb 14	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" min.	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" min.	100	600
1997	Jan 27-Feb 18	7	8¾" min.	100	2,700
1998	Jan 12-Feb 13	10	9" min.	<100	2,700
1999	Jan 11-Feb 26	13	9" min.	<100	1,800
1995-1999 Average		7		<100	1,600
2000	Jan 10-Feb 11	10	9" min.	17	1,200
	Feb 13-29	7	9" min.; above Kelley Pt.	0	325
	" "		8" min; below Kelley Pt.	479	736
2001	Jan 8-Feb 9	10	9" min.	71	2,634
	Feb 26-Mar 9	6	8" min; below Kelley Pt.	5,373	425
2002	Jan 7-Feb 15	11	9" min.	146	2,625
	Feb 25-Mar 27	15	5½" max.	14,238	99
2003	Jan 7-28	4	9" min.	2	1,490
	Feb 17 and 19	2	8" min.	519	21
	Mar 21	1	4¼" max.	2,527	6
2004	Jan 13-Feb 11	5	9" min.	48	1,696
	Mar 2-Mar 19	6	9" min.	3,490	159
	Mar 23-Mar 30	3	4¼" max.	9,620	15
2000-2004 Average		16		7,306	2,287
2005 ³	Jan 18-Feb 25	7	9" min.	94	473
	Mar 1-Mar 16	5	9" min.	1,489	58
	Mar 29-April 1	2	4¼" max.	3,606	12

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

². Since 1997, maximum mesh size of 9¾" unless specified otherwise.

³. Catch updated with preliminary fish ticket landings.

Table 18. Winter Season Commercial Gillnet Landings in the Zone 6 Treaty Indian Fishery, 1977-2005.

Year	Season ¹	Peak Net Count	Numbers of Fish Landed ²			
			Chinook	Steelhead	Sturgeon	Walleye
1977-1981	Feb 1-Apr 1 ³	170	1,400	3,700	110	--
Average						
Range		87-246	30-2,800	2,600-4,900	20-220	
1982-1986	Feb 1-Mar 21 ^{4,5}	107	50	4,700	670	--
Average						
Range		61-180	5-100	3,000-7,800	70-1,700	
1987-1991	Feb 1-Mar 21 ^{4,5}	183	100	6,700	2,100	500
Average						
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	Feb 2-Mar 10 ⁸ (37 days)	--	2	70	1,748	48
2005 ⁹	Feb 1-Mar 16 ¹⁰ (44 days)	--	1	8	1,754	27

^{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 end 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.} The closing date for the John Day Pool was March 21 (48 days).

^{9.} Catch statistics preliminary.

^{10.} The closing date for the The Dalles Pool was March 19 (47 days).