



*Washington
Department of*
**FISH and
WILDLIFE**

**JOINT STAFF REPORT
CONCERNING THE 2004 FALL IN-RIVER COMMERCIAL
HARVEST OF COLUMBIA RIVER FALL CHINOOK SALMON,
SUMMER STEELHEAD, COHO SALMON, CHUM SALMON,
AND STURGEON**

Joint Columbia River Management Staff

*Oregon Department of Fish and Wildlife
Washington Department of Fish and Wildlife*

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JOINT STAFF REPORT CONCERNING THE 2004 IN-RIVER COMMERCIAL HARVEST OF COLUMBIA RIVER FALL CHINOOK SALMON, SUMMER STEELHEAD, COHO SALMON, CHUM SALMON, AND STURGEON

INTRODUCTION

This report describes fall fisheries in the mainstem Columbia River and includes summaries of 2003 fall fisheries, 2004 management guidelines, expected 2004 fall fish runs, and the outlook for 2004 fall fisheries. It is part of an annual series of reports produced by the Joint Columbia River Management Staff of the Oregon Department of Fish and Wildlife (ODFW) and Washington Department of Fish and Wildlife (WDFW) prior to each major Columbia River Compact hearing. Information concerning early and late fall mainstem management periods and fall Select Area fisheries are included in this report.

The first Compact hearing of the 2004 fall management period will begin at 10 AM, Thursday July 29 at the Cowlitz County Public Utility District office located at 961 12th Avenue, Longview, Washington. The purpose of this hearing is to consider non-Indian commercial fishing options for the mainstem Columbia River. Following the hearing, the states will consider Select Area fall salmon seasons in Big Creek, Youngs Bay, Tongue Point, Blind Slough, Deep River, and Steamboat Slough. Additionally, a Compact hearing has been scheduled for 10 AM Friday August 20 at the Columbia River Intertribal Fisheries Enforcement Office located at 4270 Westcliff Drive, Hood River, Oregon. The purpose of this hearing is to review salmon and steelhead stock status and to consider non-Indian commercial fisheries and/or treaty Indian commercial fisheries in the mainstem Columbia River. Further Compact hearings will be scheduled throughout the fall management period as needed to evaluate salmon and steelhead stock status and adopt or modify treaty Indian and non-Indian commercial seasons as appropriate.

Salmon and summer steelhead returns are forecast prior to the fall season and are updated in-season based on the most current ocean and in-river fishery information plus Columbia River dam counts (Table 1). White sturgeon abundance in the lower Columbia River is updated annually. The data in this report are a consensus of the Technical Advisory Committee (TAC) which completed its review prior to printing. The TAC is comprised of biologists from state and federal fish management agencies and the Columbia River treaty Indian tribes, and functions by agreement of the parties under *U. S. v. Oregon*.

THE COMPACT

The Columbia River Compact is charged by congressional and statutory authority to adopt seasons and rules for Columbia River commercial fisheries (Figure 1). In recent years, the Compact has consisted of the Oregon and Washington agency directors, or their delegates, acting on behalf of the Oregon Fish and Wildlife Commission (OFWC) and the Washington Fish and Wildlife Commission (WFWC). In addition, the Columbia River treaty tribes have authority to regulate treaty Indian fisheries.

When addressing commercial seasons for salmon, steelhead, and sturgeon, the Compact must consider the effect of the commercial fishery on escapement, treaty rights, and sport fisheries, as well as the impact on species listed under the Endangered Species Act (ESA). Although the

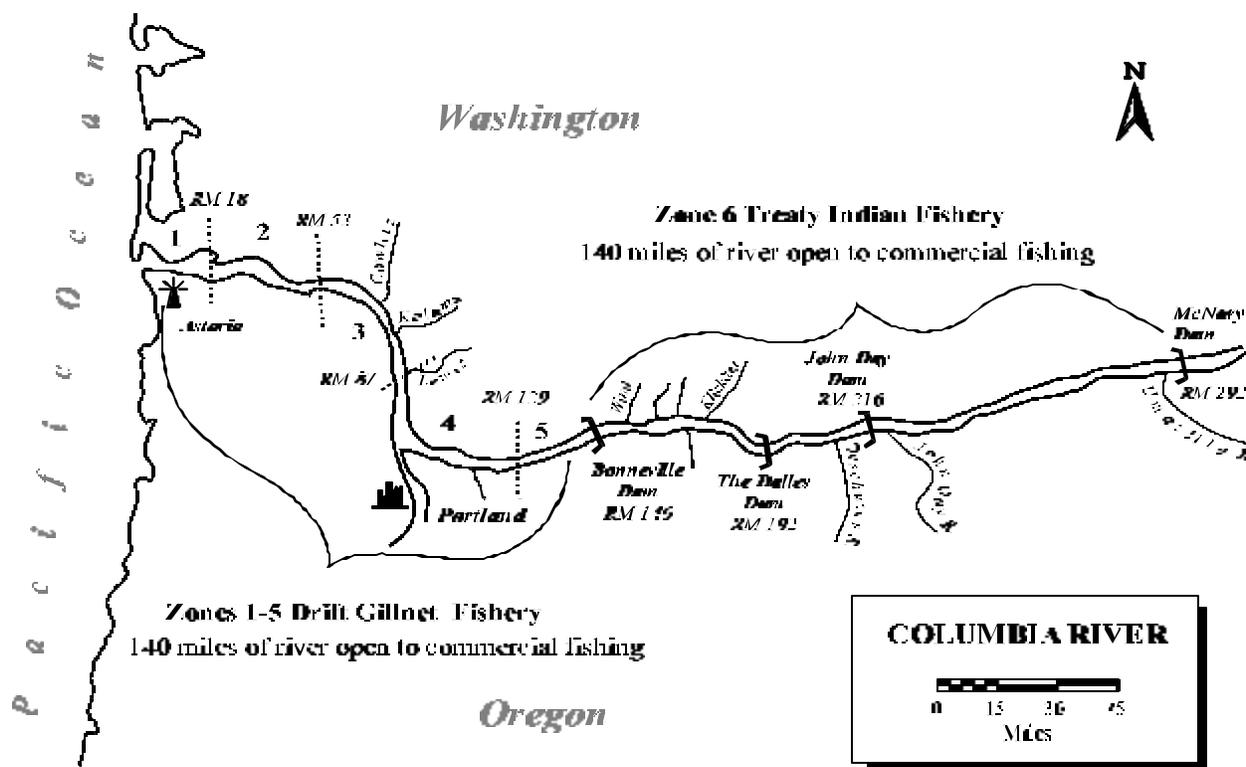


Figure 1. Columbia River Commercial Fishing Zones.

Compact has no authority to adopt sport fishing seasons or rules, it is an inherent responsibility of the Compact to address the allocation of limited resources among users and this responsibility has become increasingly demanding in recent years. The Compact will continue to apply a conservative management strategy when considering fisheries that will impact listed salmon and steelhead.

STOCK STATUS

Fall Chinook

Stock Description

Fall chinook generally enter the Columbia River from late July through October with abundance peaking in the lower river from mid-August to mid-September and passage at Bonneville Dam peaking in early September. Columbia River fall chinook are comprised of five major components: Lower River Hatchery (LRH), Lower River Wild (LRW), Bonneville Pool Hatchery (BPH), Upriver Bright (URB), and Mid-Columbia Bright (MCB). The LRH and BPH stocks are referred to as tules and the LRW, URB, and MCB stocks are referred to as brights. Minor run components include Lower River Brights (LRB) and Select Area Brights (SAB).

The URB, BPH, and a portion of MCB chinook are produced above Bonneville Dam, and in aggregate, comprise the upriver run, which is subject to treaty Indian/non-Indian allocation requirements. Most of the URB stocks are wild fish destined for the Hanford Reach section of the Columbia River. Smaller URB components are destined for the Deschutes, Snake, and Yakima rivers. Snake River Wild (SRW) fall chinook are a sub-component of the URB stock. The MCBs originated from, and are considered a component of the URB stock. The upriver MCB component (Pool Upriver Brights or PUB stock) is comprised of brights that are reared at

Bonneville, Little White Salmon, Irrigon, and Klickitat hatcheries and released in areas between Bonneville and McNary dams. Natural production of brights derived from PUB stock is also believed to occur in the mainstem Columbia River below John Day Dam, and in the Wind, White Salmon, Klickitat, and Umatilla rivers. The BPH stock is produced primarily at Spring Creek Hatchery in the Bonneville Pool. BPH passage at Bonneville Dam occurs over a shorter time frame than the URB and MCB chinook (Figure 2). Natural production of tules occurs in the Wind, White Salmon, and Klickitat rivers.

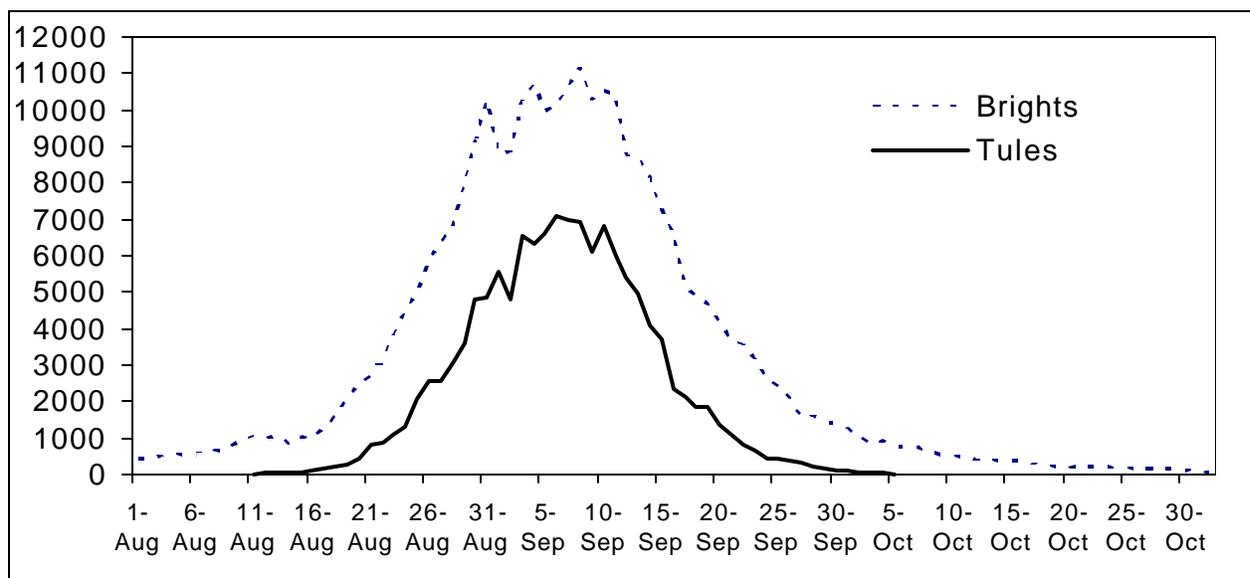


Figure 2. Average Run Timing of Adult Fall Chinook over Bonneville Dam (1994-2003) Applied to the 2004 Forecasts

The lower river run is comprised of LRH, LRW, MCB, LRB, and SAB stocks, which are produced below Bonneville Dam. The LRH stock is currently produced from hatchery facilities (five in Washington and one in Oregon) while the LRW stock is naturally produced primarily in the Lewis River system, with smaller components also present in the Cowlitz and Sandy rivers. Some natural production of LRH stock occurs in several tributaries below Bonneville Dam. The MCB production below Bonneville Dam (Bonneville Upriver Brights or BUB stock) occurs at Bonneville Hatchery in Oregon. The LRBs are a self-sustaining natural stock that spawns in the mainstem Columbia approximately three miles downstream from Bonneville Dam. The LRB stock is closely related to upriver brights and is thought to have originated from MCB or URB stock. Prior to 1998, LRBs were classified as BUBs, but beginning in 1998, LRBs were identified as a separate stock and are considered to be a component of the MCB stock. SABs are a local hatchery stock that originated from the Rogue River fall chinook stock and are currently released from Klaskanine Hatchery on the North Fork Klaskanine River and net pens located in Youngs Bay.

2003 Returns

The total Columbia River fall chinook adult return of 893,200 adults in 2003 was the largest return since 1948 and tripled the 1991-1995 average of 241,400 and more than doubled the recent 5-year average (1998-2002) of 417,000 (Table 2). In 2003 URB's comprised 42% of the total river mouth return and the URB return of 373,200 adults was the largest return since 1987

but well below the record return of 420,600 in 1987 and near double the recent five-year average (Table 32). The 2003 McNary Dam count of 180,600 adults surpassed the management goal of 43,500 and was the largest count excluding 2002 on record (since 1960). The Deschutes River basin return continues an upward trend with 20,400 adults returning. Estimated 2003 returns of SRW fall chinook to the Columbia River were 6,900, two times greater than 2002 (Table 4).

The BPH return of 180,600 adults was the largest return since 1976 and the third largest return on record. Adult returns of BPH included 56,900 fish to Spring Creek Hatchery, which was eight times the escapement goal of 7,000 adults. Natural spawning escapement of BPH stock adults totaled 1,500, 10,900, and 9,800 in the Wind, White Salmon, and Klickitat rivers, respectively.

The 2003 MCB return to the river mouth of 150,200 adults was the largest MCB return on record (since 1980), and included 67,500 PUB stock, 80,600 BUB stock, and 2,100 LRB stock. The adult PUB fall chinook return included an escapement of 4,400 to Little White Salmon Hatchery, which is double the 2,000 fish escapement goal. Natural escapement of adult PUB stock included 3,100 in the White Salmon River and 13,800 in the Klickitat River, as compared to the interim escapement goals of 1,300 and 1,000 fish, respectively. The return of BUB stock in 2003 totaled 80,600 adults to the mouth of the Columbia River, including 19,800 BUB's escaping to Bonneville Hatchery which was more than triple the 5,750 fish escapement goal. Significant natural escapement of BUBs does not occur. The return of LRB's in 2003 was 2,100 fish, of which most spawned in the mainstem Columbia River just below Bonneville Dam.

LRH returns in 2003 totaled 155,000 adults, which was similar to 2002's return of 156,400, even though Mitchell Act funding reductions have been in effect in recent years. A total of 34,500 fish returned to Oregon and Washington hatcheries below Bonneville Dam, which greatly exceeded the escapement goal of 14,700. A total of 17,900 fish returned to Washington hatcheries (goal 11,700) and 16,600 returned to Big Creek Hatchery in Oregon (goal 3,000). An additional 67,600 LRH fall chinook spawned in Washington tributaries below Bonneville Dam and interim natural escapement goals in most Washington tributaries were achieved in 2003.

Returns of LRW chinook improved significantly in 2003 with a river mouth return of 26,000 adults, which is the largest LRW return since 1989 and doubles the recent 10-year average of 13,000. The natural spawning escapement goal of 5,700 fish to the North Fork Lewis River was achieved in 2003 with a natural spawning escapement of 13,400 LRW adults.

Returns of SAB chinook in 2003 totaled 8,100 fish, which is the largest return on record.

2004 Forecast

The forecasted total adult return of fall chinook in 2004 of 634,900 adults is a decrease from last year's near record return of 893,200 adults but would still be the fifth largest return since 1948 (Table 1 and Figure 3). The forecasted returns of 287,000 URB adults and 88,800 MCB adults would both exceed the recent 5-year averages of 240,900 URB adults and 84,500 MCB adults. The BPH forecast of 150,000 adults is smaller than the recent two return years (180,600 and 160,800) but is larger than the recent 10-year average of 67,000. The LRW forecast of 24,200 adults would be similar to last year's actual return of 26,000 and the third largest return since 1989. The LRH forecast of 79,000 adults would be slightly better than the recent 10-year average of 75,100. The 2004 SAB forecast of 6,000 is greater than the five-year average of 5,000.

Upriver Summer Steelhead

Stock Description

Summer steelhead enter the Columbia River year-round, with most of the run entering from June through October. The upriver steelhead run has historically been separated into “A” and “B” groups which form separate breeding populations and have distinctive phenotypic characteristics. The “A” group has an earlier run-time at Bonneville Dam, tends to be younger and smaller as adults, and enters spawning tributaries in eastern Oregon, eastern Washington, and Idaho. The “B” group steelhead return to subbasins of the Clearwater and Salmon rivers in Idaho. They have a later run-time at Bonneville Dam and tend to be older and larger as adults. Although the groups maintain distinct breeding populations there is some overlap in all phenotypic characteristics.

Previously, group “A” and “B” steelhead were distinguished at Bonneville Dam by run-timing, with “A” steelhead passing until August 25 and “B” steelhead passing after August 26. In 1999, the validity of this method for separating the two groups was questioned due to apparent changes in run timing distributions. The TAC completed a review of steelhead passage data from the 1990s and determined that smaller steelhead tend to be earlier-timed at Bonneville Dam while larger steelhead tend to be later-timed. For example, during 1989-1999, an average of 78% of steelhead less than 78 cm fork length crossed Bonneville Dam prior to August 26 while 75% of steelhead greater than or equal to 78 cm fork length crossed Bonneville Dam after August 25. However, while about 85% of steelhead found in certain Idaho streams are large (≥ 78 cm), the data are insufficient to make any definitive conclusions regarding what proportion of late-timed, larger steelhead crossing Bonneville Dam are actually “B”-run steelhead destined for Idaho streams. The TAC concluded that separation using a 78 cm fork length criteria could be used as an interim index of Group “A” and Group “B” steelhead stock components until better information becomes available. The current method adopted by TAC for estimating fishery impacts uses length data from Bonneville Dam collected from July 1-October 31 to assign impacts to Group “A” (<78 cm) index and Group “B” (≥ 78 cm) index steelhead. The run-time distributions of hatchery and wild “A” and “B” steelhead are shown in Figure 4. Steelhead that pass Bonneville Dam prior to July 1 are classified as Skamania index steelhead. TAC continues to review this issue and is currently analyzing PIT tag data that may lead to a better index for “A” and “B” steelhead.

Group “A” and “B” steelhead cannot be distinguished based on run timing above Bonneville Dam, where groups mix as fish seek temporary refuge in cooler tributaries. Steelhead counts at dams above Bonneville surge as mainstem water temperature declines in the fall. Counts peak at John Day, McNary, and the Snake River dams in September and October. During years of above average September-October flows and lower temperatures, steelhead move readily past lower Snake River dams during the fall counting period (June-December) and fewer fish are delayed until the spring count period (March-May). Snake River steelhead experience higher Bonneville to Lower Granite Dam survival rates in run years with lower spring count percentages.

Steelhead are subject to sport fisheries throughout the basin and treaty Indian fisheries in Zone 6. In the Columbia River Basin above Bonneville Dam summer steelhead are caught in sport fisheries during the year of entry, and in the winter and spring of the following calendar year with catch regulations allowing only fin-clipped hatchery fish to be retained. Treaty Indian catch occurs throughout the year in platform and gillnet fisheries but most of the catch occurs during the fall gillnet fishery concurrent with landings of fall chinook. In recent years the tribes have

reduced catch of wild steelhead during fall treaty Indian gillnet seasons. Commercial harvest of steelhead by non-Indians has been prohibited since 1975 and time, area, and gear restrictions limit handling and mortality of steelhead by the non-Indian gillnet fishery to < 1% of the run.

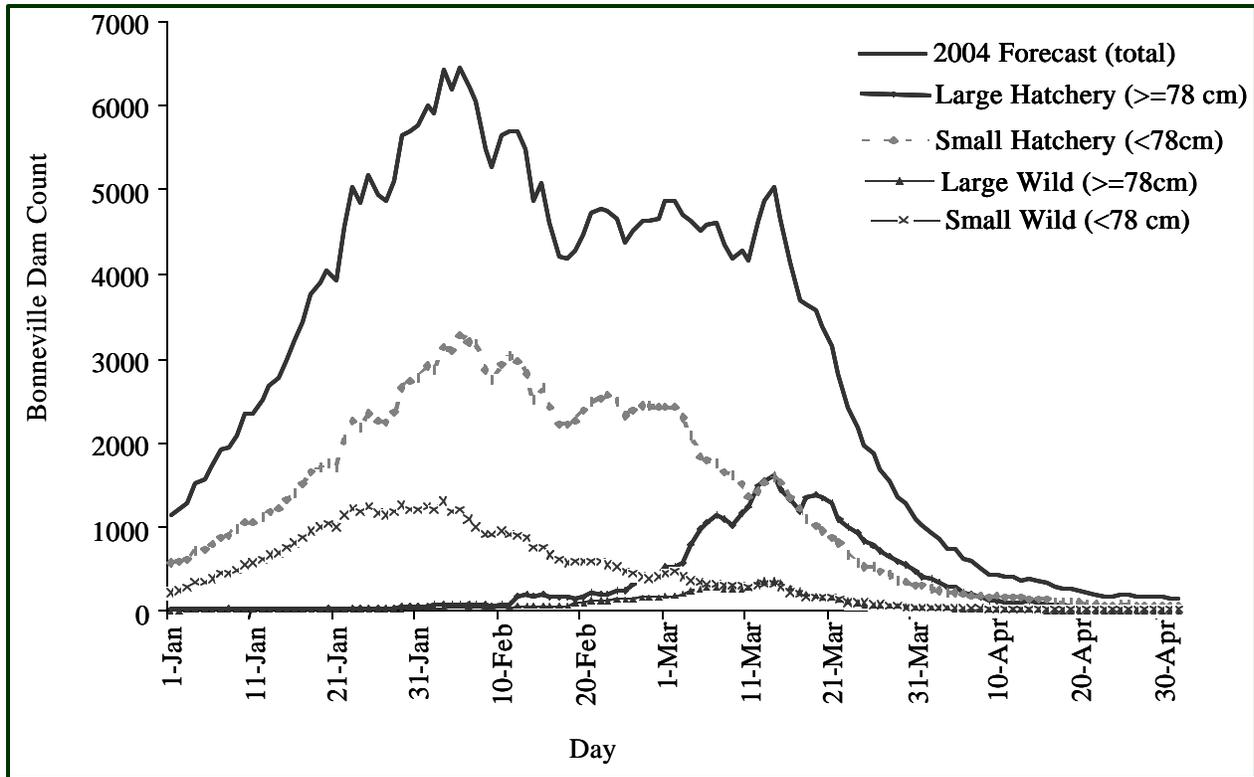


Figure 4. Average Run Timing of Summer Steelhead over Bonneville Dam (1997-2003) Applied to the 2004 Forecast.

2003 Returns

The 2003 upriver summer steelhead return of 357,200 past Bonneville Dam was smaller than the recent 5-year average of 370,800 fish. The Skamania stock return of 14,200 included 12,400 hatchery and 1,800 wild fish. Group “A” index steelhead hatchery (238,100) and wild (66,400) returns in 2003 were among the five largest runs in the database, which dates back to 1984. The Group “A” index steelhead return was 22% wild (Table 5). The Group “B” index steelhead was smaller than recent 5-year averages, with a hatchery run of 32,000 (5-year average, 51,000) and a wild run of 6,500 (5-year average, 12,600). The percent wild in the Group “B” index return was 17%.

2004 Forecast

The 2004 forecast for the summer steelhead return to Bonneville Dam is 388,100 upriver fish, including 18,300 Skamania index fish, 306,600 Group “A” index fish, and 63,200 Group “B” index fish (Table 1). The wild fish forecast of 100,600 includes 5,500 Skamania index fish, 82,400 Group “A” index fish (27% of the Group “A” return), and 12,700 Group “B” index fish (20% of the Group “B” return).

Coho

Stock Description

Columbia River coho return primarily to Oregon and Washington hatcheries downstream from Bonneville Dam with some hatchery production destined for above Bonneville Dam. In recent years approximately one-third of the releases have occurred above Bonneville Dam. Since 1970 adult coho returns to the Columbia River have ranged from a low of 74,000 in 1995 to a high of 1,527,800 in 1986 (Table 6). The Columbia River coho return includes both early and late segments with commercial fisheries prior to mid-September landing primarily early stock, fisheries during mid-September through early October landing a mixture of early and late stock, and fisheries occurring after early October landing primarily late stock.

Early stock coho enter the Columbia River from mid-August to early October with peak entry occurring in early September. Almost all early stock coho remain along the Oregon and southern Washington coasts and most migrate southward from the Columbia River. Since 1970, adult returns of Columbia River early stock coho have ranged from a low of 43,400 in 1983 (*El Niño* year) to a high of 730,800 in 1986 (Table 7). In 2003, releases of early coho above Bonneville Dam comprised 34% of the total early stock releases.

Late stock coho enter the Columbia River from mid-September through December with peak entry occurring in mid-October. The majority of late stock coho migrate northward from the Columbia River and reside along the Washington coast and Vancouver Island. Hatchery production has expanded since 1975 and is primarily from Washington hatcheries below Bonneville Dam. In 2003, releases of late stock coho above Bonneville Dam comprised 41% of the total late stock releases. Since 1970, Columbia River returns of late stock coho have ranged from a low of 16,800 in 1995 to a high of 796,900 in 1986 (Table 8).

Historic natural coho production areas in Washington included the Grays, Elokomin, Cowlitz, Toutle, Kalama, Lewis, and Washougal watersheds. Stream surveys conducted in Washington from 1945-1979 in the Toutle and lower Cowlitz River tributaries showed a steady decline of naturally spawning coho. Significant natural spawning still occurs in the lower Cowlitz River system but is almost entirely composed of Cowlitz hatchery fish. Surveys of 37 Washington streams below Bonneville Dam in 1991 suggested that natural spawning continues but production is low. Surveys of the majority of Washington tributaries below Bonneville Dam were performed again in 1998. Results of the 1998 surveys indicated that natural spawning occurs at low levels over a wide variety of areas; however, the bulk of the spawners (>90%) appear to be hatchery fish.

In Oregon, Columbia River tributaries that were historic natural coho production areas include the Lewis and Clark, Youngs, Klaskanine, Clatskanie, Clackamas, and Sandy rivers plus Big, Gnat, Beaver, Milton, and Scappoose creeks. Annual spawning fish survey counts conducted in Oregon lower Columbia River tributaries from December through February since 1949 suggested that wild coho may have been extirpated from Oregon's lower Columbia tributaries, excluding the Clackamas and Sandy rivers. Intensive surveys conducted during 1990-1992 and counts of 0.0-0.4 fish per mile during 1993-1999 supported this conclusion; however, increased numbers of coho have been observed in lower Columbia River tributaries since 1999 which suggests that some remnant populations may persist in the lower Columbia River Basin (Table 9). Post-November peak fish counts of 8.8 fish per mile in 2000, 1.4 fish per mile in 2001, 9.0 fish per mile in 2002, and 10.0 in 2003 were all well above the 1990's average of 0.2 fish per mile but well below the 1949-1970 average of 25.1 fish per mile.

The Clackamas and Sandy rivers still contain significant natural populations of coho. The naturally produced Clackamas coho run is destined for areas above North Fork Dam, and includes an early segment that originated from hatchery plants during 1960-1972 and a late segment that recolonized the upper river after 1939 when the Faraday Dam fish ladder was built. Coho presently pass North Fork Dam in a bimodal pattern with peaks in September and January, although only a unimodal pattern with a peak during November and December was apparent prior to 1960. Early and late run Clackamas coho pass through the lower Columbia River during September and November-December, respectively. Coded-wire tag (CWT) studies on the 1985-1987 broods indicated that late stock Clackamas coho contributed only 0-0.2% of 1988-1990 late fall commercial landings, with all landings occurring after mid-October. The Sandy River coho population passing Marmot Dam is primarily a wild population supplemented with some hatchery plants of adults and juveniles during 1961-1973 and 1979-1990. This run passes through the lower Columbia River primarily in September and passes Marmot Dam from early September through November with the peak in October. Historic passage at Marmot Dam occurred from late September through December. Since 1978, natural coho returns to the Sandy and Clackamas rivers have varied widely with very low returns observed during 1996-1999. Natural coho returns to the Clackamas and Sandy rivers increased significantly during 2000-2001, and again in 2003. Passage of 1,200 adults over Marmot Dam in 2003 was well above the historic (1960-1969) average of 800 adults annually. The 2003 coho adult return past North Fork Dam on the Clackamas River totaled 2,100 which is similar to the recent 5-year average of 1,900. The 2003 North Fork Dam coho count was comprised of 1,700 early stock adults and 400 late stock adults.

Historical natural coho production areas above Bonneville Dam include the Spokane, Yakima, Wenatchee, Entiat, Methow, and Snake rivers. The majority of coho presently passing Bonneville Dam are returns from Columbia River Fish Management Plan (CRFMP)-mandated hatchery releases of lower river coho stocks in the Yakima, Umatilla, Little White Salmon, Klickitat, and Clearwater rivers. In the past, these releases have primarily been for the purpose of harvest augmentation but the parties are also increasing efforts to restore naturally producing coho to appropriate habitats above Bonneville Dam, most recently the Snake and Methow rivers. Counts of coho destined for areas above Bonneville Dam have represented an increasing percentage of the total return in response to increased releases above Bonneville Dam. Since 1998 passage over Bonneville Dam has exceeded 40,000 adults with counts ranging between 40,700 in 1999 and 259,600 in 2001, which more than doubled the previous record of 108,600 in 1986 (Table 6). The 2003 Bonneville Dam count of 125,800 coho adults is the second highest count since 1938.

2003 Returns

The 2003 Columbia River coho return of 694,800 adults was comprised of 502,000 early stock fish and 192,800 late stock fish. The 2003 adult return was over a third larger than the 2002 return of 514,800 and significantly larger than the 1995-1999 average of 154,200 (Table 6). The early stock component increased whereas the late stock fish declined slightly in 2003 (Tables 7 and 8). Overall, early and late coho aggregate and individual hatchery escapement goals were achieved in 2003.

2004 Forecast

The projected 2004 Columbia River mouth return, following expected ocean fisheries, is 257,500 adults, which includes 169,300 early stock and 88,200 late stock (Table 1). A total return of

257,500 would be the smallest return since 1999 but nearly double the average of 131,000 observed during the poor return years of 1993-1998. Both the early stock and late stock forecasts are also significantly larger than the 1993-1998 averages of 95,000 and 36,000, respectively. Approximately 72,900 coho are expected to pass above Bonneville Dam after ocean and lower river fisheries. Hatchery escapement goals of 18,300 early stock and 11,300 late stock are expected to be achieved after all mainstem and tributary fisheries have occurred and some early and late stock coho are expected to be available for harvest in 2004.

Chum

Chum salmon return to the Columbia River during mid-October through mid-December, with spawning occurring in November and December. Chum returns are almost entirely from natural/wild production. Primary production areas for chum include the Grays River in Washington, smaller tributaries downstream from Bonneville Dam, and the mainstem Columbia River in the area from the I-205 Bridge upstream to Bonneville Dam. Limited hatchery releases also contribute to returns, which have fluctuated at low levels since the mid-1960's. Washington tributaries have been surveyed annually since 1950 and the mainstem Columbia River has been surveyed annually since 1998. Beginning in 2000, more intensive surveys were conducted and survey areas were expanded to include non-index streams in Washington and Oregon tributaries entering the Columbia River downstream of Bonneville Dam. Significant numbers of chum salmon were observed in non-index Washington tributaries; however, very few chum have been observed in Oregon tributaries. Chum returns (as indexed by counts of fish per mile) to Washington index areas in 2003 were not available, but are assumed to be less than the 2002 run size, which was the largest on record (since 1950), over seven times greater than the 1990s average, and over 1 ½ times greater than 2001 (Table 9). Chum are caught incidentally in the late fall non-Indian commercial fishery with landings typically occurring after mid-October. During 2003, chum landings totaled six, which were all landed in late fall mainstem fisheries (Table 14).

Sturgeon

Both white and green sturgeon are present in the lower Columbia River. Green sturgeon originate primarily from the Klamath, Sacramento, and Rogue rivers and use the Columbia River estuary extensively during summer and early fall. Columbia River white sturgeon originate from spawning areas near Bonneville Dam and range seasonally up and down the lower Columbia River. Columbia River white sturgeon are also known to use near shore ocean waters along the Oregon and Washington coasts and contribute to populations in other coastal bays and estuaries. Columbia River sturgeon fisheries are designed primarily for white sturgeon. Sport anglers seldom catch green sturgeon but contributed significant commercial catches at times prior to 2001.

The current white sturgeon population is considered to be healthy with more than 1 million fish exceeding 2' in length. In general, indicators of sublegal (<42 inches) and oversize (>60 inches) abundance are good at this time. Population estimates produced during 1995-2001 indicate that the number of 42"-60" sturgeon in the population decreased about 4% annually instead of increasing at the rate the abundance models predicted. These results suggest the combined sport and commercial annual harvest rates exceeded levels considered to be adequate for broodstock recruitment needs. There is evidence that the harvestable population was overestimated in 1996 due to extensive emigration of white sturgeon from the lower Columbia River. Tags recovered from outside the Columbia River basin indicated that this emigration began in 1995-1996 with

the fish continually returning to the Columbia River since 1997. Managers used population abundance and fish growth rates to calculate appropriate harvest guidelines. Analysis of recapture data from 1985-2000 indicate that growth rates for white sturgeon slowed substantially in 1995, and have gradually returned to normal levels since. Managers now believe the harvest guidelines established for 1997-1999 and renewed for 2000-2002 did not fully allow for adequate recruitment of white sturgeon through fisheries into the broodstock population. In conjunction with the extension of the Joint State Sturgeon Management Agreement for 2003-2005 the white sturgeon annual catch guideline was reduced from 50,000 fish to 40,000 fish in response to this new information.

Isolated white sturgeon populations also exist in reservoirs upstream of Bonneville Dam. Abundance varies among populations and is limited primarily by lack of quality spawning habitat in each reservoir. The sturgeon populations in the three Zone 6 reservoirs are evaluated every three to five years to monitor the effects of hydro-system mitigation activities, which include quota management based on an optimum sustainable yield (OSY) harvest management strategy. Pool specific abundances of sturgeon 3-6 feet in total length are estimated using mark-recapture methodology, which results in abundance estimates of 14,200 in John Day Pool (2001), 20,600 in The Dalles Pool (2002), and 31,865 in Bonneville Pool (2003). Managers normally project population growth based on abundance estimates and average fish growth rates; however, new data on fish growth rates indicate that white sturgeon in all three pools are growing slower than previously thought. The new growth rate data invalidated the abundance projection model managers previously used; therefore, abundance for each pool was not projected for 2003 and 2004 as has been the case in previous years.

MANAGEMENT GUIDELINES

Endangered Species Act

Status reviews occurring since 1991 have resulted in the majority of Columbia Basin salmon and steelhead stocks being listed under the ESA (Table 10). In order to facilitate consultations with the National Oceanographic and Atmospheric Administration (NOAA) Fisheries 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. In 2004 a combined Indian and non-Indian Biological Assessment concerning fall fisheries has been submitted to the NOAA Fisheries, but a Biological Opinion had not been received at the time this report was written.

The State of Oregon listed wild coho destined for Oregon tributaries of the lower Columbia River as an endangered species under Oregon state law in July 1999. The ODFW recently completed a management plan for state-listed wild coho. The management plan includes separate abundance based harvest matrices for ocean and freshwater fisheries and was adopted at the July 20, 2001 OFWC meeting. The harvest matrices provide separate maximum allowable fishery mortality rates for ocean and freshwater fisheries based on parental escapement relative to full seeding and marine survival as indexed by the return rate of jacks per hatchery smolts released. For 2004, the combined ocean and freshwater fishery mortality rate should not exceed 40.5% of the pre-fishery ocean abundance and the freshwater fishing mortality rate should not

exceed 15.0% of the run entering the Columbia River. Fisheries will be managed to limit impacts to state-listed coho through the use of area closures or mesh size restrictions as described in the "Coho Protection Measures" section of this document .

2004 Columbia River Salmon Management Guidelines

The CRFMP expired on July 31, 1999. A Management Agreement for upper Columbia River fall chinook, steelhead, and coho is has been reached prior to initiation of fall fisheries occurring in 2004. The following guidelines are expected to be in place for the 2004 fall fishery management period.

- ✓ Allowable SRW fall chinook impacts in combined non-Indian and treaty Indian mainstem fisheries below the confluence of the Snake River for 2004 result in a 30% reduction from base period harvest rates. The corresponding impact rate is 31.29% of the aggregate URB run.
- ✓ The freshwater URB impact rate of 31.29% will be allocated 23.04% for treaty Indian fisheries and 8.25% for non-Indian fisheries; however, sharing of impacts could change based on inseason updates. Overall impacts will not exceed 31.29%.
- ✓ Treaty Indian fall fisheries will be managed to limit impacts on wild Group B index steelhead to no greater than 15%. All non-Indian fisheries outside the Snake River basin will be managed for an upriver wild steelhead impact rate to not exceed 2% on wild Group B index steelhead.
- ✓ Upriver fall chinook escapement goals include 7,000 adult fall chinook (4,000 females) to Spring Creek Hatchery and 43,500 adult fall chinook (natural and hatchery included) for spawning escapement above McNary Dam.
- ✓ Ocean and lower river fisheries will be managed to provide for Bonneville Dam escapement of at least 50% of the upriver coho salmon return.
- ✓ Non-Indian fisheries will be managed for an impact rate of less than 5% for Columbia River chum salmon.
- ✓ During the North of Falcon fishery management process, the states reached agreement concerning management of non-Indian commercial and sport fisheries for the fall management period. The agreement is included in this document under the "2004 Fall Season Fisheries Expectations" section.
- ✓ Based on the 2004 Incidental Take Permit issued by the OFWC, combined ocean and freshwater fisheries will be managed to limit impacts on wild coho destined for Oregon tributaries to no more than 40.5%. Freshwater fishery impacts should not exceed 15.0% of the run entering the Columbia River.

2004 Non-Indian Columbia River Fall Fishery Chinook Allocation Agreement

This agreement was reached during a series of meetings occurring on March 16, March 30, and April 14, 2004.

- ✓ This agreement is limited by the non-Indian allocation of URB fall chinook impacts of 8.25% as per the 2004 *U.S. v Oregon* Fall Management Agreement (in progress). Non-Indian catch estimates are based on pre-season abundance forecasts referenced in Table 28.

- ✓ URB fall chinook impacts in fisheries downstream of the Snake River are allocated pre-season 52% (4.29%) to the sport fishery and 48% (3.96%) to the commercial fishery. The Columbia River Compact/Joint States will use this URB impact allocation as guidance for making in-season management decisions concerning the Columbia River sport and commercial fisheries. Actual URB impacts in the fisheries may differ from pre-season estimates based on actual fishery catches, stock composition, and run size updates. The *U.S. v Oregon* TAC will update the URB run size beginning in mid-September.
- ✓ Expected total catch of fall chinook in the mainstem Columbia River downstream of the Snake River, in lower Columbia River tributaries, and Select Areas is 83,700 of which 37,000 (44%) are expected to be harvested by the sport fishery and 46,700 (56%) by the commercial fishery. These catch estimates are based on pre-season abundance forecasts and fishery estimates. Actual harvest sharing will be influenced by stock specific fall chinook abundances and relative harvest rates by each respective fishery.
- ✓ The Buoy 10 sport fishery is modeled at 94% of the chinook catch estimated for a full fishery. The fishery will begin on August 1 with a two fish daily limit; only one may be a chinook. Chinook retention will continue through at least Labor Day (September 1). URB impacts with this fishery are projected to be 0.80%, or 19% of the total sport impact of 4.29%.
- ✓ The mainstem sport fishery below Bonneville Dam is modeled at 86% of the chinook catch estimated for a full fishery. The fishery will begin on August 1 with a two fish daily limit; only one may be a chinook. The goal is to have a chinook retention fishery through at least September 30th. URB impacts associated with this fishery are 3.04%, or 71% of the total sport impact of 4.29%.
- ✓ Expectations for the commercial fishery include:
 - An early August salmon fishery up to 3 nights/ week during the first two weeks of August (modeled dates were August 3, 5, 8, 10, and 12). Mesh size is 8-inch minimum and area is Zones 1-5. URB allocation for this fishery is 0.49% (12% of the total commercial impacts of 3.96%) and total chinook catch expectation is 12,000 fish. Chinook/URB impacts not used in this fishery will transfer to future commercial fisheries.
 - During the third week of August the fishery is expected to occur two nights per week in zones 2-5 and zones 3-5. Modeled dates were August 15th (Zones 2-5) and August 17th (Zones 3-5). Mesh size is 8-inch minimum. Total chinook catch expectation is 4,650 fish. URB allocation for this fishery is 0.60% (15% of the total commercial impacts of 3.96%). Chinook/URB impacts not used in this fishery will transfer to future commercial fisheries.
 - Late August Zone 4-5 fishery during the last (forth) week of August. Fishing is expected to occur up to 2 nights per week with breaks in between fishing days. Mesh size is 9-inch minimum and area is Zones 4-5. URB allocation for this fishery is 0.63% (0.16% of the total commercial impact of 3.96%) and total chinook catch expectation is 5,400 fish. Chinook/URB impacts not used in this fishery will transfer to September fisheries.
 - Fishing areas and days in August fisheries may change based on in-season updates.
 - Late fall fishery to begin the week of September 19, with inseason flexibility to start as early as September 16. Fishery to occur in as much of Zone 1-5 as possible and will

include some target chinook fishing. Fishery will target coho or chinook as determined by remaining impacts and in-season run strength. The late September chinook harvest will be determined by the mid-September URB run size update and the actual URB impacts remaining that can be used by the commercial fishery.

- Sturgeon management will be consistent with sturgeon protocol adopted at the February 6, 2003 Compact hearing (see page 21).

Lower Columbia River Sturgeon Allocation

Sturgeon fisheries between the Columbia River mouth and Bonneville Dam during 2003-2005 are guided by a management plan adopted by the Oregon and Washington Fish and Wildlife Commissions and the Columbia River Compact. Major tenets of the "Joint State Agreement on Sturgeon Fishery Management" include:

- ✓ Management for optimum sustained yield of white sturgeon.
- ✓ Absent significant update, annual harvestable number is 40,000.
- ✓ Harvestable number may be adjusted if there is a significant population update resulting from new biological information, new analytical/theoretical approach, or a substantial change in harvest impacts outside of the Columbia River system.
- ✓ Allocate white sturgeon harvestable number 20% commercial (8,000) and 80% sport (32,000).
- ✓ Sport and commercial seasons will be modified as necessary to ensure that average catch during the three-year period (2003-2005) does not exceed fishery specific harvestable number.
- ✓ Commercial target seasons allowed as necessary to access allocation and maximize economic benefit consistent with conservation objectives for other species.
- ✓ Green sturgeon may be taken during white sturgeon commercial seasons but green sturgeon-only commercial seasons are not allowed (green sturgeon catch rate not to exceed historical rates).
- ✓ Commercial size limits are 48-60 inches for white sturgeon and 48-66 inches for green sturgeon.
- ✓ Recreational size limit for white and green sturgeon is 42-60 inches (with the exception of 45-60 inches in the area below the Wauna Power line s from May 15- July 23, 2004) with one fish daily limit, five fish annual (per calendar year) limit, and barbless hooks required. A reduction in the annual limit from 10 to five in Washington State became effective April 1, 2004.

Catch of white sturgeon in Select Areas is included in the annual commercial allocation of the harvestable number. Past management practices regarding white sturgeon catch in Select Areas have varied and were developed in consultation with participants of Select Area commercial fisheries. Prior to 1997 no catch limit restrictions were in place. Beginning in 1997, white sturgeon catch in Select Areas was limited to 5% of the commercial white sturgeon allocation and this limit was subsequently increased to 10% for 1998 and 1999. Sales of sturgeon were allowed in the Youngs Bay fisheries only prior to 1998 and in all Select Area fisheries thereafter. On April 12, 2000 commercial fishing industry leaders met to discuss the harvest of white sturgeon in Select Areas as it related to the commercial allocation and arrived at the following consensus points:

- 1) Select Area fisheries should be managed as salmon directed fisheries.
- 2) Use of gear (mesh size) restrictions should be adopted to target salmon, not sturgeon. New regulations should be phased in to limit economic impact on participating fishers. Based on a June 8, 2000 public meeting with interested participants in Select Area fisheries a 6-inch maximum mesh size was considered appropriate for coho-directed fisheries and a 7-inch to 8-inch maximum mesh size was considered appropriate for chinook directed fisheries.
- 3) Enforcement presence is encouraged to ensure compliance with gear restrictions.

Sturgeon retention regulations enacted during the fall of 2001 and 2002, a reduced commercial sturgeon allocation for 2003-2005, and increased salmon fishing opportunities resulted in an evaluation of recent commercial sturgeon fishery management practices. The Joint Staff met with the commercial fishing industry on December 2, 2002 and January 23, 2003 to discuss issues regarding white sturgeon retention in commercial fisheries during 2003-2005. The issue of white sturgeon retention during commercial fisheries was considered at the December 18, 2002 and February 6, 2003 Compact hearings and the Compact adopted the following protocol for management of white sturgeon retention in 2003-2005 commercial fisheries.

<i>Protocol for Management of White Sturgeon in 2003-2005 Commercial Fisheries</i>	
✓	Fisheries should be managed for white sturgeon catch expectations of 2,000 for the winter-summer timeframe (January-July), 2,000 for the early fall timeframe (August), and 3,600 for the late fall timeframe (September-October).
✓	Landings during SAFE fisheries are not to exceed 400 white sturgeon for the entire year with winter/spring/summer fisheries not to exceed 300.
✓	Allow some level of incidental sturgeon harvest to occur during all target salmon seasons.
✓	Conduct limited target sturgeon fisheries during winter and early fall timeframes if feasible.
✓	Conduct target sturgeon fisheries during October if necessary to access commercial allocation.
✓	Adopt white sturgeon possession and landing limits if necessary to remain within season specific catch expectation or to provide white sturgeon for harvest during subsequent salmon seasons.
✓	Until further discussion occurs with the OFWC and the WFWC regarding sturgeon allocation among individual commercial fisher's landings and possession limits will be in the form of per vessel limits and these limits will include both mainstem and Select Area fisheries.
✓	Joint Staff will conduct an annual post season evaluation of white sturgeon retention with industry.

Zone 6 Sturgeon Allocation

Sturgeon catch guidelines and sport/treaty commercial allocations have been reviewed annually since 1987 by the Sturgeon Management Task Force (SMTF), which is comprised of representatives from state fish management agencies and the Columbia River treaty Indian tribes. Guidelines are based on desired harvest rates and current stock assessments. In March of 1997, the SMTF agreed to pool-specific management with catch guidelines, based on OSY, which are designed to allow for survival of adequate numbers of juvenile sturgeon through existing fisheries to increase harvestable and broodstock numbers. Sturgeon size limits are 48-60 inches in treaty Indian commercial fisheries in The Dalles and John Day Pool. The size limit for the treaty Indian commercial fishery in the Bonneville Pool was changed from 48-60 inches to 45-60 inches for 2004. Sturgeon size limits are 48-60 inches for sport fisheries in The Dalles and John Day pools, and 42-60 inches in the Bonneville Pool.

Sturgeon harvest guidelines remained stable for all three pools during 1998-2001 as updated population assessments indicated that these sturgeon populations were rebuilding under the catch restrictions implemented by the SMTF; however, population assessments conducted in 2001, 2002, and 2003 documented population declines in all three pools (Table 11). Managers relied on population abundance estimates and fish growth rates to calculate appropriate harvest guidelines. Analysis of length at recapture of marked sturgeon during 2001-2003 indicated individual growth rates within all three pools was substantially slower than initially thought. Managers now believe the previous harvest guidelines provided inadequate recruitment through fisheries into the broodstock populations.

Non-Indian sport and treaty Indian commercial harvest guidelines for John Day Pool were reduced from 1,720 fish (560 sport and 1,160 commercial) to 500 fish (165 sport and 335 commercial) in 2002 based on the 2001 population assessment. New harvest guidelines were adopted for both The Dalles and Bonneville pools in 2003 and readjusted for 2004 following population assessments conducted in The Dalles Pool in 2002 and in Bonneville Pool in 2003. The sharing formulas between treaty Indian commercial and non-Indian sport fisheries for The Dalles and Bonneville pools were modified to accommodate guideline reductions. The treaty Indian commercial guideline was reduced to 900 fish in 2003 for The Dalles Pool and to 400 fish for Bonneville Pool in 2004 while non-Indian sport harvest guidelines were decreased to 400 fish in 2003 for The Dalles Pool and to 700 fish in 2004 for Bonneville Pool. Guidelines were set to maintain an approximate 50:50 allocation between non-Indian sport and tribal fisheries for all three pools combined.

Treaty Indian fishers continue to take sturgeon for subsistence purposes after commercial seasons have been completed. Subsistence catch is estimated through a monitoring program conducted by the Yakama Nation (YN) and annually averages less than 300 sturgeon. Subsistence catch is not included in the aforementioned catch guidelines. Sport anglers may continue to fish for sturgeon and release them unharmed when catch guidelines are reached and retention is prohibited.

REVIEW OF MAINSTEM FISHERIES

Past Seasons

Traditional commercial fisheries below Bonneville Dam occurred during "early fall" (August to mid-September) targeting on chinook and "late fall" (mid-September to mid-November) targeting on coho (Figure 5). Coho typically outnumbered chinook in the late fall season catch and in some years by a wide margin; however, chinook landings could be significant during the mid-September time frame. Incidental landings of steelhead occurred in both early and late fall seasons until commercial sale of this species was banned in 1975.

Since 1992, commercial fisheries below Bonneville Dam during the fall fishing period were reduced in response to ESA listing decisions. Mesh size restrictions were frequently imposed on both the early fall and late fall segments of the non-Indian commercial fishery to reduce the incidental catch of non-target species. Commercial fisheries were also frequently restricted to zones or daylight only time periods to concentrate on target stocks or avoid non-target stocks. Early fall fisheries typically occurred during the last half of August, primarily in Zones 4-5 (upstream of the Sandy River mouth or the I-205 Bridge) near Bonneville Dam. These fisheries target on chinook with some sturgeon and a few coho also landed. Recently seasons also occurred during the first half of August in Zones 1-3 (mouth to Longview Bridge). During 1997-

2001, these fisheries consisted primarily of short fishing periods targeting sturgeon. Since 2002, August fisheries in the lower river have expanded in time and area and shifted to targeting fall chinook with some coho and sturgeon being landed also. Late fall seasons typically occurred from mid to late September through the end of October. The majority of the seasons targeted coho in the lower river below the mouth of the Lewis River. Some target chinook seasons also occurred during mid to late September in Zones 4-5 (upstream of the I-205 Bridge). During several years in the 1990's extremely low coho abundance curtailed nearly all commercial fishing opportunities during the late fall period.

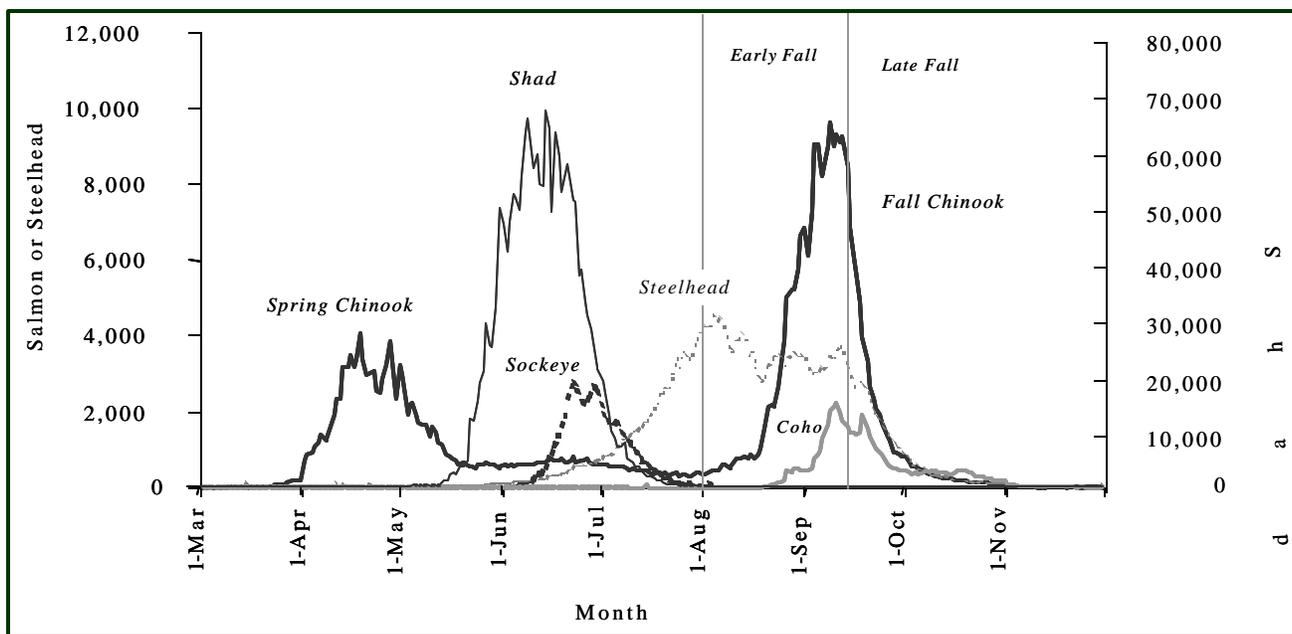


Figure 5. Average Daily Counts of Salmon and Shad at Bonneville Dam, 1986-2003.

The reduction in non-Indian commercial salmon fishing opportunities in the late 1990's, and the adoption of Joint State Sturgeon Management Agreements beginning in 1997, resulted in target sturgeon fisheries becoming an important part of fall fishing strategies. Sturgeon sales were typically allowed during salmon seasons unless the catch guideline was reached. Target sturgeon seasons were adopted to allow the commercial fishery to access the commercial allocation. During 1997-2001 target sturgeon seasons occurred during the first week of August and the last three weeks of October, except for 2001 when sturgeon retention was prohibited in all commercial fisheries after the catch guideline was reached in late August. Beginning in the fall of 2002, sturgeon fishery management changed considerably due to the limited number of sturgeon on the commercial white sturgeon allocation. No fall or late fall target sturgeon fisheries occurred during 2002 or 2003. Instead, in 2002 and 2003, daily and weekly sturgeon possession and sales limits were adopted for the first time ever. Since the inception of individual vessel landing and possession limits, regulations have varied throughout the season and included the following regulations:

- 1) Unrestricted sales of legal size sturgeon were allowed for fisheries where gear used consisted of unslackened floater gill nets with a maximum mesh size of 6 inches.
- 2) A daily sturgeon per vessel possession and sales limit has been adopted for fisheries where gear used included gillnets with a mesh size that ranged between 8-9 ¾ inches.

- 3) A weekly sturgeon per vessel possession and sales limit has been adopted in conjunction with the daily limit.
- 4) No sturgeon sales allowed regardless of gear used in the fishery.

Commercial fishing in off-channel areas (Select Areas) was initiated in 1962 with the adoption of salmon seasons for Youngs Bay. Initially, Youngs Bay seasons were concurrent with the late fall mainstem gillnet season; however, since 1977 the Youngs Bay season has been separated from mainstem seasons and has increased in importance with the involvement of the Clatsop County Economic Development Council's (CEDC) Fisheries Program. The CEDC fisheries program pioneered the successful net-pen acclimation program that is now a cornerstone of Select Area fisheries projects.

Recent declines in mainstem fishing opportunities and success of the Youngs Bay fishery prompted the Bonneville Power Administration (BPA) to fund a research project to expand net-pen programs into select off-channel fishing areas. This BPA funding now supports the Select Area Fishery Enhancement (SAFE) Project which was expanded to include Tongue Point/South Channel and Blind Slough/Knappa Slough on the Oregon shore plus Deep River and Steamboat Slough on the Washington shore. These fisheries targeted primarily hatchery coho returning to release sites in these areas; however, SAB fall chinook were also released and subsequently caught upon their return to Youngs Bay. In recent years coho fisheries occurred in all five Select Areas while chinook fisheries were limited to the Youngs Bay or Blind Slough/Knappa Slough Select Areas. Select Area fisheries targeting coho were typically initiated in early September and ran through the end of October. Limited chinook target fishing seasons typically occurred in Youngs Bay, one day per week during July and August, to target hold-over spring chinook and early returning SAB fall chinook. A target chinook fishery occurred intermittently in Knappa Slough near the mouth of Big Creek when surplus coho or tule fall chinook were expected to return to Big Creek Hatchery.

Treaty Indian commercial seasons above Bonneville Dam traditionally opened during early to mid-August and ended in mid-October. Fall chinook and steelhead dominated the catch, but substantial numbers of white sturgeon and coho could be landed also. In recent years commercial fishing opportunities in the Zone 6 management area also declined. Recent fisheries have typically occurred during a four or five week period between mid-August and late September. Fisheries continued to target on chinook but were modified to reduce impacts on listed wild steelhead. Zoning has also been used at times to increase escapement of some segments of fall chinook runs and more recently mesh size restrictions have sometimes been adopted for the treaty Indian fishery to limit steelhead catch. Fall fisheries are now generally closed for white sturgeon sales because catch guidelines have been achieved prior to August 1 or the tribes elect to retain some sturgeon for late fall setline or gillnet fisheries.

A mainstem recreational fall chinook fishery exists in much of the Columbia River. In recent years, primary catch areas for fall chinook have been the lower estuary (Buoy 10), the lower river between Astoria and Bonneville Dam, and the Vernita-Hanford Reach area below Priest Rapids Dam. Increased fall chinook returns and favorable river conditions since 2001 have fueled significant increases in lower Columbia River chinook sport fisheries, especially in the area upstream of the Longview Bridge. Fall chinook catches increased from less than 10,000 adults annually prior to 2002 to over 20,000 adults annually since 2003. Small recreational fisheries for chinook also occurred at tributary mouths in the Zone 6 management area. Significant numbers of coho were landed in the Buoy 10 fishery with limited coho catches occurring in the mainstem Columbia River above the Astoria-Megler Bridge. Coho catch

fluctuates with annual abundance. Hatchery steelhead fisheries in the mainstem Columbia River occurred primarily between Tenasillahe Island and Bonneville Dam with few steelhead caught below Tenasillahe Island. Significant steelhead landings also occurred during sport fisheries above Bonneville Dam, especially near tributary mouths.

2003 Fall Season Summary

- ✓ Fall seasons and catches are summarized in Tables 12 - 18.
- ✓ The fall chinook run was the largest since 1948 while the coho return was the second largest since 1991, with the exception of the return in 2001. The wild Group A index steelhead return was the third largest on record (since 1984) and the wild Group B index steelhead return was near the 1996-2001 average.
- ✓ All fisheries were constrained to remain within Management Agreement and ESA limitations. Post-season impacts totaled 21.55% for URB fall chinook (31.29% guideline) and 16.9% for wild Group B index steelhead (17.0% guideline).
- ✓ Actual Oregon wild coho fishery impacts of 22.3% were within the 29.2% limit identified in the 2003 state ESA Incidental Take Permit issued by the OFWC. Columbia River fisheries accounted for an impact rate of 9.0% as compared to the 11.5% impact limit.
- ✓ Treaty Indian fisheries landed 126,600 chinook and 14, 900 steelhead.
- ✓ A total of 180,600 chinook adults passed McNary Dam, greatly exceeding the escapement goal of 43,500.
- ✓ Lower river mainstem commercial fisheries focused on coho and harvestable chinook stocks while minimizing impacts on ESA-listed species. No target sturgeon fisheries were adopted and all sturgeon landed during fall seasons were incidental during target salmon fisheries.
- ✓ Lower Columbia River mainstem fall commercial fisheries landed an estimated, 58,400 adult chinook, 149,800 coho 6,000 white sturgeon, 36 green sturgeon, and 6 chum.
- ✓ Select area fall landings totaled 9,700 chinook, 117,100 coho, 173 white sturgeon, 1 green sturgeon and no chum.
- ✓ The Buoy 10 sport fishery was open to the retention of chinook from August 1-December 31 with a one chinook bag limit in effect. No other additional fishery management action was required in 2003.
- ✓ The lower Columbia River sport fishery remained open during August 1-December 31 with a two fish salmon/steelhead daily bag limit.
- ✓ White sturgeon catches totaled 6,200 in the non-Indian commercial fishery and 31,000 white sturgeon in the lower Columbia River sport fishery, compared to their respective catch guidelines of 8,000 and 32,000 for 2003.
- ✓ White sturgeon retention during the fall of 2003 was regulated by limiting the number of sturgeon sold per vessel per week, in order to stay within harvest guidelines and allow retention throughout the Columbia River commercial fishery. The lower Columbia River sport fishery allowed retention 7 days per week, January 1 through March 23 and July 1 through October 31 in the area above Wauna. Below Wauna the fishery also allowed retention 7 days per week from January 1 through June 27, 2003.

- ✓ A total of 13 Compact hearings were held between the dates of July 30 and November 20 to make commercial fishery management decisions. One Joint State action hearing was held (September 23) to modify the sport sturgeon fishery.

Zone 6 Fisheries

During the fall, fisheries in the mainstem Columbia River between Bonneville and McNary dams included treaty Indian commercial and ceremonial and subsistence (C&S) fisheries, recreational sturgeon fisheries, and limited fall chinook and steelhead sport fisheries focusing around tributary mouths. All fisheries that occurred in this section of the Columbia River were managed in accordance with predetermined harvest impact rates or catch guidelines. Landings during 2003 fall seasons are summarized in Table 14.

Treaty Indian Commercial Fishery

The treaty Indian commercial fishery in the fall of 2003 was managed to target on harvestable URB and BPH fall chinook stocks while allowing some harvest of hatchery summer steelhead and limiting impacts on listed SRW fall chinook and wild Group B index summer steelhead. The 27 ½ day commercial gillnet salmon fishery consisted of seven fishing periods: four 3 ½ day fishing periods and three 4 ½ day fishing periods (Table 12). The commercial gillnet fishery began with good chinook catches through the first five fishing periods, especially during the third and fourth weeks when a total of 67,800 chinook were landed during the eight days of fishing (Table 14). Based on an expected large return of BPH fall chinook, the large sanctuary around Spring Creek Hatchery was reduced to 150 feet. All other standard dam and river mouth sanctuaries were in effect and all of Zone 6 was open throughout the duration of the fall salmon season, as occurs in most years. The tribes did not require a minimum mesh size restriction to limit handle of listed steelhead. Aerial counts of nets being fished indicated that effort was less than 2002 with total daily net counts ranging between 103 and 331 per flight. The average count for statistical weeks 35-39 was 364 in 2002 and 293 in 2003.

The 2003 fall commercial salmon season consisted of 27 ½ fishing days occurring between August 26 and October 11 and resulted in catches of 125,900 chinook, 11,355 steelhead, and 4,393 coho, of which 25% of the chinook (31,100 fish) and 19% of the steelhead (2,142 fish) were taken home or sold directly to the public (Table 16). Total fall season harvests, including C&S landings, were 123,600 adult chinook, 14,900 steelhead, and 5,800 coho. The 27 ½ day season was much longer than the last five years and much closer to the seasons in the late 1980's when season lengths ranged from 35-46 days. The chinook catch of 123,500 represents a continued improvement over the recent 5 and 10- year averages of 81,500 and 64,100 respectively and was similar to the strong return years of 1986-1989 when catches averaged 128,700 annually (Table 20). The URB fall chinook impact rate of 12.9% was less than the 23.04% impact rate set forth in the 2003 Fall Management Agreement (Table 18).

The total catch of 14,900 summer steelhead in all treaty Indian fall season fisheries included 1,691 Group A wild index steelhead and 959 Group B wild index steelhead. The 2003 total catch was less than the recent 5- year average of 17,680 and far less than the strong return years of 1984-1989 when catches averaged 63,900 steelhead annually (Table 20). Stock specific impact rates were 2.5% on wild Group A index steelhead and 14.9% on wild Group B index steelhead (Tables 18 and 21). The 14.9% impact rate on wild Group B steelhead was considerably less than the ESA impact limit of 15% but sampling at Bonneville Dam was not done for the last weeks in October which increases the uncertainty of the estimate.

Sturgeon Fisheries

Treaty Indian fisheries had reached the sturgeon catch guideline for The Dalles Pool prior to initiation of the fall fishing period (Table 20). Although the catch guidelines for the Bonneville and John Day pools had not been reached the tribes chose not to allow sales of sturgeon during fall commercial salmon fisheries. Instead, retention of sturgeon was allowed for subsistence purposes and in commercial sturgeon fisheries adopted after completion of fall salmon fisheries.

After completion of winter/spring/summer fisheries an estimated 836, 34, and 79 white sturgeon remained on the Bonneville, The Dalles, and John Day Pool catch guidelines, respectively; therefore, sturgeon setline seasons were adopted in Bonneville and The Dalles pools following the completion of the fall salmon fishing seasons. The setline fishery began 6 am October 13 and continued through 6 pm December 31 in the Bonneville and John Day Pool. Additionally, a setnet fishery was authorized in the Bonneville Pool only from December 1-14. Landings during October through December totaled 34 white sturgeon for Bonneville Pool and 9 in October for the John Day Pool. White sturgeon commercial landings in treaty Indian fisheries totaled 1,762 fish in 2003 (Table 22).

Prior to the initiation of the fall management period (August 1) the sport sturgeon catch guidelines were reached in all three pools. Retention was prohibited in Bonneville, The Dalles, and John Day pools by state action effective July 7, June 21, and July 28, respectively. Annual white sturgeon catches by pool are summarized in Table 22.

Lower River Commercial Fisheries

Commercial fisheries in the mainstem Columbia River below Bonneville Dam are generally divided into early fall (August through mid-September) fisheries directed at fall chinook and white sturgeon and late fall (late September through early November) fisheries directed primarily at hatchery coho and white sturgeon. Select Area commercial fisheries occur in off-channel mainstem areas or bays and sloughs at tributary mouths, and are directed at coho and chinook returning from net-pen releases in these areas. All non-Indian fisheries are managed in accordance with predetermined harvest impact rates or catch guidelines; however, Select Area fishery impacts on listed fish are negligible and the adopted seasons are seldom modified in-season. Landings during 2003 fall seasons are summarized in Table 14.

Early Fall Mainstem Fisheries

The lower river commercial fishery during the early fall of 2003 was managed to harvest chinook and a limited amount of sturgeon. The early fall season consisted of four 12-hour target chinook fishing periods the nights of August 4, 6, 11, and 13 in all of Zones 1-3 and four 10-hour periods of target chinook fishing between August 18 and August 28 with the first two periods above the I-205 Bridge (Zones 4-5) and the last two fishing periods in all of Zones 4-5 (Tables 12 and 23). A seven white or green sturgeon per vessel per calendar week possession and sales limit was in effect during the entire early fall time frame (Table 15). Landings in early August totaled 3,170 white sturgeon, 10 green sturgeon, 160 coho, and 8,240 chinook in the Zones 1-3 target chinook fishery. During late August, landings totaled one green sturgeon, 410 white sturgeon, 150 coho, and 7,480 chinook in the Zones 4-5 target chinook fishery (Table 14). The total catch of 15,720 chinook during early fall fisheries was 93% of the preseason expectation of 16,850 (Table 24). Sturgeon possession and sales limits were used to limit white sturgeon catch and provide an opportunity for sales of sturgeon to continue throughout the early fall salmon

fishery with a total catch of 2,580 white sturgeon compared to the preseason catch guideline of 2,000 (Table 27). An early fall season length of 8 fishing days is comparable to recent years. Season lengths averaged six days annually during the stronger run years of 1986-1990 and 11 days annually during the more heavily fished time period of 1970-1975. The 15,720 chinook landed during early fall seasons was the third largest total since 1989 but was well below 1970-1975 when total chinook landings ranged between 51,700-142,100 and averaged 95,600.

Late Fall Mainstem Fisheries

The lower Columbia River commercial fishery during the late fall of 2003 was managed to harvest primarily coho and fall chinook while minimizing impacts on listed species (Tables 12 and 15). The late fall fishery began on September 15 with a 12-hour daylight fishing period below the Longview Bridge (Zones 1-3) to target coho and a 4-hour nighttime period to target chinook above the I-5 Bridge (Zones 4-5). Fishing regulations included a three white or green sturgeon per vessel per calendar week possession and sales limit, a 6-inch maximum mesh size restriction for Zones 1-3, and an 8-inch minimum mesh size restriction for Zones 4-5. A coho price dispute resulted in minimal effort and catch from the fishery below the Longview Bridge and the short 4-hour period limited effort above the I-5 Bridge. On September 17, with lower than expected catches of chinook and an upgraded fall chinook run size, two additional fishing periods were set with a 48-hour period during September 17-19 and a 24-hour period during September 21-22 for all Zones 1-5. The 6-inch minimum mesh size restriction was eliminated for Zones 1-3 to allow fishers to target either coho or fall chinook salmon while the 8-inch minimum mesh size restriction remained in effect for Zones 4-5 to target fall chinook and limit impacts to state-listed coho salmon. The three white or green sturgeon weekly possession and sales limit was also put in place during these two additional fishing periods. Landings totaled 44,000 coho, 23,500 chinook, 680 white sturgeon, four green sturgeon, and one chum through September 22. The late fall season continued with five additional fishing periods set to occur early and late in each week and alternate between 48 and 24-hours during September 23 through October 9 in Zones 1-5 with no minimum mesh size restriction in Zones 1-3 and an 8-inch minimum mesh size restriction in Zones 4-5 through October 2 and no minimum mesh size restriction thereafter. The three white or green sturgeon weekly possession and sales limit also remained in effect. Landings totaled 77,600 coho, 15,800 chinook, 580 white sturgeon, 20 green sturgeon, and two chum during these five periods. The last portion of the season also consisted of alternating 48 and 24-hour fishing periods beginning October 12 through October 24 and a final five day period from October 26 through October 31 with no minimum mesh size restriction in effect. During the final two days of the season the downstream fishing boundary was moved upstream to the Harrington Point/Settler Point line. The weekly sturgeon possession and sales limit was increased to nine white or green sturgeon. The final fall fishing periods resulted in landings of 27,900 coho, 3,500 chinook, 2,160 white sturgeon, one green sturgeon, and three chum (Table 14).

Fall fisheries were managed to minimize impacts on federally-listed chinook, chum, and steelhead plus state-listed wild coho destined for Oregon tributaries. Management actions taken during late fall fisheries to minimize the interception of wild coho and chum salmon destined for lower Columbia River tributaries included the area between the Longview Bridge and the I-5 Bridge was closed during the initial fishing period on September 15 to protect state-listed coho; an 8-inch minimum mesh size restriction was in effect for Zones 4-5 during September 15-October 2 to protect state-listed coho; and the area downstream from Harrington Point at the upper end of Grays Bay across to Settler Point near the lower end of Svensen Island was closed during October 29-31 to protect chum and state-listed coho (Table 25).

In 2003 late fall mainstem fisheries consisted of a total of 23 days occurring between September 15 and October 31 and resulted in catches of 149,460 coho, 42,710 chinook, 3,430 white sturgeon, 25 green sturgeon, and 6 chum (Table 26). The season length of 23 days for late fall fisheries was similar to recent years, but still less than the strong return years of 1985-1989 when season length averaged 39 days annually. The late fall season coho catch of 149,460 fish was the second highest since 1991 but only 16% of the record high catch of nearly one million fish in 1986 increased. With the largest return of fall chinook since 1987, total chinook landings during the 2003 late fall season was the largest since 1989 when nearly 100,000 fish were landed (Table 26). In 2003, a total of six chum were landed during late fall seasons which was below the recent 5-year average of 53 and well below the 1970-1989 average of 1,060. Due to restrictive sturgeon catch guidelines, 2003 late fall sturgeon catches of 3,430 white sturgeon and 25 green sturgeon were lower than recent years except 2001 when sturgeon retention was prohibited (Table 27).

Select Area Fisheries

Select Area fisheries occurring during the fall time frame of 2003 were managed to harvest hatchery and net-pen reared coho and select area bright (SAB) fall chinook salmon. Select Area fisheries are managed to have minimal impacts on listed species and have occurred in Youngs Bay since 1962; Tongue Point/South Channel, Blind Slough/Knappa Slough, and Deep River since 1996; and Steamboat Slough since 2000. Catch totals for the five Select Area fisheries during the fall of 2003 were excellent with landings of 9,700 chinook (highest since 1988), 117,100 coho, (highest ever), zero chum, and 424 white sturgeon (Table 14).

As has been the pattern in recent years, the fall Youngs Bay Select Area fishery began in early August with weekly fishing periods through Labor Day followed by continuous fishing through the end of October (Table 13). A total of five fishing periods, four 30-hour and one 12-hour, during August were intended to harvest net-pen produced SAB fall chinook and early returning coho without jeopardizing SAB fall chinook broodstock needs at Klaskanine Hatchery. To ensure adequate escapement, the upper fishing boundary was moved downstream from the confluence of Youngs and Klaskanine rivers to Battle Creek Slough beginning in August. The season included 59 consecutive days of fishing from September 2 through October 31 with the intent of harvesting late returning SAB fall chinook and 100% of the surplus hatchery origin coho whose abundance peaks in mid-September (Table 15). The combined August-October season consisted of 68 fishing days and resulted in a catch of 9,700 chinook (4,200 SAB's), 117,100 coho, and 173 white sturgeon (Table 14). The SAB chinook catch equaled the pre-season expectation of 4,300 fish but the total chinook harvest was much higher than expected. The coho catch was nearly double the preseason expected harvest of 67,500 fish.

As has been the case since 1999, the Tongue Point/South Channel fishery began immediately after Labor Day (September 2) in the Tongue Point fishing area only during the first two weeks and was subsequently expanded to include the South Channel fishing area beginning September 15. The fishery was initiated with three nightly fishing periods during September 2-5 and continued with four nightly periods per week during the remainder of September and October (Table 13). The fishing area was limited to the Tongue Point area only during the first two weeks to minimize catch of non-local fall chinook whose abundance peaks in the lower river in early September. Subsequent expansion of the fishery into the South Channel area was adopted in an effort to maximize harvest of coho produced from the Tongue Point net pens. As days grew shorter and recreational fishing activity decreased, nightly fishing hours were expanded from 12 to 14 hours effective September 29 in an effort to harvest 100% of the net-pen reared

coho (Table 15). The 35-night season, which began on September 2 and concluded on October 31, resulted in landings of approximately 2,500 chinook, 15,600 coho, and 97 white sturgeon (Table 14). The coho catch was twice the preseason expectation of 7,800 fish. Landings from the Tongue Point/South Channel area are included in mainstem landings when the mainstem is open.

The season structure of the Blind Slough/Knappa Slough fishery was similar to that used in the Tongue Point/South Channel fishery except that the entire fishing area was open throughout the season to maximize harvest of Big Creek tule fall chinook as well as Blind Slough net-pen reared coho. Similar to 2002, a three day fishing period was adopted during late-August (25th-28th) to target harvest of fall chinook returning to Big Creek Hatchery. The fishery continued with three, 12-hour nightly fishing periods during September 2-5 followed by four nightly periods per week during the remainder of September and October (Table 13). Beginning September 29, nightly fishing hours were expanded to 14 hours in an effort to harvest 100% of the net-pen reared coho (Table 15). The 35-night season, which began on September 2 and concluded on October 31, resulted in landings of 1,900 chinook, 3,800 coho, and 28 white sturgeon (Table 14). The coho catch was nearly equal to the pre-season expectation of 4,000 fish. Landings of chinook in Knappa Slough were far below preseason expectations of up to 12,300 fish probably due to limited effort created by a weak market for this grade of fish.

The structure of the Deep River fishery was similar to that used in the Tongue Point/South Channel and Blind Slough/Knappa Slough fishing areas with multiple nightly fishing periods occurring each week from September 2 through October 31. The fishery consisted of three 12-hour nightly periods during the first week of September and four nightly fishing periods thereafter through October (Table 13). Fishing periods were lengthened to 14-hours beginning September 29 in response to shorter days (Table 15). The 35-night season, which began on September 2 and concluded on October 31, resulted in landings of 168 chinook and 3,300 coho (Table 14). The coho catch was about 80% of the pre-season expectation of 4,200 fish.

The season structure for the Steamboat Slough fishery was identical to the other fishing areas, except Youngs Bay, with fishing periods occurring from September 2 through October 31 (Tables 13 and 15). The 35-night season resulted in landings of 44 chinook salmon and 107 coho (Table 14). Actual coho harvest was far below the preseason expectations of 1,900 fish.

Lower River Recreational Fisheries

Fall recreational salmon fisheries below Bonneville Dam are separated into two distinct fisheries. The Buoy 10 sport fishery catches fall chinook and coho in the estuary area of the Columbia River from Buoy 10 upstream to the Tongue Point/Rocky Point line. The lower Columbia River sport fishery catches fall chinook, summer steelhead, and coho in the mainstem of the Columbia River from the Tongue Point/Rocky Point line upstream to Bonneville Dam. During 1982-1998 the Astoria-Megler Bridge marked the boundary between the Buoy 10 and mainstem fishing areas; however, catch rates and catch composition in the area between the Astoria-Megler Bridge and Tongue Point were more similar to those in the Buoy 10 fishery. After the 1998 Buoy 10 fishery closed early, a large proportion of the fishery moved upstream of the Astoria-Megler Bridge with great success, so in 1999 the upstream boundary of the Buoy 10 fishery was moved to the Tongue Point/ Rocky Point line for management purposes. Both fisheries are intensively managed to ensure that catch guidelines and impacts to listed species are not exceeded. In both fisheries, only adipose fin-clipped hatchery coho and steelhead may be retained and all non-adipose fin-clipped coho and steelhead must be released immediately unharmed.

Buoy 10 Sport Fishery

The 2003 Buoy 10 fishery opened on August 1 for fall chinook and coho. During August 1-15 the daily bag limit was two salmon with not more than one chinook. Beginning August 16-December 31 the daily bag limit increased to three salmon with not more than one chinook. Chinook catches began slowly, but like previous years' catch rates improved steadily as the month of August progressed. Tule fall chinook (LRH and BPH) dominated the composition of the chinook catch, and no emergency action was necessary to maintain the Buoy 10 fishery impacts within preseason expectations. The 2003 Buoy 10 fishery produced 88,800 angler trips with catches of 16,300 chinook and 54,400 adipose fin-clipped coho (Table 14). The coho catch was higher than the preseason expectation of 36,700 while the chinook catch was similar to the preseason expectation of 17,900.

Buoy 10 chinook catches were large in 2003 despite the regulation of one chinook in the daily bag limit. The catch of 16,300 fall chinook in 2003 at Buoy 10 the fourth highest on record, but within expectations for the fishery. The total coho catch of 54,400 in 2003 was the seventh highest on record.

Lower Columbia Mainstem Sport Fishery

The lower Columbia River sport fishery for fall chinook opened August 1 and remained open through December 31. Preseason expectations were for a catch of 13,400 chinook. As with Buoy 10, the lower Columbia River sport fishery was heavily monitored with frequent in-season catch updates. By early September it was apparent that the mainstem fishery would greatly exceed the preseason chinook catch estimate; however, no in-season management action was taken. The 2003 mainstem sport fishery below Bonneville Dam produced 113,300 angler trips with a catch of 26,200 adult chinook, 1,100 adipose fin-clipped adult coho, and 4,200 adipose fin-clipped summer steelhead (Table 14). Effort, CPUE, and total catch for fall chinook were all record high in the mainstem sport fishery during 2003, and the total chinook catch was 24% higher than the previous record catch of 21,200 in 2002.

2003 Fishery Impacts

As has been the case in recent years, fishery management under ESA restrictions required increased in-season monitoring and fishery modifications. Impacts to URB fall chinook were limited through the use of time restrictions in the treaty Indian fishery; time, area, and gear restrictions in the non-Indian commercial fishery; and time, area, and retention restrictions in the non-Indian sport fishery. Impacts to listed steelhead were limited through time and gear restrictions in the treaty Indian fishery; time, area, gear, and sales (no sales allowed) restrictions in the non-Indian commercial fishery; and time, area, and retention restrictions in the non-Indian sport fishery. Impacts to state-listed coho were limited through time, area, and gear restrictions in the non-Indian commercial fishery and retention restrictions in the non-Indian sport fishery. Fishery catches and impacts to listed species for 2003 fall fisheries are summarized in Table 29.

Harvest impacts on URB fall chinook were 21.55% as compared with the ESA guideline of 31.29% (Table 18). URB fall chinook impacts totaled 8.67% (8.25% guideline) in non-Indian fisheries and 12.88% (23.04% guideline) in treaty Indian fisheries. Fishery specific catch estimates for SRW fall chinook are unavailable because the SRW run reconstruction analyses had not been completed at the time this report was written.

Impacts on Group B wild index steelhead were limited by the ESA to no more than 15.0% for treaty Indian fisheries and no more than 2.0% for non-Indian fisheries. Treaty fishery impacts occur as fish kept in commercial and C&S fisheries while non-Indian fishery impacts occur as catch and release mortalities in sport and commercial fisheries. Impact rates on wild group B index steelhead for 2003 were estimated to be 14.9% for treaty Indian fisheries and 2.0% for non-Indian fisheries which resulted in a total of 16.9% for all fisheries combined. New methodology for determining impacts to up river summer steelhead has been presented in the 2004 Fall Biological Assessment.

Wild coho destined for Oregon tributaries of the Columbia River are listed as endangered under the Oregon State ESA and impacts on these fish were to be limited to no more than 29.2% for all fisheries, including ocean fisheries. Expected incidental mortality was 24.9% for all salmon fisheries, including a 13.3% impact in ocean fisheries and an 11.5% impact in the Columbia River fisheries. The adult abundance was about half of the preseason forecast, but observed incidental mortality was also less than expected. Actual combined ocean and freshwater fisheries impacts were estimated to be 22.3% as compared to the preseason modeled rate of 24.9% and the ESA guideline of 29.2%. The impact rate for Columbia River fisheries was 9.0%, which is below the 11.5% impact limit.

2004 FALL SEASON FISHERY EXPECTATIONS

Non-Indian Fisheries

Specific recommendations for fall commercial seasons to harvest sturgeon, chinook, and coho will be presented at Compact hearings occurring throughout the fall management period. Based on pre-season run size forecasts, a fishing schedule was developed for sport and commercial fisheries through the North of Falcon management process. As the fall management period continues run size updates will occur which could alter pre-season planned fisheries. Run sizes are typically not updated prior to mid-September; therefore, fisheries occurring prior to mid-September will be managed conservatively to allow for flexibility in shaping fishing opportunities during the mid-September through October time frame. Stock composition, and estimated URB impacts, for all fisheries will be modified in-season as catch estimates and CWT data become available. These data may alter URB impacts from pre-season expectations, which could subsequently result in modifications to other planned fisheries. The following section of this report generally describes fishery expectations for the 2004 fall management period. Fishery catch expectations and impacts to listed species for this fishing schedule are summarized in Table 28.

2004 Non-Indian Columbia River Fall Fishery Chinook Allocation Agreement

This agreement was reached during a series of meetings occurring on March 16, March 30, and April 14, 2004.

- ✓ This agreement is limited by the non-Indian allocation of URB fall chinook impacts of 8.25% as per the 2004 *U.S. v Oregon* Fall Management Agreement. .
- ✓ URB fall chinook impacts in fisheries downstream of the Snake River are allocated pre-season 52% (4.29%) to the sport fishery and 48% (3.96%) to the commercial fishery. The Columbia River Compact/Joint States will use this URB impact allocation as guidance for making in-season management decisions concerning the Columbia River sport and

- ✓ commercial fisheries. Actual URB impacts in the fisheries may differ from pre-season estimates based on actual fishery catches, stock composition, and run size updates. The *U.S. v Oregon* TAC will update the URB run size beginning in mid-September.
- ✓ Expected total catch of fall chinook in the mainstem Columbia River downstream of the Snake River, in lower Columbia River tributaries, and Select Areas is 83,700 of which 37,000 (44%) are expected to be harvested by the sport fishery and 46,700 (56%) by the commercial fishery. These catch estimates are based on pre-season abundance forecasts and fishery estimates. Actual harvest sharing will be influenced by stock specific fall chinook abundances and relative harvest rates by each respective fishery.
- ✓ The Buoy 10 sport will begin on August 1 with a two fish daily limit; only one may be a chinook. Chinook retention will continue through at least Labor Day (September 1). URB impacts with this fishery are projected to be 0.80%, or 19% of the total sport impact of 4.29%.
- ✓ The mainstem sport fishery below Bonneville Dam is modeled at 86% of the chinook catch estimated for a full fishery. The fishery will begin on August 1 with a two fish daily limit; only one may be a chinook. The goal is to have a chinook retention fishery through at least September 30th. URB impacts associated with this fishery are 3.04%, or 71% of the total sport impact of 4.29%.
- ✓ Expectations for the commercial fishery include:
 - An early August salmon fishery up to 3 nights/ week during the first two weeks of August (modeled dates were August 3, 5, 8, 10, 12). Mesh size is 8-inch minimum and area is Zones 1-5. URB allocation for this fishery is 0.49% (12% of the total commercial impacts of 3.96%) and total chinook catch expectation is 12,000 fish. Chinook/URB impacts not used in this fishery will transfer to future commercial fisheries.
 - During the third week of August the fishery is expected to occur two nights per week in Zones 2-5 and Zones 3-5. Modeled dates were August 15th (Zones 2-5) and August 17th (Zones 3-5). Mesh size is 8-inch minimum. Total chinook catch expectation is 4,650 fish. URB allocation for this fishery is 0.60% (15% of the total commercial impacts of 3.96%). Chinook/URB impacts not used in this fishery will transfer to future commercial fisheries.
 - Late August Zone 4-5 fishery during the last (fourth) week of August. Fishing is expected to occur up to 2 nights per week with breaks in between fishing days. Mesh size is 9-inch minimum and area is Zones 4-5. URB allocation for this fishery is 0.63% (0.16% of the total commercial impact of 3.96%) and total chinook catch expectation is 5,400 fish. Chinook/URB impacts not used in this fishery will transfer to September fisheries.
 - Fishing areas and days in August fisheries may change based on in-season updates.
 - Late fall fishery to begin the week of September 19, with in-season flexibility to start as early as September 16. Fishery to occur in as much of Zone 1-5 as possible and will include some target chinook fishing. Fishery will target coho or chinook as determined by remaining impacts and in-season run strength. The late September chinook harvest will be determined by the mid-September URB run size update and the actual URB impacts remaining that can be used by the commercial fishery.

- Sturgeon management will be consistent with sturgeon protocol adopted at the February 6, 2003 Compact hearing,(found at the end of the next section.

Coho Protection Measures

In order to protect wild coho destined for Oregon tributaries of the lower Columbia River, primarily the Clackamas and Sandy rivers, area closures or mesh size restrictions will be required in the area between the Longview and I-205 bridges during the first week (September 12-18), between the mouth of the Kalama River and the I-205 Bridge during the second week (September 19-25), and between the upper end of Bachelor Island and the I-205 Bridge during the third week (September 26-October 2). Coho fisheries with a 6-inch maximum mesh restriction will expand to include the entire lower river fishing area (Zones 1-5) in the first full week of October when most state-listed coho have moved into tributaries.

Youngs Bay Select Area Fisheries

Fisheries this fall in Youngs Bay are expected to follow a pattern similar to previous years with fishing periods of approximately 30-hours each occurring weekly during August. Due to Labor Day occurring late in 2004 (September 6), a transitional fishing period of approximately 66 hours (Tuesday-Friday) is anticipated during the last week of August and first week of September to harvest net-pen produced SAB fall chinook and early returning coho. Beginning the day after Labor Day through the end of October it is expected that 7-day-per-week fishing will occur to harvest 100% of the net-pen produced coho. An 8-inch maximum mesh size restriction will likely be required prior to Labor Day with a 6-inch maximum mesh size restriction after Labor Day. The upper fishing boundary will likely be moved downstream from the confluence of the Klaskanine and Youngs rivers to Battle Creek Slough beginning in August to provide sufficient SAB fall chinook for offsite broodstock collection and to increase escapement to Klaskanine Hatchery. Daily or weekly sturgeon limits may be imposed in all Select Areas consistent with mainstem regulations and sturgeon retention will be eliminated completely if the Select Area annual sturgeon catch reaches 400 white sturgeon prior to the end of October. Based on pre-season run size predictions, an estimated 84,200 SAFE coho are expected to be available for harvest in all Select Area fishing sites combined, with approximately 50,000 destined for Youngs Bay. Select area SAB chinook catches are expected to total 4,200 fish, primarily in Youngs Bay.

Other Select Area Fisheries

Other Select Area sites include Tongue Point, Blind Slough, Deep River, and Steamboat Slough fishing sites. Fisheries in these areas target coho primarily, except for fisheries in Knappa Slough targeting Big Creek fall chinook. Due to the Labor Day being late this year, fisheries in these sites are expected to open the week prior to, rather than the week following Labor Day. Recent fall fisheries in these areas have included 1) three to four nightly fishing periods extending through the end of October, 2) nightly fishing periods expanding from 12 hours during September and early October to 14 hours for the remainder of October, and 3) a 6-inch maximum mesh size restriction (in effect since 2001). A similar season structure is anticipated in 2004 although individual fishing periods may be lengthened somewhat to maximize harvest opportunity. The western fishing boundary at the Tongue Point site will likely be moved upstream (eastward) away from the mainstem Columbia River channel to minimize interception

of non-local stocks. In addition, the Deep River fishing site may be opened one day prior to other sites during the early part of the season to encourage participation at this site.

In the past, specific fishing periods in Knappa Slough have targeted surplus fall chinook destined for Big Creek Hatchery. Fisheries targeting Big Creek Hatchery fall chinook are anticipated to occur in 2004, beginning in late August. Based on pre-season run size forecasts, an estimated 14,500 SAFE coho will return to Tongue Point, 6,800 to Blind Slough, 7,800 to Deep River, and 5,100 to Steamboat Slough. Up to 8,000 chinook are projected to be available for harvest in the Big Creek fishery.

Treaty Indian Commercial Fisheries

In recent years treaty Indian commercial fisheries have typically occurred from late August through late September. In 2003, commercial fisheries extended into October. Fishery restrictions may include mesh size restrictions to better target fall chinook or area restrictions if necessary to reduce impacts on specific stocks. Sturgeon sales are generally not allowed during fall salmon gillnet fisheries because catch guidelines have often been achieved in one or more pool. Fall fisheries typically consist of three to five day weekly fishery periods. The Columbia River treaty tribes may propose initial commercial fishing periods for the 2004 fall season at the August 20 Compact hearing.

Oregon Dept of Fish and Wildlife
Washington Department of Fish and Wildlife
July 21, 2004

Table 1. Summary of 2003 Actual and Current 2004 Forecasts of Adult Salmon and Steelhead Returns to the Columbia River.			
Species, stock	2003 Return¹	2004 Forecast¹	Comments
Fall chinook	893,200	634,900	Fifth largest since 1948
Upriver bright (URB)	373,200	287,000	Third largest since 1988
Snake River wild (SRW)	6,900	6,100	
Mid-Columbia bright (MCB)	150,200	88,800	Forth largest on record (since 1980)
Bonneville upriver bright (BUB)	80,600	37,200	
Pool upriver bright (PUB)	67,500	49,500	
Lower river bright (LRB)	2,100	2,100	Formally a component of BUB stock
Bonneville pool hatchery (BPH)	180,600	150,000	Third largest on record (since 1980)
Lower river hatchery (LRH)	155,000	79,000	Fifth largest since 1989
Lower river wild (LRW)	26,000	24,200	Third largest since 1989
Select area bright (SAB)	8,100	6,000	Greater than five year average
Upriver summer steelhead	344,200	388,100	Third largest since 1984
Skamania index (May 1 - June 30)	14,200	18,300	12,800 hatchery and 5,500 wild
A-run index (length <78cm)	306,500	306,600	224,200 hatchery and 82,400 wild
B-run index (length ≥78cm)	37,700	63,200	50,500 hatchery and 12,700 wild
Coho	694,800	257,500	Near the 1995-2001 average
Early stock	502,000	169,300	
Late stock	192,800	88,200	

^{1.} Columbia River mouth return, except summer steelhead is Bonneville Dam return.

Table 2. Stock Accountability of Adult Fall Chinook Returning to the Columbia River, 1980-2003.							
Return Year	Total Return	URB	BPH	MCB¹	LRH	LRW	SAB
1980	319,300	76,800	97,800	300	105,600	38,800	
1981	278,900	66,600	86,300	4,400	94,900	25,000	
1982	363,100	79,000	120,700	8,800	139,500	13,000	
1983	237,600	86,100	28,900	14,400	88,100	16,800	
1984	309,400	131,400	47,500	11,800	102,400	13,300	
1985	361,600	196,400	33,200	6,100	111,000	13,300	1,600
1986	494,800	281,600	16,600	17,400	154,800	24,500	2,000
1987	871,000	420,700	9,100	57,000	344,100	37,900	2,300
1988	784,700	339,900	12,000	78,000	309,900	41,700	3,200
1989	552,100	261,300	26,800	93,300	130,900	38,600	1,200
1990	313,000	153,600	18,900	59,100	60,000	20,300	1,100
1991	276,100	103,300	52,400	35,900	62,700	19,800	2,000
1992	219,000	81,000	29,500	31,100	62,600	12,500	2,300
1993	214,900	102,900	16,800	27,400	52,300	13,300	2,100
1994	254,000	132,800	18,500	33,700	53,600	12,200	3,200
1995	242,800	106,500	33,800	34,100	46,400	16,000	6,000
1996	330,800	143,200	33,100	59,700	75,500	14,600	4,700
1997	321,500	161,700	27,400	58,900	57,400	12,300	3,800
1998	255,400	142,300	20,200	36,800	45,300	7,300	3,500
1999	313,100	166,100	50,200	50,600	40,000	3,300	2,900
2000	253,300	155,700	20,500	36,700	27,000	10,200	3,400
2001	548,900	232,600	125,000	76,400	94,300	15,700	4,900
2002	733,100	276,900	160,800	108,400	156,400	24,900	5,700
2003	893,200	373,200	180,600	150,200	155,000	26,000	8,100

Includes lower river brights (LRB)

Table 3. Predicted and Actual Returns of Columbia River Adult Fall Chinook, 1996-2003 (Thousands).

Stock	Year	Pre-season Forecast	Actual Return	Percent of Forecast
Lower River Hatchery	1996	48.4	75.5	156
	1997	68.7	57.4	84
	1998	22.5	45.3	201
	1999	38.2	40.0	105
	2000	26.4	27.0	102
	2001	30.5	94.3	309
	2002	133.0	156.4	117
	2003	116.9	155.0	136
Lower River Wild	1996	8.1	14.6	180
	1997	7.2	12.3	171
	1998	7.0	7.3	104
	1999	2.5	3.3	132
	2000	2.7	10.2	378
	2001	18.5	15.7	85
	2002	18.3	24.9	136
	2003	23.4	26.0	111
Bonneville Pool Hatchery	1996	35.4	33.1	94
	1997	25.7	27.4	107
	1998	14.2	20.2	142
	1999	61.0	50.2	82
	2000	26.9	20.5	76
	2001	61.9	125.0	202
	2002	136.0	160.8	118
	2003	101.9	180.6	177
Upriver Bright	1996	94.2	143.2	152
	1997	158.0	161.7	102
	1998	141.8	142.3	100
	1999	102.1	166.1	163
	2000	208.2	155.7	75
	2001	132.7	232.6	175
	2002	273.8	276.9	101
	2003	258.4	373.2	144
Mid-Columbia Bright	1996	43.2	59.7	138
	1997	61.9	58.9	95
	1998	44.9	36.8	82
	1999	27.7	50.6	181
	2000	61.6	36.9	60
	2001	42.9	75.3	169
	2002	91.8	106.0	115
	2003	86.6	150.2	173
Columbia River Total ¹	1996	229.3	326.1	142
	1997	321.5	317.7	99
	1998	230.4	251.9	109
	1999	231.5	310.2	134
	2000	325.8	250.3	77
	2001	286.5	542.9	189
	2002	652.9	725.0	111
	2003	587.2	885.0	151

¹. Does not include Select Area Bright (SAB) stocks.

Table 4. Estimated Columbia River Returns and Lower Granite Dam Escapement of Snake River Wild Fall Chinook Adults, 1986-2003, and 2004 Projected.¹

Year	Columbia River Return	Mainstem Harvest	Harvest Rate %	Passage Loss	BON-LGR Conversion Rate %	Lower Granite Escapement
1986	3,435	1,953	56.86	946	32.5	449
1987	2,179	1,245	57.17	501	35.6	253
1988	4,660	2,975	63.84	904	30.8	368
1989	2,362	1,353	57.26	495	39.5	295
1990	576	306	53.19	120	43.2	78
1991	2,049	824	40.22	907	26.0	318
1992	1,338	352	26.32	437	55.7	549
1993	1,518	422	27.77	355	67.7	742
1994	1,000	182	18.19	412	49.6	406
1995	1,328	252	18.95	726	32.5	348
1996	1,795	473	26.37	683	48.3	639
1997	1,863	599	32.17	460	63.4	795
1998	779	208	26.73	265	53.6	304
1999	2,495	757	30.35	833	52.1	905
2000	2,756	796	28.87	813	58.6	1,148
2001	14,469	3,045	21.05	6,261	45.2	5,083
2002	3,551	1,008	28.39	448	83.2	2,095
2003	6,892	1,491	21.63	1,506	72.1	3,895
2004¹	6,100	1,919	31.46	1,583	62.2	2,608

¹. Projected

Table 5. Group A Index and Group B Index Summer Steelhead Returns to Bonneville Dam During 1984-2003 and 2004 Projections.

Year	Group A Index (<78 cm)					Group B Index (≥78 cm)				
	Number Wild	%	Number Hatchery	%	Total	Number Wild	%	Number Hatchery	%	Total
1984	52,500	27	143,200	73	195,700	13,800	14	84,200	86	98,000
1985	51,900	18	229,600	82	281,500	13,000	32	27,900	68	40,900
1986	56,600	20	230,900	80	287,500	10,000	16	54,000	84	64,000
1987	106,700	45	131,600	55	238,300	14,000	31	31,000	69	45,000
1988	64,300	37	108,800	63	173,100	17,700	22	63,900	78	81,600
1989	57,500	30	135,600	70	193,100	12,400	16	65,200	84	77,600
1990	27,100	23	88,500	77	115,600	8,800	19	38,400	81	47,200
1991	60,300	26	173,800	74	234,100	6,200	22	22,100	78	28,300
1992	44,300	18	197,200	82	241,500	12,700	22	44,800	78	57,500
1993	28,700	21	108,000	79	136,700	4,400	12	31,800	88	36,200
1994	21,200	18	99,800	82	121,000	5,200	19	22,300	81	27,500
1995	26,000	14	154,000	86	180,000	1,900	14	11,300	86	13,200
1996	25,700	15	148,700	85	174,400	3,900	21	14,900	79	18,800
1997	30,900	15	177,300	85	208,200	3,900	11	32,800	89	36,700
1998	34,800	26	99,900	74	134,700	3,400	9	36,900	91	40,300
1999	56,600	32	119,900	68	176,500	3,700	17	18,400	83	22,100
2000	63,600	29	153,100	71	216,700	8,400	21	32,500	79	40,900
2001	137,200	27	377,900	73	515,100	12,000	14	74,300	86	86,400
2002	87,300	27	235,800	73	323,100	32,300	25	97,600	75	129,900
2003	67,000	22	238,700	78	306,500	6,400	17	30,800	83	37,700
2004¹	82,400	27	224,200	73	306,600	12,700	20	50,500	80	63,200

². Projected

Table 6. Minimum Numbers (Thousands) of Coho Adults Entering the Columbia River, 1970-2003.

Year	Lower Columbia River							Minimum Run
	Comm. Catch	Sport Catch			Hatchery	Dam	Bonneville	
	Zones 1-5 ¹	Estuary ²	L.Col.R. ³	Tributary	Returns	Counts ⁴	Dam Count	
1970	520.9	--	2.2	21.8	275.4	20.1	54.9	895.3
1971	264.3	--	1.4	16.0	187.7	21.3	53.8	544.5
1972	131.3	--	0.8	9.2	91.3	11.0	34.2	277.8
1973	183.7	--	0.3	7.4	68.2	5.8	25.8	291.2
1974	261.0	--	0.5	12.6	152.8	2.4	31.6	460.9
1975	156.6	--	0.6	10.0	85.4	7.1	32.8	292.5
1976	168.4	--	0.3	10.8	117.3	3.5	36.7	337.0
1977	39.0	--	0.5	5.7	37.1	2.2	9.3	93.8
1978	132.7	--	1.1	8.7	131.8	2.9	30.3	307.5
1979	127.6	--	0.2	12.1	102.6	4.4	29.6	276.5
1980	150.1	--	0.1	11.1	122.2	5.1	13.0	301.6
1981	60.0	--	0.1	7.6	77.9	2.8	21.9	170.3
1982	201.7	18.8	0.1	17.6	154.1	5.0	55.8	453.1
1983	7.1	3.6	0.2	5.1	73.6	2.5	8.4	100.5
1984	201.5	74.3	0.7	14.9	101.7	4.2	16.8	414.2
1985	190.0	25.4	1.1	9.4	94.2	7.5	38.6	366.2
1986	981.0	120.5	4.0	20.7	284.1	8.9	108.6	1,527.8
1987	165.3	47.2	0.9	6.1	66.1	4.2	17.9	307.6
1988	361.5	143.4	0.5	11.8	113.6	6.9	27.1	664.8
1989	387.3	81.9	0.2	15.1	183.3	6.4	27.4	701.6
1990	66.2	18.5	0.3	9.7	87.8	2.0	11.6	196.1
1991	407.5	208.7	1.1	29.3	223.3	5.5	58.9	934.3
1992	54.1	43.1	0.6	8.4	85.1	5.2	14.4	210.9
1993	35.6	20.9	0.6	6.3	39.1	0.8	10.6	113.9
1994	60.7	1.8	0.9	3.4	77.7	4.1	20.3	168.9
1995	21.4	5.0	0.2	2.6	31.5	2.9	10.4	74.0
1996	26.2	4.5	0.8	3.8	62.2	0.6	15.7	113.7
1997	20.5	20.4	0.8	8.5	69.7	2.8	24.1	146.8
1998	23.0	3.2	3.7	3.0	84.6	1.0	46.3	164.8
1999	79.0	9.0	1.3	16.8	123.9	1.0	40.7	271.7
2000	171.0	21.5	1.6	34.9	232.4	6.5	85.6	553.5
2001	253.4	132.0	3.1	73.6	382.6	8.7	259.6	1,112.9
2002	163.0	6.2	3.0	32.5	218.4	3.6	88.1	514.8
2003	255.7	54.4	1.1	28.7	217.9	11.2	125.8	694.8

- ^{1.} Includes Youngs Bay, Big Creek (1970-present), other Select Area fisheries, and 1980-82 Washington terminal landings. Includes jacks, except beginning in 1987 jacks landed in Youngs Bay and other terminal fisheries are not included in this total.
- ^{2.} Catch from estuary recreational (Buoy 10) fishery. Catch from the estuary fishery prior to 1982 is included in ocean catch totals. Some non-Columbia River fish are caught in the estuary fishery and are included here.
- ^{3.} Catch from above Astoria-Megler Bridge through 1999 and catch from above Tongue Point/Rocky Point thereafter.
- ^{4.} Willamette Falls on the Willamette River, North Fork Dam on the Clackamas River, and Marmot Dam on the Sandy River.

Table 7. Minimum Numbers (Thousands) of Early Stock Coho Adults Entering the Columbia River, 1970-2003.

Year	Lower Columbia River							Minimum Run
	Comm. Catch Zones 1-5 ¹	Sport Catch			Hatchery Returns	Dam Counts ⁴	Bonneville Dam Count	
		Estuary ²	L.Col.R. ³	Tributary				
1970	396.5	--	1.7	16.6	226.2	18.6	53.1	712.7
1971	166.2	--	1.1	12.4	158.6	18.7	46.4	403.4
1972	70.3	--	0.7	7.4	81.3	10.4	32.2	202.3
1973	144.3	--	0.2	4.8	49.8	5.4	24.8	229.3
1974	120.1	--	0.4	10.6	123.8	1.6	26.1	282.6
1975	89.1	--	0.4	7.0	69.0	6.4	30.2	202.1
1976	71.2	--	0.2	6.8	71.5	2.5	33.1	185.3
1977	17.2	--	0.4	4.0	23.5	1.4	7.7	54.2
1978	62.4	--	0.8	6.2	98.7	2.4	27.9	198.4
1979	69.2	--	0.2	8.8	78.6	3.1	26.3	186.2
1980	68.8	--	0.1	6.2	76.4	2.0	6.8	160.3
1981	22.0	--	0.2	4.3	50.4	2.4	21.0	100.3
1982	42.6	11.9	0.1	11.6	108.4	3.8	51.0	229.4
1983	4.7	2.3	0.1	2.4	28.3	1.0	4.6	43.4
1984	115.1	46.3	0.5	6.9	54.9	3.8	13.1	240.6
1985	105.8	16.5	0.8	6.3	57.3	6.5	35.2	228.4
1986	356.6	97.6	2.9	9.5	158.6	5.9	99.7	730.8
1987	100.5	28.4	0.7	4.2	32.6	3.4	16.4	186.2
1988	186.7	61.7	0.3	7.0	47.3	6.3	23.0	332.3
1989	78.2	54.7	0.2	7.0	98.0	5.0	19.6	262.7
1990	38.3	12.6	0.3	6.3	40.9	1.7	8.7	108.8
1991	203.2	142.9	0.8	15.1	108.9	4.3	43.2	518.4
1992	19.4	29.1	0.5	4.1	44.5	3.4	8.4	109.4
1993	20.9	16.5	0.5	2.9	22.9	0.7	8.0	72.4
1994	58.3	1.4	0.8	2.2	59.6	3.3	12.6	138.2
1995	21.2	4.9	0.2	1.2	20.4	2.3	7.0	57.2
1996	22.3	3.9	0.8	2.4	44.3	0.6	8.9	82.6
1997	18.1	19.3	0.8	4.8	39.1	2.8	18.1	103.0
1998	22.8	3.0	3.6	0.7	46.8	0.9	34.2	112.0
1999	46.2	6.9	0.9	11.0	59.5	1.0	32.9	158.4
2000	78.9	18.7	1.0	24.5	138.9	5.6	58.9	326.6
2001	101.9	114.9	2.6	38.8	199.4	6.2	225.4	689.1
2002	116.2	5.4	1.1	15.4	99.2	3.3	50.4	290.9
2003	184.6	47.4	0.8	22.6	142.1	10.8	93.8	502.0

^{1.} Includes Youngs Bay, Big Creek (1970-present), other Select Area fisheries, and 1980-82 Washington terminal landings. Includes jacks, except beginning in 1987 jacks landed in Youngs Bay and other terminal fisheries are not included in this total.

^{2.} Catch from estuary recreational (Buoy 10) fishery. Catch from the estuary fishery prior to 1982 is included in ocean catch totals. Some non-Columbia River fish are caught in the estuary fishery and are included here.

^{3.} Catch from above Astoria-Megler Bridge through 1999 and catch from above Tongue Point/Rocky Point thereafter.

^{4.} Willamette Falls on the Willamette River, North Fork Dam on the Clackamas River, and Marmot Dam on the Sandy River

Table 8. Minimum Numbers (Thousands) of Late Stock Coho Adults Entering the Columbia River, 1970-2003.

Year	Lower Columbia River							Minimum Run
	Comm. Catch	Sport Catch			Hatchery	Dam	Bonneville	
	Zones 1-5 ¹	Estuary ²	L.Col.R. ³	Tributary	Returns	Counts ⁴	Dam Count	
1970	124.3	--	0.5	5.1	49.3	1.6	1.8	182.6
1971	98.1	--	0.3	3.7	29.0	2.6	7.4	141.1
1972	61.0	--	0.2	1.8	9.9	0.6	2.0	75.5
1973	39.4	--	0.1	2.6	18.4	0.4	1.1	62.0
1974	140.9	--	0.1	2.0	29.0	0.8	5.5	178.3
1975	67.6	--	0.2	2.9	16.4	0.7	2.6	90.4
1976	97.2	--	0.1	4.0	45.8	1.0	3.6	151.7
1977	21.8	--	0.1	1.7	13.6	0.9	1.6	39.7
1978	70.3	--	0.2	2.6	33.1	0.5	2.4	109.1
1979	58.4	--	0.0	3.4	23.9	1.3	3.3	90.3
1980	81.2	--	0.0	5.0	45.8	3.1	6.2	141.3
1981	37.9	--	0.0	3.3	27.5	0.4	1.0	70.1
1982	159.1	7.0	0.0	6.0	45.7	1.1	4.8	223.7
1983	2.4	1.3	<0.1	2.7	45.3	1.5	3.8	57.0
1984	86.4	28.1	0.2	8.0	46.8	0.4	3.6	173.5
1985	84.2	8.9	0.3	3.1	36.9	1.0	3.4	137.8
1986	624.4	22.8	1.1	11.3	125.5	2.9	8.9	796.9
1987	64.8	18.8	0.2	1.8	33.4	0.9	1.5	121.4
1988	174.9	81.7	0.2	4.8	66.3	0.6	4.1	332.6
1989	309.1	27.2	<0.1	8.1	85.3	1.4	7.8	438.9
1990	27.9	5.8	<0.1	3.5	46.9	0.3	2.9	87.4
1991	204.3	65.7	0.3	14.3	114.4	1.3	15.6	415.9
1992	34.7	14.0	<0.1	4.3	40.7	1.8	6.0	101.5
1993	14.8	4.4	0.1	3.4	16.1	0.1	2.6	41.5
1994	2.4	0.4	0.1	1.2	18.1	0.8	7.7	30.7
1995	0.2	0.2	<0.1	1.3	11.1	0.6	3.4	16.8
1996	3.8	0.6	<0.1	1.4	17.9	<0.1	6.8	30.5
1997	2.4	1.0	<0.1	3.7	30.7	<0.1	6.0	43.8
1998	0.2	0.2	0.2	2.3	37.8	0.1	12.1	52.9
1999	32.8	2.1	0.4	7.5	64.4	0.1	7.8	125.9
2000	92.1	2.8	0.6	10.4	93.4	0.9	26.7	226.9
2001	151.5	17.2	0.5	34.8	183.2	2.5	34.4	423.9
2002	46.8	0.8	2.0	17.1	119.3	0.4	37.7	223.9
2003	71.2	7.1	0.4	6.1	75.8	0.4	32.0	192.8

^{1.} Includes Youngs Bay, Big Creek (1970-present), other Select Area fisheries, and 1980-82 Washington terminal landings. Includes jacks, except beginning in 1987 jacks landed in Youngs Bay and other terminal fisheries are not included in this total.

^{2.} Catch from estuary recreational (Buoy 10) fishery. Catch from the estuary fishery prior to 1982 is included in ocean catch totals. Some non-Columbia River fish are caught in the estuary fishery and are included here.

^{3.} Catch from above Astoria-Megler Bridge.

^{4.} North Fork Dam on the Clackamas River.

Table 9. Escapement Index Values for Chum in Washington Lower Columbia River Tributaries and for Late Run Coho in Oregon Columbia River Tributaries Downstream of the Sandy River, 1950-2003.

Year	Chum (Washington Tributaries)			Coho (Oregon Tributaries)		
	Miles Surveyed	Fish Observed	Fish/Mile	Miles Surveyed ¹	Fish Observed	Fish/Mile
<i>50's Average</i>	2.2	903	450	9.4	263	28
<i>60's Average</i>	4.9	767	179	6.8	161	24
<i>70's Average</i>	6.0	450	77	9.3	61	7
1980	6.7	276	41	9.3	81	9
1981	4.0	56	14	9.3	16	2
1982	6.1	1,127	185	9.3	17	2
1983	5.8	317	55	9.3	11	1
1984	7.1	499	70	9.3	17	2
1985	7.1	500	70	7.8	3	<1
1986	7.4	1,138	154	9.3	51	5
1987	7.1	1,016	143	9.3	7	1
1988	7.1	1,917	270	9.3	5	1
1989	7.1	367	52	9.3	3	<1
<i>80's Average</i>	6.6	721	105	9.2	21	2
1990	7.1	832	117	9.4	4	<1
1991	7.1	673	95	9.4	3	<1
1992	7.1	3,273	461	9.4	4	<1
1993	7.1	1,411	199	9.3	2	<1
1994	7.1	509	72	9.3	3	<1
1995	7.2	922	128	9.3	2	<1
1996	7.2	1,545	215	9.3	0	0
1997	7.2	1,054	146	9.3	0	0
1998	7.2	1,666	231	9.3	4	<1
1999	7.2	2,096	291	9.3	4	<1
<i>90's Average</i>	7.1	1,321	185	9.3	2	<1
2000	6.1	2,425	398	9.3	82 ²	9
2001	5.8	4,551	785	9.3	13 ²	1
2002	6.3	8,662	1,375	9.3	84	9
2003³	NA	NA	NA	9.3	93	10

^{1.} In 1975 the database was reorganized into 9.3 miles of ten standard index streams that best indicate trends in escapement since 1967. Prior to 1967 the same ten streams were used; however, survey miles and frequency varied. In 1968 two index streams were not surveyed and in 1985 observations in an index survey heavily influenced by hatchery adult introduction was not included.

^{2.} May include some adipose fin-clipped coho.

^{3.} 2003 Chum values not available

Table 10. Salmon, Steelhead, and Smelt of the Columbia River Basin Considered for Listing Under the Federal ESA. ¹			
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	Under review	--	--
<u>Smelt</u> – Columbia River	Petition not accepted	--	--

^{1.} The ESU's in bold are present in the Columbia River basin during the time when fisheries described in this report occur and therefore may be impacted by these fisheries.

^{2.} Includes hatchery fish.

^{3.} In 1991, the NMFS decided not to list wild coho of the lower Columbia River (Columbia River and its tributaries below Bonneville Dam, exclusive of the Willamette River) because the remaining small remnant runs are predominately hatchery-maintained and are not a species as defined in the ESA. In 1995, the NMFS combined Columbia River coho with Willapa Bay and Grays Harbor coho into a single evolutionarily significant unit (ESU) and identified it as a candidate species, worthy of further study. In 2000, the NMFS began another status review of lower Columbia River coho. Lower Columbia River coho destined for Oregon tributaries were listed as an endangered species under Oregon state law in July 1999.

Table 11. Sturgeon Catch Guidelines in the Zone 6 Management Area, 1998-2004.					
Reservoir / Fishery	1998-2000	2001	2002	2003	2004
Bonneville	2,820	2,820	2,820	2,900	1,100
Sport	1,520	1,520	1,520	1,700	700
Treaty Commercial	1,300	1,300	1,300	1,200	400
The Dalles	1,800	1,800	1,800	1,300	1,300
Sport	600-800	700	700	400	400
Treaty Commercial	1,000-1,200	1,100	1,100	900	900
John Day	1,720	1,720	500	500	500
Sport	560	560	165	165	165
Treaty Commercial	1,160	1,160	335	335	335

Table 12. Fall Lower River and Zone 6 Mainstem Commercial Fishing Seasons, 2003. ¹								
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
AUGUST		7 pm ■ ■	7 am ■ ■	7 pm ■ ■	7 am ■ ■	8	9	
	3	4	5	6	7			
		7 pm ■ ■	7 am ■ ■	7 pm ■ ■	7 am ■ ■			
	10	11	12	13	14	15	16	
		8 pm ● ●	6 am ● ●			8 pm ● ●	6 am ● ●	
17	18	19	20	21	22	23		
SEPTEMBER		8 pm ■ ■	6 am ■ ■	8 pm ■ ■	6 am ■ ■		6 pm	
	24	25	26	27	28	29	30	
			6 am			6 pm		
OCTOBER	31	1	2	3	4	5	6	
			6 am			6 pm		
	7	8	9	10	11	12	13	
		7 am ■ ■ ■ ■	7 pm ■ ■ ■ ■	6 am ■ ■ ■ ■	7 pm ■ ■ ■ ■	■ ■ ■ ■	7 pm ■ ■ ■ ■	6 pm
	14	15	16	17	18	19	20	
NOVEMBER		6 pm ■ ■	6 pm ■ ■ ■ ■	6 pm ■ ■ ■ ■	6 am ■ ■ ■ ■	6 pm ■ ■ ■ ■	6 pm	
	21	22	23	24	25	26	27	
		6 pm ■ ■	6 pm ■ ■ ■ ■	6 pm ■ ■ ■ ■	6 am ■ ■ ■ ■	6 pm ■ ■ ■ ■		
DECEMBER	28	29	30	1	2	3	4	
		6 pm ■ ■	6 pm ■ ■ ■ ■	6 pm ■ ■ ■ ■	6 am ■ ■ ■ ■	6 pm ■ ■ ■ ■		
	5	6	7	8	9	10	11	
		6 pm ■ ■	6 pm ■ ■ ■ ■		6 am ■ ■ ■ ■	6 am ■ ■ ■ ■		
	12	13	14	15	16	17	18	
JANUARY		6 pm ■ ■	6 pm ■ ■ ■ ■		6 am ■ ■ ■ ■	6 am ■ ■ ■ ■		
	19	20	21	22	23	24	25	
		6 pm ■ ■	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■	6 am ■ ■ ■ ■	
26	27	28	29	30	31			

¹. There was an additional commercial treaty fishery that occurred from 6 am December 1 – 6 pm December 14.

Table 13. Fall Select Area Commercial Fishing Seasons, 2003.

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
AUGUST				noon —————	6 pm		
	3	4	5	6	7	8	9
				noon —————	6 pm		
	10	11	12	13	14	15	16
				noon —————	6 pm		
SEPTEMBER	17	18	19	20	21	22	23
			6 am	noon —————	6 pm	noon	6 pm
	24	25	26	27	28	29	30
		7 pm	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●
			7 am	7 am	7 pm	7 am	7 pm
OCTOBER	31	1	2	3	4	5	6
		7 pm	7 am	7 pm	7 am	7 pm	7 am
	4	8	9	10	11	12	13
		7 pm	7 am	7 pm	7 am	7 pm	7 am
	14	15	16	17	18	19	20
NOVEMBER		7 pm	7 am	7 pm	7 am	7 pm	7 am
	21	22	23	24	25	26	27
		6 pm	8 am	6 pm	8 am	6 pm	8 am
	28	29	30	1	2	3	4
		6 pm	8 am	6 pm	8 am	6 pm	8 am
DECEMBER	5	6	7	8	9	10	11
		6 pm	8 am	6 pm	8 am	6 pm	8 am
	12	13	14	15	16	17	18
		6 pm	8 am	6 pm	8 am	6 pm	8 am
	19	20	21	22	23	24	25
JANUARY		6 pm	8 am	6 pm	8 am	6 pm	8 am
	26	27	28	29	30	31	

Youngs Bay



Other Select Areas:



Fisheries open 7 pm - 7 am during September 2-26

Fisheries open 6 pm - 8 am during September 29-October 31

Table 14. Salmon, Steelhead, and Sturgeon Catch in 2003 Fall Fisheries.¹

Fishery ^{2,3}	Date	Chinook	Coho	Chum	Summer Steelhead	White Sturgeon	Green Sturgeon
Treaty Indian Fisheries							
Zone 6 Commercial	Aug. 26-30	8,715	65	--	839	--	--
Zone 6 Commercial	Sept. 2-5	19,278	233	--	1,462	--	--
Zone 6 Commercial	Sept. 9-12	29,602	559	--	1,423	--	--
Zone 6 Commercial	Sept. 16-20	38,208	1,143	--	3,481	--	--
Zone 6 Commercial	Sept. 24-27	19,955	1,397	--	2,168	--	--
Zone 6 Commercial	Oct. 1-4	7,666	525	--	1,283	--	--
Zone 6 Commercial	Oct. 8-11	2,505	471	--	699	--	--
Zone 6 Commercial WSG	Dec. 1-14	--	--	--	--	0	--
Zone 6 Late Fall Setline	Oct. 13-Dec. 31	--	--	--	--	43	--
Zone 6 C & S	Aug.-Dec.	683	1,277	--	3,570	187	--
Treaty Indian Total		126,612	5,670	--	14,925	230	0
Non-Indian Fisheries							
Zone 1-3 Early August	Aug. 4-7	1,998	8	0	--	972	4
Zone 1-3 Early August	Aug. 11-14	6,243	151	0	--	1,202	6
Zone 4-5 Late August	Aug. 18-22	448	4	0	--	131	0
Zone 4-5 Late August	Aug. 25-28	7,029	147	0	--	280	1
Zones 1-5 Late Fall	Sept. 15-19	17,541	26,981	1	--	372	1
Zones 1-5 Late Fall	Sept. 21-25	12,550	38,203	0	--	421	10
Zones 1-5 Late Fall	Sept. 28-Oct. 2	5,749	26,851	0	--	275	11
Zones 1-5 Late Fall	Oct. 5-9	3,371	29,505	2	0	197	2
Zones 1-5 Late Fall	Oct. 12-17	2,056	22,525	3	--	714	1
Zones 1-5 Late Fall	Oct. 19-24	1,045	4,536	0	--	779	0
Zones 1-5 Late Fall	Oct. 26-28	320	604	0	--	608	0
Zones 2-5 Late Fall	Oct. 29-31	78	251	0	--	60	0
<i>Subtotal</i>		<i>58,428</i>	<i>149,766</i>	<i>6</i>		<i>6,011</i>	<i>36</i>
Youngs Bay	Aug. 6 – Oct. 31	5,157	94,279	0	--	45	0
Tongue Pt./South Ch.	Sept. 2 – Oct. 31	2,451	15,598	0	--	97	1
Blind Sl/Knappa Sl.	Aug. 25 – Oct. 31	1,903	3,816	0	--	28	0
Deep River	Sept. 2 – Oct. 31	168	3,333	0	--	3	0
Steamboat Slough	Sept. 2 – Oct. 31	44	107	0	--	0	0
<i>Subtotal</i>		<i>9,723</i>	<i>117,133</i>	<i>0</i>		<i>173</i>	<i>1</i>
Buoy 10 Sport ⁴	Aug. 1-Dec. 31	16,300	54,400	--	--	--	--
Lower River Sport	Aug. 1-Dec. 31	26,200	1,100	--	4,200	7,700	0
Bonn. Dam to Priest Rapids Dam Sport	Aug. 1-Dec. 31	7,740	--	--	--	--	--
<i>Subtotal</i>		<i>50,240</i>	<i>55,500</i>	<i>0</i>	<i>4,200</i>	<i>7,700</i>	<i>0</i>
Non-Indian Total		118,391	322,399	6	4,200	13,884	37
Grand Total		245,003	328,069	6	19,125	14,114	37

^{1.} Commercial landings are preliminary. Please see Table 15 for details concerning specific commercial season, area, and gear restriction.

^{2.} Includes take home and over-the-bank sales.

^{3.} Subsistence harvest not occurring during commercial fishing periods.

^{4.} Buoy 10 open August 1-December 31, with a two salmon (only one chinook) daily catch limit in effect through Aug. 15, and three fish, of which one could be a chinook thereafter.

Table 15. Non-Indian Fall Commercial Fishing Seasons, 2003

Main-Stem Salmon and Sturgeon Seasons					
Days	Season	Dates	Special Regulations		
			Gear	Area/Other	
12 hrs	Early Fall	Aug 4, 7 PM - Aug 5, 7 AM	8" min. and 9 3/4" max. mesh size restrictions.	Zones 1-3 (mouth upstream to lower Zone 4 boundary line at the Lewis River). Grays River, Elokomin-A, Cowlitz River, Kalama-A, and Lewis-A sanctuaries in effect. Salmon and sturgeon. A maximum of seven white or green sturgeon in the aggregate may be possessed or sold by each participating vessel during each calendar week. During August 3-16, the seven sturgeon weekly limit applies to both Select Area and Columbia River mainstem fisheries in the aggregate.	
12 hrs		Aug 6, 7 PM - Aug 7, 7 AM	Same.	Same.	
12 hrs		Aug 11, 7 PM - Aug 12, 7 AM	Same.	Same.	
12 hrs		Aug 13, 7 PM - Aug 14, 7 AM	Same.	Same.	
10 hrs		Aug 18, 8 PM - Aug 19, 6 AM	9" min. and 9 3/4" max. mesh size restrictions.	Zones 4-5 (I-5 Bridge upstream to Beacon Rock). Washougal River and Sandy River sanctuaries in effect. Salmon and sturgeon. A maximum of seven white or green sturgeon in the aggregate may be possessed or sold by each participating vessel during each calendar week. The seven sturgeon weekly limit applies only to mainstem fisheries in the aggregate during August 17-31.	
10 hrs		Aug 21, 8 PM - Aug 22, 6 AM	Same.	Same.	
10 hrs		Aug 25, 8 PM - Aug 26, 6 AM	Same.	Zones 4-5 (lower Zone 4 boundary line at the Lewis River upstream to Beacon Rock). Same. Same. Same. Same.	
10 hrs		Aug 27, 8 PM - Aug 28, 6 AM	Same.	Same.	
12 hrs		Late Fall	Sep 15, 7 AM - 7 PM	Unslackened floater gillnet with 6" max. mesh size restriction.	Zones 1-3 (mouth upstream to the Longview Bridge). Elokomin-A and Abernathy Creek sanctuaries in effect. Salmon and sturgeon. A maximum of three white or green sturgeon in the aggregate may be possessed or sold by each participating vessel during each calendar week.
4 hrs			Sep 15, 8 PM - 12 AM	8" min. mesh size restriction.	Zones 4-5 (I-5 Bridge upstream to Beacon Rock). Washougal River and Sandy River sanctuaries in effect. Same. Same.
2	Sep 17, 7 PM - Sep 19, 7 PM		No minimum and 9 3/4" max. mesh size restriction in Zones 1-3. 8" min. and 9 3/4" max. mesh size restriction in Zones 4-5.	Zones 1-5 (mouth upstream to Beacon Rock). Elokomin-A, Abernathy Creek, Cowlitz River, Kalama-A, Lewis-A, Washougal River, and Sandy River sanctuaries in effect. Same. Same.	
1	Sep 21, 6 PM - Sep 22, 6 PM		Same.	Same.	
2	Sep 23, 6 PM - Sep 25, 6 PM		Same.	Same.	
1	Sep 28, 6 PM - Sep 29, 6 PM		Same.	Same.	
2	Sep 30, 6 PM - Oct 2, 6 PM		Same.	Same.	

Table 15. continued

Main-Stem Salmon and Sturgeon Seasons (continued)					
Days	Season	Dates	Special Regulations		
			Gear	Area/Other	
1	Late Fall - (cont.)	Oct 5, 6 PM - Oct 6, 6 PM	No minimum and 9 3/4" max. mesh size restriction.		Zones 1-5 (mouth upstream to Beacon Rock). Elokommin-A, Abernathy Creek, Cowlitz River, Kalama-A, Lewis-A, Washougal River, and Sandy River sanctuaries in effect. Same. Same.
2		Oct 7, 6 PM - Oct 9, 6 PM	Same.		Same.
1		Oct 12, 6 PM - Oct 13, 6 PM	Same.		Same. Same. Same. A maximum of nine white or green sturgeon in the aggregate may be possessed or sold by each participating vessel during each calendar week.
2		Oct 15, 6 AM - Oct 17, 6 AM	Same.		Same.
1		Oct 19, 6 PM - Oct 20, 6 PM	Same.		Same.
2		Oct 22, 6 AM - Oct 24, 6 AM	No minimum and 9 3/4" max. mesh size restriction.		Zones 1-5 (mouth upstream to Beacon Rock). Elokommin-A, Abernathy Creek, Cowlitz River, Kalama-A, Lewis-A, Washougal River, and Sandy River sanctuaries in effect. Salmon and sturgeon. A maximum of nine white or green sturgeon in the aggregate may be possessed or sold by each participating vessel during each calendar week.
2 1/2		Oct 26, 6 PM - Oct 29, 6 AM	Same.		Same.
2		Oct 29, 6 AM - Oct 31, 6 AM	Same.		Zones 2-5 (Harrington Point/Settler Point line upstream to Beacon Rock). Same. Same.

Select Area Seasons					
Days	Season	Dates	Special Regulations		
			Gear	Area/Other	
1 1/4	Youngs Bay - Fall	Aug 6, noon - Aug 7, 6 PM	Same.		Youngs Bay select fishing area (Oregon only). Upper deadline at the markers at Battle Creek Slough. Permanent transportation rules are in effect. Salmon and sturgeon. A maximum of seven white or green sturgeon may be possessed or sold by each participating vessel during each calendar week. The seven sturgeon limit includes both mainstem and Select Area fisheries.
1 1/4		Aug 13, noon - Aug 14, 6 PM	Same.		Same.
1 1/4		Aug 20, noon - Aug 21, 6 PM	Same.		Same except there is no weekly possession/sale limit on sturgeon.
1 1/4		Aug 27, noon - Aug 28, 6 PM	Same.		Same.
12 hrs		Aug 29, noon - Aug 30, 6 PM	6" max. mesh size restriction. Same. Same.		Same.

Table 15. continued

Select Area Seasons (continued)				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
59 1/4	Youngs Bay - Fall (cont.)	Sep 2, noon - Oct 31, 6 PM	Same.	Youngs Bay select fishing area (Oregon only). Upper deadline at the markers at Battle Creek Slough. Permanent transportation rules are in effect. Salmon and sturgeon. The sale of sturgeon prohibited effective 7 AM September 9. Salmon only thereafter.
12hrs	Tongue Point - Fall	Sep 2, 7 PM - Sep 3, 7 AM	6" max. mesh size restriction in effect for Tongue Point Basin. Nets may not exceed 250 fathoms in length and leadline not to exceed 2 lbs per fathom.	Tongue Point Basin select fishing area (concurrent waters). Fishers in Tongue Point area may have stored onboard, gill nets with a leadline in excess of 2 lbs per fathom. Permanent transportation rules are in effect. Salmon and sturgeon.
12 hrs		Sep 3, 7 PM - Sep 4, 7 AM	Same.	Same.
12 hrs		Sep 4, 7 PM - Sep 5, 7 AM	Same.	Same.
12 hrs		Sep 8, 7 PM - Sep 9, 7 AM	Same.	Same.
12hrs		Sep 9, 7 PM - Sep 10, 7 AM	6" max. mesh size restriction in effect for Tongue Point Basin. Nets may not exceed 250 fathoms in length and leadline not to exceed 2 lbs per fathom.	Tongue Point Basin select fishing area (concurrent waters). Fishers in Tongue Point area may have stored onboard, gillnets with a leadline in excess of 2 lbs per fathom. Permanent transportation rules are in effect. Salmon only, sturgeon sales prohibited 7 AM September 9.
12 hrs		Sep 10, 7 PM - Sep 11, 7 AM	Same.	Same.
12 hrs		Sep 11, 7 PM - Sep 12, 7 AM	Same.	Same.
12 hrs	Tongue Point / South Channel - Fall	Sep 15, 7 PM - Sep 16, 7 AM	Tongue Point: 6" max. mesh size restriction. Nets may not exceed 250 fathoms in length and leadline may not exceed 2 lbs per fathom. South Channel: 6" max. mesh size restriction. Nets may not exceed 100 fathoms in length and there is no weight restriction on the leadline.	Tongue Point Basin/South Channel select fishing areas (concurrent waters). Fishers in Tongue Point area may have stored onboard, gillnets with a leadline in excess of 2 lbs per fathom. Permanent transportation rules are in effect. Salmon only.
12 hrs		Sep 16, 7 PM - Sep 17, 7 AM	Same.	Same.
12 hrs		Sep 17, 7 PM - Sep 18, 7 AM	Same.	Same.
12 hrs		Sep 18, 7 PM - Sep 19, 7 AM	Same.	Same.
12 hrs		Sep 22, 7 PM - Sep 23, 7 AM	Same.	Same.
12 hrs		Sep 23, 7 PM - Sep 24, 7 AM	Same.	Same.
12 hrs		Sep 24, 7 PM - Sep 25, 7 AM	Same.	Same.
12 hrs		Sep 25, 7 PM - Sep 26, 7 AM	Same.	Same.
14 hrs		Sep 29, 6 PM - Sep 30, 8 AM	Same.	Same.

Table 15. continued

Select Area Seasons (continued)				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
14 hrs	Tongue Point / South Channel - Fall (cont.)	Sep 30, 6 PM - Oct 1, 8 AM	Tongue Point: 6" max. mesh size restriction. Nets may not exceed 250 fathoms in length and leadline may not exceed 2 lbs per fathom. South Channel: 6" max. mesh size restriction. Nets may not exceed 100 fathoms in length and there is no weight restriction on the leadline.	Tongue Point Basin/South Channel select fishing areas (concurrent waters). Fishers in Tongue Point area may have stored onboard, gillnets with a leadline in excess of 2 lbs per fathom. Permanent transportation rules are in effect. Salmon only.
14 hrs		Oct 1, 6 PM - Oct 2, 8 AM	Same.	Same.
14 hrs		Oct 2, 6 PM - Oct 3, 8 AM	Same.	Same.
14 hrs		Oct 6, 6 PM - Oct 7, 8 AM	Same.	Same.
14 hrs		Oct 7, 6 PM - Oct 8, 8 AM	Same.	Same.
14 hrs		Oct 8, 6 PM - Oct 9, 8 AM	Same.	Same.
14 hrs		Oct 9, 6 PM - Oct 10, 8 AM	Same.	Same.
14 hrs		Oct 13, 6 PM - Oct 14, 8 AM	Same.	Same.
14 hrs		Oct 14, 6 PM - Oct 15, 8 AM	Same.	Same.
14 hrs		Oct 15, 6 PM - Oct 16, 8 AM	Same.	Same.
14 hrs		Oct 16, 6 PM - Oct 17, 8 AM	Same.	Same.
14 hrs		Oct 20, 6 PM - Oct 21, 8 AM	Same.	Same.
14 hrs		Oct 21, 6 PM - Oct 22, 8 AM	Same.	Same.
14 hrs		Oct 22, 6 PM - Oct 23, 8 AM	Same.	Same.
14 hrs		Oct 23, 6 PM - Oct 24, 8 AM	Same.	Same.
14 hrs		Oct 27, 6 PM - Oct 28, 8 AM	Same.	Same.
14 hrs		Oct 28, 6 PM - Oct 29, 8 AM	Same.	Same.
14 hrs		Oct 29, 6 PM - Oct 30, 8 AM	Same.	Same.
14 hrs		Oct 30, 6 PM - Oct 31, 8 AM	Same.	Same.
3	Blind Slough / Knappa Slough - Fall	Aug 25, 7 PM - Aug 28, 7 PM	9 3/4" max. mesh size restriction. Nets may not exceed 100 fathoms in length. No weight restriction on leadline.	Blind Slough/Knappa Slough select fishing area (concurrent waters up to railroad bridge, Oregon only above). Permanent transportation rules are in effect. Salmon and sturgeon.
12 hrs		Sep 2, 7 PM - Sep 3, 7 AM	Same.	Same.

Table 15. continued

Select Area Seasons (continued)				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
12 hrs	Blind Slough / Knappa Slough - Fall (cont.)	Sep 3, 7 PM - Sep 4, 7 AM	9 3/4" max. mesh size restriction. Nets may not exceed 100 fathoms in length. No weight restriction on leadline.	Blind Slough/Knappa Slough select fishing area (concurrent waters up to railroad bridge, Oregon only above). Permanent transportation rules are in effect. Salmon and sturgeon.
12 hrs		Sep 4, 7 PM - Sep 5, 7 AM	Same.	Same.
12 hrs		Sep 8, 7 PM - Sep 9, 7 AM	Same.	Same.
12 hrs		Sep 9, 7 PM - Sep 10, 7 AM	Same.	Same, except the sale of sturgeon prohibited effective 7 AM September 9. Salmon only thereafter.
12 hrs		Sep 10, 7 PM - Sep 11, 7 AM	Same.	Same.
12 hrs		Sep 11, 7 PM - Sep 12, 7 AM	Same.	Same.
12 hrs		Sep 15, 7 PM - Sep 16, 7 AM	6" max. mesh size restriction. Same. Same.	Same.
12 hrs		Sep 16, 7 PM - Sep 17, 7 AM	Same.	Same.
12 hrs		Sep 17, 7 PM - Sep 18, 7 AM	Same.	Same.
12 hrs		Sep 18, 7 PM - Sep 19, 7 AM	Same.	Same.
12 hrs		Sep 22, 7 PM - Sep 23, 7 AM	Same.	Same.
12 hrs		Sep 23, 7 PM - Sep 24, 7 AM	Same.	Same.
12 hrs		Sep 24, 7 PM - Sep 25, 7 AM	Same.	Same.
12 hrs		Sep 25, 7 PM - Sep 26, 7 AM	Same.	Same.
14 hrs		Sep 29, 6 PM - Sep 30, 8 AM	Same.	Same.
14 hrs		Sep 30, 6 PM - Oct 1, 8 AM	Same.	Same.
14 hrs		Oct 1, 6 PM - Oct 2, 8 AM	Same.	Same.
14 hrs		Oct 2, 6 PM - Oct 3, 8 AM	Same.	Same.
14 hrs		Oct 6, 6 PM - Oct 7, 8 AM	Same.	Same.
14 hrs		Oct 7, 6 PM - Oct 8, 8 AM	Same.	Same.
14 hrs	Oct 8, 6 PM - Oct 9, 8 AM	Same.	Same.	
14 hrs	Oct 9, 6 PM - Oct 10, 8 AM	Same.	Same.	

Table 15. continued

Select Area Seasons (continued)				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
14 hrs	Blind Slough / Knappa Slough - Fall (cont.)	Oct 13, 6 PM - Oct 14, 8 AM	6" max. mesh size restriction. Nets may not exceed 100 fathoms in length. No weight restriction on leadline.	Blind Slough/Knappa Slough select fishing area (concurrent waters up to railroad bridge, Oregon only above). Permanent transportation rules are in effect. Salmon only.
14 hrs		Oct 14, 6 PM - Oct 15, 8 AM	Same.	Same.
14 hrs		Oct 15, 6 PM - Oct 16, 8 AM	Same.	Same.
14 hrs		Oct 16, 6 PM - Oct 17, 8 AM	Same.	Same.
14 hrs		Oct 20, 6 PM - Oct 21, 8 AM	Same.	Same.
14 hrs		Oct 21, 6 PM - Oct 22, 8 AM	Same.	Same.
14 hrs		Oct 22, 6 PM - Oct 23, 8 AM	Same.	Same.
14 hrs		Oct 23, 6 PM - Oct 24, 8 AM	Same.	Same.
14 hrs		Oct 27, 6 PM - Oct 28, 8 AM	Same.	Same.
14 hrs		Oct 28, 6 PM - Oct 29, 8 AM	Same.	Same.
14 hrs		Oct 29, 6 PM - Oct 30, 8 AM	Same.	Same.
14 hrs		Oct 30, 6 PM - Oct 31, 8 AM	Same.	Same.
12 hrs		Deep River - Fall	Sep 2, 7 PM - Sep 3, 7 AM	6" max. mesh size restriction. Nets may not exceed 100 fathoms in length. No weight restriction on leadline.
12 hrs	Sep 3, 7 PM - Sep 4, 7 AM		Same.	Same.
12 hrs	Sep 4, 7 PM - Sep 5, 7 AM		Same.	Same.
12 hrs	Sep 8, 7 PM - Sep 9, 7 AM		Same.	Same.
12 hrs	Sep 9, 7 PM - Sep 10, 7 AM		Same.	Same, except the sale of sturgeon prohibited effective 7 AM September 9. Salmon only thereafter.
12 hrs	Sep 10, 7 PM - Sep 11, 7 AM		Same.	Same.
12 hrs	Sep 11, 7 PM - Sep 12, 7 AM		Same.	Same.
12 hrs	Sep 15, 7 PM - Sep 16, 7 AM		Same.	Same.
12 hrs	Sep 16, 7 PM - Sep 17, 7 AM	Same.	Same.	

Table 15. continued

Select Area Seasons (continued)				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
12 hrs	Deep River - Fall (cont.)	Sep 17, 7 PM - Sep 18, 7 AM	6" max. mesh size restriction. Nets may not exceed 100 fathoms in length. No weight restriction on leadline.	Standard Deep River select fishing area (concurrent waters up to Highway 4 Bridge, Washington only above). Permanent transportation rules are in effect. Salmon only.
12 hrs		Sep 18, 7 PM - Sep 19, 7 AM	Same.	Same.
12 hrs		Sep 22, 7 PM - Sep 23, 7 AM	Same.	Same.
12 hrs		Sep 23, 7 PM - Sep 24, 7 AM	Same.	Same.
12 hrs		Sep 24, 7 PM - Sep 25, 7 AM	Same.	Same.
12 hrs		Sep 25, 7 PM - Sep 26, 7 AM	Same.	Same.
14 hrs		Sep 29, 6 PM - Sep 30, 8 AM	Same.	Same.
14 hrs		Sep 30, 6 PM - Oct 1, 8 AM	Same.	Same.
14 hrs		Oct 1, 6 PM - Oct 2, 8 AM	Same.	Same.
14 hrs		Oct 2, 6 PM - Oct 3, 8 AM	Same.	Same.
14 hrs		Oct 6, 6 PM - Oct 7, 8 AM	Same.	Same.
14 hrs		Oct 7, 6 PM - Oct 8, 8 AM	Same.	Same.
14 hrs		Oct 8, 6 PM - Oct 9, 8 AM	Same.	Same.
14 hrs		Oct 9, 6 PM - Oct 10, 8 AM	Same.	Same.
14 hrs		Oct 13, 6 PM - Oct 14, 8 AM	Same.	Same.
14 hrs		Oct 14, 6 PM - Oct 15, 8 AM	Same.	Same.
14 hrs		Oct 15, 6 PM - Oct 16, 8 AM	Same.	Same.
14 hrs		Oct 16, 6 PM - Oct 17, 8 AM	Same.	Same.
14 hrs		Oct 20, 6 PM - Oct 21, 8 AM	Same.	Same.
14 hrs		Oct 21, 6 PM - Oct 22, 8 AM	Same.	Same.
14 hrs	Oct 22, 6 PM - Oct 23, 8 AM	Same.	Same.	
14 hrs	Oct 23, 6 PM - Oct 24, 8 AM	Same.	Same.	

Table 15. continued

Select Area Seasons (continued)				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
14 hrs	Deep River - Fall (cont.)	Oct 27, 6 PM - Oct 28, 8 AM	6" max. mesh size restriction. Nets may not exceed 100 fathoms in length. No weight restriction on leadline.	Standard Deep River select fishing area (concurrent waters up to Highway 4 Bridge, Washington only above). Permanent transportation rules are in effect. Salmon only.
14 hrs		Oct 28, 6 PM - Oct 29, 8 AM	Same.	Same.
14 hrs		Oct 29, 6 PM - Oct 30, 8 AM	Same.	Same.
14 hrs		Oct 30, 6 PM - Oct 31, 8 AM	Same.	Same.
12 hrs	Steamboat Slough - Fall	Sep 2, 7 PM - Sep 3, 7 AM	6" max. mesh size restriction. Nets may not exceed 100 fathoms in length. No weight restriction on leadline.	Steamboat Slough select fishing area (concurrent waters). Fishers may transport their catch outside of fishing area with a permit issued by an authorized agency employee after examining the catch. Salmon and sturgeon.
12 hrs		Sep 3, 7 PM - Sep 4, 7 AM	Same.	Same.
12 hrs		Sep 4, 7 PM - Sep 5, 7 AM	Same.	Same.
12 hrs		Sep 8, 7 PM - Sep 9, 7 AM	Same.	Same.
12 hrs		Sep 9, 7 PM - Sep 10, 7 AM	Same.	Same, except the sale of sturgeon prohibited effective 7 AM September 9. Salmon only thereafter.
12 hrs		Sep 10, 7 PM - Sep 11, 7 AM	Same.	Same.
12 hrs		Sep 11, 7 PM - Sep 12, 7 AM	Same.	Same.
12 hrs		Sep 15, 7 PM - Sep 16, 7 AM	Same.	Same.
12 hrs		Sep 16, 7 PM - Sep 17, 7 AM	Same.	Same.
12 hrs		Sep 17, 7 PM - Sep 18, 7 AM	Same.	Same.
12 hrs		Sep 18, 7 PM - Sep 19, 7 AM	Same.	Same.
12 hrs		Sep 22, 7 PM - Sep 23, 7 AM	Same.	Same.
12 hrs		Sep 23, 7 PM - Sep 24, 7 AM	Same.	Same.
12 hrs		Sep 24, 7 PM - Sep 25, 7 AM	Same.	Same.
12 hrs		Sep 25, 7 PM - Sep 26, 7 AM	Same.	Same.
14 hrs			Sep 29, 6 PM - Sep 30, 8 AM	Same.
14 hrs		Sep 30, 6 PM - Oct 1, 8 AM	Same.	Same.

Table 15. continued

Select Area Seasons (continued)				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
14 hrs	Steamboat Slough - Fall (cont.)	Oct 1, 6 PM - Oct 2, 8 AM	6" max. mesh size restriction. Nets may not exceed 100 fathoms in length. No weight restriction on leadline.	Steamboat Slough select fishing area (concurrent waters). Fishers may transport their catch outside of fishing area with a permit issued by an authorized agency employee after examining the catch. Salmon only.
14 hrs		Oct 2, 6 PM - Oct 3, 8 AM	Same.	Same.
14 hrs		Oct 6, 6 PM - Oct 7, 8 AM	Same.	Same.
14 hrs		Oct 7, 6 PM - Oct 8, 8 AM	Same.	Same.
14 hrs		Oct 8, 6 PM - Oct 9, 8 AM	Same.	Same.
14 hrs		Oct 9, 6 PM - Oct 10, 8 AM	Same.	Same.
14 hrs		Oct 13, 6 PM - Oct 14, 8 AM	Same.	Same.
14 hrs		Oct 14, 6 PM - Oct 15, 8 AM	Same.	Same.
14 hrs		Oct 15, 6 PM - Oct 16, 8 AM	Same.	Same.
14 hrs		Oct 16, 6 PM - Oct 17, 8 AM	Same.	Same.
14 hrs		Oct 20, 6 PM - Oct 21, 8 AM	Same.	Same.
14 hrs		Oct 21, 6 PM - Oct 22, 8 AM	Same.	Same.
14 hrs		Oct 22, 6 PM - Oct 23, 8 AM	Same.	Same.
14 hrs		Oct 23, 6 PM - Oct 24, 8 AM	Same.	Same.
14 hrs		Oct 27, 6 PM - Oct 28, 8 AM	Same.	Same.
14 hrs		Oct 28, 6 PM - Oct 29, 8 AM	Same.	Same.
14 hrs		Oct 29, 6 PM - Oct 30, 8 AM	Same.	Same.
14 hrs	Oct 30, 6 PM - Oct 31, 8 AM	Same.	Same.	

Date		Chinook	Steelhead	Coho	Walleye
Aug.	C & S	670	3,186	30	0
Aug. 26-Aug. 30	Ticket	5,400	637	52	8
	Other	3,315	202	13	11
	Total	8,715	839	65	19
Sept. 2-5	Ticket	16,821	1,110	186	3
	Other	2,457	352	47	5
	Total	19,278	1,462	233	8
Sept. 9-12	Ticket	25,829	1,310	198	0
	Other	3,773	113	361	9
	Total	29,602	1,423	559	9
Sept. 16-20	Ticket	31,494	3,204	915	0
	Other	6,714	277	228	0
	Total	38,208	3,481	1,143	0
Sept. 24-27	Ticket	10,889	1,701	1,118	0
	Other	9,066	467	279	5
	Total	19,955	2,168	1,397	5
Oct. 1-4	Ticket	3,410	948	325	0
	Other	4,256	335	200	0
	Total	7,666	1,283	525	0
Oct. 8-11	Ticket	979	303	258	1
	Other	1,526	396	213	18
	Total	2,505	699	471	19
Oct-Dec	C & S	13	384	1,247	0
Totals	Ticket	94,822	9,213	3,052	12
	Other	31,107	2,142	1,341	48
	C&S	683	3,570	1,277	0
Grand Total		126,612	14,925	5,670	60

¹. Ticket catch estimates based on final post-season landings.

	Stock						Total
	LRH	LRW	BPH	URB	MCB ²	Other ³	
Non-Indian Fisheries⁵							
Recreational ⁴	5,968	1,208	6,596	22,758	10,837	1,309	48,673
Early August Commercial	1,435	0	2,612	529	2,389	888	7,853
Late Aug/Sept Commercial	1,887	595	5,247	3,973	12,284	100	24,086
October Commercial	1,178	2,403	0	2,848	4,824	36	11,289
Select Area Commercial	3,330	85	1,334	36	328	4,388	9,501
Subtotal	13,798	4,291	15,786	30,144	30,662	6,721	101,402
Treaty Indian Fisheries							
Sales to Licensed Buyers	0	0	34,757	27,110	13,835	242	75,944
C&S and Other non-ticketed catch	0	0	13,447	20,950	12,726	521	47,644
Subtotal⁵	0	0	48,204	48,060	26,561	763	123,588
Total	13,798	4,291	63,990	78,204	57,223	7,484	224,990

¹. Based on preliminary inseason phone survey catch estimates.

². Includes lower river bright (LRB) stock.

³. Includes Select Area bright (SAB) and out-of-basin stocks.

⁴. Includes sport catch from mouth to Priest Rapids Dam.

⁵. Landings for treaty Indian fisheries do not include Aug-Dec C&S catch.

Season	Fall Chinook Catch	Snake R. Wild Fall Chinook		Total Steelhead Catch	Wild Steelhead			
		No.	%		Group A		Group B	
					No.	%	No.	%
Treaty Indian Fisheries	126,600	NA	12.88	14,900	1,690	2.5	960	14.9
Non-Indian Fisheries	118,600	NA	8.67	30,300	790	1.2	130	2.0
Total	245,200	NA	21.55	45,200	2,480	3.7	1,090	16.9

¹. Based on preliminary inseason phone survey catch estimates.

Year	Open Area	Spring Creek Sanctuary
1988	All of Zone 6	Small sanctuary Aug 10-27 and Sep 12-24. Large sanctuary Aug 29-Sep 21
1989	"	Small sanctuary Aug 7-26 and Sep 27-29. Large sanctuary Aug 28-Sep 27
1990	All of Zone 6 except closed below Hood River Bridge Sep 10-12	Small sanctuary Aug 8-25 and Sep 24-29. Large sanctuary Aug 27-Sep 22
1991	"	Small sanctuary Aug 12-Sep 10. Reduced to 50' radius Sep 10-Oct 28
1992	All of Zone 6 except Spring Creek Sanctuary Area only open Sep 7-15 and Bonneville Pool closed Sep 17-19	Small sanctuary Aug 10-22. Reduced to 50' radius Sep 2-5. Large sanctuary Sep 23-Oct 12
1993	All of Zone 6 except Bonneville Pool closed Sep 13-18	Small sanctuary August 9-28. Large sanctuary Aug 30-Oct 2.
1994	All of Zone 6	Large sanctuary Aug 29-Sep 10. Reduced to 50' radius Oct 12-15
1995	"	Large sanctuary all season
1996	All of Zone 6 except closed below Hood River Bridge Sep 23-28	Large sanctuary all season
1997	All of Zone 6 except closed below Hood River Bridge Sep 9-13	Large sanctuary Aug 7-Sep 6. Enlarged sanctuary from Light #27 to Light #35, Washington shore to mid-channel, Sep 17-20
1998	All of Zone 6 except closed below Hood River Bridge Sep 8-12	Large sanctuary Sep. 1-12. Enlarged sanctuary from Light #27 to Light #35, Washington shore to mid-channel, September 15-28
1999	All of Zone 6	Small sanctuary all season
2000	"	Large sanctuary all season
2001	"	Large sanctuary Aug 28-Sep 8. Small sanctuary Sep 11-29
2002	"	Large sanctuary Aug 28-Aug 31. Small sanctuary Sep 11-28
2003	"	Small sanctuary all season.

Table 20. Number of Adult Chinook, Coho, Steelhead, and Sturgeon Landed During Treaty Indian Fall Seasons (Aug-Nov) Above Bonneville Dam, 1970-2003.

Year	Season ²	Fishing Days ³	Numbers Landed ¹			
			Chinook Adults	Coho	Steelhead ⁴	White Sturgeon ⁵
1970	Aug. 9-Oct. 16	48	34,800	21,300	11,400 (13,200)	200
1971	Aug. 9-Oct. 15	49	50,900	17,100	22,500 (25,700)	600
1972	Aug. 9-Oct. 13	46	39,000	9,600	25,100 (28,800)	500
1973	Aug.12-Oct. 12	56	57,000	11,400	26,200 (26,800)	400
1974	Aug. 8-Oct. 18	63	51,100	6,900	12,900 (13,200)	400
1975	Aug. 8-Oct 10	54	122,300	6,000	7,000 (7,800)	600
1976	Aug. 8-Oct. 18	60	121,500	4,600	8,800 (11,800)	300
1977	Aug. 25-Sept. 13	19	46,300	1,000	31,300 (36,000)	200
1978	Aug. 25-Oct. 3	27	56,200	4,400	15,800 (19,100)	400
1979	Aug. 25-Sept. 18	18	59,900	4,600	5,900 (8,500)	300
1980	Sept. 2-Sept. 11	5	32,600	300	4,700 (9,600)	200
1981	Sept. 1-Sept. 18	10	48,900	1,800	5,100 (9,400)	100
1982 ⁶	Sept. 1-Nov. 5	14	53,600	4,300	5,100 (8,300)	100
1983	Aug. 31-Oct. 7	15	22,800	200	14,800 (18,300)	200
1984	Aug. 6-Oct. 15	32	50,900	1,600	68,900 (78,200)	700
1985 ⁷	Aug. 23-Sept. 28	29	68,300	5,300	72,600 (86,100)	1,800
1986 ⁸	Aug. 18-Oct. 4	37	102,300	40,300	62,500 (72,700)	4,300
1987 ⁹	Aug. 10-Oct. 15	46	138,600	2,400	66,300 (81,100)	4,400
1988 ¹⁰	Aug. 10-Oct. 1	35	145,700	2,700	59,500 ¹³ (81,600)	2,000
1989 ¹¹	Aug. 7-Sept. 29	36	128,200	8,700	55,400 (71,300)	--
1990 ¹²	Aug. 8-Sept. 29	34	79,300	2,900	30,700 (38,000)	1,700
1991 ¹³	Aug. 12-Oct. 28	20	51,100	12,800	41,100 (46,800)	--
1992	Aug. 10-Oct. 17	32	28,100	1,000	52,400 (60,800)	100
1993	Aug. 9-Oct. 2	26	30,400	1,000	28,800 (33,400)	100
1994 ¹⁴	Aug. 29-Oct. 15	10	33,700	1,300	15,500 (18,700)	500
1995	Aug. 29-Sept. 15	9	41,400	400	20,400 (22,800)	400
1996	Sept. 2-Sept. 28	17	63,200	700	19,000 (23,200)	300
1997	Aug. 27-Sept. 20	16	65,000	600	22,700 (27,800)	<100
1998	Aug. 25-Sept. 25	22	44,700	1,500	12,600 (16,900)	<100
1999	Aug. 31-Oct. 2	22	77,200	2,300	17,300 (20,600)	0
2000	Aug. 30-Sept. 23	17	52,100	6,300	15,500	0
2001 ¹⁵	Aug. 28-Sept. 29	18	103,900	5,400	29,200 (38,200)	806
2002	Aug 28-Sep 28	18.5	129,700	1,600	13,800 (19,200)	300
2003¹⁶	Aug 26-Oct 11	27.5	123,600	5,800	14,900 (20,500)	200

^{1.} Includes Spring Creek terminal area fishing since 1975 (1977-83 & 92), sales to the general public and C&S catches beginning in 1994, Klickitat R. dipnet catches during open mainstem seasons, and extended Klickitat River commercial seasons beginning in 1988.

^{2.} Minimum mesh size: 1970-1974 none; 1975 7-1/2"; 1976-1982 8"; 1983 none; 1984 none, except 8" Oct 9-15; 1985 none, except 8" Sep 14-28; 1986 none, except 8" Sep 6-Oct 4; 1987 none; 1988 none, except 8" Aug 17-27 and Sep 18-24 and 8" and 9" test fishery Sep 28-Oct 1; 1989 8" except none Aug 7-12; 1990 8" except none Sep 3-5, Sep 12-15 below Hood River Br., Sep 17-22, and Sep 24-29; 1991-97 none; 1998 8"; 1999 none except 8" Sep 15-18 and Sep 29-Oct 2; 2000-2002 none.

^{3.} Mainstem commercial seasons only.

^{4.} Steelhead run year totals are in parentheses. Sales to licensed buyers during sockeye and fall seasons only through 1984. Sales to licensed buyers, general public and C&S catch, including winter season catches of holdover and fresh run summer steelhead, for calendar year from 1985-present.

5. *No sturgeon sales allowed in set net fisheries since 1991. Includes landings in fall set-line fisheries.*
6. *Includes Nov 1-5 coho fishery below Klickitat River.*
7. *Spring Creek sanctuary area open to fishing Aug 23-28 and Aug 29-Sep 3.*
8. *Includes Sep 29-Oct 4 dipnet and experimental gillnet fishery. An additional catch of 1,000 chinook occurred above Priest Rapids Dam. Over half of the coho catch (24,100) occurred in the Klickitat River dipnet fishery.*
9. *An additional catch of 2,200 chinook occurred above Priest Rapids Dam.*
10. *Includes Sep 28-Oct 1 test fishery in John Day Pool. No sturgeon sales allowed after Sep 3. An additional catch of 2,300 chinook and an estimated 300 steelhead occurred above Priest Rapids Dam. Includes 5,500 coho captured in an extended Klickitat River dipnet season.*
11. *No sturgeon sales allowed. An additional catch of 800 chinook occurred above Priest Rapids Dam. Includes 6,100 coho captured in an extended Klickitat River dipnet season.*
12. *An additional 200 chinook catch occurred above Priest Rapids Dam. Includes 1,900 coho captured in an extended Klickitat River dipnet season.*
13. *Includes 5,500 coho captured in an extended Klickitat River dipnet season.*
14. *An additional catch of 570 chinook and 70 steelhead occurred above Priest Rapids Dam. An additional catch of 220 chinook and 80 steelhead occurred above McNary Dam.*
15. *Target sturgeon gillnet seasons adopted for Zone 61 (Bonneville Pool) during November 14-30 and Zone 63 (John Day Pool) during November 14-December 7.*
16. *Target sturgeon gillnet season adopted for Zone 61 (Bonneville Pool) during December 1-14. No sturgeon were landed.*

Year	Group A Index		Group B Index	
	Number	% of wild run ¹	Number ²	% of wild run
1985	10,800	20.7	4,000	31.0
1986	7,800	13.8	2,700	26.7
1987	16,800	15.7	5,200	37.2
1988	11,000	17.1	4,200	23.5
1989	9,100	15.9	4,300	35.0
1990	4,300	16.0	1,900	21.6
1991	8,800	14.7	1,900	30.0
1992	7,200	16.2	3,300	26.3
1993	4,400	15.2	800	19.2
1994	2,200	10.3	1,000	18.6
1995	2,700	10.4	300	18.4
1996	2,300	9.0	1,400	35.0
1997	3,200	10.3	600	14.3
1998	3,100	8.8	500	15.5
1999	4,500	7.9	400	9.9
2000	3,000	4.7	1,100	13.3
2001	5,600	4.0	1,400	11.5
2002	2,400	2.7	1,100	3.4
2003	1,700	2.5	1,000	14.9

- ^{1.} Percentage calculated before rounding. Steelhead impacts based on date method through 1998 and fork length index method thereafter.
- ^{2.} Includes sales to licensed buyers only prior to 1994. Includes sales to the general public and C&S catch beginning in 1994.

	Non-Indian Sport				Treaty Indian Commercial				Sub- sistence
	Bonne- ville	The Dalles	John Day	Total	Bonne- ville	The Dalles	John Day	Total	
1991	2,270	200	150	2,620	1,000	460	40	1,500	NA
1992	1,720	140	150	2,010	1,150	430	20	1,600	210
1993	2,310	160	140	2,610	1,420	580	10	2,010	260
1994	2,220	155	235	2,610	1,175	310	115	1,600	650
1995	1,370	50	90	1,510	1,420	310	310	2,040	1,150
1996	1,360	90	80	1,530	1,000	230	360	1,590	480
1997	1,470	180	480	2,130	1,852	498	1,260	3,610	236
1998	1,625	857	599	3,081	1,462	1,108	1,100	3,670	240
1999	1,236	694	422	2,352	1,280	1,051	760	3,091	244
2000	1,262	809	437	2,508	1,145	1,456	846	3,447	324
2001	1,422	677	300	2,399	1,019	1,258	684	2,961	476
2002	1,560	878	187	2,581	490	1,138	322	1,950	370
2003 ¹	1,542	447	163	2,152	385	866 ²	303	1,554	325

- ^{1.} 2003 numbers are all preliminary.
- ^{2.} There was no winter fishery in The Dalles Reservoir.

Table 23. Time, Area, and Gear Restrictions in Effect for Non-Indian Mainstem Fisheries Occurring During the Early Fall Fishing Seasons, 1980-2003.

Year	Date(s)	Hours	Area	Mesh Size
1980	Sept 2-3	6pm-6pm	Zone 1	None
1982	Aug 30-31	6pm-6am	Zone 1	8" minimum
1983	Sept 1-2	"	Zone 1	None
1986	July 30 - Aug 1	6pm-6am nightly	Zone 1	9" minimum
	Aug 4-6	"	Zone 1	9" minimum
1987	Aug 9-12	"	Zones 1 and 2	8" minimum
1988	Aug 14-15	6pm-5am	Zone 1 below Astoria-Megler Bridge	8" minimum
	"	6pm-noon	Zones 1-5 above Astoria-Megler Bridge	8" minimum below Longview Bridge and 9" minimum above
1989	Aug 7-11	6pm-6am	Zones 1-5	"
	Aug 13-14	"	Zones 3-5	"
	Aug 14-15	"	Zones 2-5 above Wauna powerlines	"
	Aug, 25, 27-29	6pm-6am nightly	Area 2S	9" minimum
1990	Aug 12-17, Aug 19-24	"	Extended Area 2S above I-205 Bridge	"
1991	Aug 25-29	"	"	"
1992	Sep 8-9	6pm-6am	Zone 1	None
1996	Aug 26-29	8pm-6am nightly	Area 2S	9" minimum
1997	Aug 4-5, Aug 24-25	9pm-3am, 8pm-6am	Zone 1, Area 2S	"
1998	Aug 4-5	5pm-5am	Zones 1-3	"
	Aug 25-26	8am-6am	Area 2S	"
1999	Aug 4-5	7pm-7am	Zones 1-3 below Longview Bridge	"
	Aug 23-24	8pm-6am	Area 2S	"
2000	Aug 3-4	7pm-7am	Zones 1-3 below Longview Bridge	"
2001	Aug 4-5	7pm-7am	Zones 1-3 below Longview Bridge	"
	Aug 8-9	10am-6pm	Zone 1	"
	Aug 20-25	8pm-6am nightly	Extended Area 2S above I-205 Bridge	"
2002	Aug 4-5, Aug 6-7, Aug 8-9, Aug 9-10	7pm-7am nightly	Zones 1-3 below Longview Bridge	8" minimum
	Aug 11-12	7pm-7am	Zones 2-3	"
	Aug 18-19, Aug 20-21, Aug 22-23, Aug 25-26, Aug 27-28	8pm-6am nightly	Extended Area 2S above I-205 Bridge	9" minimum
2003	Aug 4-5, Aug 6-7, Aug 11-12, Aug 13-14	7pm-7am nightly	Zones 1-3	8" minimum
	Aug 18-19, Aug 21-22	8pm-6am nightly	Zones 4-5 Above I-5 Bridge	9" minimum
	Aug 25-26, Aug 27-28	8pm-6am nightly	Zones 4-5	9" minimum

Table 24. Number of Adult Chinook, Chum, Coho, Steelhead, and Sturgeon Landed During Early Fall Mainstem Columbia River Seasons Below Bonneville Dam, 1970-2003.

Year	Season ¹	Fishing Days	Chinook			Sturgeon	
			Adults	Coho	Steelhead ²	White	Green
1970	August 9-26	13	142,100	66,600	6,200	2,000	1,000
1971	August 8-25	13	91,900	31,900	9,600	2,900	1,000
1972	August 9-25	12	94,400	18,800	3,800	2,700	900
1973	August 12-24	10	101,200	10,900	6,800	1,800	1,000
1974	August 11-23	10	51,700	20,100	2,600	3,900	2,700
1975	August 10-22	10	92,100	6,600	--	4,900	1,000
1976	August 8-18	7	31,700	2,500	--	8,300	1,400
1977	August 14-23	7	67,000	4,400	--	4,300	600
1978	August 15-21	4	38,900	1,300	--	2,700	1,600
1979	August 14-16	2	28,100	1,800	--	2,300	700
1980	September 2-3	1	58,400	7,000	--	1,700	600
1981	None	0	--	--	--	--	--
1982	August 30-31	0.5	79,200	5,800	--	500	300
1983	September 1-2	0.5	15,400	200	--	1,200	600
1984	None	0	--	--	--	--	--
1985	None	0	--	--	--	--	--
1986	July 30-August 6	4	800	0	--	5,400	5,100
1987	August 9-12	3	11,500	100	--	3,900	3,200
1988	August 14-15	0.5	51,100	300	--	1,700	2,300
1989	August 7-29	13	29,800	100	--	1,800	0
1990	August 12-24	10	6,700	20	--	1,500	0
1991	August 25-29	4	5,400	10	--	500	0
1992	September 8-9	0.5	2,200	400	--	800	1,800
1993	None	0	--	--	--	--	--
1994	None	0	--	--	--	--	--
1995	None	0	--	--	--	--	--
1996	August 26-29	3	4,400	0	--	300	0
1997	August 4 - 25	2	1,300	1	--	2,000	1,500
1998	August 4 - 26	2	1,800	0	--	2,600	700
1999	August 4 - 24	2	1,400	0	--	2,900	500
2000	August 3-23	3	7,400	200	--	2,800	600
2001	August 5-25	7	6,600	660	--	5,700	340
2002	August 4-28	10	19,500	60	--	1,700	0
2003	August 4-28	8	15,700	300	--	2,600	11

¹. Minimum mesh size: 1970-1974 7-1/4"; 1975-1979 8"; 1980-2002 see Table 23.

². Sale of steelhead by non-Indians prohibited since 1975. Annual handling and mortality limited by time, area, and gear regulations.

Table 25. Closed Fishing Areas During Late Fall Mainstem Non-Indian Fishing Seasons, 1999-2003.

Year	Date(s)	Closed Area
1999	Sept 20-Oct 7	Longview Bridge-Beacon Rock
	Oct 11-22	Longview Bridge-Upper Bachelor Island
	Oct 27-28	Buoy 10 - Harrington Point/Settler Point Line
2000	Sep 19-20	Longview Bridge-Lower Bachelor Island
	Sep 18, Sep 25-Oct 5	Longview Bridge-Beacon Rock
	Oct 9-20	Longview Bridge-Lower Bachelor Island
	Oct 23-27	Upper Cottonwood Island-Lower Bachelor Island
	Oct 30	Buoy 10-Settler Point/Harrington Point line and upper Cottonwood Island-lower Bachelor Island
2001	Sep 17-21	Longview Bridge-I-205 Bridge
	Sep 24-28	Kalama River-I-205 Bridge
	Oct 1-5	Upper Bachelor Island-I-205 Bridge
	Oct 29-31	Buoy 10-Settler Point/Harrington Point line
2002	Sep 16, Sep 19	Longview Bridge-Beacon Rock
	Sep 19-20	Buoy 10-Lewis River
	Sep 24-26	Longview Bridge-Lewis River
	Sep 26-27	Buoy 10-Lewis River
	Oct 28-31	Buoy 10- Settler Point/Harrington Point line and Green Navigation Marker 85-Beacon Rock
2003	Sep 15 (Day)	Longview Bridge-Beacon Rock
	Sep 15 (night)	Buoy 10-I-5 Bridge
	Oct 29-31	Buoy 10- Settler Point/Harrington Point line

Table 26. Number of Adult Chinook, Coho, Steelhead, and Sturgeon Landed during Late Fall Mainstem Columbia River and Select Area Seasons (mid-Sep to mid-Nov) below Bonneville Dam, 1970-2003.

Year	Mainstem Season ¹	Mainstem Fishing Days	Chinook		Coho			Sturgeon ⁵		
			Columbia Mainstem	Select Area ²	Columbia Mainstem	Select Area ²	Chum ³	Steelhead ⁴	White	Green
1970	Sep 10-Nov 5	35	93,900	700	432,500	21,700	600	6,200	1,300	100
1971	Sep 12-Nov 3	34	119,600	100	224,400	8,000	500	6,300	1,800	200
1972	Sep 20-Nov 3	27	39,400	900	103,100	9,300	1,300	9,200	1,600	100
1973	Sep 12-Nov 2	32	158,400	300	166,000	6,800	1,400	13,000	2,400	200
1974	Sep 17-Nov 1	29	43,300	100	231,800	9,100	900	1,200	4,800	400
1975	Sep 10-Nov 7	39	72,700	< 100	148,000	2,100	500	--	5,300	300
1976	Sep 7-Nov 12	47	105,400	300	160,700	5,200	1,200	--	8,100	1,200
1977	Sep 8-Oct 27	23	90,400	1,700	33,100	1,600	200	--	2,300	200
1978	Sep 10-Nov 15	37	64,900	500	128,000	3,400	1,500	--	3,900	100
1979	Sep 11-Nov 7	30	65,300	1,600	103,200	22,500	100	--	13,500	500
1980	Sep 28-Oct 16	12	14,600	40,000	114,200	28,900	200	--	3,100	50
1981	Sep 27-Nov 12	25	5,200	24,900	47,400	12,400	1,400	--	6,700	100
1982	Oct 3-Nov 12	27	4,500	6,000	181,600	14,300	1,800	--	4,600	400
1983 ⁶	Oct 4-Oct 13	4	4,800	4,700	3,600	3,600	200	--	4,500	100
1984	Sep 10-Nov 16	35	60,300	3,600	160,900	40,600	1,800	--	9,800	2,700
1985	Sep 16-Nov 15	39	56,400	3,600	138,800	51,200	700	--	4,900	1,500
1986	Sep 12-Nov 14	43	153,000	4,600	925,400	55,600	1,800	--	4,100	800
1987	Sep 13-Nov 12	35	280,900	36,900	150,900	16,900	1,300	--	4,100	1,600
1988	Sep 12-Nov 11	41	242,200	28,800	311,100	51,400	2,500	--	3,100	1,000
1989	Sep 17-Nov 15	36	95,700	6,600	360,700	28,100	1,300	--	2,700	1,700
1990	Sep 18-Oct 31	26	35,300	3,100	47,400	27,600	800	--	3,100	2,200
1991 ⁷	Sep 10-Nov 5	32	33,500	2,100	324,400	82,100	400	--	2,400	3,200
1992	Sep 22-Oct 30	22	14,100	1,500	37,900	19,600	700	--	4,200	400
1993	Sep 20-Oct 20	17	16,700	300	20,600	15,500	40	--	7,100	2,200
1994	Oct 9-Oct 19	4	1,500	100	6,000	57,800	20	--	3,400	200
1995	Oct 9 & Oct 12	2	50	500	200	22,300	0	--	6,000	400
1996 ⁸	Sep 16-Oct 25	17	7,600	5,000	5,600	22,400	20	--	7,200	600
1997 ⁹	Sep 24-Nov 7	23	3,800	4,000	3,800	17,100	39	--	7,800	100
1998 ¹⁰	Oct 7-Nov 6	7	1,000	2,100	300	23,600	11	--	10,900	900
1999 ¹¹	Sep 20-Nov 4	23	4,600	2,100	57,600	23,000	101	--	4,100	300
2000 ¹²	Sep 18-Nov 1	21	3,440	2,300	110,400	58,300	26	--	4,600	600
2001 ¹³	Sep 17-Oct 31	33	14,900	3,100	219,100	33,800	116	--	21 ¹⁴	0 ¹⁴
2002	Sep 16-Oct 31	21	16,100	8,700	99,500	70,400	12	--	4,700	200
2003¹⁵	Sep 15-Oct 31	22	42,700	9,700	149,500	117,100	6	--	3,600	27

1. Mesh restriction of 7" or less and 9" or greater, 1980-1982.

2. Number of Oregon and Washington terminal areas and fishing days vary from year to year, and some early fall fisheries are included. Between 1983 and 1995 only Oregon terminal fisheries occurred. Prior to 1979, landings listed for Youngs Bay are minimal as Youngs Bay salmon could be sold outside of the bay during concurrent mainstem fishing periods.

3. Includes 1970-present Youngs Bay Select Area, 1980-1982 Washington terminal, and 1996-present Big Creek, Tongue Point, Blind Slough, and Deep River Select Area, and 2000-present Steamboat Slough Select Area landings.

4. Sale of steelhead by non-Indians prohibited since 1975. Handling and mortality limited by time, area, and gear regulations.

5. Includes landings from Select Area fall fisheries beginning in 1997.

6. Dates reflect coho season only. Six days of large-mesh sturgeon fishing occurred Oct 18-Nov 3 with sale of chinook allowed.

7. Sep 10 and 17 daylight only coho target fishery. Late fall season opened on Sep 22.

8. Sep 16-20 extended 2S night time fishery. Sep 30-Oct 25 all of Zones 1-5.
9. Sep 24-Oct 3 Zone 1-Longview Bridge 6" max. mesh and I-5 Bridge to Zone 5 9" min. mesh; Oct 6-Nov 7 Zones 1-5, 8" min. mesh after Oct 26.
10. Oct. 7 – Nov 4 Zones 1-5, 9" min. mesh.
11. Sep 20 - Oct 28, target coho fisheries with 6" max. mesh; Oct 11, 18, 25, and 27, salmon/sturgeon fisheries with 9 ¾ max.; Oct 5-7 salmon fishery with 8" min mesh; Nov. 4 daylight target sturgeon fishery with 9" min and 9 ¾ max mesh.
12. Sept. 18-Oct. 30 target coho fisheries w/6" max mesh size; Sept. 19-20 target salmon/sturgeon fishery w/8" min. and 9 ¾ max. mesh restrictions; Oct. 9, 16, and 23 sturgeon/salmon fisheries with 6" max. or 9" min. to 9 ¾ max. mesh; Nov. 1 daylight sturgeon fishery with 9" min. and 9 ¾ max. mesh size .
13. Sept. 17-19 target coho fishery w/ 6" max mesh size; Sept. 17-Oct. 4 salmon fishery w/ 8"min and 9 ¾ max mesh size; Sept. 20-Oct. 5 salmon fisheries w/9 ¾ max mesh size; Oct. 8-26 salmon fishery w/9 ¾ max mesh size; Oct. 29-31 target coho w/6" max. mesh.
14. The sturgeon harvest guideline for 2001 had been reached by late August, which accounts for the low number (21 white sturgeon landed in August Youngs Bay SAFE fishery).
15. Season specific information (i.e., seasons, areas, and gear restrictions) is included in Table 15.

Year	White Sturgeon					Green Sturgeon				
	Sport	Commercial ¹				Sport	Commercial ¹			
		Winter	Early Fall	Late Fall	Total		Winter	Early Fall	Late Fall	Total
1991	22,700	840	530	2,430	3,800	20	4	2	3,180	3,186
1992	40,100	1,210	790	4,240	6,240	75	10	1,750	400	2,160
1993	37,900	1,020	--	7,050	8,070	15	1	--	2,220	2,221
1994	33,500	3,030	--	3,380	6,410	130	1	--	240	241
1995	45,100	110	--	6,040	6,150	20	--	--	390	390
1996	42,800	1,380	330	6,670	8,380	65	1	--	610	610
1997	38,200	3,064	1,971	7,792	12,827	41	2	1,474	138	1,614
1998	41,600	2,675	2,634	8,585	13,894	73	0	743	151	894
1999	39,800	2,303	2,854	4,336	9,493	93	2	508	279	789
2000	40,500	2,795	2,790	4,560	10,145	32	0	568	636	1,204
2001	41,200	3,552	5,740	21 ²	9,313	50	4	338	0 ²	342
2002	38,500	3,368	1,725	4,522	9,615	51	7	0 ³	156	163
2003	31,100	1,768	2,585	3,598	7,951	52	1	11	27	39

¹. Includes Youngs Bay and other Select Area fisheries landings.

². Sturgeon sales prohibited in mainstem and Select Area fisheries effective August 22.

³. Green sturgeon sales prohibited during all early fall seasons.

Table 28. Columbia River Fishery Model Summary (MR2004 Final)

COLUMBIA RIVER FISHERY MODEL SUMMARY										2004 Preseason				MR2004 Final					
2004 Fisheries. Non-Indian fisheries at 8.25% URB. URB share 52% sport/48% commercial.																			
Fishery Descriptions										Management Benchmarks									
Ocean Fisheries: PFMC - April Final Inriver Fisheries: Buoy 10 sport 94% Aug 1 for chinook & marked coho, 1 chinook limit, chinook open thru Labor Day Mainstem sport 86% Aug 1 for chinook & marked coho, 1 chinook limit, chinook open thru September 30 Commercial 6 days Early to mid-August salmon fishery 5 days Mid-late August salmon fishery 8 days Mid-late Sept chin/coho (~Z1-5) 1 month October coho/chinook Upriver sport 100% August 1, 2 chinook limit Hanford sport open August 16 catch: 6,730 Treaty Indian 5 weeks										Chinook: Projected SRW impacts: Non-Ind. 8.25% Tr. Ind. 23.04% Total 31.30% % of Total 26% 74% 100% % of Harvestable Surplus 19.4% 36.5% McNary Escapement: 128,870 43.5 LRH Ocean/Inriver AEQ Exploitation Rate 43.9% 49. NI Catch Sport: 37,000 Comm. 46.7 B Index Steelhead: Constraint 2.0% 15.0% 17.0% Projected impact 1.7% 13.6% 15.3% Coho: % of Upriver Run to Bonn. Dam 50% 50% WA Late Hatchery Coho to Tributaries 28,000 Freshwater harvest rate on LCR wild coho 6.4% 15. Chum: (Harvest Index) 1.6% 5%									
Chinook										Upriver Steelhead					Coho				Chu
Total	BPH	URB	LRH	LRW	BUB	PUB	LRB	SAB	Snake R Wild Num. %	Total	Skam. Total	Upriver A Index Hatch. Wild	Upriver B Index Hatch. Wild	Total	Un-marked	Upriver	LCR Wild	Total	
Ocean Catch/Mortality	34,780	17,170	6,580	7,760	1,290	850	1,130	50		-				336,626	30,444	45,359	13.8%		
Columbia River Run	634,910	150,000	286,980	79,000	24,150	37,220	49,500	2,060	6,000					257,470	103,608	104,135		12,	
Non-Indian (Total)	90,360	16,660	30,430	17,470	6,570	9,590	4,260	530	4,850	8.25%	1,123	909	214	100,827	31,010	32,533	20.2%		
Early - Mid August Salmon	12,010	5,780	1,410	2,480	200	760	370	40	970	0.49%	207 *	132	75	100	35	36	0.1%		
Select Areas	7,980	1,170	470	3,110	10	220	20	10	2,970	0.16%				9,077	3	0	0.1%		
Buoy 10 Sport	11,600	3,840	2,290	2,880	320	1,040	410	60	760	0.80%				16,390	1,786	2,485	1.6%		
Lower River Sport	15,180	440	8,730	1,660	350	1,890	1,990	100	20	3.04%	837 **	722	115	3,000	114	273	0.1%		
Mid - Late August Salmon	4,650	2,230	1,740	70	0	400	190	20	0	0.60%				0	0	0	0.0%		
2S Mid - late August	5,410	1,460	1,800	510	0	1,000	570	60	10	0.63%				0	0	0	0.0%		
Mid - Late Sept Chinook	6,140	1,400	2,230	730	240	1,350	110	80	0	0.78%	79 ***	55	24	0	0	0	0.0%		
Mid - Late Sept Coho	5,370	310	2,630	1,270	630	290	110	20	110	0.91%				28,000	10,650	10,594	3.0%		
October Coho	5,120	30	1,100	230	1,090	2,470	50	140	10	0.38%				40,000	18,413	17,885	1.5%		
Late Fall sturgeon	0	0	0	0	0	0	0	0	0	0.00%				0	0	0	0.0%		
Tributary Sport	8,260	0	0	4,530	3,730	0	0	0	0	-				3,000	10	0	0.1%		
Lower River Subtotal	81,720	16,660	22,400	17,470	6,570	9,420	3,820	530	4,850	7.80%	1,123	909	214	99,567	31,010	31,273	6.37%		
Sport (Bonn-Hwy 395 Br.)	1,910	0	1,300	0	0	170	440	0	0	0.45%				1,260		1,260			
Treaty Indian (Total)	154,148	70,860	66,130	-	-	3,458	13,700	-	-	23.04%	19,400	0	9,420 2,790 5,470 1,730						
Dam Counts																			
Bonneville Dam Passage	453,319	131,501	264,595	-	-	11,539	45,684	-	-		388,100	18,300	224,200 82,400 50,500 12,700	72,862		72,862			
McNary Dam	128,870	-	128,870	-	-	-	-	-	-										
Escapement																			
Hatchery	-	35,200	-	27,750	-	16,050	4,016	-	-										
(WA only)	-	-	-	14,530	-	-	-	-	-										
Natural (WA)	-	-	-	22,290	14,140	-	-	-	-										
Natural (OR)	-	-	-	11,480	3,360	-	-	-	-										
Surplus (WA only)		28,200	85,370	13,680 3,455	8,440	10,300	2,020	-	-										

* Includes all early fall commercial fisheries.
 ** Includes all recreational fisheries.
 *** Includes all late fall commercial fisheries and SAFE.