2010 JOINT STAFF REPORT CONCERNING STOCK STATUS AND FISHERIES FOR STURGEON AND SMELT

Joint Columbia River Management Staff

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

December 7, 2009

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INTRODUCTION

This report describes sturgeon and smelt fisheries in the mainstem Columbia River and includes summaries of stock status, current management plans and guidelines, and past management actions and strategies. Additionally, this report contains information concerning smelt abundance and fisheries in Columbia River tributaries.

This report is part of an annual series produced by the Joint Columbia River Management Staff of the Oregon Department of Fish & Wildlife (ODFW) and Washington Department of Fish & Wildlife (WDFW) prior to each major Columbia River Compact/Joint State hearing. The hearing for 2010 sturgeon and smelt management will begin at 10 AM, Thursday December 17, 2009 at the Cowlitz County Administration Building, 207 North 4th, Kelso, Washington. Members of the *US v Oregon* Technical Advisory Committee (TAC) have reviewed this report.

THE COMPACT

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

When addressing commercial seasons for Columbia River fisheries, the Compact must consider the effect of the commercial fishery on escapement, treaty rights, and the impact on species listed under the Endangered Species Act (ESA). Working together under the Compact, the states have the responsibility to address the allocation of limited resources between recreational, commercial and treaty Indian fishers. This responsibility has become increasingly demanding in recent years. The states maintain a conservative management approach when considering Columbia River fisheries that will affect species listed under the ESA.

SEASONS CONSIDERED

Because 2009 is the final year of the current Joint State Management Agreement (2006-2009 Accord) for white sturgeon and a new agreement will not be in place until February 2010 (pending guidance from the WFWC and OFWC), the December 17 Compact/Joint State hearing will only address the following mainstem Columbia River non-Indian fishing seasons: 1) winter commercial white sturgeon; 2) commercial and recreational eulachon smelt; and 3) recreational white sturgeon fisheries for January and February. Tributary commercial and recreational fisheries for eulachon smelt will also be considered by the states. Additionally, recreational sturgeon fishing regulations for January-February in the Willamette River may be considered by Oregon. Modifications to seasons adopted at the December 17 hearing and additional recreational and commercial white sturgeon seasons will be considered at future hearings following guidance from the Commissions in February 2010 and as additional information on fish runs and ongoing fisheries become available.

STURGEON MANAGEMENT AND FISHERIES DOWNSTREAM FROM BONNEVILLE DAM

Stock Status

Sturgeon abundance in the lower Columbia River collapsed at the end of the 19th century due to over fishing and remained depressed through the first half of the 20th century. The population began to rebound only after the adoption of management actions aimed at reducing overall harvest and protecting broodstock, particularly the 6-foot maximum size limit regulation enacted in 1950. Since that time, white sturgeon abundance in the lower Columbia River has increased significantly and the population is considered healthy enough to support recreational and commercial fisheries.

Joint state tagging and recovery programs were initiated in 1986 to provide data necessary to estimate the annual abundance of white sturgeon inhabiting the lower Columbia River. Abundance estimates, based on tagging conducted in one year and mark sampling extending into the following year, have been produced since 1987 with the exception of 1994 and 2004 (the estimates are referred to by the year of tagging). Abundance estimates for harvestable size fish (42-60 inches total length (TL) [1]) were generally low during 1988-1992 averaging 55,600 but improved significantly during 1993-1997 when average legal abundance was 169,200 (Table 1). The estimates from 1998 through 2005 were lower (132,400 average) but more stable, ranging between 121,600-140,700 fish. The most recent estimates have been more divergent with estimates of 123,400 fish for 2006, 135,400 fish for 2007, and 97,000 fish for 2008. A regression run on the 2005-2008 estimates results in a projection of 96,300 fish for 2009 (r^2 0.57, $P = 0.25$, $\alpha = 0.05$). Numbers of 42-48 inch TL white sturgeon declined from an average of 126,900 fish for 1996-2000 to an average of 91,600 fish for 2001-2008, while the number of fish between 48 and 60 inches TL increased from an average of 24,000 fish for 1996-2000 to 33,100 fish for 2001-2008. An alternative indicator of legal-size abundance, harvest per angler trip in recreation fisheries, remained relatively stable from 1995 through 2007, but declined 24% in 2008 from the previous 13-year average. Catch per angler trip of sublegal (<42 inches TL) white sturgeon has decreased annually since 2004 following eight years of mostly steady increases. By 2008, catch per angler trip of sublegal-size fish had dropped to half of the 1996-2006 average catch per angler trip.

A new and growing threat to white sturgeon population stability has been losses from predation by sea lions, especially losses of broodstock-size white sturgeon to Steller sea lion predation. Observers for the U.S. Army Corps of Engineers (Corps) report a steady increase in the number of Steller sea lions at Bonneville Dam, from zero animals in 2002 to 26 animals by 2009. Predation of broodstock-size fish observed by WDFW and ODFW employees in the vicinity of Beacon Rock peaked during December 2005 through March 2006, with over 50 kills reported. Activity then declined following initiation of a hazing program in March 2006 that successfully moved the Steller sea lions out of the area by early April. Hazing was initiated again in February 2007 and from December 2007 through May 2008 and from February through May 2009; however, these efforts were not as effective as in 2006. Crews were able to distract individuals from feeding, but they were not successful in driving them from the gorge. Hazing is scheduled for January-February 2010.

[1] *References to sturgeon length are in total length (inches) unless otherwise noted.*

The Corps observer program at Bonneville Dam has documented a steady increase in predation of all sizes of white sturgeon near the base of the dam. Estimated consumption of white sturgeon in this small area has increased from 413 fish in 2006 to 1,710 fish in 2009. Predation on smaller white sturgeon throughout the river by both Steller and California sea lions also appears to be increasing in frequency based on observations by staff and reports from anglers and commercial fishers. Loss of juvenile fish to predation may be impacting sublegal abundance and recruitment to fisheries. Loss of broodstock fish is expected to lead to lower population productivity and eventual reduced recruitment to fisheries.

Based on this information, the Joint Staff will likely recommend that the combined white sturgeon harvest guideline be reduced from the current guideline of 40,000 (36,800 actual harvest) beginning in 2010. Although a new guideline has not yet been developed, initial modeling indicates a reduction of up to 35% may be needed to compensate for reduced sublegal and legal abundance.

In 2008, ODFW initiated development of the Oregon White Sturgeon Management and Conservation Plan (WSMCP) for the lower Columbia River. Concurrent with ODFW's effort, WDFW is developing of a Comprehensive Statewide White Sturgeon Management Plan (CSWSMP) for Washington state waters. The intent is for both plans to be complimentary in addressing lower Columbia River white sturgeon management. The Oregon WSMCP will examine factors and threats that are limiting the abundance and productivity of lower Columbia River white sturgeon and identify critical unknowns and data gaps pursuant to these factors and threats. Population goals and objectives will be refined and strategies and actions will be developed to address the limiting factors and threats. A preliminary draft of the WSMCP is due to be completed in 2010.

Fishery Management Actions

Sturgeon fishery management focused on the commercial fishery during the early 1900's and expanded to encompass recreational fisheries beginning in 1940. Regulations for recreational and commercial fisheries became increasingly restrictive and complex as the popularity and importance of sturgeon as a target species increased for both fisheries.

Past Management Actions

Sturgeon management actions were initiated in 1899 with the adoption of a 4-foot minimum size limit for commercially-landed sturgeon. During 1899-1908, commercial sale of sturgeon was prohibited and beginning in 1909, commercial sturgeon sales were allowed during salmon seasons only. Between 1940 and 1989, fishery management actions primarily consisted of modifying catch limits for the recreational fishery and legal size restrictions for recreational and commercial fisheries. Most significant was the adoption of a 6-foot maximum size limit regulation in 1950. The purpose of the maximum size limit restriction was to protect broodstock and aid recovery of the Columbia River white sturgeon population. Additionally, commercial sturgeon setline seasons in place during 1975-1983 were discontinued.

Since 1989, lower Columbia River white sturgeon fisheries have been managed for optimum sustained yield (OSY). This management strategy is intended to optimize harvest while allowing for the continued rebuilding of the white sturgeon population. Significant management actions taken during 1985-1996 to restrict catch rates to sustainable levels included (1) increasing the minimum size limit in recreational fisheries, (2) reducing the maximum size limit in all fisheries, (3) reducing

daily and annual catch limits for recreational fisheries, and (4) adopting annual catch guidelines for commercial fisheries.

In 1985, recreational regulations allowed for a daily catch limit of three fish between 36 and 72 inches TL with no annual catch limit. Recreational catches dropped from a peak of 62,400 fish in 1987 to a low of 17,300 fish in 1990, primarily due to angling regulation changes. During the same period, commercial catches also dropped from a peak of 11,600 fish in 1986 to a low of 3,800 fish in 1991, due to reductions in fishing opportunities. The maximum size limit for all white sturgeon fisheries was reduced from 72 inches to 66 inches TL in 1993. In 1996, recreational regulations were further restricted with a daily catch limit of one fish between 42 and 66 inches TL and a ten fish annual catch limit. The maximum size limit for both fisheries was reduced from 66 inches TL to 60 inches TL in 1997. These regulation changes culminated in adoption of WFWC policy C-3001 on Lower Columbia Sturgeon Management and in a series of three-year Joint State Management Agreements (Accords) between Washington and Oregon that have guided Columbia River sturgeon management since 1997.

Joint State White Sturgeon Management Agreements

The Joint State agreements have contained a variety of fishery regulations including (1) size limits for recreational and commercial fisheries, (2) daily and annual catch limits for recreational anglers (3) gear restrictions for recreational and commercial fisheries, and (4) the allowance of target sturgeon seasons in the commercial fishery. The cornerstone of the agreement is the adoption of a three-year average harvestable number that ensures that fishery impacts do not exceed what is sustainable. This harvestable number has been allocated 80% for recreational fisheries and 20% for commercial fisheries since 1997.

The tenets of the agreements also allowed for modifications if new information suggested that a change was warranted. Since adoption of the first sturgeon agreement, additional management actions have been necessary. Abundance did not increase as expected during the first two years of the agreement, and based on this new information, the annual harvestable number was reduced from 67,300 white sturgeon to 50,000 fish for 1999 fisheries.

The ODFW and WDFW also adopted a no-fishing sanctuary just downstream from Bonneville Dam in 1996 to protect spawning white sturgeon. A boat-based catch-and-release fishery targeting over-legal size (oversize) fish had been intensifying in this area since 1990. Angling for sturgeon from boats was prohibited during May and June within this sanctuary, which extended 4.5 miles downstream to Beacon Rock. In 2000, this closure was extended through mid-July to provide additional protection to the broodstock population.

In December 2002, the WFWC and OFWC (Commissions) established sturgeon management protocol to help guide the development of recreational and commercial fisheries during 2003-2005. Due to the declining trend in abundance, the Commissions adopted a reduction in the harvestable number from 50,000 fish to 40,000 fish for 2003-2005. The harvest allocation was 32,000 fish for the recreational fishery and 8,000 fish for the commercial fishery. This reduction generated a conflict in season-shaping preferences among competing recreational interests for the areas downstream (estuary) and upstream (non-estuary) of the Wauna powerline crossing at River Mile 40. In addressing this issue, the Commissions differed on how to allocate the 32,000 fish recreational share, with the OFWC favoring a sharing formula that assigned 58% of the catch to the estuary fishery, while the WFWC favored a formula that assigned 65% of the catch to the estuary

fishery. In response, the Director's of ODFW and WDFW agreed to a one-year recreational fishery management package for 2003, while pursuing concurrence for the remaining two years. The one-year agreement allotted 60% of the recreational share to the estuary fishery and 40% to the non-estuary fishery. In early 2004, the Director's agreed to maintain the 2003 estuary/non-estuary sharing formula through 2005.

Work with the Columbia River Recreational Fisheries Advisory Group (CRRAG) had established that goals tended to differ for those who participated in the estuary fishery compared to those who participated in the non-estuary fishery. Proponents of the non-estuary fishery above the Wauna powerlines emphasized the importance of providing retention opportunity throughout as much of the year as possible and placed a special emphasis on the spring and fall timeframes. A days-per-week approach was adopted to achieve this, with retention allowed on Thursdays, Fridays, and Saturdays, and catch–and-release allowed on non-retention days. Retention was prohibited during August and September to ensure that the annual harvest guideline lasted through the fall timeframe.

Proponents of the estuary fishery emphasized the importance of providing retention opportunity seven days per week, and in achieving a retention season that lasted at least through July 4. To achieve this, the minimum size limit for this area was increased to 45 inches TL after April 2004 to slow catch rates in the estuary and prolong the retention season. This modification required the annual guideline for the estuary be reduced from 19,200 to 16,000 to maintain a comparable harvest rate.

Other changes to recreational fishery regulations enacted during 2004-2005 included reducing the annual limit from ten fish to five fish, requiring anglers to use one single-point barbless hook, and adoption of additional measures designed to protect broodstock white sturgeon. The duration of the fishing prohibition within the spawning sanctuary was extended through July, and the bank fishery was incorporated into the closure. Washington adopted a regulation extending the sanctuary boundary an additional 1.6 miles further downstream to U.S Coast Guard (USCG) Navigation Marker 85. Oregon did not adopt this change, and Washington rescinded the regulation in order to maintain concurrence with Oregon. Instead, the Joint State Agreement was modified to include a "Best Fishing Practices" program that identified angling practices designed to maximize post-release survival rates in the oversize catch-and-release fishery.

The adoption of the sturgeon retention management protocol for 2003-2005 commercial fisheries superseded previous agreements regarding Select Area fisheries, and beginning in 2003, Select Area sturgeon retention was managed consistent with the adopted protocol for commercial fisheries.

In 2006, the ODFW and WDFW adopted the Joint State Accord for a fourth consecutive three-year period covering 2006-2008. The major tenets from the 2003-2005 Agreement remained intact, including the 40,000 fish annual harvestable number (36,800 fish actual), the 80% recreational and 20% commercial allocation, and the 60% estuary and 40% non-estuary recreational sub-allocation. The Director's also agreed to modify the white sturgeon spawning sanctuary by moving the boundary 1.6 miles further downstream to USCG Navigation Marker 85 to provide additional broodstock protection. The agreement also called for basic monitoring of marine mammal predation of white sturgeon.

The maximum size limit for green sturgeon in the commercial fishery was lowered from 66 inches TL to 60 inches TL for 2006-2008 to provide additional protection to the species. However, the National Marine Fisheries Service (NMFS) listed the Southern Distinct Population Segment (DPS) of the North American green sturgeon (those spawning in the Sacramento River, California) as

threatened effective July 6, 2006. The states subsequently prohibited the commercial sale of green sturgeon from Columbia River commercial fisheries effective July 6, 2006 and retention in Columbia River recreational fisheries effective January 1, 2007.

The Joint State Accord on 2006-2008 Columbia River Sturgeon Management was renewed for one year (2009) to allow for development of the Oregon WSMCP and the Washington CSWSMP and refine a strategy for long-term lower Columbia River white sturgeon management.

Major Tenets of the Joint State Accord on Columbia River Sturgeon Fishery Management

2006-2008 plan extended through 2009

Management based on optimum sustained yield approach.

Plan can be modified in-season if new information suggests a change is warranted.

White Sturgeon

- ✓ Absent significant update, annual harvestable number averages 40,000 for the 3-year period.
- ✓ Allocation for fisheries in the lower Columbia River are: 20% commercial and 80% recreational.
  - 8,000 for commercial fisheries
  - 32,000 for recreational fisheries
- ✓ Commercial target seasons allowed as necessary to access allocation and maximize economic benefit consistent with conservation objectives for other species.
- ✓ Commercial size limit 43-54 inches fork length (48-60 inches TL).
- ✓ Recreational size limit is 38-54 inches fork length (42-60 inches TL) with one per day and five per year catch limits plus one single-point barbless hook is required.

Green Sturgeon

- ✓ Retention of green sturgeon is prohibited.

The following protocol, comprised of fishery objectives adopted in 2003 by the Commissions and harvest levels and allocations adopted by the Directors in 2003 and 2004, designed to guide recreational and commercial fishery management, were retained for 2006-2009 with only minor modifications.

Protocol for Regulations Regarding White Sturgeon Retention in Recreational Fisheries During 2006-2009.

Fishery Objectives

- ✓ Minimize emergency in-season action.
- ✓ Balance catch between estuary and non-estuary and maintain diverse recreational fishing opportunities.
- ✓ Maintain fishery monitoring and management capabilities.

Catch Guideline and Allocation

- ✓ Allocate the 32,000 catch guideline 60% (19,200 fish) for fisheries below the Wauna powerlines (estuary) and 40% (12,800 fish) for fisheries above the Wauna powerlines.
  - The estuary fishery will be managed with a 41-inch fork length minimum size limit instead of the 38-inch fork length minimum during the spring/summer retention season.
  - The spring/summer season is expected to begin the second Saturday in May and continue through July 4 or until the harvest guideline is achieved.

- The 19,200 fish harvest guideline for the estuary translates to 16,000 fish from 41-54 inches fork length.

✓ Retention restrictions include Youngs Bay and the Willamette River upstream to Willamette Falls.

Protocol For Management of White Sturgeon Retention in Commercial Fisheries During 2006-2009.

✓ Commercial fisheries should be managed to provide some level of white sturgeon harvest in each of the following seasons:
- Winter-spring season (January-June 15) to include sturgeon and salmon directed fisheries,
- Summer season (June 16-July 31),
- Early fall season (August),
- Late fall season (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 expectations or to provide white sturgeon for harvest during subsequent salmon seasons.

✓ Joint Staff will conduct an annual post-season evaluation of white sturgeon fisheries with industry.

Adjustments for Harvest Outside the Mainstem Columbia River

Harvest guidelines and allocations identified in the Joint State management agreements pertain specifically to harvest in the mainstem Columbia River (and Select Areas) downstream of Bonneville Dam. However, white sturgeon from the lower Columbia River migrate into, and are harvested in, various Columbia River tributaries and coastal estuaries. Harvest outside the Columbia is generally low, averaging 2.6% based on 1996-2007 tag recovery data but can be higher as observed in 1996 when tag recoveries from outside the Columbia River increased to 5.3%. During that year, harvest of white sturgeon along the coast correspondingly peaked at a level more than double the average harvest for the previous decade. This phenomenon was recognized as a concern, so the Columbia River harvest guideline identified in the original 1997-1999 Joint State Management Agreement was adopted with the contingency that it could change with a substantial increase in harvest outside the Columbia system. To assure that future harvest guidelines and allocations remained equitable, the Oregon and Washington Fish and Wildlife commissions adopted policy in the 2000-2002 and subsequent Joint State agreements, calling for management of sturgeon harvest outside the mainstem Columbia River to be consistent with Columbia River conservation and management needs.

The 2000 Willapa Bay Fishery Management Framework (plan) was developed to address the Joint State agreement policy. The Willapa Framework incorporated white sturgeon harvest guidelines for commercial and recreational fisheries based on the historic relationship between Willapa Bay and Columbia River harvest levels adjusted by the same 20% reduction made to the Columbia River guideline in 2003 resulting in a 1,769 fish guideline. Since adoption of the plan, non-Indian commercial harvest in Willapa Bay has declined; however, treaty harvest in Grays Harbor and tributaries has generally increased. Collectively, the combined harvest has remained fairly consistent since 1997.

Since 2004, there has been a significant shift in the winter and early spring recreational sturgeon harvest from the mainstem Columbia into the Willamette River. This shift may be due to warmer (2-5°F higher) winter water temperatures in the Willamette and generally poor smelt returns to the Columbia over the last several years that appear to be attracting more fish (and recreational fishers) to the Willamette River during January-May. Based on punch card and/or creel data, annual white sturgeon harvest in the Willamette River averaged 1,531 fish (range 989-2,206) during 1986-1996, 1,871 fish (range 1,263-2,811) during 1997-2003, and 4,626 fish (range 2,312-7,023) during 2004-2009. Due to lack of a year-round sturgeon creel program in the Willamette (March-June only prior to 2009), in-season adjustments to the above Wauna guideline to account for harvest in the Willamette River in excess of the baseline were not attempted except in 2004, when a 1,481 fish adjustment was applied to the above Wauna harvest to account for observed high harvest in the Willamette River (Table 3).

Because of this increasing trend, staff re-calculated harvest estimates (and adjusted guidelines) for the Willamette recreational fishery for 2003-2008 to account for harvest in excess of the 1986-1996 baseline level. These adjusted estimates for the Willamette River have been added to the above Wauna fishery to more accurately reflect the total recreational harvest for this river section. Based on information available from the ODFW creel survey and angler punch card data, these adjustments equate to an additional 246 fish in 2003; 2,510 fish in 2004; 1,087 fish in 2005; 2,152 fish in 2006; 4,641 fish in 2007; 5,798 fish in 2008, and 4,215 in 2009 (Table 3). Annual estimates for the Willamette were calculated by expanding the estimated harvest during months when the creel program occurred by the monthly distribution of catch based on year-specific punch cards. Since punch card data for 2008-2009 is not yet available, the annual catches in these years were projected using the 2007 monthly punch card catch distribution to estimate harvest for months when creel surveys did not occur (January–February and July-December in 2008; July-December in 2009). Staff will continue to review the methodologies developed for estimating sturgeon harvest in the lower Willamette River and may revise catch estimates as additional information becomes available. In addition, staff intends to continue monitoring coastal white sturgeon harvest trends as required in the Joint State agreement to determine if a similar adjustment is needed for fisheries occurring in these areas.

Sturgeon Fisheries

Reduced salmon fishing opportunities during the mid-1970's through the late 1990's greatly increased the popularity and importance of sturgeon for both commercial and recreational fisheries. The healthy white sturgeon population allowed the commercial industry to develop stable fisheries in a time when commercial salmon fishing opportunities had been drastically reduced. A similar lack of predictable recreational salmon fisheries, and increased recognition of white sturgeon as a sport fish have resulted in increased popularity of sturgeon angling since the mid-1980's. In recent years, reduced white sturgeon catch guidelines have impacted the stability of all Columbia River sturgeon fisheries.

Past Commercial Sturgeon Fisheries

Since the late 19th century, commercial catch of sturgeon remained very low until the mid-1940's. Catches did not exceed 5,000 fish annually until 1969 and have since exceeded 5,000 fish annually in all years except 1991. Catches peaked in the late 1970's and early 1980's with annual landings ranging from 9,400 to 22,800 fish. During the 1990's, catches ranged from a low of 3,800 fish in

1991 to a high of 13,900 fish in 1998 (Table 4). Since 1997, commercial sturgeon fisheries have been managed to remain within catch guidelines while maximizing economic benefit and achieving conservation objectives for other species. Annual plans for distribution of the commercial harvest allocation are developed with input from the Columbia River Commercial Fisheries Advisory Group (CRCAG), to provide more predictable commercial fishing opportunities throughout the year while maintaining optimum market value. Weekly landing limits have remained a valuable tool in maintaining consistent commercial fisheries since first adopted in 2002.

2009 Commercial Fishery

Commercial fisheries in 2009 harvested 7,737 white sturgeon (Tables 4 and 5). In-season protocols for management of white sturgeon retention in commercial fisheries during 2009 were developed based on input from the CRCAG and was adopted in December 2008 by the Compact. Fisheries were managed for white sturgeon catch expectations of 1,700 during the winter/spring timeframe and 600 white sturgeon allocated for the summer season. The early fall (August) season was allocated 2,000 white sturgeon and the remaining 3,300 fish were allocated to the late fall season. Any unused allocation from winter/spring/summer mainstem fisheries were to be re-distributed equally between the early fall and late fall fisheries. As in recent years, 400 white sturgeon were allocated to Select Area commercial fisheries, with a target 300 fish during winter/spring/summer seasons and 100 fish for the fall season.

Commercial fisheries in 2009 (Table 6) were initiated with a winter target sturgeon season consisting of six 24-hour and two 18-hour fishing periods between January 6 and February 13 in Zones 1-5. Gear regulations included a 9-inch minimum and 9¾-inch maximum (per permanent rule) mesh size restriction to target sturgeon and minimize the handle of spring Chinook and winter steelhead. Landings during the 2009 winter target sturgeon fishery were as expected, with a total catch of 1,697 white sturgeon landed compared to the planned 1,700. Weekly landing limits of 12 white sturgeon per vessel per week were used during the last four fishing periods.

Two 10-hour and one 4-hour commercial spring Chinook salmon fishing periods occurred during March 29 – April 14 in the area from the Hayden Island Powerlines upstream to the commercial fishing boundary at Beacon Rock. Gear was limited to 4 ¼-inch maximum mesh tangle-nets with other live-capture rules in effect. Sales of sturgeon were allowed throughout the salmon fishery with no weekly landing limits. A total of 21 white sturgeon were landed during the spring fishery, bringing the mainstem winter/spring season sturgeon catch total to 1,718 fish.

The commercial summer Chinook gill net fishery consisted of one 12-hour nighttime fishing period on June 18 (Zones 1-3), and two 10-our nighttime fishing periods on June 24 and June 30 (Zones 1-5). The fishery was restricted to the use of 8-inch minimum mesh size to reduce the handle of steelhead and sockeye. The weekly white sturgeon landing limit was five per vessel per week for summer fishing periods. During this fishery, 624 white sturgeon were landed.

Select Area winter-summer commercial fisheries did not require in-season action to manage harvest to the 300 fish guideline for these fisheries. The five white sturgeon (per vessel per week) landing limit used in recent years was maintained for 2009 resulting in a harvest of 311 white sturgeon for winter-summer fisheries.

The early-August mainstem commercial fishery consisted of two 12-hour fishing periods (August 4 and 6) in Zones 1-5 and one 12-hour period (August 9) in Zones 2-5. The weekly landing limit was nine white sturgeon per vessel per week and gear was restricted to 9-inch minimum mesh size to

minimize the handle of summer steelhead. An estimated 2,213 white sturgeon were landed in early-August mainstem commercial fisheries.

The late-August season included two 10-hour fishing periods on August 18 and August 20 in Zones 3 (upstream of the Kalama River) through 5 with a 9 fish weekly landing limit. One additional period occurred in Zone 5 only on August 25, with a three white sturgeon weekly landing limit. All late-August seasons were limited to 9-inch minimum and 9¾-inch maximum mesh gear. Catch in these periods was 756 white sturgeon, bringing the August total to 2,969 fish.

Late fall fisheries began on September 24 and were completed on October 28. Fisheries through mid-October mainly targeted Chinook and white sturgeon, while late October fisheries provided opportunity for Chinook, coho, and white sturgeon. Weekly landing limit during the late fall season ranged from 5-8 fish per vessel through October 23, after which retention was prohibited (Table 6). The mainstem sturgeon catch for late-fall totaled 2,001, and the total mainstem sturgeon catch for 2009 was 7,312 fish (Table 6).

Retention of white sturgeon was allowed in SAFE fisheries during the early fall season, but was prohibited after September 6 to remain within the annual 400 fish SAFE target. Fall Select Area fisheries harvested 114 white sturgeon, bringing the total 2009 Select Area harvest to 425 fish, or 106% of the annual target.

A preliminary total of 7,737 white sturgeon were landed in combined commercial fisheries in 2009 (Tables 4 and 5). Mainstem fisheries landed 95% of the white sturgeon catch (7,312 fish) while Select Area fisheries landed 5% (425 fish).

Mainstem Commercial Seasons Harvesting White Sturgeon During 1997-2009.
Winter
1997-2002: Two 30-hour fishing periods per week from the 2nd week of January through mid-February (Zones 1-5).
2003: Three 30-hour fishing periods (one per week) followed by one 12-hour period. January only (Zones 1-5).
2004: Five 24-hour fishing periods from mid-January through mid-February (Zones 1-5).
2005: Seven 24-hour fishing periods from January through late February (Zones 1-5).
2006: Ten fishing periods from January-February (Zones 1-5). Seven were 24 hours and three were 12 hours.
2007: Nine fishing periods from January-February. Seven were 24 hours and two were 18 hours (Zones 1-5).
2008: Eleven fishing periods from January - February. Six were 24 hours and five were 18 hours. Three openers were restricted to portions of Zones 4-5 and the remainder occurred in Zones 1-5.
2009: Eight fishing periods from January – February (Zones 1-5). Six were 24 hours and 2 were 18 hours. Landing limit of 12 during the last 4 periods. Sturgeon catch also occurs in spring Chinook fisheries. Annual protocol adopted for the Winter/Spring season typically includes 200 sturgeon be set aside for these fisheries. In 2008 and 2009, spring fishing was restricted to the area above the Hayden Island powerlines. Catches of sturgeon in these areas during spring is very low. Accordingly, in 2009, no specific guideline was set aside for the spring fishery, and only 21 white sturgeon were landed. In most years, weekly landing limits for sturgeon are not utilized in winter fisheries.
Summer
2004: Two 12-hour fishing periods during late June and early July targeting sockeye and summer Chinook.
2005: Six 10-hour fishing periods during late June through late July targeting summer Chinook.

2006: Three 10-hour and ten 12-hour fishing periods from late June through July 31 targeting summer Chinook. Retention of green sturgeon in commercial fisheries was prohibited effective July 6, 2006.

2007: Two 10-hour fishing periods in late June and early July targeting summer Chinook. Weekly limit 5 white sturgeon per vessel per week.

2008: Three 10-hour fishing periods in late June and early July targeting summer Chinook. A 6-hour target sockeye fishery also occurred in Area 2S on June 30, 2008. Weekly limit 5 white sturgeon per vessel per week.

2009: One 12-hour fishing period on June 18 and two 10-hour fishing periods on June 24 and 30 targeting summer Chinook. Weekly limit 5 white sturgeon per vessel per week.

Early August

1998-2001: One 12-hour fishing period below Longview Bridge targeting sturgeon during the first week of August.

2002: Three fishing periods with a five white sturgeon per vessel per day limit. Possession and sales prohibited during the final two fishing periods.

2003-2005: Four 12-hour Chinook fishing periods each year in Zones 1-5.

2006: Six fishing periods in all or portions of Zones 1-5. Weekly landing limits ranged from five to seven white sturgeon per vessel.

2007: Three early August periods of 12 hours each in Zones 1-5. Weekly landing limits were 12 white sturgeon per vessel.

2008: Five fishing periods (four in Zones 1-5 and one in Zones 2-5). Weekly landing limits were 10 white sturgeon per vessel per week.

2009: Three 12-hour fishing periods (two in Zones 1-5 and one in Zones 2-5).

Late August

1997-2003: Target Chinook seasons in Area 2S or expanded Area 2S during late August. White sturgeon catch this was typically low.

2004-2005: Four fishing periods during mid to late-August with varying area and possession limit restrictions.

2006: One fishing period in Zones 3-5, and one in Zones 4-5 (upstream of the I-205 Bridge). Weekly landing limits were seven white sturgeon.

2007: One 11-hour fishery in Zones 4-5 with a three white sturgeon per vessel weekly landing limit.

2008: Two fishing periods in Zones 4-5, with a weekly landing limit of three white sturgeon per vessel.

2009: Two 10-hour fishing periods in Zones 3-5 (upstream of Kalama River) with a weekly landing limit of nine white sturgeon and one 10-hour period in Zone 5 only with a weekly landing limit of three white sturgeon.

Late Fall

Fisheries occur during mid-September through the end of October and include both salmon- and sturgeon-directed fisheries. Salmon seasons vary depending on run sizes and available impacts for listed species. Target Chinook and/or coho fisheries occur throughout the late fall timeframe while target sturgeon seasons most often occur during October, if sturgeon remain available on the quota.

1997-2000: Target fall sturgeon seasons occurred.

2001: Sturgeon sales prohibited in late-fall due to high landings earlier in the year.

2002: A five white sturgeon per day per vessel possession and sales limit was in effect for nearly the entire late fall season except for the final 3-day fishing period when sturgeon possession and sales were prohibited.

2003: Sturgeon possession and sales limits ranged from three to nine per vessel per week.

2004: Sturgeon possession and sales limit of five white sturgeon per vessel per week was in place for most of the late fall period, but was increased to ten fish during the final three fishing periods.

2005: Sturgeon possession and sales limits ranged from three to 15 fish per vessel.

2006: White sturgeon possession and sales limits were maintained at eight white sturgeon per week per vessel when

retention was allowed.

2007: White sturgeon possession and sales limits ranged from 7-12 white sturgeon per vessel through October 5 after which white sturgeon sales in the mainstem were prohibited.

2008: Most fishing periods occurred in Zones 4-5, however, some fishing did occur in all or portions of Zones 1-3. Sturgeon sales were allowed in all periods, with weekly landing limits of 10 fish per vessel through October 3, followed by three fish landing limits thereafter.

2009: Most fishing periods occurred in Zones 4-5, however, some fishing did occur in all or portions of Zones 1-3. Sturgeon sales were allowed through October 23, with weekly landing limits ranging from 5-8 fish per vessel. Sales were prohibited after October 23.

Past Recreational Sturgeon Fisheries

Recreational fisheries for white sturgeon were managed for average annual harvest guidelines of 54,000 fish (42-60 inches TL) during 1997-1998, 40,000 fish during 1999-2002, and 32,000 fish during 2003-2009. Beginning in 2003, the recreational harvest of white sturgeon below Bonneville Dam has been allocated 60% (19,200 fish) to the estuary fishery and 40% (12,800 fish) to the non-estuary (above Wauna) fishery. Beginning in 2004, the estuary guideline was reduced to 16,000 fish as a result of raising the minimum size limit to 45-inches TL during the summer retention season in an effort to prolong the duration of the fishery (Table 7). Also beginning in 2004, the popularity of the recreational sturgeon fishery in the Willamette River experienced unprecedented growth above the historic baseline period of 1986-1996, when the average annual harvest was about 1,530 sturgeon. Since most of the Willamette catch information was derived from punchcards, it took several years for managers to become aware of the magnitude of the increase in the Willamette River sturgeon catch, but ultimately resulted in re-calculating harvest for the recreational fishery above Wauna during 2003-2008.

The management agreement in effect for 2006-2008 specified that recreational fisheries remain within average annual guidelines of 16,000 white sturgeon for the estuary and 12,800 for the non-estuary. At the end of the three year period, the total catch in the estuary fishery was 48,471 compared to the guideline of 48,000, and the total catch in the non-estuary fishery including adjustments for the Willamette was 39,770 compared to the guideline of 38,400 (Table 3). At the end of 2008, the states opted for a one-year rollover of the 2006-2008 management agreement for 2009 sturgeon fisheries in light of many complex issues which needed to be addressed before both states felt comfortable moving ahead with another three-year agreement. Among these issues were the unprecedented increase in sturgeon catches in the Willamette River, river-wide decrease in CPUE for both legal size and sublegal sturgeon, increased predation on sturgeon of all sizes by sea lions (and particularly on oversize sturgeon), and a new white sturgeon conservation plan being developed by ODFW. The cumulative overage in catch of 1,841 from the 2006-2008 guidelines was carried into the new agreement resulting in guidelines of 15,529 for the estuary fishery and 11,430 for the fishery above Wauna in 2009.

2009 Recreational Sturgeon Fishery

Recreational fishery options were considered at the December 18, 2008 Joint State hearing when the states adopted sturgeon fishing regulations for 2009. Based on the expected guideline, the states adopted a three-day per week retention season (Thursday-Saturday) during January 1-July 31 and October 1-December 31 for the fishery above Wauna (Table 7). Based on the guideline of 15,529 for the estuary, the states adopted a summer retention season during May 9-June 28 and June 2-5 for 2009 (Table 7). The states also adopted a fork length measurement technique for white sturgeon in

2009 because it is a more precise method of measuring sturgeon. As a result, the slot limit for legal size fish was adjusted from 42-60" TL to 38-54" fork length (FL) to reflect the new measuring technique.

Above Wauna (non-Estuary)

The Columbia River above the Wauna power lines (River Mile 40) including all adjacent Washington tributaries and the Willamette River downstream from Willamette Falls including Multnomah Channel was open to the retention of sturgeon three days per week (Thursday-Saturday) during January 1-July 31 and October 1-December 31. Sturgeon retention was prohibited four days per week (Sunday-Wednesday) during January 1-July 31 and October 1-December 31, and everyday during August 1-September 30. Catch-and-release angling was allowed during all retention closures.

The 2009 recreational fishery above Wauna started slowly with only 160 sturgeon landed from 7,305 angler trips through the end of April. Similar to the start of the 2004-2008 seasons, cold water temperatures and a poor smelt return contributed to the very low catch rates, and anglers concentrated their efforts in the Willamette River where catch rates were higher. Catch rates in the Columbia River improved during May when anglers caught 1,634 sturgeon from 13,535 trips as sturgeon began their migration to the estuary. Catch rates declined again during June and July, and the cumulative catch was only 2,152 sturgeon through the end of July, the second lowest catch total on record (back to 1977). Because catches were again high in the Willamette River, the states did not provide any additional opportunity in the recreational fishery above Wauna during the August-September closure.

When the non-estuary fishery reopened in October, angler effort and catch rates were the highest of the year, with a preliminary catch estimate of 2,168 white sturgeon from 16,083 angler trips. During November, the projected catch and effort totals were 600 white sturgeon kept from 7,000 angler trips with an additional 100 fish expected to be caught in December. The total catch for the 2009 fishery above Wauna is projected to be 5,020 white sturgeon from 63,900 angler trips.

The 2009 preliminary Willamette River sport catch of 5,440 is 4,215 fish above the 1986-1996 adjusted baseline (1,225), based on February-June 2009 creel data expanded for the proportion of catch outside the creel program. Given the Willamette harvest adjustment, the total catch in the recreational fishery above Wauna is projected to be 9,235 white sturgeon for 2009, or 81% of the 11,430 white sturgeon harvest guideline (Table 3).

Below Wauna (Estuary)

Regulations allowed sturgeon retention seven days per week during January 1-April 30, May 9-June 28, and July 2-5. For the May 9-June 28 and July 2-5 retention seasons, the minimum size limit was increased from 38" to 41" FL (Table 7). Sturgeon retention below Wauna was prohibited during May 1-8, June 29-July 1, and July 6- December 31 (catch-and-release angling was allowed during all retention closures).

The recreational sturgeon season below Wauna began slowly with no catch through the end of April from 289 angler trips. Effort was high when the estuary fishery reopened on Saturday May 9, but catch rates were somewhat below expectations averaging 0.14 fish/angler for the month. The final catch for May in the estuary was 1,125 white sturgeon from 8,118 angler trips. Angler effort continued to build during June with a peak count of 694 private and 24 charter boats on Saturday

June 13, and catch rates improved to 0.31 fish/angler during the month compared to 0.39, 0.42, and 0.27 fish/angler in 2006, 2007, and 2008 respectively. The catch during June 1-28 was 8,593 white sturgeon from 30,978 angler trips.

Effort and catch remained high in the estuary during the July 2-5 retention period, with a total catch of 1,338 white sturgeon from 4,725 angler trips. The cumulative catch at the end of the estuary retention season was 11,056 white sturgeon, which left a balance of almost 4,500 fish on the guideline of 15,529.

On July 7, 2009 the states met to add retention days to the estuary sturgeon fishery. Catches had averaged about 350 white sturgeon per day during late June and then dropped to about 325 per day during July 2-5; however, in 2008 catches ballooned to 684 fish per day during the extended (July) fishing season. Cautious not to exceed the management guideline, the states adopted six additional days of sturgeon retention during July 10-12 and 17-19. Other size and bag limit regulations remained the same as during May 9-July 2.

Catch and effort during the additional retention days were well below expectations with an estimate of 1,536 sturgeon kept from 5,537 angler trips for both fishing periods. The states met again on July 21 and proposed six additional fishing days on July 24-26 and July 31-August 2. The states adopted the retention period for July 24-26, but cited concerns about low sublegal and legal catch rates as well as noting the estuary fishery had "met objectives" established at the beginning of the year and did not adopt the July 31-August 2 fishing period. The catch for July 24-26 was 517 white sturgeon from 1,722 trips, which brought the total catch for July to 3,391 white sturgeon from 11,984 angler trips. No additional time was added to the estuary sturgeon fishery in 2009, although the states did consider the option at a joint state hearing on July 29.

The total catch for the 2009 estuary fishery was 13,109 white sturgeon kept from 51,385 angler trips, or 84% the harvest guideline of 15,529 white sturgeon (Table 3) and the lowest catch since 1991. The estimated handle of green sturgeon in the estuary during 2009 was six fish kept (as a result of misidentification) and 255 fish released, which was the highest handle of green sturgeon since 1986.

Summary of 2009 Recreational Harvest

The total recreational catch estimate for the mainstem Columbia River below Bonneville Dam in 2009 is projected to be 18,129 white sturgeon from 115,241 angler trips, which is the lowest catch since 1990. The 2009 recreational catch is projected to be 33% (6,000 fish) in the 3-4 foot TL size class and 67% (12,100 fish) in the 4-5 foot TL size class, as compared to the 2001-2008 averages of 62% and 38%, respectively (Table 8). An additional 4,215 white sturgeon in excess of background levels were estimated to be harvested from the Willamette River, for a combined total of 22,344 fish or 83% of the 26,959 fish guideline for 2009 (Tables 2, 3 and 5).

2010 Non-Indian Sturgeon Fisheries Expectations

With the 2006-2009 Joint State sturgeon management agreement expiring and the need to develop a new agreement, the Joint Staff has not developed proposals for 2010 fisheries at this time. The Joint Staff are recommending that the current four-year sturgeon management agreement be renewed for one year (2010) with modifications to the harvest guideline. The WFWC is scheduled to make a decision on policy guidance for sturgeon management at the February 5-6 Commission meeting and the OFWC is scheduled to do same at their February 5 meeting. Because a new Accord for 2010 will not be available until February 2010, Joint Staff sturgeon fishery recommendations will likely

be limited to winter commercial and January-February recreational fisheries at the December 17, 2009 Compact/Joint State hearing to bridge the period prior to Commission guidance. Recreational and commercial fishing seasons for the remainder of the year will be considered at the February 18, 2010 Compact/Joint State hearing.

Commercial Fisheries

In accordance with the commercial white sturgeon retention protocol, a post-season meeting occurred on November 19, 2009 to evaluate the currently adopted protocol and discuss fishing plans for 2010. Based on the results of this meeting and follow-up conversations with commercial fishers, the Joint Staff will recommend rules for the winter sturgeon fishery at the December 17, 2009 Compact hearing.

Recreational Fisheries

The Joint Staff has not developed formal proposals for the 2010 recreational fishery at this time. In preparation, the Joint Staff has met with the public (November 5, 10, and 12) and with the CRRAG (October 13 and November 18) to discuss 2010 white sturgeon fishery options considering the potential for a reduced harvest guideline. The Joint Staff will likely recommend recreational fisheries for January and February 2010 at the December 17, 2009 Compact/Joint State hearing. Recreational fishing seasons and rules covering the remainder of the year will be considered at the February 18, 2010 Compact/Joint State hearing.

Fork Length

Effective January 1, 2009, Oregon and Washington converted from a TL to a FL measurement standard for all non-Indian fisheries. The conversions for current slot measurements are as follows:

42-inch TL = 38-inch FL
45-inch TL = 41-inch FL
48-inch TL = 43-inch FL
60-inch TL = 54-inch FL

STURGEON MANAGEMENT AND FISHERIES UPSTREAM FROM BONNEVILLE DAM

Stock Status

The healthy white sturgeon population in the lower Columbia River historically ranged into areas above the current location of Bonneville Dam; however, with the construction of Bonneville Dam in 1938, the population became segregated and fish residing upstream could no longer migrate freely between freshwater and marine environments. The population became further segregated with the completion of McNary Dam in 1953, The Dalles Dam in 1957, and John Day Dam in 1968, resulting in functionally separate populations in Bonneville, The Dalles, John Day, and McNary pools. Inaccessibility to the marine environment and habitat alterations, primarily due to hydroelectric development, has rendered these populations less productive than those residing below Bonneville Dam.

Abundance of white sturgeon populations in each of the three Zone 6 reservoirs (between Bonneville and McNary dams) is estimated every three years to monitor the effects of hydro-system operations and fishery management strategies. Mark-recapture population estimates are derived using directed sampling with gill nets and setlines. Significant harvest reductions were enacted beginning in 1988 and populations in all three reservoirs increased as a result of reduced catch and other mitigation efforts. The most recent assessments estimated the abundance of three- to six-foot TL sturgeon to be 42,100 in Bonneville Reservoir (2006), and 26,600 in John Day Reservoir (2007), and 80,900 in The Dalles Reservoir (2008); Table 10).

Fishery Management Actions

The Sturgeon Management Task Force (SMTF) consists of representatives from Oregon, Washington, and the Columbia River treaty Indian tribes (Nez Perce, Umatilla, Warm Springs, and Yakama). The SMTF was formed in 1987 in response to concerns over increasing catch rates (non-Indian recreational and treaty Indian commercial and subsistence) and declining white sturgeon abundance in the Zone 6 area. The purpose of the SMTF is to review the status of sturgeon and provide harvest management recommendations for fisheries occurring in the Zone 6 management area.

The current harvest allocation is approximately 40 percent recreational and 60 percent treaty for Zone 6, although reservoir-specific guidelines are shaped to meet fishery demands. The recreational fishery is allowed a greater share of the Bonneville Pool catch, while the treaty Indian fishery is allowed a greater share of the catch in The Dalles and John Day pools. Treaty Indian fishers may continue to take sturgeon for subsistence purposes after commercial seasons have been completed, and this catch is not included in the commercial catch guidelines. Subsistence catch is estimated through a monitoring program conducted by the Yakama Indian Nation, and for the past decade has averaged 290 sturgeon annually (Table 11).

Sturgeon Fisheries

Sturgeon fisheries in Zone 6 consist of treaty-Indian commercial and subsistence fisheries and non-Indian recreational fisheries. Non-Indian fishing is restricted to hook-and-line recreational fishing only, while treaty Indian commercial fishing is conducted with three types of gear: hook-and-line, setlines, and gill nets.

Each year, the Columbia River Compact and the tribes set specific seasons for commercial gillnet fisheries (Table 12). Under permanent regulations, treaty setline fisheries are open in all three Zone 6 reservoirs during January 1-31. Setline seasons target sturgeon, while gillnet seasons usually target steelhead; however, in recent years the winter gillnet season has shifted to a target sturgeon season due to poor prices for steelhead. Treaty Indian subsistence seasons are open the entire year, as were recreational seasons prior to 1994. Since 1994, the sturgeon recreational fishery and treaty Indian commercial fisheries have been managed under reservoir-specific quotas. Catch-and-release recreational fishing is allowed once recreational quotas are reached (Table 13).

2009 Fisheries

Fisheries occurring in Zone 6 during 2009 included treaty subsistence, treaty Indian commercial setline and gillnet, and non-Indian recreational fisheries. Zone 6 commercial and recreational fisheries were managed in accordance with catch guidelines set forth by the SMTF (Table 14). In 2009, the size limits for all fisheries changed from TL to equivalent FL:

Bonneville Reservoir

Commercial: 38-54” FL (45-60” TL from 2004-January 2008 and 42-60” TL thereafter)

Recreational: 38-54” FL (previously 42-60” TL)

The Dalles and John Day reservoirs:

Commercial and Recreational: 43-54” FL (previously 48-60” TL)

2009 Setline Fisheries

The treaty Indian winter setline fishery produced no sturgeon landings in any of the Zone 6 pools. In the subsequent summer setline fishery which occurred in The Dalles Pool only, 31 sturgeon were landed (Table 15).

2009 Gillnet Fishery

The treaty Indian winter gillnet season commercial fishery was open from February 2-13 in Bonneville Pool, and February 2-March 6 in The Dalles and John Day pools. These seasons resulted in landings of 409 sturgeon in Bonneville Pool, 868 sturgeon in The Dalles Pool, and 325 sturgeon in John Day Pool which were 102 %, 87% and 97%, respectively, of the guidelines (Table 15). The summer setline fishery increased landings in The Dalles to 899 (90% of guideline), bringing the total tribal commercial catch for 2009 to 1,633 (94% of the combined Zone 6 treaty guideline).

2009 Subsistence Fishery

Treaty Indian subsistence sturgeon fishing is open year-round, with sanctuary closures around dams and tributaries. The subsistence fishery catch in 2009 is estimated to be 216 fish, or 74% of the 2000-2009 average of 290 white sturgeon (Table 11).

2009 Recreational Fishery

Recreational retention seasons for each Zone 6 pool began January 1 and remained open until catch guidelines were reached. Retention of fish was allowed through June 5 in Bonneville Pool, through April 18 in The Dalles Pool, and through April 12 in the John Day Pool (Table 13) with preliminary catches of 697, 232, and 148 fish, respectively. The combined Zone 6 recreational catch of 1,077 was 92% of the combined guideline of 1,165 white sturgeon (Table 14).

2010 Zone 6 Sturgeon Fisheries Expectations

As per permanent regulations, treaty Indian commercial setline seasons are scheduled for January 1-31, 2010. The SMTF is expected to meet January 19, 2010 to review 2009 harvests, the 2009 stock assessment in Bonneville Pool, and to discuss management options for 2010, including catch guidelines. In January, the tribes are expected to propose winter season commercial gillnet fisheries to begin in early February. As per permanent regulations, Zone 6 recreational seasons are presently scheduled to begin January 1, 2010 and continue until guidelines are met. Given the recent early closures in the John Day Pool recreational fishery, there has been interest in alternative season structures. Staff conducted a public meeting in Umatilla, OR on November 12, 2009 to discuss sturgeon populations and season alternatives for John Day Reservoir. Input was mixed regarding whether a change in season structure was needed.

SMELT MANAGEMENT AND FISHERIES

Stock Status

Eulachon smelt annually return to the Columbia River, at 3, 4, and 5 years of age, to spawn in the mainstem Columbia River and its tributaries downstream of Bonneville Dam. The fish typically enter the Columbia River in early to mid-January, though a small 'pilot' run may occur in December. Smelt typically spawn every year in the Cowlitz River, with inconsistent runs and spawning events occurring in the Grays, Elochoman, Lewis, Kalama, and Sandy rivers. Peak tributary abundance is usually in February, with variable abundance through March, and an occasional showing in April.

Adult Returns

The smelt fishery can be traced back to the late 1800's and landings can be used to index relative annual abundance. Although commercial landings are not applicable for developing annual population estimates because they are influenced by consumer demand, season structure, and environmental conditions, they do provide a useful measure of the relative annual run strength (Tables 16 and 17). Commercial landings from 1938-1992 were in the millions of pounds annually. In 1993, smelt strayed to many Washington coastal streams and bays due to cold Columbia River water temperature, and only 500,000 pounds were landed in the Columbia River Basin. Landings in 1994 were only 43,000 pounds, and beginning in 1995, fishery restrictions were enacted. Commercial harvest improved significantly in 2001, and stayed strong through 2003, when total landings exceeded a million pounds. The catch per unit effort and landings dropped sharply in 2004, with landings for 2005 reaching an all time low of around 200 pounds. A similar precipitous drop occurred in the 2005 Canadian Department of Fisheries and Oceans' (CDFO) New Westminster eulachon test fishery and in 2006 the northern British Columbia (BC) stock (e.g. Skeena River), and central BC stock (e.g. Bella Coola River) groups collapsed as well as the southern stocks (Fraser River and Columbia River). The low landings (Table 16) and catch per unit effort (Table 17) during 2005-2007 suggests poor production for all components (Age 3-5) of the 2010 run.

Juvenile Production

Beginning in the early 1990's, a more direct measure of brood-year strength was developed—one based on the density of emigrating smelt larvae averaged across stations and depths at selected index sites below spawning areas in the mainstem Columbia River and key lower tributaries (Table 18). Beginning in 2003, multiple collections throughout the out-migration season were conducted at the Price Island and Clifton Channel sites, which provide the data necessary to identify the peak timing and duration of the out-migration from the bulk of the production areas. The record low larval densities during 2005 suggest very poor production for the Age 5 component of the 2010 run. The poor larval densities during 2006 and 2007 suggest poor production for the Age 4 and 5 components of the 2010 run, respectively (Table 18). Good productivity has not always corresponded to high returns, and poor ocean conditions during any part of the smelt's marine life-stage may negate favorable spawning and out-migration conditions (implied by high larval densities). For example, 2004-2008 returns were poor, despite good 2000-2003 larval production.

Ocean Survival

All Oregon/Washington/British Columbia stock groups have remained depressed since the 2006 coast-wide collapse, suggesting that protracted poor ocean conditions were prevalent along the whole West Coast of North America. Scientists have developed various indices of oceanic environmental conditions. Of these, the Pacific Decadal Oscillation (PDO) Index and the Southern Oscillation Index (SOI) are useful in estimating how well smelt survive their ocean-phase.

The PDO is an index based on North Pacific sea surface temperature and pressure that correlates with changes in northeast Pacific marine ecosystem productivity. Warm PDO eras have coincided with enhanced coastal ocean biological productivity in Alaska and inhibited productivity off the west coast of the contiguous United States, while cold PDO eras have coincided with the opposite pattern. Pacific climate changes observed from late 1998 through early 2002 indicate favorable productivity in the coastal waters where eulachon migrate. These conditions, especially during the first year of ocean residency, would improve larvae-spawner survival rates. The increased eulachon returns to the Columbia River during 2001-2003 support this hypothesis; however, this relationship did not hold true during 2004-2008. Consistent warm ocean conditions between late 2002 and late 2004 probably had greater impacts on survival of the 1999-2003 broods than anticipated. While October-December PDO indices were cool, the annual average PDO indices for 2004-2006 were warm. This could be unfavorable for the Age 4 and 5 components of the 2010 run to the Columbia River. Starting in 2007, ocean conditions cooled; however, it is unlikely that this will make up for the loss from the previous warm periods. Since the ocean has remained cool during 2008 and 2009 (though trending toward warm in recent months), the Age 3 (Brood Year 2007) component may survive better than Age 4 and 5 run components.

Recent trends in eulachon abundance also follow the SOI, which describes El Niño and La Niña events. In 1977, the index changed from a regular oscillation of El Niño and La Niña anomalies to fairly persistent El Niño conditions continuing through 1988. Eulachon returns were variable during this time. The period of 1990-1998 was dominated by extreme and persistent El Niño conditions, and during this time eulachon returns declined precipitously. Eulachon returns to the Columbia River remained at record low levels during 1993-2000. Beginning in 1998, La Niña conditions developed, and eulachon returns began increasing in 2001, in response to improved ocean rearing conditions. The sharp decline (1993-2000) and subsequent increase (2001-2003) in spawner abundance follow the onset of persistent El Niño and La Niña conditions by about three to four years, which is the dominant life cycle of eulachon. Unfavorable El Niño conditions returned in April 2001, and have persisted through early 2007. This may explain the poor returns in 2004-2008. These unfavorable ocean conditions through early 2007 will likely impact the survival of the 2006 and 2005 broods that will comprise the Age 4 and 5 components of the 2010 run. Starting in 2007 a favorable, but weak, La Niña condition developed. However, in 2009, there has been a shift back to a weak El Niño condition. This could be detrimental to all components of the run, and puts into question the somewhat positive ocean survival prospects for the Age 3 run component implied by the PDO index discussion above.

A more direct measure of ocean survival of smelt can be obtained from marine harvest data. Columbia River smelt are caught in the spring shrimp fisheries off the West Coast of Vancouver Island (WCVI); therefore, bycatch and test fishery information gathered by the CDFO during their annual spring shrimp surveys can be used as an indicator of Columbia River returns. Estimates of smelt bycatch biomass in the WCVI shrimp fisheries during 2005-2008 have been a degree of magnitude less than those for 2000-2004 (Table 19), which imply that the winter 2010 returns of

smelt to the Columbia River will be small. However, there was a slight improvement in the biomass indices in 2009, which imply that Age 3 returns might be fairing better then Age 4 and 5 returns.

Smelt Fishery Management

Joint State Eulachon Management Plan

Beginning in 1999, the Washington and Oregon Departments of Fish and Wildlife began work on a Joint State Eulachon Management Plan to guide all aspects of smelt management for future years. During 1999, WDFW and ODFW developed an interim Eulachon Management Plan to guide fishery management decisions in 2000, because a draft plan had not been completed prior to adoption of recreational and commercial fishing seasons for that year.

In 2001, the WDFW, with input from ODFW, completed the final eulachon management plan (WOEMP) which contains recommended policies concerning smelt fishery management. These policies are wise-use management precepts that are consistent with the need to maintain an ecosystem approach to resource decisions. The ecological importance of eulachon is underscored in much of the body of research in the Northeast Pacific ecosystem, and should be a fundamental consideration when making fishery management decisions affecting the health of this resource.

Policy Recommendations for Eulachon Conservation and Fishery Management from the Washington and Oregon Eulachon Management Plan

Conservation Policy

- ✓ Maintain healthy populations of eulachon while assuring the integrity of the ecosystem and habitat upon which they depend.
- ✓ Management actions will consider the role of eulachon in both the marine and freshwater ecosystems and the need to maintain sufficient populations of eulachon for proper ecosystem functioning.
- ✓ A precautionary approach to resource management shall be utilized.
- ✓ Consider the best scientific information available and strive to improve the information base for eulachon.

Fishery Management Recommendations

- ✓ Maintain commercial and recreational fishing opportunity in the lower Columbia River, to include opportunities in both mainstem and tributaries for both fleets.

The management plan includes recommendations concerning fisheries occurring in the mainstem Columbia River and its tributaries below Bonneville Dam. Fishery recommendations have been separated into three separate levels depending on run size expectations based on (1) parental run strength as indexed by fishery landings, (2) juvenile production as indicated by larval sampling, and (3) estimates of ocean productivity. Columbia River smelt fishing seasons have been adopted in accordance with the WOEMP since 2001.

Excerpts from the Washington and Oregon Eulachon Management Plan Describing Fisheries Recommended at Varying Run Size Expectations.

Level One Fisheries

Level One fisheries are recommended when there is great uncertainty in run strength or indications for a poor return. Level One fisheries would be the most conservative, and should be scheduled to effect a harvest rate of 10% or less. Data obtained from these fisheries should give us a better index of run strength and productivity. The purpose of Level One fisheries would be to gain some insight on spawning returns to the lower Columbia River and its tributaries. The intent would be to capture some of the variability of eulachon returns and further develop a fishery database while minimizing the risk of overexploiting the return.

The Joint Staff recommends one 12 - 24 hour fishing period per week for the mainstem Columbia River commercial fishery. Recreational and commercial dipnet fisheries consisting of one 12-24 hour fishing period per week would be used to monitor returns to the Cowlitz River. The daily bag limit for Washington tributaries should be ten pounds per person at these low levels of abundance. The Joint Staff recommends these fisheries be adopted for the January through March time frame with fisheries closed during the remainder of the year, except December as described below, as per permanent rules. These fisheries would be used to gain some real time insight of run size strength. Days and hours to be fished should be developed with the respective participants. The commercial fishery can be shaped to maximize marketing opportunities and the recreational fishery could, for instance, be conducted during a weekend day to maximize opportunity. Fishery monitoring data would be one factor used to make in-season decisions about increase of the fisheries to Level Two or Three. December opportunity should be allowed 24 hours a day and seven days per week in the mainstem Columbia commercial and recreational fisheries, as previously noted.

Level Two Fisheries

When fishery data indicates a promising abundance in the spawning return and productivity indices are favorable, yet it is still uncertain whether the run is moderate or strong, then fishing time would be increased to collect additional data concerning relative eulachon abundance. The trigger to extend the fishery from Level One to Two should be carefully deliberated. The Joint Staff does not currently have a specific recommendation for a Level Two trigger. We believe evidence of increased run strength beyond what was observed solely in Level One fisheries (e.g., the presence of significant concentrations of birds and marine mammals attending the run) should be considered as well when ramping up fisheries.

The Joint Staff recommends a two or three day commercial fishery in the mainstem Columbia River. The recreational and commercial dipnet fisheries in the Cowlitz River should be similarly increased to two or three days. Managers could also consider whether to expand recreational and commercial fisheries to lower Columbia tributaries other than the Cowlitz River. The Joint Staff recommends these fisheries be adopted for the January through March time frame with fisheries closed during the remainder of the year, except December in the mainstem, as per permanent rules. Fishery monitoring data would be one factor used to decide if it would be appropriate to increase fisheries to Level Three or decrease fisheries to Level One.

Level Three Fisheries

Level Three fisheries are the most liberal that the Joint Staff would recommend. The decision to adopt Level Three fishing opportunity would be based on very positive indicators of strong abundance and productivity and therefore a very low risk of overexploitation.

The Joint Staff recommends that Level Three fisheries be conducted up to four days per week in the Columbia River with additional commercial opportunity of up to four days per week in all lower Columbia River tributaries. Recreational fishing would be open in all tributaries for four to seven days per week. The Joint Staff recommends these fisheries be adopted for the January through March time frame with fisheries closed during the remainder of the year, except for December in the mainstem when fisheries are open with no daily closures, as per permanent rules. Increasing the daily bag limit for Washington recreational dippers from ten pounds per person per day is appropriate at this level of fishing. The increase could range from 15 to 25 pounds; the latter value would be consistent with Oregon regulations. Fishery monitoring data would be one factor used to decide if it would be appropriate to decrease fisheries to Level Two or One.

Smelt Fisheries

Smelt fisheries occur in the mainstem Columbia River and several tributaries, primarily the Cowlitz River. Mainstem fisheries consist primarily of a commercial fishery using gill nets with some

commercial fishers using small trawls. Recreational dip net fishing is nearly non-existent in the mainstem Columbia River. Tributary fisheries include both recreational and commercial fisheries with the Cowlitz River providing the most consistent fishing opportunities. Both fisheries use dip nets to capture smelt, with most recreational fisheries being bank fisheries and most commercial fisheries occurring by boat. Tribal harvest is essentially non-existent. The Cowlitz Indian Tribe's (CIT's) lands have not been formally defined yet, so that group has not exerted fishing pressure on the resource. However, the Yakama Nation has taken a few pounds of smelt from the Cowlitz River annually, for ceremonial and subsistence purposes.

Past Commercial and Recreational Fisheries

During 1960-1977, commercial smelt fisheries were open year-round 3½ days per week, except for 1965 and 1966 when the season was expanded to 4½ days per week. During 1978-1994, the commercial season was expanded to seven days per week but the season was reduced to the December-March time frame beginning in 1986 to better reflect the run timing of Columbia River smelt (Table 20). Large trawl gear was also prohibited in 1986. Tributaries in Washington State were closed to commercial fishing during the 1999-2000 seasons. Starting in 2001, some tributary commercial fisheries were reopened and managed according to the Eulachon Management Plan (Table 21).

As Columbia River smelt abundance began to decline during the early 1990's, fishery managers recognized the need to restrict fisheries to increase escapement to spawning areas. Lower Columbia River mainstem and tributary commercial fisheries were greatly reduced beginning in 1995 due to exceptionally poor landings in 1993 and 1994 (Table 16). During 1995 and 1996, commercial fisheries were restricted to fewer fishing days per week, but the season was extended through the end of March. During 1997-2000, commercial fisheries were further restricted to test fisheries with limited days fished per week and a short season. These test fisheries were intended to allow minimal smelt catch and collection of biological data to provide fishery managers with data necessary to assess the annual run strength. Recreational fisheries in Washington tributaries were closed early during 1997-1999 in response to continuing poor smelt returns to the Columbia River (Table 22).

The recreational smelt fishery is a longstanding fishery that occurs in tributaries using dip net gear. Prior to 1997, the recreational fishery in Washington tributaries was open seven days per week the entire year (Table 22). Smelt dippers in Washington were allowed 20 pounds per person each day, but beginning in late 1998 the limit has sometimes been ten pounds per person. In Oregon the daily limit remains 25 pounds per person with the season open throughout the year. The recreational dip net fishery is very popular, drawing thousands of participants. Smelt are used for human consumption and are also in great demand for sturgeon bait. Annual recreational catch estimates are not available; however, limited past creel census information suggests that the recreational catch may equal the commercial landings in some years when smelt are abundant for a long period of time.

2009 Commercial Fisheries

The Joint Staff proposed a Level One fishery for the 2009 season. The seven-days-a-week season, during December 2008, occurred as per permanent regulations. For January 1 – March 31, 2009, the mainstem Columbia River commercial fishery was open from 7 AM-2 PM on Mondays and Thursdays (Table 20). The Cowlitz River was open from 6 AM to 10 PM on Saturdays. The Sandy River was open year-round, seven days a week, 24 hours a day, per permanent regulations (Table 21). Pounds landed in the mainstem Columbia River commercial fisheries dropped to half of that

landed in 2008, from 11,400 pound to 5,600 pounds (Table 16). No commercial landings were made in Oregon tributaries (i.e., Sandy River) during 2009. Pounds landed in the Cowlitz River commercial fishery almost doubled from 2008, from 5,900 pounds to 12,100 pounds; however, that level is only 3-8 percent of what commercial fishers landed each year in the Cowlitz River during 2001-2004 (Table 16). All other Washington tributaries were closed to commercial fishing during 2009.

2009 Recreational Fisheries

The mainstem Columbia River was open to both Washington and Oregon recreational fishers seven days per week on a 24-hour basis, with a bag limit of 25 pounds per person under Level One restrictions. The Washington tributary season was restricted to the Cowlitz River from 6 AM-10 PM on Saturdays with a bag limit of ten pounds per person. All Oregon tributaries were open to recreational dipping seven days per week the entire year as per permanent regulations. Recreational fishing was poor due to low abundance.

2010 Smelt Fishery Expectations

Based on projections for poor smelt returns to the Columbia River in 2009-2010, the Joint Staff is recommending that 2009-2010 smelt fisheries operate consistent with Level One fisheries as described in the Joint State Eulachon Management Plan. Specific dates and times will be proposed at the December 17, 2009 Compact hearing. Level One fisheries should be adopted when there is either great uncertainty in run strength or indications of a poor return. The Joint Staff looks at various indicators of abundance. Positive abundance indicators for 2010 include: (1) modest improvements in adult eulachon returns during 2006 (landings and CPUE), (2) a moderately improving level of Age 2 bycatch in the Canadian ocean shrimp fisheries during 2009, (3) a moderate increase in total smelt biomass tonnage in the Canadian ocean shrimp fisheries in 2009, and (4) favorable ocean conditions starting in 2007 and continuing through 2009. Negative abundance indices for 2010 include: (1) low mainstem Columbia River larval densities during the winters of 2005 through 2007, (2) decreasing adult smelt biomass estimates from the Fraser River and, (3) adult landings were weak in brood years 2005 and 2007. Taking a weighted average of the positive and negative indicators for each age component of the run suggest a slight improvement for 2010 compared to 2009. The main components of the 2010 run (age 3 and 4), should strengthen; however, the age 5 component will remain weak.

ENDANGERED SPECIES ACT (ESA)

Salmon and Steelhead

Status reviews occurring since 1991 have resulted in the majority of Columbia Basin salmon and steelhead stocks being listed under the ESA. The TAC prepares biological assessments (BAs) for combined fisheries based on relevant *U.S. v Oregon* management plans and agreements. The TAC has completed 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 addition, ODFW has a management plan in place for naturally-produced coho that were listed by the State of Oregon in 1999.

The parties to *U.S. v Oregon* have developed a plan covering Columbia River treaty Indian and non-Indian fisheries occurring from January 2008 through December 2017. This agreement titled "2008-2017 *U.S. v Oregon* Management Agreement for upriver Chinook, sockeye, steelhead, coho, and white sturgeon" (2008-2017 MA) provides specific fishery management constraints. A modification to this agreement concerning sharing of upriver spring Chinook was recently developed. A BA concerning fishery-related impacts to ESA-listed species/stocks from Columbia River treaty Indian and non-Indian fisheries as described in the 2008-2017 MA was submitted to the NMFS and a Biological Opinion (BO) has been issued. This BO covers mainstem fisheries through December 31, 2017. Impacts to listed salmonid species from fisheries described in this report are expected to be *de minimus*.

Eulachon Smelt

On November 8, 2007, NMFS received a petition from the Cowlitz Indian Tribe to list southern eulachon (populations in Washington, Oregon, and California) under the ESA. The Cowlitz Indian Tribe's petition sought delineation of a southern eulachon "Distinct Population Segment" (DPS) extending from the U.S.-Canada border south to include populations in Washington, Oregon, and California. In March 2008, NMFS determined that the petition presented substantial scientific and commercial information indicating the petitioned action may be warranted, and initiated a status review. In March 2009, NMFS published a proposed rule (74 FR 10857) to list the Southern DPS of eulachon (defined by the Biological Review Team as those eulachon spawning in rivers south of the Nass River, Northern BC) as threatened under the ESA. A decision, as to the listing of Eulachon, should be final by next spring.

Green Sturgeon

On April 5, 2005, the NMFS filed a proposed rule to list the Southern DPS of the North American green sturgeon (those spawning in the Sacramento River, California) as threatened (70 FR 17386) and subsequently listed the Southern DPS as threatened (71 FR 17757) on April 7, 2006, effective July 6, 2006. Effective November 9, 2009, the Columbia River below River Mile 46 has been designated as critical habitat of the Southern DPS (74 FR 52300). The BO covering non-Indian fisheries described in the "2008-2017 *U.S. v Oregon* Management Agreement" also addresses impacts to green sturgeon. Given that (1) green sturgeon are essentially absent from the Columbia River during the winter and spring months, (2) commercial sale of green sturgeon from Columbia River commercial fisheries was prohibited effective July 6, 2006, and (3) the retention of green sturgeon in Columbia River recreational fisheries was prohibited effective January 1, 2007, impacts to green sturgeon from fisheries described in this report are expected to be *de minimus*.

Marbled Murrelet

The threatened status of the marbled murrelet has not changed since initially listed October 1, 1992. On June 12, 2009, the United States Fish and Wildlife Service concluded a five year review of the status of the marbled murrelet and determined that no change in the bird's threatened status was needed. Fisheries described in this report are not likely to adversely affect this species.

Table 1. Estimated Abundance of 42-60 Inch White Sturgeon in the Lower Columbia River, 1987-2008.			
	Total Length Interval (inches)		
Year	42-48	48-60	42-60
1987	75,900	28,100	104,000
1988	34,400	33,700	68,100
1989	31,900	16,800	48,700
1990	25,800	12,000	37,800
1991	32,500	11,700	44,200
1992	70,400	8,700	79,100
1993	115,500	14,200	129,700
1994	N/A	N/A	N/A
1995	143,200	59,000	202,200
1996	137,100	33,500	170,600
1997	146,600	27,700	174,300
1998	116,800	23,900	140,700
1999	116,800	17,700	134,500
2000	117,300	17,400	134,700
2001	102,200	25,300	127,500
2002	87,400	34,200	121,600
2003	85,000	46,200	131,200
2004[1]	N/A	N/A	N/A
2005	106,900	30,000	136,900
2006	88,100	35,300	123,400
2007	105,900	29,500	135,400
2008[2]	65,600	31,400	97,000

1. *Abundance estimates were not developed in 1994 because insufficient numbers of fish were tagged and in 2004 due to data collection and modeling concerns.*
2. *Preliminary.*

Table 2. Annual Recreational Catches of White Sturgeon in the Lower Columbia River and Comparisons to Catch Guidelines, 1993-2009[1].								
	Below Wauna		Above Wauna			Combined		
Year	Catch	Guideline	Catch	Adjusted Catch [23]	Guideline[4]	Catch	Adjusted Catch [2]	Guideline
1993	20,107	Na	17,780		Na	37,900		
1994	15,578	Na	17,893		Na	33,500		
1995	29,714	Na	15,423		Na	45,100		
1996	27,694	Na	15,068		Na	42,800		
1997	24,511	Na	13,646		Na	38,200		53,840
1998	30,303	Na	11,293		Na	41,600		53,840
1999	29,238	Na	10,561		Na	39,800		40,000
2000	24,267	Na	16,238		Na	40,500		40,000
2001	21,619	Na	19,597		Na	41,200		39,500
2002	26,234	Na	12,045		Na	38,300		38,300
2003	18,367	19,200	13,565	13,811	12,800	31,932	32,178	32,000
2004	15,050	16,000	10,519	13,029	12,800	25,569	28,079	28,800
2005	17,911	17,783	11,891	12,979	11,560	29,802	30,890	29,343
2006	15,726	16,000	8,545	10,697	12,800	24,271	26,423	28,800
2007	19,131	16,274	10,675	15,316	13,852	29,806	34,447	30,126
2008	13,614	13,143	7,959	13,757	12,387	21,573	27,371	25,530
2009	13,109	15,529	5,020[5]	9,235[5]	11,430	18,129[5]	22,344[5]	26,959

1. *Recreational catch estimates for 1993-2002 are above and below the western tip of Puget Island.*
2. *Represents combined estimated harvest in the Columbia and Willamette rivers. Willamette River harvest is the amount in excess of the adjusted 1986-1996 baseline (1,225).*
3. *Final Willamette River harvest estimates were not available until 2009.*
4. *Actual in-season guidelines were different than represented here.*

5. *Projected.*

Table 3. Summary of Recreational White Sturgeon Management Guidelines and Harvest, 2003-2009.									
Area	**2003**	**2004**	**2005**	**2003-05**	**2006**	**2007**	**2008**	**2006-08**	**2009**
LCR									
Guideline	32,000	28,800	29,343	89,600	28,800	30,126	25,530	86,400	26,959
Harvest	32,178	28,079	30,890	91,147	- 26,423	- 34,447	-27,371	-88,241	22,344
No. remaining from guideline	- 178	+ 721	- 1,547	- 1,547	+ 2,377	- 4,321	-1,841	-1,841	4,615
Above Wauna									
Management target	12,000	12,000	12,800		12,000	12,000	12,800		12,800
Management buffer	+ 800	+ 800	0		+ 800	+ 800	0		0
No. remaining from guideline	0	0	-1,240		0	+ 1,052	-413		-1,370
Guideline	12,800	12,800	11,560		12,800	13,852[2]	12,387[2]		11,430
Willamette harvest adjustment [1]	-246	- 2,510	- 1,088		- 2,152	- 4,641	-5,798		4,215
Mainstem harvest	-13,565	-10,519	-11,891		- 8,545	-10,675	-7,959		5,020
No. remaining from guideline	- 1,011	- 229	- 1,419		+ 2,103	- 1,464	-1,370		2,195
Below Wauna									
Management target	18,000	15,000	16,000		15,000	15,000	16,000		16,000
No. remaining from guideline	0	0	+1,783		+1,000	+1,000	0		0
Management buffer	+1,200	+1,000	0		0	+ 274	- 2,857		-471
Guideline	19,200	16,000	17,783		16,000	16,274	13,143		15,529
Harvest	-18,367	-15,050	-17,911		-15,726	-19,131	13,614		13,109
No. remaining from guideline	+ 833	+ 950	- 128		+ 274	- 2,857	-471		2,420

1. *Harvest originally estimated at 0;1,418; and 0 for 2003-2005, respectively but was increased to 246; 2,510; and 1,088 based on final creel and punch card estimates for 2003-2005. The guideline for2005 has been adjusted accordingly.*
2. *2007 and 2008 guidelines were initially adjusted to 14,900 based on a roll-over (~50% for each year) of un-harvested fish from 2006 prior to realization of the need to adjust for Willamette River harvest in excess of baseline levels. Given final estimates for 2006 Willamette River harvest, the actual adjusted annual guidelines for 2007 and 2008 should have been 13,852 and 13,851; respectively. However, the 2008 guideline was further decreased to 12,387 based on combined overages from 2006-2007.*
3. *Estimated Willamette River harvest (in excess of the adjusted 1986-1996 baseline) based on harvest estimates from the Willamette creel program (February or March-June) expanded for non-observed months using angler punch card data.*
4. *Preliminary. Mainstem harvest estimated through October 2009 and projected for November-December 2009.*

Table 4. Commercial Catch of White Sturgeon by Season, Annual Commercial Catch, and Comparisons to Catch Guidelines, 1993-2009.

	Mainstem							Select Area				
Year	Winter Sturgeon[1]	Winter Salmon	Summer	Early August	Late August	Late Fall	Total	Spring/ Summer	Fall	Total	Grand Total	Guide-line
1993	990			0	0	7,010	8,000	30	20	50	8,150	6,000
1994	2,990			0	0	3,380	6,370	30	0	30	6,400	6,000
1995	0			0	0	5,980	5,980	110	70	180	6,200	8,000
1996	800			0	330	6,580	7,710	580	110	690	8,400	8,000
1997	2,710			1,740	140	7,790	12,380	350	100	450	12,800	13,460
1998	2,680			2,540	90	8,060	13,370	360	170	530	13,900	13,460
1999	1,780			2,770	60	4,180	8,790	520	190	710	9,500	10,000
2000	2,260			2,490	300	5,130	10,180	540	160	690	10,870	10,000
2001	3,060			4,720	1,020	0	8,800	490	20	510	9,310	9,100
2002	2,720			1,340	380	4,200	8,640	650	330	980	9,620	9,800
2003[2]	1,490	27		2,170	410	3,430	7,530	250	170	420	7,950	8,000
2004[2]	1,696	174	9	1,550	917	3,219	7,565	184	117	301	7,866	8,000
2005[2]	473	70	1,369	1,129	965	3,793	7,799	279	74	353	8,152	8,200
2006[2]	288	1,651	544	1,548	363	3,492	7,886	317	109	426	8,312	8,000
2007[2]	1,424	47	414	2,646	91	2,734	7,356	257	148	405	7,761	7,850
2008[2]	869	17	523	2,706	103	3,170	7,388	337	134	471	7,859	7,927
2009[2]	1,697	21	624	2,213	756	2001	7,312	311	114	425	7,737	8,000

1. *Prior to 2003, values reflect all winter fisheries.*
2. *Preliminary.*

Table 5. Summary of Combined Recreational and Commercial White Sturgeon Harvest, 1997-2009.

	Recreational		Commercial		Combined	
Year	Harvest	Guideline[1]	Harvest	Guideline	Harvest	Guideline[1]
1997	38,200	53,840	12,800	13,460	51,000	67,300
1998	41,600	53,840	13,900	13,460	55,500	67,300
1999	39,800	40,000	9,500	10,000	49,300	50,000
2000	40,500	40,000	10,870	10,000	51,370	50,000
2001	41,200	40,000	9,310	9,100	50,510	49,100
2002	38,300	38,500	9,620	9,700	47,920	48,200
2003	32,178[2]	32,000	7,950	8,000	40,098[2]	40,000
2004	28,079[2]	28,800	7,866	8,000	35,945[2]	36,800
2005	30,890[2]	29,343	8,152	8,200	39,042[2]	37,543
2006	26,423[2]	28,800	8,312	8,000	34,735[2]	36,800
2007	34,447[2]	30,126	7,761	7,850	42,208[2]	37,976
2008	27,371[2]	25,530	7,859	7,927	35,392[2]	33,457
2009[3]	22,344[2]	26,959	7,737	8,000	30,081	34,959

[1] *Harvest guidelines shown have been adjusted based on final Willamette River harvest estimates. Guidelines used in-season may have been different.*

[2] *Includes estimated Willamette River recreational harvest in excess of the adjusted 1986-1996 baseline harvest.*

[3] *Preliminary. Mainstem recreational harvest estimated through November 2009 and projected for December 2009.*

Table 6. Fishing Periods, Gear, and Associated Sturgeon Catch for Mainstem Columbia River Commercial Seasons, 2009.							
Season	Fishing Period	Hours	Zones	Mesh	STG Limit[1]	Deliveries	WSTG
Winter Sturgeon	6 PM Jan. 6 – 6 PM Jan. 7	24	1-5	9-9¾"	no limit	9	382
	6 PM Jan. 13 – 6 PM Jan. 14	24	1-5	9-9¾"	no limit	11	296
	6 PM Jan. 20 – 6 PM Jan. 21	24	1-5	9-9¾"	no limit	16	197
	6 PM Jan. 27– 6 PM Jan. 28	24	1-5	9-9¾"	no limit	17	545
	6 PM Feb. 3 – 6 PM Feb.4	24	1-5	9-9¾"	12	20	90
	6 PM Feb. 5 – noon Feb. 6	18	1-5	9-9¾"	12	16	60
	6 PM Feb. 10 – 6 PM Feb. 11	24	1-5	9-9¾"	12	18	91
	6 PM Feb. 12 – noon Feb. 13	18	1-5	9-9¾"	12	12	36
			Winter Season Totals (and average deliveries)			**15**	**1,697**
Spring Salmon	1 PM – 11 PM Mar. 29	10	4-5 [2]	≤4¼"	no limit	68	7
	1 PM – 11 PM Apr. 7	10	4-5 [2]	≤4¼"	no limit	133	10
	9 AM – 1 PM Apr. 14	4	4-5 [2]	≤4¼"	no limit	116	4
			Spring Season Totals (and average deliveries)			**106**	**21**
Summer	6 PM June 18 – 6 AM June 19	12	1-3 [3]	8-9¾"	5	109	290
	7 PM June 24 – 5 AM June 25	10	1-5	8-9¾"	5	91	157
	7 PM June 30 – 5 AM July 1	10	1-5	8-9¾"	5	92	177
			Summer Season Totals (and average deliveries)			**97**	**624**
August	7 PM Aug. 4 – 7 AM Aug. 5	12	1-5	9-9¾"	9	158	730
	7 PM Aug. 6 – 7 AM Aug. 7	12	1-5	9-9¾"	9	153	391
	7 PM Aug. 9 – 7 AM Aug. 10	12	2-5	9-9¾"	9	155	1,092
	8 PM Aug. 18 – 6 AM Aug. 19	10	3-5 [4]	9-9¾"	9	120	463
	8 PM Aug. 20 – 6 AM Aug. 21	10	3-5 [4]	9-9¾"	9	115	170
	8 PM Aug. 25 – 6 AM Aug. 26	10	5	9-9¾"	3	75	123
			August Season Totals (and average deliveries)			**129**	**2,969**
Late Fall	9 PM Sep. 24 - 5 AM Sep. 25	8	4-5	8-9¾"	5	66	132
	6 AM - 6 PM Sep. 28	12	1-3	≤6"	5	178	100
	9 PM Sep 28 - 5 AM Sep. 29	8	4-5	8-9¾"	5	31	111
	6 AM - 6 PM Sep. 29	12	1-5	9-9¾"	5	22	107
	6 AM - 6 PM Sep. 30	12	1-3	≤6"	5	173	77
	7 PM Sep 30- 7 AM Oct. 1	12	4-5	8-9¾"	5	16	32
	7 PM Oct. 1 - 7 AM Oct. 2	12	4-5	8-9¾"	5	13	14
	7 PM Oct. 4 - 7 AM Oct. 5	12	4-5	8-9¾"	8	28	132
	7 PM Oct. 7 - 7 AM Oct. 8	12	4-5	8-9¾"	8	19	87
	7 AM - 7 PM Oct. 8	12	1-5	9-9¾"	8	75	422
	7 PM Oct 13 - 7 AM Oct. 14	12	4-5	8-9¾"	7	7	36
	7 AM - 7 PM Oct. 14	12	1-5	9-9¾"	7	60	409
	7 PM Oct.15 - 7 AM Oct. 16	12	4-5	8-9¾"	7	9	20
	7 PM Oct. 18 - 7 AM Oct. 19	12	4-5	8-9¾"	7	21	140
	7 PM Oct. 20 - 7 AM Oct. 21	12	4-5	8-9¾"	6	7	20
	7 AM - 7 PM Oct. 21	12	1-3	≤6"	6	88	17
	7 AM - 7 PM Oct. 22	12	1-5	9-9¾"	6	36	145
	7 PM Oct. 22 - 7 AM Oct. 23	12	4-5	8-9¾"	6	5	0
	7 PM Oct. 25 - 7 AM Oct. 26	12	4-5	8-9¾"	0	3	Prohibited
	7 PM Oct. 27- 7 AM Oct. 28	12	4-5	8-9¾"	0	0	Prohibited
	7 AM - 7 PM Oct. 28	12	2-3	≤9¾"	0	35	Prohibited
			Late-Fall Season Totals (and average deliveries)			**42**	**2,001**

1. *White sturgeon possession and sales limit (per vessel per week). The retention of green sturgeon is prohibited.*
2. *From Hayden Island powerlines (west towers) upstream to the upper end of the Zone 5 commercial fishing boundary at Beacon Rock.*
3. *Zones 1-3 downstream of the Longview Bridge.*
4. *Zones 4-5 upstream of the Kalama River.*

Table 7. History of Sturgeon Regulations for the Lower Columbia River Recreational Fishery.

Year	Daily Bag Limit	Annual Bag Limit	Size Restrictions	Other Regulations
Pre-1940	None	None	None	None
1940	Only 3 < 4'	"	"	"
1942	Five, (3 < 4' and 2 ≥ 4')	"	"	"
1950	" "	"	30" min.-72" max.	"
1951	3 Fish	"	"	"
1957	"	"	"	Cannot remove head or tail in the field.
1958	"	"	36" min.-72" max.	
1986	2 Fish	OR-30	"	OR--required sturgeon tag: WA--no gaffing.
1989	"	OR-30, WA-15	40" min.-72" max.	WA--required sturgeon tag. New minimum size limit effective April 1.
1990	"	15	"	Single-point barbless hooks required. OR--no gaffing.
1991	"1 and 1" slot limit	"	"	Daily limit changed to one fish 40-<48" and one fish 48-72".
1992	"	"	"	WA--60" max. length effective April 16, 1992-April 15,1993. WA--Beacon Rock to Bonneville Dam sturgeon spawning sanctuary (boat and bank) April 16-June 15, 1992.
1994	"	10	42" min.-66" max.	Daily limit changed to one fish 42-<48" and one fish 48-66".
1995	"	"	"	LCR closed to retention September 1-December 31.
1996	1 Fish	"	"	One 42-66" fish daily bag limit effective April 1. Closed to boat angling from Beacon Rock to Bonneville Dam May 1-June 30.
1997	"	"	42" min.-60" max.	80% allocation of 67,300 annual harvest guideline to sport fishery (53,840).
1999	"	"	"	Harvest guideline adjusted to 50,000 in-season (40,000 sport). U.S. Army Corps implements Bonneville Boat Restricted Zone from Robins Is. to Hamilton Is. boat ramp.
2000	"	"	"	Retention disallowed below Wauna powerlines April 1-30. Beacon Rock-Bonneville boat angling closure extended through 7/15. Annual limit 10 fish even if licensed in both states.
2001	"	"	"	LCR closed to retention August 1-September 30.
2002	"	"	"	LCR closed to retention on Sundays and Mondays during March 3-May 13 and seven days per week during July 25-November 22.

Table 7. Continued.

Year	Daily Bag Limit	Annual Bag Limit	Size Restrictions	Other Regulations
2003	"	"	"	32,000 annual harvest guideline split 40% above Wauna and 60% below Wauna. Retention allowed above Wauna January 1-March 23 and July 1-October 31, and below Wauna January 1-June 27.
2004	"	5	42" min.-60" max. 45" min. below Wauna during May 15-July 3	28,800 annual harvest guideline split 12,800 above Wauna and 16,000 below Wauna. Retention allowed above Wauna January 1-31, then three days per week (Thur.-Sat.) during February 1-July 31 and October 1-December 31. Retention allowed below Wauna January 1-April 30 under permanent rules, then May 15-July 3 with a 45" minimum size limit. Closed to boat and bank angling from Beacon Rock to Bonneville Dam May 1-July 31. Annual limit reduced to five sturgeon.
2005	"	"	42" min.-60" max. 45" min. below Wauna during May 14-July 10- and July 15-August 15	30,600 annual harvest guideline split 12,800 above Wauna and 17,800 below Wauna. Retention allowed above Wauna three days per week (Thur.-Sat.) January 1-July 31 and October 1-December 31. Retention allowed below Wauna January 1-April 30 under permanent rules, then May 14-July 10 and July 15-August 15 with a 45" minimum size limit.
2006	"	"	42" min.-60" max. 45" min. below Wauna during May 13-July 4	28,800 annual harvest guideline split 12,800 above Wauna and 16,000 below Wauna. Retention allowed above Wauna three days per week (Thur.-Sat.) during January 1-July 31 and October 1-December 31. Retention allowed below Wauna January 1-April 30 under permanent rules, then May 13-July 4 with a 45" minimum size limit. Closed to boat and bank angling from Navigation Marker 85 to Bonneville Dam May 1-July 31.
2007	“	“	42" min.-60" max. 45" min. below Wauna during May 12-July 4	30,600 harvest guideline split 14,300 above Wauna and 16,274 below Wauna. Retention allowed above Wauna three days per week (Thur.-Sat.) January 1-31 and four days per week (Thur-Sun.) February 1-July 31 and seven days per week August 18-December 31. Sturgeon retention allowed below Wauna January 1-April 30 under permanent rules then May 12-July 4 with a 45” minimum size limit. Retention of green sturgeon prohibited.
2008	“	“	42" min.-60" max. 45" min. below Wauna during May 10-July 26	Retention allowed above Wauna four days per week (Thur-Sun.) January 1-December 31. Sturgeon retention allowed below Wauna January 1-April 30 under permanent rules then May 10-June 24, July 10-12, July 17-19, and July 26 with a 45” minimum size limit. Retention of green sturgeon prohibited.
2009	“	“	38” min. FL - 54” max. FL 41” min. FL below Wauna May 9-July 25.	Fork length measurement. Retention allowed above Wauna three days per week (Thur.-Sat.) January 1-July 31 and October 1-December. Retention allowed below Wauna January 1-April 30 under permanent rules, then May 9-June 28, July 2-5, 10-12, 17-19 and 24-26 with a 41” minimum size (FL) limit. Retention of green sturgeon prohibited.

Table 8. Estimated Catch of White Sturgeon (in 1000's) in 1-Foot Legal Length Groups in Mainstem Lower Columbia River Commercial and Recreational Fisheries, 1977-2009. [1]

	Recreational Fisheries [2]							Commercial Fisheries [3]				
	3-4 Ft		4-5 Ft		5-6 Ft			4-5 Ft		5-6 Ft		
Year	No.	%	No.	%	No.	%	Total	No.	%	No.	%	Total
1977-79 Ave	22.2	76	5.4	18	1.6	5	29.2	12.5	94	0.8	6	13.3
1980	21.3	79	4.1	15	1.6	6	27.0	9.1	97	0.3	3	9.4
1981	21.3	78	4.5	17	1.4	5	27.2	14.2	95	0.7	5	14.9
1982	19.7	78	4.3	17	1.1	4	25.1	10.8	93	0.8	7	11.6
1983	26.2	73	7.2	20	2.6	7	36.0	11.2	90	1.2	10	12.4
1984	34.2	81	6.5	15	1.2	3	42.0	16.1	92	1.4	8	17.5
1980-84 Ave	24.5	78	5.3	15	1.6	5	31.5	12.3	93	0.9	7	13.2
1985	37.0	84	5.3	12	1.5	3	43.8	7.6	90	0.8	10	8.4
1986	42.3	85	6.0	12	1.5	3	49.8	10.4	90	1.1	9	11.6
1987	55.0	88	5.9	9	1.6	3	62.4	8.8	91	0.8	8	9.7
1988	37.5	87	4.2	9	1.5	3	43.1	6.2	91	0.6	9	6.8
1989	20.8	82	3.5	14	1.0	4	25.4	4.5	90	0.5	10	5.0
1985-89 Ave	38.5	86	5.0	11	1.4	3	44.9	7.5	90	0.8	10	8.3
1990	14.0	81	2.5	14	0.7	4	17.3	4.6	87	0.6	11	5.3
1991	19.6	86	2.2	10	0.8	4	22.7	3.4	89	0.3	8	3.8
1992	34.9	87	4.2	10	1.0	3	40.1	6.0	97	0.2	3	6.2
1993	33.4	88	3.9	10	0.6	2	37.9	7.9	98	0.2	2	8.1
1994	25.9	77	7.0	21	0.6	2	33.5	6.3	98	0.1	2	6.4
1990-94 Ave	25.6	84	4.0	13	0.7	2	30.3	5.6	93	0.3	5	6.0
1995	35.9	80	8.9	20	0.3	1	45.1	6.1	98	0.1	2	6.2
1996	30.7	72	11.4	27	0.6	1	42.8	8.3	99	0.1	1	8.4
1997	29.0	76	9.1	24	<0.1	<1	38.2	12.8	100	0.0	0	12.8
1998	32.1	77	9.4	23	0.1	<1	41.6	13.9	100	0.0	0	13.9
1999	31.9	80	7.9	20	<0.1	<1	39.8	9.5	100	0.0	0	9.5
1995-99 Ave	31.9	77	9.3	22	0.2	<1	41.5	10.1	99	<0.1	<1	10.2
2000	33.3	82	7.2	18	<0.1	<1	40.5	10.9	100	0.0	0	10.9
2001	31.4	76	9.8	24	<0.1	<1	41.2	9.3	100	0.0	0	9.3
2002	29.9	78	8.4	22	<0.1	<1	38.3	9.8	100	0.0	0	9.8
2003[4]	21.0	65	10.9	35	<0.1	<1	31.9	8.0	100	0.0	0	8.0
2004[4]	13.6	53	12.0	47	<0.1	<1	25.6	7.9	100	0.0	0	7.9
2000-04 Ave	25.8	71	9.7	29	<0.1	<1	35.5	9.2	100	0.0	0	9.2
2005[4]	17.2	58	12.6	42	0.1	<1	29.8	8.2	100	0.0	0	8.2
2006[4]	13.9	57	10.4	43	<0.1	<1	24.3	8.3	100	0.0	0	8.3
2007[4]	16.6	56	13.1	44	<0.1	<1	29.8	7.8	100	0.0	0	7.8
2008[5]	10.7	49	10.9	50	<0.1	<1	21.6	7.9	100	0.0	0	7.9
2009[5 6]	6.0	33	12.1	67	<0.1	<1	18.1	7.7	100	0.0	0	7.7
2005-09 Ave	12.9	52	11.9	48	<0.1	<1	24.8	8.0	100	0.0	0	8.0

1. *Individual columns may not add up to total column due to rounding errors. Recreational harvest in the Willamette River is not included.*
2. *White sturgeon legal size limits were 36"-72" during 1977-1988, 40"-72" during 1989-1993, 42"-66" during 1994-1996, and 42"-60" thereafter.*
3. *White sturgeon legal size limits were 48"-72" during 1977-92, 48"-66" during 1993-96, and 48"-60" thereafter.*
4. *Commercial data is preliminary.*
5. *Preliminary data.*
6. *Converted from fork length measurement.*

Table 9. Recreational and Commercial Sturgeon Catch (in 1,000's) and White Sturgeon Catch Sharing Percentages in the Lower Columbia River, 1977-2009.

	White Sturgeon					Green Sturgeon		
	Recreational [1]		Commercial [2]		Total	Recreational	Commercial [1]	Total
Year	Catch	%	Catch	%	Catch	Catch	Catch	Catch
1977	25.8	73	9.7	27	35.5	0.0	0.8	0.8
1978	30.4	76	9.8	24	40.2	0.0	1.7	1.7
1979	31.4	61	20.5	39	51.9	0.0	1.2	1.2
1977-79 Ave	29.2	70	13.3	30	42.5	0.0	1.2	1.2
1980	27.0	74	9.4	26	36.4	0.0	1.7	1.7
1981	27.2	65	14.9	35	42.1	0.0	0.2	0.2
1982	25.1	68	11.6	32	36.7	0.0	0.8	0.8
1983	36.0	74	12.4	26	48.4	0.1	0.7	0.8
1984	42.0	71	17.5	29	59.5	0.1	2.7	2.8
1980-84 Ave	31.5	70	13.2	30	44.6	<0.1	1.2	1.3
1985	43.8	84	8.4	16	52.2	0.5	1.6	2.1
1986	49.8	81	11.6	19	61.4	0.4	6.0	6.4
1987	62.4	87	9.7	13	72.1	0.2	4.9	5.1
1988	43.1	86	6.8	14	49.9	0.1	3.3	3.4
1989	25.4	84	5.0	16	30.4	0.1	1.7	1.8
1985-89 Ave	44.9	84	8.3	16	53.2	<0.1	3.5	3.8
1990	17.3	77	5.3	23	22.6	0.1	2.2	2.3
1991	22.7	86	3.8	14	26.5	<0.1	3.2	3.2
1992	40.1	87	6.2	13	46.3	0.1	2.2	2.3
1993	37.9	82	8.1	18	46.0	<0.1	2.2	2.2
1994	33.5	84	6.4	16	39.9	0.1	0.2	0.3
1990-94 Ave	30.3	83	6.0	17	36.3	0.1	2.0	2.1
1995	45.1	88	6.2	12	51.3	<0.1	0.4	0.4
1996	42.8	84	8.4	16	51.2	0.1	0.6	0.7
1997	38.2	75	12.8	25	51.0	<0.1	1.6	1.6
1998	41.6	75	13.9	25	55.5	0.1	0.7	0.8
1999	39.8	80	9.5	20	49.3	0.1	0.8	0.9
1995-99 Ave	41.5	80	10.2	20	51.7	0.1	0.8	0.9
2000	40.5	79	10.9	21	51.4	<0.1	1.2	1.3
2001	41.2	82	9.3	18	50.5	0.1	0.3	0.4
2002	38.3	80	9.6	20	47.9	0.1	0.2	0.2
2003 [3]	32.2	80	8.0	20	40.2	0.1	<0.1	0.1
2004 [3]	28.1	78	7.9	22	35.9	<0.1	0.1	0.1
2000-04 Ave [3]	36.1	80	9.1	20	45.2	<0.1	0.4	0.4
2005 [3]	30.9	79	8.2	21	39.0	0.1	0.1	0.2
2006 [3]	26.4	76	8.3	24	34.7	0.1	<0.1	0.1
2007 [3]	34.4	82	7.8	18	42.2	<0.1	0.0	<0.1
2008 [3]	27.4	78	7.9	22	35.3	0	0	0
2009 [4]	22.3	75	7.7	25	30.2	<0.1	0	<0.1
2005-09 Ave [4]	28.3	78	8.0	22	36.3	<0.1	0	<0.1

1. Includes Willamette River harvest in excess of the adjusted 1986-1996 baseline (1,225).
2. Includes Youngs Bay (1979-present) and other Select Area landings (1998-present).
3. Commercial landings are preliminary.
4. Preliminary data.

Table 10. Annual 3-6 Foot Abundance Estimates by Reservoir in the Zone 6, 1976-2009			
Year	Bonneville Pool	The Dalles Pool	John Day Pool
1976-1978	5,400	--	--
1987	--	18,900	--
1988	--	6,300	--
1989	17,900	--	--
1990	--	--	2,200
1991	--	--	--
1992	--	--	--
1993	--	--	--
1994	19,800	6,500	--
1995	--	--	--
1996	--	--	24,100
1997	--	46,800	--
1998	--	--	--
1999	45,600	--	--
2000	--	--	--
2001	--	--	14,200
2002	--	20,600	--
2003	34,220	--	--
2004	--	--	12,800
2005	--	12,700	--
2006	42,100	--	--
2007	--	--	26,600
2008	--	80,900	--
2009	pending	--	--

Table 11. Treaty Indian Commercial and Subsistence and Non-Indian Recreational Catch of White S					
	Treaty Indian Commercial			Treaty Indian	Non-Indian
Year	Gill Net	Setline	Total	Subsistence [1]	Recreational
2000	2,251	1,054	3,305	343	2,505
2001[2]	2,333	966	3,299	476	2,402
2002	1,502	448	1,950	370	2,625
2003	1,339	190	1,529	325	2,175
2004	1,748	0	1,748	269	1,611
2005	1,644	97	1,741	311	1,104
2006[3]	815	45	860	201	1,003
2007[4]	1,114	10	1,124	161	1,039
2008	1,592	0	1,592	226	1.133
2009[4]	1,602	31	1,633	216	1,077

1. *Numbers prior to 2000 are available in previous Winter Joint Staff Reports.*
2. *Setline total includes 38 fish landed during hook and line fisheries.*
3. *Setline total includes two sturgeon landed during hook and line fisheries.*
4. *Setline total includes one sturgeon landed during hook and line fisheries.*
5. *Preliminary through November 12, 2009 (all pools closed to sturgeon retention and unlikely to open).*

Table 12. Treaty Indian Commercial Setline and Gill Net Seasons and White Sturgeon Catch in the Zone 6 Management Area, 2005-2009.

Fishery	Date	Open Pools[1]	Length	Mesh Size	Catch
		2005			
Setline	January 1-31	All	31 days	--	7
	October 12-December 31	TD	81 days	--	68
Winter	February 1-March 16	BO, JD	45 days	None	903
"	February 1-March 19	TD	47 days	None	741
Spring	Closed season	--	--	--	--
Sockeye	Closed season	--	--	--	--
Fall	Closed season	--	--	--	
				Total	**1,719**
		2006			
Setline	January 1-31	All	31 days	--	0
"	July 31-August 15	BO,	34 days	--	47[2]
Winter	February 1-March 21	All	49 days	None	815
Spring	Closed season	--	--	--	--
Sockeye	Closed season	--	--	--	--
Fall	Closed season	--	--	--	--
				Total	**862**
		2007			
Setline	January 1-31	All	31 days	--	6
	August 1-August 18	JD	18 days	--	4[3]
Winter	February 1-March 21	BO, JD	49 days	None	508
"	February 1-March 9	TD	37 days	None	606
Spring	Closed season	--	--	--	--
Sockeye	Closed season	--	--	--	--
Fall	Closed season	--	--	--	--
				Total	**1,124**
		2008			
Setline	January 1-31	All	31 days	--	0
Winter	February 1-29	BO	29 days	None	744
"	February 1-March 3	TD	32 days	None	571
"	February 1-March 10	JD	39 days	None	277
Spring	Closed season	--	--	--	--
Sockeye	Closed season	--	--	--	--
Fall	Closed season	--	--	--	--
				Total	**1,592**
		2009[4,5]			
Setline	January 1-31	All	31 days	--	**0**
	August 3-15	TD	11 days	None	**31**
Winter	February 2-13 (Mon-Fri)	BO	10 days	None	**409**
"	February 2-March 6	TD, JD	33 days	None	**868**
Spring	Closed season			None	**325**
Sockeye	Closed season			--	--
Fall	Closed season			--	--
				Total	**1,633**

1. *BO = Bonneville Pool, TD = The Dalles Pool, JD = John Day Pool.*
2. *Includes two sturgeon landed during hook-and-line fisheries.*
3. *Includes one sturgeon landed during hook-and-line fisheries.*
4. *Preliminary estimate through November 12, 2009(all pools are closed and unlikely to open).*
5. *Legal-sized management based on fork length of 38-54" BO, and 43-54" TD and JD, was adopted January 29, 2009.*

Table 13. Recreational Fishery Retention Restrictions in the Zone 6 Management Area, 2000-2009. [1,2]			
Year	Bonneville Pool	The Dalles Pool	John Day Pool
2000	April 8-December 31	June 19-December 31	Retention allowed all year
2001	August 13-December 31	April 9-December 31	Retention allowed all year
2002	August 5-September 27	July 13-December 31	August 24-December 31
2003	July 7-December 31	June 21-December 31	July 28-December 31
2004	June 26-December 31	June 28-December 31	July 12-December 31
2005	June 11-December 31	June 25-December 31	July 11-December 31
2006	July 24-December 31	April 8-December 31	July 1-December 31
2007	July 30-December 31	March 29-December 31	June 11-December 31
2008	July 12-December 31	March 15-December 31	March 26-December 31
2009	June 6-December 31	April 19-December 31	April 13-December 31

1. Dates during which restrictions were in effect.
2. Retention restriction dates prior to 2000 are available in the previous Winter Joint Staff Reports.

Table 14. Annual Catch Estimates and Guidelines for Commercial and Recreational Fisheries in the Zone 6 Management Area, 2000-2009. [1]						
	Bonneville Pool		The Dalles Pool		John Day Pool	
Year	Catch	Guideline	Catch	Guideline	Catch	Guideline
			Commercial Fisheries			
2000	1,165	1,300	1,342	1,000-1,200	788	1,160
2001	1,287	"	1,215	1,100	755	"
2002	472	"	1,152	"	326	335
2003	379	1,200	811	900	251	"
2004	464	400	975	"	309	"
2005	550	"	809	"	360	"
2006	153	"	397	550	312	"
2007	285	"	607	"	232	"
2008	744	"	571	"	277	"
2009 [2]	409	"	899	1,000	325	"
			Recreational Fisheries			
2000	1,262	1,520	809	600-800	434	560
2001	1,426	"	677	700	299	"
2002	1,560	"	878	"	187	165
2003	1,542	1,700	447	400	186	"
2004	852	700	530	"	229	"
2005	588	"	384	"	132	"
2006	727	"	93	100	183	"
2007	682	"	108	"	249	"
2008	841	"	128	"	164	"
2009 [2]	697	"	232	"	148	"

1. Numbers prior to 2000 are available in previous Winter Joint Staff Reports.
2. Preliminary estimates through November 12, 2009 (all pools closed to sturgeon retention and unlikely to open).

Table 15. Treaty Indian White Sturgeon Landings by Season and Pool, 2009. [1]						
Reservoir	January Setline	Winter Gill Net	Summer Setline	Fall Setline	Commercial Total	Guideline
Bonneville	0	409	0	0	409	400
The Dalles	0	868	0	0	899	1,000
John Day	0	325	31	0	325	335
Total	**0**	**1,602**	**31**	0	**1,633**	**1,735**

1. Preliminary through November 12, 2009 (all pools closed to sturgeon retention and unlikely to open).

Table 16. Columbia River and Tributary Smelt Commercial Landings (in thousands of pounds), 1938-2009.								
Year(s)		Columbia River [1]	Grays River	Cowlitz River	Kalama River	Lewis River	Sandy River	Total
1938-1949	Range	200-1,000	0-59	1-3,000	0-77	0-2,000	0-1,400	1,000-5,700
	Average	610	18	1,400	13	300	300	3,000
1950-1959	Range	400-1,300	0-16	0-2,000	0-44	0-900	0-500	1,300-2,600
	Average	800	3	700	11	200	100	1,800
1960-1969	Range	100-800	0-53	1,000	0-0	0-82	0-0	800-1,500
	Average	700	10	600	0	8	0	1,100
1970-1979	Range	900	0-6	100	0-300	0-900	0-800	500-3,200
	Average	300	1	1,400	4	100	100	2,000
1980-1989	Range	53-500	0-35	100-3,700	0-8	0-2,700	0-300	500-3,800
	Average	200	4	2,500	1	600	59	2,400
1990		6.4	0.0	2,756.2	0.0	21.6	0.0	2,784.2
1991		5.8	0.0	2,944.6	0.0	0.0	0.0	2,950.4
1992		0.8	0.0	3,673.0	0.0	0.0	0.0	3,673.8
1993		33.2	0.0	413.9	66.8	0.0	0.0	513.9
1994		0.2	0.0	43.2	0.0	0.0	0.0	43.4
1995		7.7	0.0	431.4	0.9	0.0	0.0	440.0
1996		7.1	0.0	2.0	0.0	0.0	0.0	9.1
1997		37.1	0.0	21.5	0.0	0.0	0.0	58.6
1998		11.9	0.0	0.2	0.0	0.0	0.0	12.1
1999		20.9	0.0	0.0	0.0	0.0	0.0	20.9
2000		31.0	0.0	0.0	0.0	0.0	0.0	31.0
2001		158.8	0.0	154.3	0.0	0.0	0.0	313.1
2002		58.0	0.0	169.6	0.0	493.6	0.0	721.2
2003		66.9	0.0	464.4	0.0	529.1	23.0	1,083.4
2004		15.4	0.0	216.2	0.0	0.0	0.0	231.7
2005		0.1	0.0	0.1	0.0	0.0	0.0	0.2
2006		13.1	0.0	0.0	0.0	0.0	0.0	13.1
2007		7.1	0.0	1.2	0.0	0.0	0.0	8.3
2008		11.4	0.0	5.9	0.0	0.0	0.0	17.3
2009		5.6	0.0	12.1	0.0	0.0	0.0	17.7

1 Season totals may contain landings from previous December.

Table 17. Weekly and Total Smelt CPUE's and Smelt Catch in Columbia River Commercial Fisheries, 1988-2009.[1]										
	CPUE's by Statistical Week								Season Totals	
Year	1	2	3	4	5	6	7	8	CPUE	Catch[2]
1988	0	0	125	702	78	214	0	0	535	14,500
1989	0	0	0	101	0	0	0	0	1,396	58,600
1990	0	409	445	1,650	0	0	0	0	709	6,400
1991	0	0	86	113	0	107	685	0	389	5,800
1992	0	0	0	0	0	232	290	0	192	2,300
1993	0	0	0	0	18	0	224	2,136	1,841	29,500
1994	0	53	0	0	0	0	0	0	59	235
1995	150	59	8	48	550	157	265	31	180	7,600
1996	50	46	41	151	124	0	445	59	95	7,100
1997	0	22	79	94	168	216	672	214	304	37,100
1998	0	0	40	223	94	30	17	0	134	11,800
1999	0	25	21	123	146	183	297	110	172	20,800
2000	151	37	206	63	371	123	330	241	182	26,142
2001	0	0	0	0	0	520	1,604	2,322	1,984	158,719
2002	27	371	733	3,925	1,433	1,041	164	0	1,567	57,985
2003	64	497	1,260	0	445	590	778	4,350	1,133	66,875
2004	0	0	0	0	100	845	261	26	482	15,431
2005	0	0	0	0	25	28	0	0	27	108
2006	0	132	113	144	172	194	209	14	156	13,099
2007	53	285	37	33	0	0	0	209	128	8,072
2008	17	65	134	17	0	63	210	58	129	11,381
2009	0	30	266	114	34	3	65	50	101	5,539

1. *CPUE = pounds per delivery. These statistical weeks typically represent the first eight calendar weeks of the year (about January 1 through February 15).*
2. *Season total catch may include catch during the previous December.*

Table 18. Results of Larval Sampling Program in the Lower Columbia River Basin, 1994-2009.[1]							
	Catch (Larvae per cubic meter)[2]						
Year	Mainstem Columbia	Cowlitz River	Grays River	Elochoman River	Kalama River	Lewis River	Sandy River
1994	N/S	0.7	N/S	N/S	N/S	N/S	N/S
1995	N/S	19.7	N/S	N/S	32.4	N/S	N/S
1996	0.8	1.2	N/S	N/S	0.2	N/S	N/S
1997	3.9	0.7	N/S	1.5	0.3	0.0	N/S
1998	0.9	0.5	2.8	22.1	0.3	0.0	0.1
1999	0.7	0.2	0.6	0.8	0.4	0.0	0.1
2000	1.3	41.6	25.7	3.5	0.1	0.2	0.1
2001	42.1	192.0	24.4	0.0	5.5	17.6	N/S
2002	28.2	283.0	N/S	N/S	0.5	0.6	N/S
2003	12.3	1.4	N/S	24.5	N/S	36.2	0.1
2004	3.5	0.9	20.4	N/S	N/S	N/S	N/S
2005	0.3	N/A	0.6	N/S	N/S	N/S	N/S
2006	0.7	0.1	0.0	N/S	N/S	N/S	N/S
2007	0.7	2.8	N/S	N/S	N/S	0.3	N/S
2008	1.1	6.2	44.0	3.3	N/S	<0.1	N/S
2009	2.3	0.1	0.2	N/S	N/S	0.5	N/S

1. *Inter-annual comparisons of abundance are tentative as sampling has not been systematic from year to year. Mainstem Columbia R. data since 2003 includes multiple collections at Price Island and Clifton Channel sites.*
2. *N/S = not sampled.*

Table 19. Age Composition of Eulachon Bycatch in the West Vancouver Island Shrimp Fishery, 1999-2009.

Ocean Year	No. of Age 1 Smelt (millions)	Columbia River Return Year			No. of Age 2[1] Smelt (millions)	Columbia River Return Year		
		Age 3	Age 4	Age 5		Age 3	Age 4	Age 5
1999	11.8	2001	2002	2003	21.2	2000	2001	2002
2000	208.9	2002	2003	2004	27.8	2001	2002	2003
2001	102.6	2003	2004	2005	219.2	2002	2003	2004
2002	311.7	2004	2005	2006	458.8	2003	2004	2005
2003	215.6	2005	2006	2007	270.7	2004	2005	2006
2004[2]	143.8	2006	2007	2008	133.4	2005	2006	2007
2005[2]	9.0	2007	2008	2009	168.8	2006	2007	2008
2006[3]	55.6	2008	2009	**2010**	9.7	2007	2008	2009
2007[3]	17.0	2009	**2010**	2011	21.8	2008	2009	**2010**
2008[3]	33.2	**2010**	2011	2012	42.6	2009	**2010**	2011
2009[3]	81.9	2011	2012	2013	104.9	**2010**	2011	2012

1. *The Age 2 estimate may also include some Age 3 fish.*
2. *The estimates of number of fish by age are not official Canadian Department of Fisheries and Ocean values.*
3. *The detailed length data was not provided by Canadian Department of Fisheries and Ocean; this data is based on crude interpretation of 2006-2009 WCVI Eulachon Length Frequency graphs available at:* *http://www.pac.dfo-mpo.gc.ca/sci/herring/herspawn/pages/ocean1_e.htm*

Table 20. Mainstem Columbia River Commercial Smelt Seasons, 1960-2009.				
Year	Season	Fishery Level[1]	Weekly Period	Days Open
1960-1964	Jan. 1 – Dec. 31	--	12 PM Sat – 12 AM Wed	~255
1965-1966	Jan. 1 – Dec. 31	--	12 AM Sat – 12 AM Thu	~307
1967-1977	Jan. 1 – Dec. 31	--	12 PM Sat – 12 AM Wed	~255
1978-1984	Jan. 1 – Dec. 31	--	7 days/week	365
1985	Jan. 1 – Dec. 31	--	7 d/wk (upstream of Cowlitz R. 2/22-3/1)	365
1986-1994	Dec. 1 – Mar. 31	--	7 days/week	121
1994/1995	Dec. 7 – Jan. 7	--	7 days/week	38
	Jan. 7 – Mar. 31	--	8 PM Sat – 8 AM Wed	48
1995/1996	Dec. 1 – Feb. 2	--	7 days/week	64
	Feb. 3 – Mar. 31	--	Noon Mon – 6 PM Fri	32
1996/1997	Dec. 1 – Jan. 27	--	7 days/week	58
	Jan. 30 – Feb. 21	--	6 AM Thu – 6 PM Fri	8
1997/1998	Dec. 1 – Dec. 31	--	7 days/week	31
	Jan. 2 – Feb. 13	--	6 AM – 6 PM Mon & Fri	13
1998/1999	Dec. 1 - Dec. 23	--	7 days/week	23
	Dec. 30 - Feb. 10[2]	--	7 AM - 7 PM Wed	7
1999/2000	Dec 1 - Dec 26	--	7 days/week	26
	Dec. 29 Feb. 23	--	7 AM - 7 PM Wed	9
2000/2001	Dec 1 - Dec 31	--[3]	7 days/week	31
	Jan. 3 - Mar. 7	One	3 AM - 9 PM Wed	10
	Mar. 12 - Mar. 31	Two (3/06)	3 AM - 9 PM Mon & Wed	6
2001/2002	Dec. 1 - Dec. 31	--[3]	7 days/week	31
	Jan. 2 - Jan. 31	Two	3 AM - 9 PM Sun & Wed	9
	Feb. 1 - Mar. 31	Two (1/31)	3 AM - 9 PM Sun, Wed & Fri	26
2002/2003	Dec. 1 - Dec. 31	--[3]	7 days/week	31
	Jan. 1- Mar. 31	Three	3 AM - 9 PM Sun, Tues, Thurs, & Fri	51
2003/2004	Dec. 1- Dec. 31	--[3]	7 days/week	31
	Jan. 1 - Mar. 21	Three	3 AM – 9PM Sun, Tues, Thurs, & Fri	34
	Mar. 22- Mar. 31	Two (3/18)	3 AM – 9 PM Fri, & Sun	2
2004/2005	Dec. 1 - Dec. 31	--[3]	7 days/week	31
	Jan. 1- Feb. 23	Two	3 AM - 9 PM Mon, & Thurs	15
	Feb. 24 – Mar. 31	One (2/23)	3 AM – 9 PM Thurs	6
2005/2006	Dec. 1 – Dec. 31	--[3]	7 days/week	31
	Jan. 1 – Mar. 2	One	7 AM - 4 PM Mon, & Thurs	20
	Mar. 7	One (3/08)	7 AM - 4 PM Mon	1
	Mar. 13 – Mar. 31	One (3/08)	7 AM - 4 PM Mon, & Thurs	6
2006/2007	Dec. 1 - Dec. 31	--[3]	7 days/week	31
	Jan. 1 - Mar. 31	One	7 AM - 4 PM Mon, & Thurs	20
	Mar. 11	One (3/05)	7 AM - 4 PM Sun	1
	Mar. 15- Mar. 31	One (3/05)	7 AM - 4 PM Mon, & Thurs	5
2007/2008	Dec. 1 - Dec. 31	--[3]	7 days/week	31
	Jan. 1 - Mar. 31	One	7 AM - 4 PM Mon, & Thurs	26
2008/2009	Dec. 1 - Dec. 31	--[3]	7 days/week	31
	Jan. 1 - Mar. 31	One	7 AM - 2 PM Mon, & Thurs	26

1. Fishery levels are described in the Joint State Eulachon Management Plan.

2. Also, a reduced test fishery (1-3 boats) occurred on January 31, February 7, and February 18, 1999.

3. Under permanent rules, December 1-31 is open 7 days/week, 24 hours/day.

Table 21. Washington and Oregon Tributary Commercial Smelt Seasons, 2000-2009.[1]				
Year	Cowlitz River[2]	Kalama River[3]	Lewis River[4]	Oregon Rivers[5]
2000	Closed	Closed	Closed	24-hours, Everyday
2001	1/02-3/28: 3 PM Tue – 3 AM Wed	Closed	Closed	24-hours, Everyday
2002	1/02-1/31: 6 PM Sun – 6 AM Mon, and 6 PM Wed – 6 AM Thu 2/01-2//25: 6 PM Sun – 6 AM Mon, and 6 PM Tue – 6 AM Wed, and Wed – 6 AM Thu 2/26-3/31: 6 PM Sun – 6 AM Mon, and 6 PM Tue – 6 AM Wed, and Wed – 6 AM Thu, and 6 PM Thu – 6 AM Fri	2/05-2/25: 6 PM Sun – 6 AM Mon, and 6 PM Tue – 6 AM Wed, and Wed – 6 AM Thu 2/26-3/31: 6 PM Sun – 6 AM Mon, and 6 PM Tue – 6 AM Wed, and Wed – 6 AM Thu, and 6 PM Thu – 6 AM Fri	2/05-3/31: 6 PM Sun – 6 AM Mon, and 6 PM Tue – 6 AM Wed, and Wed – 6 AM Thu 2/26-3/31: 6 PM Sun – 6 AM Mon, and 6 PM Tue – 6 AM Wed, and Wed – 6 AM Thu, and 6 PM Thu – 6 AM Fri	24-hours, Everyday
2003	1/01-3/31: 6 PM Sun – 6 AM Mon, and 6 PM Tue – 6 AM Wed, and 6 PM Wed – 6 AM Thu	1/01-3/31: 6 PM Sun – 6 AM Mon, and 6 PM Tue – 6 AM Wed, and 6 PM Wed – 6 AM Thu	1/01-3/31: 6 PM Sun – 6 AM Mon, and 6 PM Tue – 6 AM Wed, and 6 PM Wed – 6 AM Thu	24-hours, Everyday
2004	1/01-3/17: 6 PM Sun – 6 PM Tue and 6PM Wed- 6 PM Fri Effective 6 PM Thu 3/18-3/31: 6 PM Sun – 6 AM Mon and 6 PM Wed – 6 AM Thur	1/01-3/17: 6 PM Sun – 6 PM Tue and 6PM Wed- 6 PM Fri Effective 6 PM Thu 3/18-3/31: 6 PM Sun – 6 AM Mon and 6 PM Wed – 6 AM Thu	1/01-3/17: 6 PM Sun – 6 PM Tue and 6PM Wed- 6 PM Fri Effective 6 PM Thu 3/18-3/31: 6 PM Sun – 6 AM Mon and 6 PM Wed – 6 AM Thu	24-hours, Everyday
2005	1/01-2/22: 6 PM Sun – 6 AM Mon and 6 PM Wed- 6 AM Thu 2/23-3/31: 6 PM Wed- 6 AM Thu	Closed	1/01-2/22 6 PM Sun – 6 AM Mon and 6 PM Wed- 6 AM Thu 2/23-3/31: 6 PM Wed- 6 AM Thu	24-hours, Everyday
2006	1/01-3/31: 6 PM - 11:59 PM, Sun and Wed	Closed	Closed	24-hours, Everyday
2007	1/01-3/31: 6 PM - 11:59 PM, Sun and Wed			24-hours, Everyday
2008	1/01-3/31: 6 PM – 11:59 PM, Sun and Wed	Closed	Closed	24-hours, Everyday
2009	1/01-3/31 6AM- 10:PM, Saturdays:	Closed	Closed	24-hours, Everyday

1. *The table contains the emergency regulations that modify the seasons during the January 1 – March 31 period. Washington tributaries not mentioned above were closed by emergency regulation during this period.*
2. *Area restricted to downstream of Peterson's Eddy (approximately River Mile [RM]8.0).*
3. *Area restricted to downstream of Modrow Bridge (RM 2.9).*
4. *Area restricted to the mainstem and north fork downstream from the overhead powerlines near Eagle Island (approximately RM 11.5).*
5. *Oregon tributaries (e.g., Sandy River) are open 24 hours per day, 7-days/week, all year.*
6. *All tributary commercial fisheries are restricted to dip net gear.*

Table 22. Lower Columbia River Basin Recreational Smelt Seasons, 1960-2009.	
1960-1996	Columbia River and tributaries open seven days per week the entire year.
1997	Columbia River and Oregon tributaries open seven days per week the entire year. Washington tributaries closed effective February 28.
1998	Columbia River and Oregon tributaries open seven days per week the entire year. Washington tributaries closed effective February 2.
1999	Columbia River and Oregon tributaries open seven days per week the entire year. Washington tributaries were open on Wednesdays and Saturdays from January 2, 1999 through February 13, 1999.
2000	The Oregon portion of the Columbia River and Oregon tributaries open 7 days per week the entire year. The Cowlitz River was open on Fridays and Saturdays from December 31, 1999 through February 26, 2000. The Washington portion of the Columbia River and all other Washington tributaries were closed the entire year.
2001	The Oregon portion of the Columbia River and Oregon tributaries open seven days per week the entire year and the Washington portion of the Columbia River was open 7 days per week during February 24-March 31, 2001. The Cowlitz River was open on Saturdays during January 6- March 6, 2001. All Washington tributaries, including the Cowlitz River, were open on Saturdays, Sundays, and Wednesdays during March 7-18, 2001 and Saturdays, Sundays, Mondays, and Wednesdays during March 19-31, 2001.
2002	The Columbia River and Oregon tributaries open 7 days per week the entire year. Washington tributaries open Saturdays, Sundays, and Wednesday from 6 AM to 10 PM during January 1-February 25, 2002. Washington tributaries open 7 days per week from 6 AM to 10 PM during February 26-March 31, 2002.
2003	The Columbia River and Oregon tributaries open 7 days per week the entire year. Washington tributaries open 7 days per week from 6 AM to 10 PM during January 1-March 31, 2003.
2004	The Oregon portion of the Columbia River and Oregon tributaries open seven days per week the entire year (25-lbs. daily limit), and the Washington portion of the Columbia River was open 7 days per week during January 1- March 31, 2004 (20-lbs. daily limit). Washington tributaries were open 7 days per week from 6 AM to 10 PM during January 1 – March 19, 2004, and on Wednesdays and Saturdays from 6 AM to 10 PM during March 19-31, 2004 (20-lbs. daily limit).
2005	The Oregon portion of the Columbia River and Oregon tributaries open seven days per week the entire year (25-lbs. daily limit), and the Washington portion of the Columbia River was open 7 days per week during January 1- March 31, 2005 (25-lbs. daily limit). Washington tributaries (Grays River, Cowlitz River, Kalama River, and Lewis River) were open on Tuesdays and Saturdays from 6 AM to 10 PM during January 1 – February 23, 2005 (10-lbs. daily limit), and in the Cowlitz River only, on Saturdays from 6 AM to 10 PM during February 26 – March 31, 2005 (10-lbs. daily limit).
2006-2007	The Oregon portion of the Columbia River and Oregon tributaries open seven days per week the entire year (25-lbs. daily limit), and the Washington portion of the Columbia River was open 7 days per week during January 1- March 31 (25-lbs. daily limit). Washington tributaries were closed with the exception of the Cowlitz River, which was open on Saturdays only, from 6 AM to 10 PM, during January 1 – March 31 (10-lbs. daily limit).
2007-2009	The Oregon portion of the Columbia River and Oregon tributaries open seven days per week the entire year (25-lbs. daily limit), and the Washington portion of the Columbia River was open 7 days per week during January 1- March 31 (25-lbs. daily limit). Washington tributaries were closed with the exception of the Cowlitz River, which was open on Saturdays only, from 6 AM to 10 PM, during January 1 – March 31 (10-lbs. daily limit).