



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

**2022 JOINT STAFF REPORT:
STOCK STATUS AND FISHERIES FOR
FALL CHINOOK SALMON, COHO SALMON, CHUM
SALMON, SUMMER STEELHEAD,
AND WHITE STURGEON**

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TABLE OF CONTENTS

INTRODUCTION	5
COMPACT and JOINT STATE PROCESS	5
SEASONS CONSIDERED	5
STOCK STATUS	6
<i>Fall Chinook</i>	6
<i>Summer Steelhead</i>	9
<i>Coho</i>	12
<i>Chum</i>	13
MANAGEMENT GUIDELINES	15
<i>Endangered Species Act</i>	15
<i>Columbia River Salmon Management Guidelines</i>	15
<i>Upriver Summer Steelhead</i>	15
<i>Lower Columbia River natural-origin Coho (LCN Coho)</i>	16
<i>Lower Columbia River natural-origin tule Chinook (LCR tule)</i>	16
<i>Upriver Fall Chinook</i>	17
<i>Annual Non-Treaty Impact Allocation of Upriver Fall Chinook</i>	17
REVIEW OF MAINSTEM AND SELECT AREA FISHERIES	18
<i>Non-Treaty Commercial Fisheries</i>	18
2021 <i>Early Fall Commercial Mainstem Fisheries</i>	18
2021 <i>Late Fall Commercial Mainstem Fisheries</i>	19
2021 <i>Commercial Alternative Gear Fall Fisheries</i>	19
2021 <i>Combined Commercial Mainstem Fisheries</i>	19
<i>Non-Treaty Recreational Fisheries</i>	20
2021 <i>Buoy 10 Recreational Fishery</i>	21
2021 <i>Lower Columbia Mainstem Recreational Fishery</i>	23
2021 <i>Columbia Mainstem Recreational Fisheries above Bonneville Dam</i>	24
<i>Select Area Fisheries</i>	25
2021 <i>Select Area Fisheries</i>	25
<i>Treaty Indian Mainstem Fisheries</i>	27
2021 <i>Treaty Indian Commercial Fisheries</i>	27
2021 <i>Fishery Impacts</i>	28
2022 FALL SEASON FISHERY EXPECTATIONS	29
<i>Non-Treaty Fisheries</i>	29
2022 <i>Non-Treaty Columbia River Fall Fishery Chinook Fishery Plan</i>	29
<i>Select Area Fisheries</i>	31
<i>Treaty Indian Fisheries</i>	32
2022 <i>Columbia River Fall Fishery Model Summary</i>	32

LIST OF TABLES

Table 1. Federally-listed species found in Columbia River fishery management areas.34

Table 2. Columbia River fall salmonid forecasts and actual returns, 2020-2021. ^{1,2}35

Table 3. Stock accountability of adult fall Chinook returning to the Columbia River, 1980-2021. ^{1,2,3}36

Table 4. Predicted and actual returns to the Columbia River of adult fall Chinook, 2014-2021. ¹37

Table 5. Estimated Columbia River return of Snake River natural-origin fall Chinook adults, 1986-2021.38

Table 6. Returns of upriver summer steelhead to Bonneville Dam (April- October), 1984-2021.....39

Table 7. Returns of upriver summer steelhead to Lower Granite Dam, 1991-2022. ¹40

Table 8. Adult Coho returns to the Columbia River, 1980-2021. ¹41

Table 9. Early stock adult Coho returns to the Columbia River, 1980-2021. ¹42

Table 10. Late stock adult Coho returns to the Columbia River, 1980-2021. ¹43

Table 11. Lower Columbia River Coho natural spawner estimates in Oregon and Washington tributaries, 2011-2020. ^{1,2}44

Table 12. Columbia River Chum abundance in select Washington tributaries and the mainstem Columbia River, 2005-2021.....46

Table 13. Treaty Indian fall Zone 6 mainstem commercial gillnet seasons, 2021.47

Table 14. Non-treaty fall commercial fishing seasons, 2021.....48

Table 15. Kept catch (adults and jacks) in fall season mainstem fisheries, 2021.....55

Table 16. Fishing periods, gear, and landings from mainstem Columbia River non-treaty commercial seasons, 2021.56

Table 17. Lower Columbia River winter/spring/summer/fall commercial landings, 2021.57

Table 18. Stock composition of adult fall Chinook catch in mainstem Columbia River fisheries, 2021. ¹58

Table 19a. Fall season A-Index summer steelhead harvest and incidental release mortalities in mainstem Columbia River non-treaty fisheries, 1999-2021. ¹.....59

Table 19b. Fall season B-Index summer steelhead harvest and incidental release mortalities in mainstem Columbia River non-treaty fisheries, 1999-2021. ¹.....60

Table 20. Time, area, and gear restrictions for early fall non-treaty commercial mainstem fisheries, 2009-2021.....61

Table 21. Landed catch from early fall non-treaty commercial mainstem fisheries, 1970-2021.62

Table 22. Landed catch from late fall mainstem and Select Area non-treaty commercial fishing seasons, 1980-202163

Table 23. Select Area fall commercial fisheries landings, 2009-202164

Table 24. Fall-season recreational harvest of Chinook and Coho in Oregon Select Area sites and adjacent tributaries, 2008-2021. ^{1,2}65

Table 25. Angler trips and kept catch in the Buoy 10 recreational fishery, 1982-2021. ¹66

Table 26. Fall Salmon angler trips and kept catch on the lower Columbia River, August-October, 1980-2021.67

Table 27. Mainstem fall Chinook recreational fisheries upstream of Bonneville Dam, 2003-2021.....68

Table 28. Treaty fishery open area and Spring Creek Sanctuary restrictions during fall season commercial set and drift gillnet seasons, 1995-2021.....	69
Table 29. Fall mainstem Columbia River treaty fishery landings, 1980-2021.....	70
Table 30. Fall treaty fisheries catch composition, 2021. ¹	71
Table 31. Aerial set net counts for Zone 6 treaty Indian fall gillnet salmon fisheries during statistical weeks, 35-40, 1999-2021.....	72
Table 32. Fall season treaty impact rates on natural-origin and total B-Index (since 2008) upriver summer steelhead, 1999-2021. ¹	73
Table 33. Fall season non-treaty harvest and impact rates on natural-origin A- and B-Index upriver summer steelhead, 1999-2021. ¹	74
Table 34. Lower Columbia Natural (LCN) Coho ocean and in-river exploitation rates, 2005-2021.....	75
Table 35. Lower Columbia River tule fall Chinook exploitation rates, 2006-2021. ¹	76
Table 36. ESA impact summary for fall season fisheries, 2021.....	77
Table 37. Upriver bright and Snake River natural-origin fall Chinook in-river harvest rates, 2007-2021.	78

LIST OF FIGURES

Figure 1. Average (2012-2021) daily passage of fall Chinook at Bonneville Dam.....	6
Figure 2. Fall Chinook terminal escapement destinations color coded by management stock (legend at top right of figure). Major dams along the mainstem Columbia River and Snake River are indicated by two letter abbreviations (BD = Bonneville Dam, DD = The Dalles Dam, JD = John Day Dam, MN = McNary Dam, PR = Priest Rapids Dam, IH = Ice Harbor Dam, LG = Lower Granite Dam).....	7
Figure 3. Estimated ten-year average (2012-2021) daily passage of A- and B-Index summer steelhead at Bonneville Dam.	11
Figure 4. Ten-year average (2012-2021) of daily fish counts at Bonneville Dam.....	13
Figure 5. Columbia River commercial fishing zones.....	20

INTRODUCTION

This report describes fall fisheries in the mainstem Columbia River, and includes a review of those fisheries that occurred in 2021 and expectations for 2022 fall fish runs and fisheries. This report is part of an annual series produced by the Joint Columbia River Management Staff of the Washington Department of Fish and Wildlife (WDFW) and Oregon Department of Fish and Wildlife (ODFW) prior to each major Columbia River Compact/Joint State hearing. The first Columbia River Compact Hearing of the 2022 fall management period is scheduled for 10:00 a.m. Wednesday July 27 via teleconference. The *U.S. v Oregon* Technical Advisory Committee (TAC) has contributed to and reviewed this report.

COMPACT and JOINT STATE PROCESS

The Columbia River Compact is an agreement between the states of Oregon and Washington through which the two states set commercial fishing regulations for concurrent jurisdiction waters of the Columbia River. The Columbia River Compact was established in 1915 by the respective state legislatures to resolve the difficulties which arose from the states unilaterally establishing commercial fishing seasons and regulations. The Compact provides that neither state may make, change, alter, or amend its fishing regulations without the consent and approbation of the other. Congress ratified the Compact in 1918.

The Compact is interpreted as being applicable only to commercial fisheries; however, in practice, the states also apply the principle of joint state management to regulation of recreational fisheries occurring in concurrent jurisdiction waters of the Columbia River.

Typically, public hearings are convened to provide a forum in which the states may discuss, negotiate, and reach agreement on specific fishing regulations. The states are typically represented by delegates of the Oregon and Washington agency directors, acting on behalf of the Oregon Fish and Wildlife Commission (OFWC) and the Washington Fish and Wildlife Commission (WFWC). The Columbia River treaty tribes have authority to regulate treaty fisheries.

When addressing regulations for Columbia River fisheries, the states consider the effect on escapement, treaty rights, and the impact on species listed under the Endangered Species Act (ESA; Table 1). Working together under the principles of the Compact, the states have the responsibility to address the allocation of limited resources between recreational, commercial, and treaty 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

At the July 27 hearing, the Compact will consider fall-season Select Area and mainstem commercial fisheries plus fall-season treaty platform and hook-and-line fisheries. A second hearing is expected in mid-August to consider treaty mainstem commercial fisheries. Additional

Compact and/or Joint State hearings will be scheduled throughout the fall management period as in-season information on fish runs and ongoing fisheries become available.

STOCK STATUS

Fall Chinook

Fall Chinook generally enter the Columbia River from late July through October with abundance peaking in the lower river from mid-August to mid-September, and passage at Bonneville Dam peaking in early to mid-September (Figures 1 & 4).

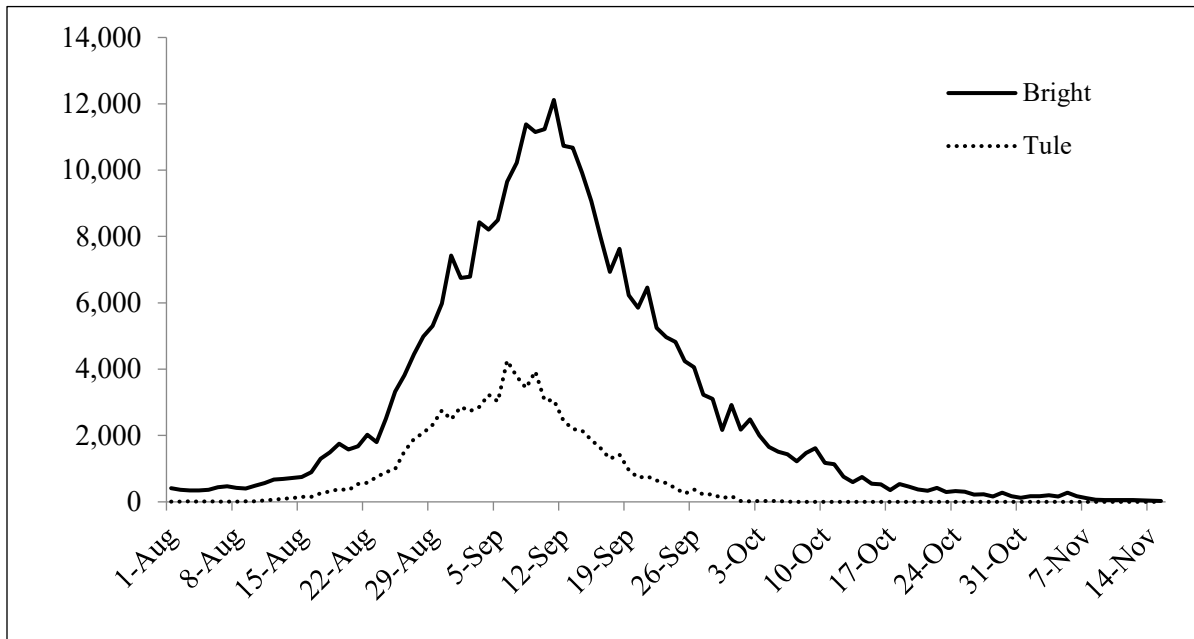


Figure 1. Average (2012-2021) daily passage of fall Chinook at Bonneville Dam.

Columbia River fall Chinook are comprised of seven management components: Lower River Hatchery (LRH), Lower River Natural-Origin (LRW), Select Area Bright (SAB), Bonneville Pool Hatchery (BPH), Upriver Bright (URB), Pool Upriver Brights (PUB), and Lower River Brights (LRB). The aggregate PUB and LRB returns comprise the mid-Columbia Bright (MCB) stock category. The LRH and BPH components are considered tule stock, and the LRW, SAB, URB, and MCB components are considered bright stock. General destinations of these various stock components are illustrated in Figure 2.

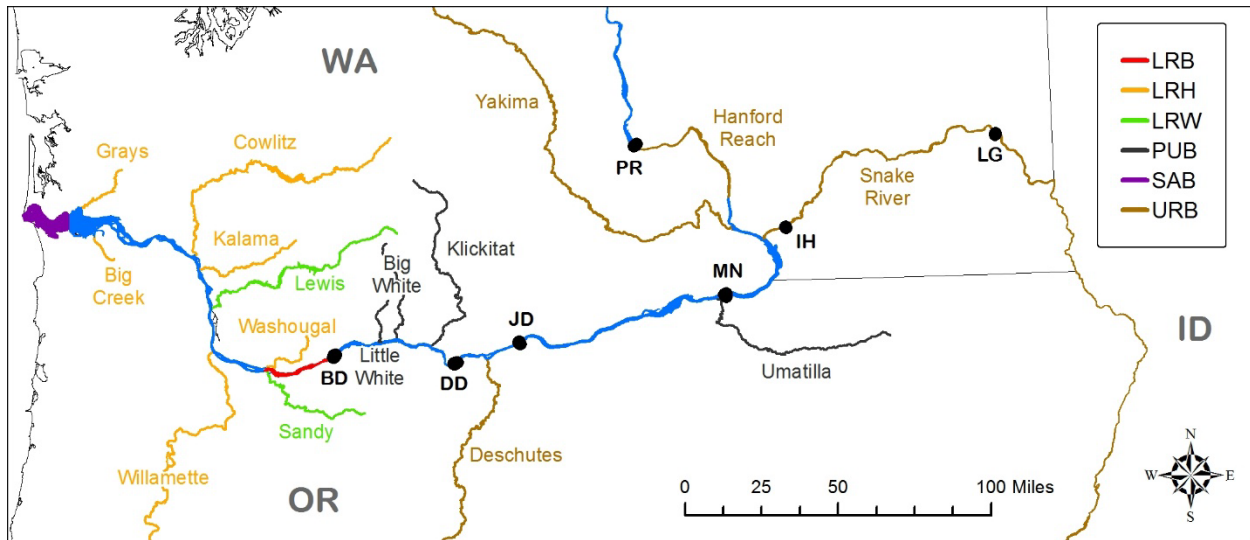


Figure 2. Fall Chinook terminal escapement destinations color coded by management stock (legend at top right of figure). Major dams along the mainstem Columbia River and Snake River are indicated by two letter abbreviations (BD = Bonneville Dam, DD = The Dalles Dam, JD = John Day Dam, MN = McNary Dam, PR = Priest Rapids Dam, IH = Ice Harbor Dam, LG = Lower Granite Dam)

The upriver run is comprised of stocks produced upstream of Bonneville Dam, and includes URB, PUB, and BPH. Most of the URB Chinook are destined for the Hanford Reach area of the Columbia River, Priest Rapids Hatchery, areas upstream of Priest Rapids Dam, and the Snake River. Smaller URB components are destined for the Deschutes and Yakima rivers. Snake River natural-origin (SRW) fall Chinook are a sub-component of the URB stock. PUBs are a bright stock reared at Little White Salmon (LWSNFH), Umatilla, and Klickitat hatcheries, and released in areas between Bonneville and McNary dams. Natural production of fish derived from PUB stock is believed to also occur in the mainstem Columbia River below John Day Dam, and in the Wind, White Salmon, Klickitat, and Umatilla rivers. The BPH stock is produced primarily at the Spring Creek National Fish Hatchery (SCNFH) in Bonneville Pool, although natural production of tules also occurs in the Wind, White Salmon, Hood, and Klickitat rivers. Hatchery production of BPH Chinook has been reduced since 2009 and offset by increased tule releases in Oregon facilities downstream of Bonneville Dam. Tule (BPH) passage at Bonneville Dam occurs over a shorter timeframe than for bright (URB and PUB) Chinook (Figure 1).

The lower Columbia River (LCR) run is comprised of stocks produced downstream of Bonneville Dam, and includes LRH, LRW, LRB, and SAB stocks. Of the four lower river stocks, LRH are the only tule strain, the remainder being bright stocks. The LRH stock is currently produced from hatchery facilities (four in Washington and three in Oregon), and includes natural production (LCR natural tules) from most tributaries downstream of Bonneville Dam. Being a tule stock, the LRH fish are generally more mature (darker in color and well-developed gonads) when entering the mainstem, and are quick to reach the tributaries to spawn. The LRW stock is naturally-produced, primarily in the Lewis River system with smaller components also present in the Cowlitz and Sandy rivers. The LRBs are a natural stock that spawn in the mainstem Columbia River approximately three miles downstream from Bonneville Dam. The LRB stock is closely related to URBs, and is thought to have originated from MCB or URB stock. LRBs were originally considered a component of the MCB stock. Beginning in 1998, this stock was reclassified as a

unique subcomponent of the MCB stock. SABs are a hatchery stock that originated from Rogue River stock fall Chinook egg transfers during 1982-1986. Production of this stock is confined to Youngs Bay, with releases occurring from ODFW's Klaskanine Hatchery and Clatsop County Fisheries' (CCF) net pens.

2021 Returns

The total Columbia River fall Chinook adult return during 2021 was 481,300 fish. The return was 66% of the recent 10-year average (2011-2020) return of 724,200 adults, and less than the preseason forecast of 576,200 fish. The LRH, BPH, SAB and PUB returns exceeded preseason forecasts, while LRW, LRB, and URB returns came in under forecasts. Passage at Bonneville Dam totaled 347,801 adults, with a peak daily count of 18,848 adult fish. Forecasted and actual returns for 2021 are presented in Table 2. Historical returns by stock are presented in Tables 3 and 4. Forecast accuracy is presented in Table 4. Recent-year average Chinook passage at Bonneville Dam is illustrated in Figures 1 and 4.

The 2021 LRH return was 74,707 adults, 101% of forecast and 87% of the recent 10-year average of 85,560 adult fish. Just over 32,500 adult fish returned to Oregon and Washington hatcheries below Bonneville Dam, exceeding the escapement goal of 13,200. LRH hatchery escapements included approximately 23,500 adult fish to Washington hatcheries (5,400 goal) and about 9,000 adult fish to Oregon hatcheries (6,000 goal). A tule production program was initiated in 2008 at Bonneville Hatchery. Eggs were initially transferred from SCNFH and sub-yearling smolts were released beginning in 2009 (2008 BY). This program is now maintained with broodstock collected at Bonneville Hatchery. Currently these fish are grouped with the LRH stock, but because of their origin, these fish could be grouped with the BPH stock, or considered a separate stock. In addition to the established hatchery programs, releases of LRH Chinook also occur from the Deep River net pens and Klaskanine Hatchery. Naturally-spawning LRH fall Chinook accounted for an estimated 17,400 adults in Washington tributaries and 7,100 adult fish in Oregon tributaries. Natural spawners may include a mix of hatchery and natural-origin fish.

The 2021 LRW return totaled 16,937 adults. The return was 83% of forecast and 88% of the recent 10-year average return of 19,210 fish. The natural spawning escapement to the North Fork Lewis River of 12,400 exceeded the escapement goal of 5,700 LRW adults.

The 2021 BPH return of 73,658 adults was 156% of forecast and 104% of the recent 10-year average return of 70,720 fish. Adult returns of BPH included 24,400 fish to SCNFH, which exceeded the escapement goal of 7,000 adults. An additional 2,800 adult BPH strayed into Bonneville Hatchery. Naturally-spawning BPH fall Chinook accounted for an estimated 1,500 adult fish in Washington tributaries which may include a mix of hatchery and natural-origin fish.

The 2021 URB return of 239,906 adults was 66% of the forecast and 56% of the recent 10-year (2011-2020) average return of 424,860. The URB return comprised 50% of the Columbia River fall Chinook return. The McNary Dam count (Aug 9 – Oct 31) of 172,259 adult Chinook exceeded the *U.S. v OR* management goal of 60,000 fish. The Hanford Reach fall Chinook spawning escapement in 2021 was 49,500 adult fish. The Deschutes River return of 8,100 adults was 54% of the recent 10-year average of 14,900 adults. The SRW fall Chinook return of 10,902 fish was

100% of forecast and 60% of the 2011-2020 average of 18,000 (Table 5). The SRW escapement to Lower Granite Dam totaled 9,322 adult fish.

The 2021 MCB adult return included 7,803 LRB stock and 66,079 PUB stock. The LRB return was 78% of the forecast and 139% of the recent 10-year average return of 5,620 fish. The PUB return was 106% of the forecast and 71% of the recent 10-year average of 93,360 fish. PUB hatchery escapement included 10,600 fish to LWSNFH. PUB natural-spawn escapement totaled 9,600 fish in Washington tributaries upstream of Bonneville Dam.

The 2021 SAB return of 2,192 adults was 440% of forecast but only 22% of the recent 10-year average of 9,820 fish. The majority (96%) of SABs returning in 2021 were harvested in Columbia River fisheries or returned to hatcheries.

2022 Forecast

The forecast for the 2022 fall Chinook adult return to the Columbia River totals 485,500 (Table 2). The forecast is 101% of the 2021 actual return and 68% of the 2012-2021 average return (710,240 adults). Bright stocks represent 66% of the total forecast. The LRH forecast of 73,600 adults is similar to the 2021 actual return, but below the recent 10-year average (82,100 adults). The LRW forecast of 10,900 adults is 56% of the recent 10-year average of 19,360 adults. The BPH forecast of 92,200 adults is 130% of the recent 10-year average of 71,040 adults. The forecasted return of 229,700 URB adults represents 47% of the projected total return and is 55% of the recent 10-year average (416,640 adults). Included in the URB forecast is the SRW forecast of 11,000 adult fish, which is 63% of recent 10-year average (17,410 adults) and 101% of last year's return. The LRB forecast of 8,700 adults is 140% of the recent 10-year average (6,210 adults), and the PUB forecast of 69,800 adults is 74% of the recent 10-year average (94,100 adults). The SAB forecast of 600 adult fish is 7% of the recent 10-year average return (8,400 adults).

Summer Steelhead

The Columbia River summer steelhead run is made up of populations originating from both lower river and upper river tributaries. Summer steelhead enter the Columbia River primarily from April through October each year, with most of the run entering from late June to mid-September. The LCR component is primarily hatchery produced and derived from Skamania stock, and tends to be earlier-timed than the upriver stocks. The Skamania stock was successfully introduced into numerous tributaries below Bonneville Dam, and a few systems above, including the Klickitat and Hood rivers. Peak return timing of the lower river component is in May and June. Summer steelhead caught in mainstem Columbia River fisheries downstream of Bonneville Dam during May and June are categorized as lower river Skamania stock (destined for areas downstream of Bonneville Dam).

Upriver summer steelhead include hatchery and wild fish that pass Bonneville Dam during April through October. Fish passing from April through June are categorized as Skamania stock steelhead, destined mainly for tributaries within Bonneville Pool. Production of Skamania stock steelhead in hatcheries upstream of Bonneville Dam has decreased from historical levels. Steelhead caught in the Bonneville Pool from April 1 through June 30 are categorized as upriver Skamania Steelhead.

Steelhead that pass Bonneville Dam during July through October are categorized as A-Index or B-Index fish, based on fork length (A-Index <78 cm, B-Index ≥78 cm). B-Index steelhead primarily return to tributaries in the Salmon and Clearwater rivers in Idaho and usually spend two years in the ocean, while A-Index steelhead return to tributaries throughout the Columbia and Snake basins (including the Salmon and Clearwater rivers), and usually spend only one year in the ocean. The run-timing distribution at Bonneville Dam of A-Index and B-Index summer steelhead is shown in Figure 3. Steelhead caught in the mainstem Columbia River downstream of the Snake River from July 1 through October 31 are considered A-Index or B-Index steelhead. Additionally, steelhead caught in the mainstem Columbia River between The Dalles Dam and the mouth of the Snake River from November 1 through June 30 are also considered A-Index or B-Index steelhead.

Summer steelhead passage over Bonneville Dam is shown in Table 6, and passage over Lower Granite Dam is shown in Table 7. Index classification and hatchery-/natural-origin determination are dependent on biological sampling at the two hydroelectric facilities mentioned. See Table 2 for details on steelhead forecasts.

Steelhead harvest from non-treaty recreational fisheries occurs throughout the Columbia River basin and from treaty Indian fisheries in Zone 6 (between Bonneville and McNary Dams) and just downstream of Bonneville Dam. Recreational steelhead fisheries are mark-selective, allowing retention of fin-clipped fish only. Retention of steelhead in non-treaty commercial fisheries has been prohibited since 1975. Time, area, and gear restrictions are implemented to minimize encounters of steelhead in non-treaty commercial fisheries, although some release mortality does occur. The majority of the treaty Indian catch occurs during the fall gillnet fishery, but catch also occurs in treaty platform and hook-and-line fisheries. Treaty Indian steelhead harvest is not mark-selective. Since the 1990s, the tribes have reduced catch of natural-origin steelhead during fall treaty Indian gillnet seasons.

2021 Returns

The total upriver summer steelhead return to Bonneville Dam (April-October passage) in 2021 was 69,669 fish, and included 1,917 Skamania stock, 56,256 A-Index, and 11,496 B-Index. The 2021 return was 69% of the forecast of 101,400 upriver steelhead. Upriver steelhead passage at Bonneville Dam in 2021 was 35% the recent 10-year average return of approximately 199,800 fish. Natural-origin passage totaled 21,800 fish, which represented 31% of the return, compared to the recent 10-year average proportion of 33% (65,624 fish). Run-size data in this report are adjusted for unclipped hatchery fish based on sampling data collected at the Bonneville Dam adult fish trapping facility (AFF). From July through October, 636 steelhead were biologically sampled by CRITFC. Sampling at the AFF was halted for temperature restrictions in from July 27-August 9 in 2021. Sampling is limited when temperatures exceed 70 °F and is ceased when water temperatures exceed 72°F.

The majority of summer steelhead passage at Bonneville Dam occurs during July through October. During these months in 2021, an estimated 67,752 steelhead passed Bonneville Dam, compared to the recent 10-year average of 192,020 fish. Passage during 2021 was 50% complete on August 29, compared to the recent 10-year average 50% passage date of August 14.

The upriver Skamania return to Bonneville Dam totaled 1,917 fish, including 1,119 (58%) natural-origin fish. The Skamania return was 25% of the recent 10-year average of 7,755 fish. The A-Index return of 56,256 was 34% of the recent 10-year average of 166,541 fish. Natural-origin fish represented 34% of the A-Index return, which was less than the recent 10-year average of 35%. The B-Index return totaled 11,496 fish, which was 45% of the recent 10-year of 25,478 fish. Natural-origin fish represented 15% of the B-Index return, less than 10-year average of 19%.

The steelhead run year at Lower Granite Dam is from July 1 through June 30 of the following year. The preliminary 2021-2022 steelhead passage at Lower Granite Dam was 42,586 fish. Based on passage and visual sampling data, the preliminary composition was 7,666 B-Index fish (17% natural-origin) and 34,919 A-Index fish (23% natural-origin). About 43% of the unclipped B-Index fish were hatchery origin and about 11% of the unclipped A-Index fish were hatchery origin.

2022 Forecast

The 2022 forecast for the summer steelhead return to Bonneville Dam is 99,700 upriver fish, including 3,100 Skamania stock (1,600 natural-origin), 81,000 A-Index (28,100 natural-origin), and 15,600 B-Index (1,900 natural-origin). Overall, the forecast is 59% of the recent 10-year average return of 170,254 fish. The Skamania, A-Index, and B-Index forecasts are 44% and 58%, and 68% respectively, of the recent 10-year average returns (Tables 2 and 6).

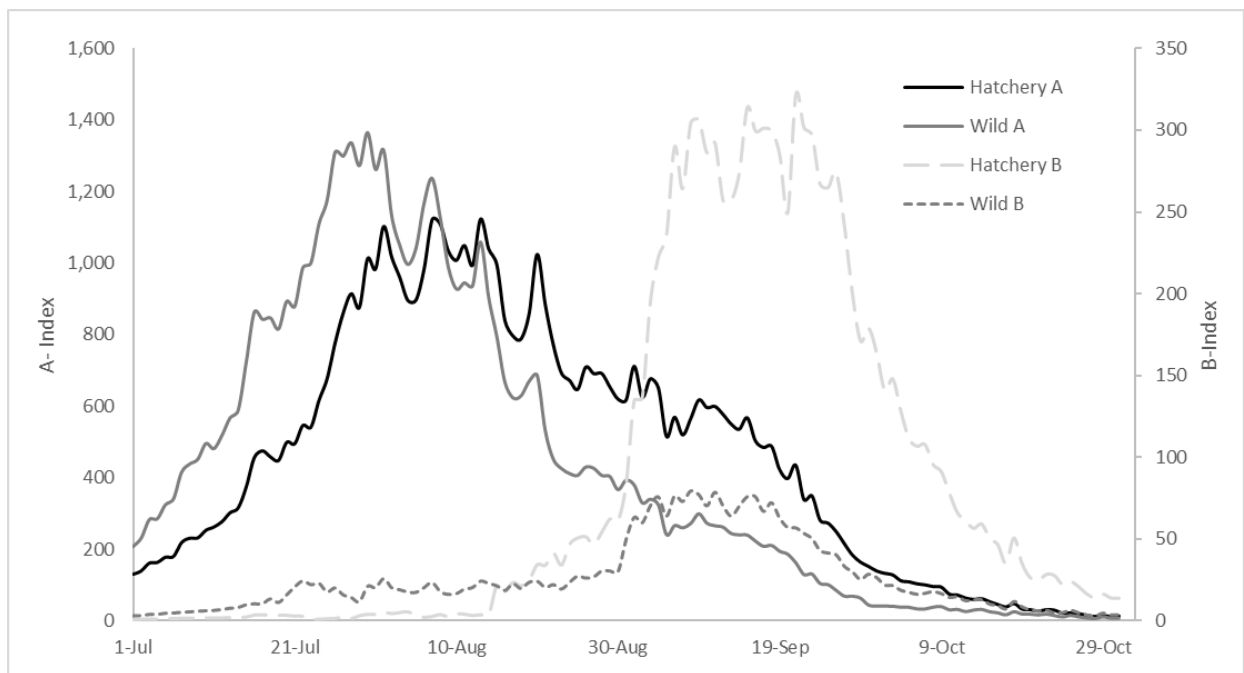


Figure 3. Estimated ten-year average (2012-2021) daily passage of A- and B-Index summer steelhead at Bonneville Dam.

Coho

The Columbia River hatchery Coho return includes both early and late returning stocks. Coho adults are typically age-3 fish, returning to freshwater after only one year in the ocean. Early stock Coho enter the Columbia River from mid-August to early October, with peak entry occurring in early September (Figure 4). In the ocean, early stock Coho tend to remain near the Oregon and southern Washington coasts, and primarily migrate southward from the Columbia River, and are therefore referred to as Type S. Late stock Coho enter the Columbia River from mid-September through December, with peak entry occurring in mid-October. In the ocean, late stock Coho tend to migrate northward from the Columbia River along the Washington coast and Vancouver Island, and are therefore referred to as Type N. Columbia River Coho return primarily to Oregon and Washington hatcheries downstream from Bonneville Dam, although substantial hatchery, and some natural, production now occurs in areas upstream of Bonneville Dam (Tables 8, 9, and 10).

Columbia River tributaries in Oregon with historical natural Coho production included the Lewis and Clark, Youngs, Klaskanine, Clatskanie, Clackamas, and Sandy rivers, plus Big, Gnat, Beaver, Milton, and Scappoose creeks. Annual spawning fish survey counts conducted in Oregon LCR tributaries from December through February, beginning as early as 1949, indicated that natural-origin Coho might have been extirpated from Oregon's lower Columbia tributaries, excluding the Clackamas and Sandy rivers. Intensive surveys conducted during 1990-1999, resulting in counts of 0.0-0.4 fish per mile, supported this conclusion. Higher numbers of unmarked Coho have been observed in LCR tributaries since 2000, indicating that some remnant Oregon populations may persist in the LCR Basin, but the origin of these fish is unknown. Population-specific estimates of naturally-spawning Coho, and the proportion estimated to be of natural-origin, are shown in Table 11.

Historical natural Coho production areas in Washington included the Grays, Elochoman, Cowlitz, Toutle, Kalama, Lewis, and Washougal watersheds. Stream surveys conducted in Washington from 1945-1979 in the Toutle and lower Cowlitz River tributaries showed a steady decline of naturally-spawning Coho. Smolt traps are currently being used in several Washington tributaries to estimate natural production. Recent-year natural spawn estimates from Washington's LCR tributaries are provided in Table 11.

Historical natural Coho production areas above Bonneville Dam included the Spokane, Yakima, Wenatchee, Entiat, Methow, and Snake rivers. The majority of Coho presently passing Bonneville Dam are from the *U.S. v. Oregon* Management Agreement mandated hatchery releases of Coho stocks in the Yakima, Umatilla, Klickitat, Wenatchee, Methow, and Clearwater rivers. The releases outside the Klickitat are primarily intended to restore natural Coho to appropriate habitats above Bonneville Dam, most recently in the Snake, Yakima, Methow, and Entiat rivers. Coho destined for areas upstream of Bonneville Dam have represented an increasing percentage of the total return in response to increased releases above Bonneville Dam. Coho passage at Bonneville Dam is illustrated in Figure 4. The tribes are engaged in increased monitoring and evaluation activities to determine the extent of natural production in areas where Coho have been re-introduced. See Tables 8, 9, and 10 for details on harvest, escapement, passage, and abundance.

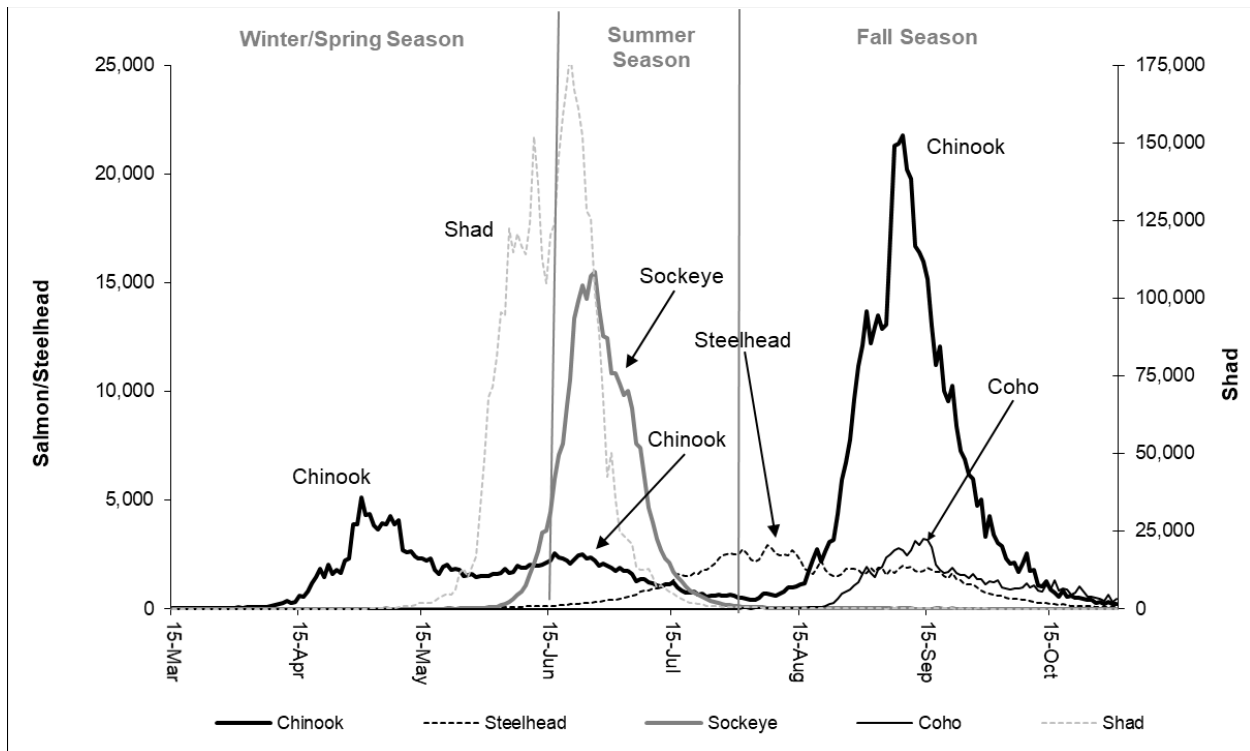


Figure 4. Ten-year average (2012-2021) of daily fish counts at Bonneville Dam.

2021 Returns

The 2021 Columbia River Coho return of 666,402 adult fish was comprised of 472,304 early-stock fish and 194,098 late-stock fish (Table 2) and represented 50% of the forecasted return of 1,343,200 adults. The early stock Coho return was 54% of forecast, and the late stock return was 41% of forecast. The Bonneville Dam count of 243,603 adult Coho was 194% of the 2020 count. Hatchery escapement below Bonneville Dam (approximately 160,800 fish) to Washington and Oregon facilities was 180% of the recent 10-year average. Passage represented 87% of the estimated total ocean abundance of Columbia River Coho destined for areas above Bonneville Dam. The preliminary natural escapement of LCR Coho is 51,800 adults, compared to the recent 10-year average of 29,400 fish.

The 2022 forecast for the Columbia River Coho return is 683,700 adults, which includes 431,400 early stock and 252,300 late stock (Table 2). The forecast is 200% of the recent 10-year average of 341,100 fish. The individual forecasts for early and late stock Coho are 195% and 210% of the recent 10-year averages, respectively. Bonneville Dam passage is expected to be 271,116 adult Coho, which represents 63% of the forecasted total ocean abundance of Columbia River Coho destined for areas upstream of Bonneville Dam. Escapement goals of 4,930 early stock and 11,400 late stock adults to hatcheries downstream of Bonneville Dam are expected to be achieved.

Chum

Chum salmon (Chum) return to the LCR from early October through mid-December, with spawning occurring from late October through early January. Chum returns are primarily from natural production. Primary production areas include the Grays River in Washington, smaller

tributaries just downstream from Bonneville Dam, and the mainstem Columbia River in specific locations from the I-205 Bridge upstream to Bonneville Dam. A small number of Chum also pass Bonneville Dam each year.

Four small hatchery enhancement programs (three in WA and one in OR) release fed-fry that contribute to the lower Columbia population. The Washougal/Vancouver Hatchery enhancement program provides fed-fry for release into Duncan Creek (BY 2001 to present) and the East Fork Lewis River (BY 2011 to present). The Grays River Hatchery enhancement program has been producing fed-fry for in-basin releases since 1999 (BY 1998). Beginning in 2011 (BY 2010), eyed-egg transfers of Grays River origin Chum to ODFW's Big Creek Hatchery (BCH) have provided fed-fry for release in Oregon waters. In fall 2014, Chum from the 2010 (age-4) and 2011 (age-3) brood years returned to BCH. These adult returns were the first to be incorporated into the BCH broodstock, and egg transfers from Grays River Hatchery occurred through 2014, and then again 2018 and 2019.

Washington index areas have been surveyed annually since 1950, and specific areas of the mainstem Columbia River have been surveyed annually since 1998. During 2000-2003, survey areas were expanded to include non-index LCR tributaries (Washington and Oregon) downstream of Bonneville Dam. These non-index stream surveys have continued sporadically since. In some years, significant numbers of Chum have been observed in non-index areas, primarily at the mainstem Columbia River spawning areas between Bonneville Dam and the I-205 Bridge. In 2013, the reporting metric for the LCR Chum abundance index was changed from fish/mile to estimates of escapement. Table 12 has been updated to report escapement estimates for the major populations of LCR Chum. The combined estimated return for the major populations in 2021 of approximately 33,021 fish is greater than the recent 10-year average return (16,944 adults). While variable, reported returns to spawning areas outside of the major populations of LCR Chum generally number less than 200 fish annually.

In the fall of 2021, returns of Chum Salmon to Oregon's Big Creek Hatchery were the highest observed in at least 40 years, more than doubling the mark set in the 2020 return. This enabled the Program to Restore Oregon's Chum Salmon (PROCS) to meet fry release goals and conduct adult outplanting in the Big Creek and Clatskanie River populations. Because of the large return no egg transfers from Grays River Hatchery were needed this year. A total of 337 Chum (168 females; 169 males) were spawned over three days in November 2021, resulting in 424,468 eggs being collected. Otoliths are currently being analyzed to determine the origin of the adult fish. Big Creek Hatchery adult collections in 2021 yielded the largest Chum fry release since the inception of the Chum Reintroduction project. A total of 403,152 fed-fry were released from Big Creek on March 22 and April 18, 2022. After broodstock collection goals were met, outplanting occurred and the adults returning to the hatchery were transported to spawn volitionally in nearby streams. In the Big Creek Population, 636 Chum (353 females; 283 males) were taken to Bear and Little Bear Creeks, and 103 fish (54 females; 49 males) were put in Gnat Creek. A total of 1,005 Chum (706 females; 299 males) were transported to two locations in the Clatskanie River. 168 fish (120 females; 48 males) were taken to Conyers Creek and 50 fish (28 females; 22 males) were put in Stewart Creek.

Chum Salmon were observed in 16 spawning reaches via surveys conducted by Oregon Salmonid Inventory and Sampling (OASIS) and PROCS projects in the fall 2021. Adults were observed in

the Lewis & Clark and SF Klaskanine rivers in the Youngs Bay population, and in Bear, Little Bear, Big, Little, and Plympton creeks in the Big Creek population. Additionally, outplanted adults were observed by OASIS survey crews in the Clatskanie River and in Conyers, Carcus, and Stewart creeks in the Clatskanie Population.

PROCS operated screw traps in Bear Creek, Conyers Creek, and the Clatskanie River in the spring of 2022. Final Chum estimates for these sites are unavailable at this time, but 5,039 Chum fry were handled at the Clatskanie River trap, 1874 were caught in Bear Creek and 869 were trapped in Conyers Creek. The total catch in Bear Creek this season was less compared to 2021, but the Clatskanie River and Conyers Creek traps had record-breaking catches for the project due to the outplanting that occurred last fall.

MANAGEMENT GUIDELINES

Endangered Species Act

Status reviews occurring since 1991 have been conducted in the Columbia Basin on ESA-listed salmon and steelhead (Table 1). The *U.S. v Oregon* TAC has prepared Biological Assessments (BAs) for combined fisheries based on relevant *U.S. v Oregon* management plans and agreements since 1992. In addition, ODFW has a state management plan in place for naturally-produced Coho from Oregon tributaries that were listed by the State of Oregon in 1999.

The current BA addresses Columbia River treaty Indian and non-treaty fisheries, as described in the 2018-2027 *U.S. v Oregon* Management Agreement (2018-2027 MA). This BA was submitted in June 2017, and a Biological Opinion (BO) was subsequently issued by the National Marine Fisheries Service (NMFS) in February 2018. The current BO expires after December 31, 2027, concurrent with the 2018–2027 MA.

Columbia River Salmon Management Guidelines

The parties to *U.S. v Oregon* are currently operating under the 2018-2027 MA. This agreement provides specific fishery management constraints for upriver spring, summer, and fall Chinook, upriver Coho, Sockeye, and steelhead. Excerpts from the 2018-2027 MA and other agreements applicable to fisheries considered in this report are included in this section.

Upriver Summer Steelhead

During the fall season, treaty Indian and non-treaty fisheries encountering upriver summer steelhead will be managed according to the harvest rate schedule shown in Table A4 of the 2018-2027 MA. Table A4 only addresses impacts to B-Index steelhead in fall season fisheries; however, the BO does address ESA impact limits to A-Index steelhead in the fall season as well as steelhead impacts in other management periods. All mainstem non-treaty fall fisheries (downstream of the Highway 395 Bridge near Pasco, Washington) occurring from August through December are managed to not exceed impact rates of 2% each on natural-origin A-Index and natural-origin B-Index steelhead. Treaty fisheries are managed based on the abundance-based harvest rate schedule for the aggregate return of hatchery- and natural-origin B-Index steelhead.

Forecast Bonneville Total B Steelhead Run Size	River Mouth URB Run Size	Treaty Total B Harvest Rate	Non-Treaty Natural Origin B Harvest Rate	Total Harvest Rate
<20,000	Any	13%	2.00%	15.00%
20,000	Any	15%	2.00%	17.00%
35,000	>200,000	20%	2.00%	22.00%

B-Index Steelhead are defined as steelhead measuring ≥ 78 cm & passing Bonneville Dam during July 1 and October 31. This harvest rate schedule applies to fall season fisheries only. These fisheries include all mainstem fisheries below the mouth of Snake River from August 1 through October 31 and for mainstem fisheries from The Dalles Dam to the mouth of the Snake River from November 1 through December 31. Also included are fall season treaty fisheries in Drano Lake and tributary mouth fisheries in Zone 6 that impact Snake River steelhead.

Lower Columbia River natural-origin Coho (LCN Coho)

As part of the 2018-2027 MA, ocean and Columbia River fisheries are managed to provide treaty Indian and non-treaty fisheries the opportunity to each harvest 50% of the upriver-origin adult Coho available for harvest south of the U.S-Canada border. Non-treaty fisheries include commercial and recreational fisheries in the ocean and mainstem Columbia River. For lower-river Coho, the exploitation rate (ER) limits are based on impacts to LCN Coho stocks. These ER limits are set annually by NMFS using a harvest matrix that considers parameters of ocean survival and parental escapement. The matrix was updated in 2015 to include additional reference populations. The allocation of non-treaty catch and ESA impacts between ocean and in-river fisheries downstream of Bonneville Dam is determined annually by the states and occurs during the Pacific Fishery Management Council (PFMC) and North of Falcon (NOF) meetings in March and April.

Parental Escapement (percent of full seeding)	Marine Survival Index a/				
	Very Low	Low	Medium	High	Very High
	$\leq 0.06\%$	$\leq 0.08\%$	$\leq 0.17\%$	$\leq 0.40\%$	$> 0.40\%$
Normal	10%	15%	18%	23%	30%
Very Low *	$\leq 10\%$	$\leq 15\%$	$\leq 18\%$	$\leq 23\%$	$\leq 30\%$

* In the event that lower Columbia River natural Coho average spawning escapements fall below 30 percent of full seeding when considered as an average of the ten reference populations, b/ the Council shall work to the extent possible to minimize LCN Coho exploitation rates on adult returns from the corresponding brood year, and in no case exceed the exploitation rate for a given marine survival index category.

a/ Columbia River hatchery Coho jack returns per smolt released.

b/ Clatskanie River, Scappoose Creek, Elochoman River/Skamokawa River, Grays River/Chinook River, Clackamas, Sandy River, Lower Cowlitz River, Toutle River, Coweeman River, and East Fork Lewis River.

Lower Columbia River natural-origin tule Chinook (LCR tule)

Fall-season fisheries in the Columbia River and ocean that harvest LCR tules are managed according to an abundance-based ER schedule that fluctuates based on the combined LRH Chinook return. The LRH Chinook are considered a valid indicator of the relative abundance of LCR (natural) tules. The total allowed ER is shared between ocean and in-river fisheries downstream of Bonneville Dam. The allocation of non-treaty catch and ESA impacts between ocean and in-river fisheries is determined annually by the states and occurs during the PFMC and NOF meetings in March and April.

LRH Abundance	Exploitation Rate
0-30,000	0.30
30,000 -40,000	0.35
40,000 -85,000	0.38
> 85,000	0.41

Upriver Fall Chinook

Fall season fisheries in the Columbia River Basin downstream of the confluence with the Snake River are managed according to the abundance-based harvest rate schedule from the 2018-2027 MA (Table A3). If non-treaty mark-selective fisheries impacting URBs are implemented, the non-treaty ocean and in-river fisheries may not harvest more than 50% of the harvestable surplus of URBs, consistent with the applicable federal allocation case law.

Upriver fall Chinook escapement goals include 7,000 adult BPH fall Chinook (4,000 females) to SCNFH, and a 60,000 adult URB fall Chinook (natural and hatchery) management goal above McNary Dam.

Table A3. Chinook harvest rate schedule for fall management period.					
Expected URB River Mouth Run Size	Expected River Mouth Snake River Natural-origin Run Size ¹	Treaty Total Harvest Rate	Non-Treaty Harvest Rate	Total Harvest Rate	Expected Escapement of Snake R. Natural-origin Past Fisheries
<60,000	<1,000	20%	1.50%	21.50%	784
60,000	1,000	23%	4%	27.00%	730
120,000	2,000	23%	8.25%	31.25%	1,375
>200,000	5,000	25%	8.25%	33.25%	3,338
	6,000	27%	11%	38.00%	3,720
	8,000	30%	15%	45.00%	4,400
<ol style="list-style-type: none"> 1. If the Snake River natural fall Chinook forecast is less than the level corresponding to an aggregate URB run size, the allowable mortality rate will be based on the Snake River natural fall Chinook run size. 2. Treaty Fisheries include Zone 6 Ceremonial, subsistence, and commercial fisheries from Aug 1-Dec 31. 3. Non-Treaty Fisheries include: Commercial and recreational fisheries in Zones 1-5 and mainstem recreational fisheries from Bonneville Dam upstream to the confluence of the Snake River and commercial and recreational SAFE (Selective Areas Fisheries Evaluation) fisheries from August 1-December 31. 4. The Treaty Tribes and the States of Oregon and Washington may agree to a fishery for the Treaty Tribes below Bonneville Dam not to exceed the harvest rates provided for in this Agreement. 5. Fishery impacts in Hanford sport fisheries count in calculations of the percent of harvestable surplus achieved. 6. When expected river-mouth run sizes of naturally produced Snake River Fall Chinook equal or exceed 6,000, the states reserve the option to allocate some proportion of the non-treaty harvest rate to supplement fall Chinook directed fisheries in the Snake River. 					

Annual Non-Treaty Impact Allocation of Upriver Fall Chinook

Based on preseason run size forecasts, a fishing schedule is developed annually for non-treaty recreational and commercial fisheries through the NOF management process. The fisheries described in the following section were structured and guided by preseason planning efforts and informed by in-season data. Preseason plans for fall fisheries that occurred in 2021 can be found in the “Fall Season Expectations” section of the 2021 Fall Joint Staff Report.

REVIEW OF MAINSTEM AND SELECT AREA FISHERIES

Non-Treaty Commercial Fisheries

Traditional commercial fisheries below Bonneville Dam occurred during "early fall" (August to mid-September) targeting Chinook, and during the "late fall" (mid-September to mid-November) targeting Coho. Although Coho typically outnumber Chinook in the late fall season catch, Chinook landings have occasionally been significant during the mid- to late-September timeframe. Incidental landings of steelhead occurred in both early and late fall seasons until commercial sales were outlawed in 1975. Time, area, and gear restrictions have been imposed to reduce the incidental catch of non-target species. See Figure 5 for a map of commercial fishing zones.

Since 1992, fall season commercial fisheries below Bonneville Dam have been reduced in response to ESA listings. During 1995-1998, extremely low Coho abundance curtailed nearly all commercial fishing opportunities during the late fall period. During 1997-2001, early fall fisheries consisted primarily of short fishing periods targeting sturgeon. Since 2002, August fisheries have expanded in time with increased emphasis placed on targeting Chinook. Since 2011, the early fall season has primarily occurred in Zones 4-5 due to ESA constraints and reduced allocation guidelines for LCR tulle Chinook. Late fall season fisheries targeting Chinook typically occur from mid to late September through the end of October within Zones 4-5. Prior to 2006, the late fall season primarily targeted Coho in Zones 1-3 (below the mouth of the Lewis River). Since 2006, the ESA listing of LCN Coho has reduced Coho fishing opportunity considerably. However, during 2013-2015 and again in 2019-2021, mark-selective Coho-target fisheries were implemented using tangle net gear and other live-capture regulations to provide commercial access to harvestable hatchery-origin Coho, while remaining within allowable ESA impact limits.

The following release mortality rates are applied to commercial fishing gears used during the fall; tangle net ($\leq 3.75''$ mesh; Coho, steelhead, chum = 23.6%); gill net (8-8.75'' mesh: steelhead, chum = 44.8%); gill net (9-9.75'' mesh: steelhead = 38.3%).

Reduced non-treaty commercial salmon fishing opportunities in the late 1990s and adoption of Joint State Sturgeon Management Agreements beginning in 1997 resulted in target sturgeon fisheries becoming an important part of fall fishing strategies to allow access to the commercial allocation of White Sturgeon. During 2002-2013, daily and/or weekly possession and sales limits concurrent with salmon fisheries largely replaced directed sturgeon seasons during the fall timeframe. During 2014-2016, policies adopted by the WFWC and OFWC prohibited the retention of White Sturgeon in all non-treaty fisheries downstream of Bonneville Dam (sport and commercial). Since 2017, sturgeon sales have been allowed in fall mainstem commercial fisheries, primarily during August.

2021 Early Fall Commercial Mainstem Fisheries

The 2021 early fall (August) mainstem gillnet season consisted of eight, nine-hour fishing periods in Zones 4-5 during August 9-September 2. A 9-inch minimum mesh size restriction was in place for all periods to minimize handle of steelhead and under-sized sturgeon. White Sturgeon sales (44-50 inches FL) were allowed with a weekly landing limit of four fish per participating vessel in effect. The number of deliveries ranged from 13-81 per fishing period. Landings for the early

fall season included 21,228 Chinook, 2,768 Coho, and 297 White Sturgeon. Chinook landings were 88% of preseason expectations. Coho landings in the early fall season were about 572% of the recent 10-year average of 484 fish. See Tables 14-21 for details on season structure and catches.

2021 Late Fall Commercial Mainstem Fisheries

The late fall mainstem season consisted of eight Chinook-directed fishing periods occurring in Zones 4-5 between September 19 and October 14. The minimum mesh size for all periods was 8-inches. White Sturgeon sales (44-50 inches FL) were allowed for all eight periods, with a six fish weekly landing limit in effect. Landings for the late fall Chinook-directed season included 5,349 Chinook, 1,784 Coho, and 88 White Sturgeon.

2021 Commercial Alternative Gear Fall Fisheries

Due to low projected returns for steelhead and below average expectations for LRH fall Chinook, non-treaty commercial seine and pound net fisheries were not considered, and did not occur, in 2021.

Given the robust Coho forecast, a late fall commercial tangle net fishery occurred based on in-season indications the 2021 return would meet expectations. During the 19-period fishery that occurred from September 27 to October 29 in Zones 1-3, landings totaled 8,557 hatchery Coho, 614 Chinook and 10 White Sturgeon. Daily effort for this fishery peaked early in the season at 42 deliveries and declined steadily to three deliveries on the last day. Regulations for this fishery included a 3.75-inch maximum mesh size, 30-minute maximum soak time, and other live-capture fishing regulations.

2021 Combined Commercial Mainstem Fisheries

The combined fall season Chinook landings of 27,191 were 76% of preseason expectations, and the actual URB run size was 66% of the preseason forecast. Coho landings totaled 13,109 fish in mainstem commercial fisheries which was 115% of the recent 10-year average. Combined sturgeon landings for fall mainstem non-treaty commercial fisheries totaled 395 fish representing 32% of the 1,230 commercial guideline for 2021. See Tables 14-20 and 22 for details on late fall season structure and harvest.

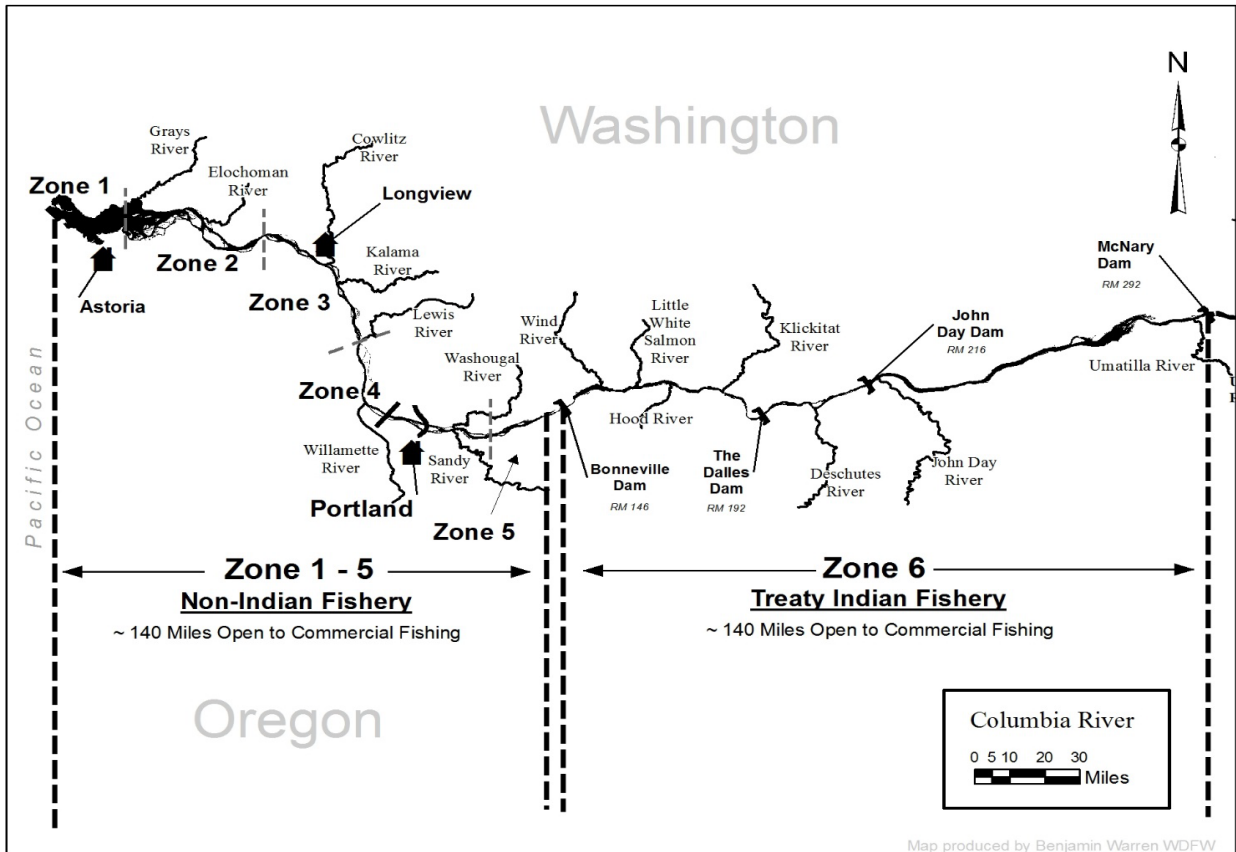


Figure 5. Columbia River commercial fishing zones.

Non-Treaty Recreational Fisheries

The fall recreational salmon fishery occurs throughout the Columbia River with primary catch areas in the estuary (Buoy 10), the LCR between Tongue Point and Bonneville Dam, and the Hanford Reach area below Priest Rapids Dam. The Buoy 10 fishery traditionally targets fall Chinook and Coho from the Buoy 10 line upstream to the Tongue Point/Rocky Point line and accounts for the majority of the recreational Coho harvest in the Columbia River. The LCR recreational fishery traditionally catches fall Chinook, summer steelhead, and Coho in the mainstem Columbia River from the Tongue Point/Rocky Point line upstream to Bonneville Dam. The Hanford Reach fishery targets fall Chinook in the area downstream of Priest Rapids Dam. Smaller fisheries targeting Chinook, Coho, and steelhead also occur on the mainstem Columbia River between Bonneville and McNary dams near most tributary mouths with larger fisheries near the Deschutes and Klickitat rivers and in the mainstem upstream of McNary Dam. Significant fisheries for summer steelhead also occur during the late fall and early winter in the mainstem between McNary Dam and the Highway 395 Bridge. In all these fisheries, regulations require anglers to release unclipped steelhead and Coho, except anglers may keep unclipped Coho upstream of the Hood River Bridge (RM 170).

The popularity of the LCR fall salmon fishery has grown considerably over the years, and anglers continue to fish successfully in new areas of the lower Columbia for fall Chinook. Historically,

high water temperatures on the mainstem during August and September hindered anglers' ability to catch fall Chinook in the shallows, and the majority of the catch occurred at or below tributary mouths where water temperatures were cooler. Beginning in the late 1990s, anglers began targeting fall Chinook in deeper areas of the river with excellent results, especially in and around shipping lanes. More recently, many anglers have switched from anchoring with wobblers to trolling with small spinners and rotating flashers which allows them to fish any stage of the tide. The recreational catch of adult fall Chinook on the mainstem has increased over time from an average of 2,300 during the 1980s, to 5,000 fish during the 1990s, 14,700 during the 2000s, and 23,600 during the 2010s. Angler trips have also increased from an average of about 41,000 trips in the 1980s, to 54,200 trips in the 1990s, 94,400 trips in the 2000s, to 118,400 trips during the 2010s. Because of the increased effort and catch, the recreational opportunity for fall Chinook on the mainstem Columbia River downstream of Bonneville Dam has been constrained in terms of the daily bag limit and/or fewer fishing days since 2004 to meet ESA and harvest-sharing guidelines. The states also adopted MSF (mark-selective fishery) rules for fall Chinook during a portion of the 2012-2017 mainstem fishing seasons downstream of Warrior Rock to reduce impacts to LCR wild fall Chinook.

Similar to the trend in the lower river fishery, Chinook catches in the Buoy 10 fishery have also increased as anglers have become more effective at catching Chinook in this area, especially in recent years with large returns. While the average number of angler trips by decade has increased since the 1990s, Chinook harvest has increased disproportionately, from an average of 6,700 in the 1990s, to 10,000 in the 2000s, to 19,100 during the 2010s. A significant portion of the Chinook catch in the Buoy 10 fishery is tule stock. The increased Chinook harvest, coupled with a decrease in the allowable ER on LCR tules, has required the states to reduce opportunity for Chinook since 2007, with retention seasons averaging 29 days during August and early September. The states also adopted MSF rules for fall Chinook during a portion of the 2013-2016 and 2021 Buoy 10 fisheries to reduce impacts to LCR fall Chinook.

The following release mortality rates are applied to fall recreational fisheries; Buoy 10 and mainstem Columbia River (Chinook, Coho: 19.0% (21% for barbed hooks); steelhead, chum: 10.0%).

2021 Buoy 10 Recreational Fishery

The 2021 Buoy 10 fishery opened August 1 for fall Chinook and adipose fin-clipped Coho. The season began with a daily bag limit of two adult salmonids, of which only one could be a Chinook. Chinook retention was originally scheduled for August 1 through September 6 (Labor Day), with retention from August 1-10 limited to hatchery fish only. Chinook retention was scheduled to close September 7 through December 31, with the adipose fin-clipped Coho fishery remaining open and the bag limit increasing to three adult salmonids. Due to low runs of summer steelhead, the states prohibited retention of any steelhead August through October. Retention of adipose fin-clipped hatchery steelhead was set to open November 1 through December 31. The preseason catch expectations (including release mortalities) for the Buoy 10 fishery were 26,990 Chinook (5.85% LCR Chinook ER and 2.70% SRW harvest rate), and up to 93,827 Coho.

The first ten days of the 2021 Buoy 10 fishery, produced an estimated 11,500 angler trips and a Chinook catch rate of 0.1 kept fish per rod. Effort and kept catch increased considerably after

August 10, when Chinook mark-selective retention regulations were lifted. Peak Chinook fishing occurred during the week of August 16-22 with 26,941 angler trips and 10,465 Chinook kept. Weekly average Chinook catch rates ranged from 0.08 to 0.39 kept Chinook per rod throughout the season. Angler trips averaged about 17,750 trips per week during the Chinook retention period. On August 25, the states met to review the status of the LRH component of the Chinook catch in the Buoy 10 fishery. Through August 23, the Chinook handle was 62% higher than expected and the LRH component made up a greater proportion (38%) of the Chinook catch than preseason expectations (24%). In order to manage within the LRH exploitation rate, staff recommended states close Chinook retention in the Buoy 10 fishery as soon as practicable. On August 27, the fishery closed to all Chinook retention. The adipose fin-clipped Coho fishery remained open with a daily bag limit of two adult salmonids, which increased to three adult salmonids on September 7.

The Coho fishery started slowly in the estuary for most of August, with catch rates ranging from 0.01 to 0.15 Coho kept per rod. Catch rates improved during the week of August 23-29 when the weekly average catch rate reached 0.51 Coho kept per rod. Total weekly Coho kept catch peaked at 9,627 Coho from 18,792 angler trips during the week of August 23-29. Coho catch rates remained fairly good throughout most of September, ranging from 0.78 to 0.97 fish kept per angler. The highest weekly average Coho catch rate occurred the week of September 20-26 with 3,978 Coho kept from 4,111 angler trips. Angling effort continued through October, with an average of about 1,500 angler trips per week and weekly catch rates ranging from 0.58 to 0.66 Coho kept per rod.

The season structure for Chinook retention did not match the preseason plan. Chinook retention closed early on August 27 due to a higher-than-expected proportion of the LRH tule stock in the overall Chinook catch. The states met on September 29 and reopened Chinook retention from October 1-31. This decision was based on an upgraded URB run size, updated catch projections, and past CWT data which indicated that the majority of the LRH tule stock were likely to be in the tributaries at that time and would not be subject to retention in the Buoy 10 fishery. The projected catch for October was less than 600 Chinook, and the actual kept catch for October was only about 50 Chinook.

Summary of 2021 Buoy 10 Fishery Retention Regulations	
08/01 to 08/10	Two adult salmonid daily bag limit, only one Chinook allowed. Chinook and Coho must be adipose fin clipped. Steelhead retention prohibited.
08/10 to 8/26	Two adult salmonid daily bag limit, only one Chinook allowed. Coho must be adipose fin clipped. Steelhead retention prohibited.
8/27 to 9/6	Two adult coho daily bag limit. Chinook retention prohibited. Coho must be adipose fin clipped. Steelhead retention prohibited.
9/7 to 9/30	Three adult coho daily bag limit. Chinook retention prohibited. Coho must be adipose fin clipped. Steelhead retention prohibited.
10/1 to 10/31	Three adult salmonid daily bag limit, only one Chinook allowed. Coho must be adipose fin clipped. Steelhead retention prohibited.
11/1 to 12/31	Three adult salmonid daily bag limit, no more than two steelhead. Coho and steelhead must be adipose fin clipped. Chinook retention prohibited.

The 2021 Buoy 10 fishery in the Columbia River estuary consisted of 105,865 total angler trips with a total kept catch of 20,789 Chinook and 37,031 adipose fin-clipped Coho (Table 25). Anglers released a total of 10,129 Chinook, 26,930 Coho, and 105 steelhead. The total Chinook kept catch ranked seventh since 1982. Total angler effort in the fishery was the third highest in the last 20 years behind 2015 and 2014. See Tables 15, 18, 19a, 19b, and 25 for additional detail.

2021 Lower Columbia Mainstem Recreational Fishery

Fall-season salmon fisheries on the lower Columbia River opened August 1 for fall Chinook and Coho. Non-treaty fall fisheries were constrained most by LCR tule Chinook and upriver summer steelhead. The states adopted Chinook retention seasons during August 1-September 9 between Tongue Point and Warrior Rock and August 1-October 31 between Warrior Rock and Bonneville Dam. The states closed summer steelhead retention between Tongue Point and Bonneville Dam effective August 1-October 31. The retention of hatchery Coho was open during August 1-December 31 in both areas based on the expected return of 1,343,000 fish. The daily bag limit in both areas was two adult salmon (Chinook or hatchery Coho) but only one could be a Chinook when Chinook retention was allowed. The states adopted party fishing rules for boat anglers whereby each angler aboard a vessel could continue to deploy gear until the anglers achieved a boat limit. The preseason catch expectation for the 2021 mainstem recreational fishery was 30,000 adult Chinook, including 21,000 URB and 1,400 LRH fall Chinook, and 8,600 hatchery Coho.

Similar to recent years, high water temperatures adversely affected catch rates for Chinook in the recreational fishery from Cathlamet upstream to Bonneville Dam during August. Catch rates improved between Tongue Point and Warrior Rock during August 23-29. Through August 31, the total Chinook catch from Tongue Point to Warrior Rock was 5,100 fish, which was similar to expectations; however, the proportion of LRH in the catch and impacts to LCR tule Chinook were much higher than expected. In addition, the states closed Buoy 10 early effective August 27 because catches of LRH and impacts to LCR fall Chinook in that fishery greatly exceeded expectations. The catch in the fishery from Warrior Rock to Bonneville Dam was only 1,100 fish by August 31, however, impacts to LCR fall Chinook in this fishery also exceeded expectations. With no remaining impacts to LCR fall Chinook in the recreational fishery and catch rates increasing in both areas, the states met on September 2 and closed salmonid angling effective September 4 between Tongue Point and Warrior Rock and September 7 between Warrior Rock and Bonneville Dam. Through September 3, the total catch between Tongue Point and Warrior rock was 6,900 adult Chinook, and through September 6 the total catch between Warrior Rock and Bonneville Dam was just under 3,000 adult Chinook.

The states held a Joint State hearing on September 9 after an updated FRAM run indicated that ocean fisheries were not expected to fully utilize their impacts to LCR fall Chinook. With the rollover of the remaining LCR impacts from the ocean to the river, the states reopened salmon fishing for Chinook and hatchery Coho from Warrior Rock to Bonneville Dam effective September 11-October 31. On September 15, TAC downgraded the URB run size to 76% of the preseason forecast; however, URBs were not a constraining stock for lower river recreational fisheries in 2021. The states held another hearing on September 15 and reopened Coho angling downstream of Warrior Rock effective September 17-30. On September 29, the states met and reopened Chinook retention from Buoy 10 to Warrior Rock effective October 1-31.

Chinook fishing was excellent upstream of Warrior Rock from September 11 through the first week of October. Some Chinook were also caught downstream of Warrior Rock the first week of October and Coho fishing was good in that area from late September through early October.

The 2021 mainstem recreational fishery on the lower Columbia produced 87,268 angler trips with kept catches of 18,900 adult fall Chinook, 2,280 Chinook jacks, 5,524 adult hatchery Coho, and 280 hatchery Coho jacks (Table 26). The total adult Chinook catch was the 11th highest since 1980 and included 10,000 URB and 3,180 LRH stock fall Chinook, which was one of the highest LRH catches on record. The angler trip total was the 16th highest since 1980, and the CPUE for adult Chinook was the sixth highest. Summer steelhead retention remained closed during the entire fall season for the third time since 1976. Anglers released totals of 1,046 adult Chinook, 2,910 adult Coho, and 478 summer steelhead during August-October 2021. See Tables 15, 18, 19a, 19b, and 26 for additional detail.

2021 Columbia Mainstem Recreational Fisheries above Bonneville Dam

The Columbia River is typically open for Chinook, hatchery steelhead, and Coho retention during the fall season in the area from Bonneville Dam upstream to the Highway 395 Bridge. Additional areas of the Columbia River upstream of the Highway 395 Bridge, such as the Hanford Reach, are also open during the fall season. Since 2017, fall season catch estimates for the salmon and steelhead fisheries from Bonneville Dam upstream to the Highway 395 Bridge are based on creel programs. The catch from the Hanford Reach fishery is also based on a robust creel program. See Tables 15, 18, 19a, 19b, and 27 for seasons and catch detail.

Bonneville Dam to Highway 395 Fishery

This fishery is often referred to as the ‘Zone 6’ recreational fishery; however, it does extend upstream of McNary Dam to the Highway 395 Bridge near Pasco, WA. Chinook catch from Bonneville to the Highway 395 Bridge during 2016-2020 ranged from 960 to 6,440 adult fish annually, 4,540 Chinook. The majority of the catch occurs within the Zone 6 area (Bonneville Dam upstream to McNary Dam). Chinook retention was open August 1 to December 31. Harvest is estimated at 6,141 adult Chinook kept (343 released), 1,004 adult Coho kept (215 released), and 55 steelhead kept (275 released hatchery- and natural-origin fish) based on creel results (Tables 15, 19a, 19b, and 27). Due to low steelhead returns, steelhead retention was closed from Bonneville Dam to The Dalles Dam from August 1 through October 31, and The Dalles Dam to Highway 395 from September 1 through December 31.

Hanford Reach Fall Chinook Fishery

The Hanford Reach fall Chinook sport fishery opened from August 16 through October 31 in the area from the Highway 395 Bridge upstream to Priest Rapids Dam with a daily bag limit of two adults.

An estimated 11,277 adult fall Chinook, 1,395 jack fall Chinook, and 136 Coho were harvested from about 39,000 angler trips in this fishery. Approximately 257 adult Chinook and 46 jack Chinook were also caught and released. The 2021 Chinook harvest is 64% of the recent 10-year average (Table 27).

Select Area Fisheries

The Select Area Fisheries Project is a cooperative program that strives to deliver quality commercial and recreational salmon fishing opportunities in areas that maximize the return of hatchery production to fisheries. Hatchery production and targeted commercial fisheries for Coho and Chinook occur in the Select Areas. The Select Areas are off-channel and terminal areas in the LCR and include Youngs Bay, Blind Slough/Knappa Slough, and Tongue Point/South Channel in Oregon and Deep River in Washington.

Commercial fisheries in the Select Areas target salmon that return from net-pen and hatchery releases in these areas. Fall-season commercial fisheries have occurred in Youngs Bay since 1962 and in Blind Slough/Knappa Slough, Tongue Point/South Channel, and Deep River since 1996. Select Area fall fishery impacts on ESA-listed fish are minimal, and fisheries are managed to remain within allowable harvest impact rates and catch guidelines. Fall fisheries in the Select Areas target hatchery Coho returning to these release sites; however, SAB and LRH fall Chinook are also produced and harvested in Youngs Bay and LRH fall Chinook from BCH are targeted in Tongue Point/South Channel and Blind Slough/Knappa Slough fisheries. Coho and Chinook produced for Select Areas also contribute to the LCR recreational and commercial fisheries, as well as both ocean recreational and commercial fisheries in the ocean.

Recreational fishing occurs in the Select Areas and associated tributaries. Under permanent regulations, Youngs Bay, Blind Slough/Knappa Slough, and Deep River areas are open all year for retention of Chinook and adipose fin-clipped Coho with a daily bag limit of two adult salmonids. Fall 2021 recreational harvest in Oregon Select Area sites and tributaries was 255 for Chinook, which was 39% of the 10-year (2011 – 2020) average of 652, and 588 for Coho, which was over two times the 10- year average of 277 (Table 24). Catches in Deep River were much lower. The past 5-year average annual catch by recreational anglers in this site was only four Chinook (range 0-19) and five Coho (range 0-18).

2021 Select Area Fisheries

During the 2021 fall management period, landings included 4,474 Chinook and 99,057 Coho. Landings were about 60% and 336% of the recent 5-year (2016-2020) averages (7,494 and 29,521) for Chinook and Coho, respectively. Retention of White Sturgeon was allowed in Select Areas for the fifth consecutive year after a multi-year retention closure from 2014 through 2016. Retention continued through fall season in 2021 since there were still fish remaining on the sub-allocation after the winter/spring/summers season fisheries were complete. A total of 371 White Sturgeon were landed during fall season which was twice the average of 189 (2017 – 2019). Landings of Select Area commercial fisheries are summarized in Tables 22 - 24. Season structure is described in Table 14.

In Youngs Bay, the fall commercial fishery was opened later than usual to allow for additional escapement of SAB fall Chinook to aide broodstock collection. Typically, there are weekly 36-hour periods in the first three weeks of August but in 2021 the fishery instead opened the week of August 23 with two 12-hour periods. A 3.5-day period was set for the following week from August 30 through September 3rd. The fishery was then open continuously from September 6 through October 29 (54 days). Typically, the early periods in August are Chinook-directed fisheries while

the remaining fisheries target Coho. The upper fishing boundary during the fall season is at Battle Creek Slough. This boundary is downstream from the typical boundary at the confluence Youngs and Klaskanine rivers and is in place to allow for escapement of SAB fall Chinook to the hatcheries. The maximum mesh size during the Chinook-directed fisheries was 9¾-inches and was reduced to 6-inches during the Coho-directed fisheries. Net length is restricted to 250-fathoms maximum in Youngs Bay. The 2021 fall commercial fishery in Youngs Bay harvested 2,012 Chinook and 42,651 Coho. Landings were about 58% and 374% of the recent 5-year (2016-2020) averages (3,469 and 11,398) for Chinook and Coho, respectively.

In Blind Slough/Knappa Slough, the fall commercial fishery was open for two 12-hour periods per week from the last week of August through the first week of September. Thereafter, four 16-hour periods per week were prosecuted from September 6 through October 29 (32 periods). The maximum mesh size was 9¾-inches through September 3 and 6-inches thereafter. Net length is restricted to 100-fathoms maximum in Blind Slough/Knappa Slough. In total, the 2021 fall commercial fishery in Blind Slough/Knappa Slough was open for 36 fishing periods, resulting in harvest of 820 Chinook and 17,509 Coho. Landings were about 57% and 379% of the recent 5-year (2016-2020) averages (1,433 and 4,625) for Chinook and Coho, respectively.

In Tongue Point/South Channel, the season structure of the fall commercial fishery was very similar to that of Blind Slough/Knappa Slough. This structure was designed to provide concurrency between the two fishing sites as requested by commercial fishers, however, there were two additional 12-hour periods the first week of September compared to Blind Slough/Knappa Slough. Commercial periods between the two areas were generally concurrent except that during September 6 to October 29 the open periods were 18 hours in Tongue Point/South Channel compared with 16 hours in Blind Slough/Knappa Slough. Maximum net length is 250-fathoms in Tongue Point/South Channel. The 2021 fall commercial fishery in Tongue Point/South Channel was open for a total of 38 fishing periods with landings of 1,468 Chinook and 31,056 Coho. Landings were about 104% and 340% of the recent 5-year (2016-2020) averages (1,418 and 9,126) for Chinook and Coho, respectively.

In Deep River, the 2021 fall commercial fishery was in the third year of a transition from harvest of early to late-stock Coho. The season was planned to span the latter part of the early fall (late September to mid-October) and late fall (mid-October through late November) return timing. The season opened with 15-hour periods September 13 that continued four days per week through October 15. From October 18 through November 25, the season continued two days per week. The maximum mesh size was 6-inches. Net length is restricted to 100-fathoms maximum in Deep River. The 2021 fall commercial fishery in Deep River was open for 32 15-hour periods. The last Coho landed in Deep River was November 11. A total of 174 Chinook and 7,841 Coho were landed. Landings were 15% and 179% of the recent 5-year (2016-2020) averages (1,174 and 4,372) for Chinook and Coho, respectively.

The 2021 recreational fisheries in Washington and Oregon Select Areas occurred as per permanent regulations. Recreational catch in the Oregon Select Areas is approximated from expanded harvest cards turned in voluntarily by anglers and are not available until at least the following calendar year. Estimated catch for the last years of available data was 255 Chinook and 588 Coho in Oregon Select Areas and associated tributaries (Table 24).

Treaty Indian Mainstem Fisheries

During the fall season, treaty Indian fisheries occur in the mainstem Columbia River from just downstream of Bonneville Dam upstream to McNary Dam (Figure 5). They include commercial and ceremonial and subsistence (C&S) fisheries. Like non-treaty fisheries occurring from the Columbia River mouth upstream to Highway 395 Bridge, treaty mainstem fisheries are managed in accordance with harvest rate schedules in the 2018-2027 *U.S. v. Oregon* MA. The URB harvest rate is used as a surrogate for harvest rates on SRW Chinook. The B-Index harvest rate is used to control impacts on ESA-listed steelhead. Treaty Indian landings and fishery structures are summarized in Tables 13, 15, 18, and Tables 28-31. ESA impacts are shown in Tables 32, 36 and 37. Fall season treaty Indian tributary fisheries (including those in the Snake Basin) are not discussed in this report.

2021 Treaty Indian Commercial Fisheries

The 2021 treaty Indian fall commercial fishery was managed to target harvestable salmon and steelhead, while limiting impacts on ESA-listed SRW fall Chinook and B-Index summer steelhead. Platform and hook and line fishing was open for both subsistence and commercial use throughout the fall season. The commercial gillnet salmon fishery occurred between August 23 and October 14 and consisted of eight weekly fishing periods ranging from 3.5 to 4.5 days long (32 fishing-days total). This was just slightly higher than the ten-year average of 32 days. The standard Spring Creek Hatchery closed area was in effect for the first three gillnet periods. An 8-inch minimum mesh size restriction was in place for all gillnet openings. Aerial surveys were conducted weekly; net counts averaged 332 nets per survey, which is below the 10-year average (Table 31). Sale of platform hook-and-line caught fish was open August 1 through December 31. Tribal platform and hook-and-line fisheries downstream of Bonneville Dam were open according to agreements with the States, but there was no recorded effort or catch.

Fall season treaty fisheries landed 84,977 Chinook (64,353 adults), 3,394 steelhead, 23,238 Coho (Tables 15, 18 and 30). Sturgeon landings during the fall salmon gillnet season totaled 30 fish. A total of 75 walleye were also caught in the salmon gillnet fishery. The tribes allowed legal-sized sturgeon to be retained only for subsistence use during the fall salmon gillnet season. The Chinook catch was highest in the first and second weeks of September (Table 30). A creel system is used to estimate the total catch so commercial fish tickets represent only part of the harvest. Of the total catch, 17% of the Chinook, 39% of the steelhead, and 19% of the Coho were taken home or sold directly to the public. Impacts to both URB and SRW Chinook were 11.1%¹ (Table 36 and 37). Impacts to total B-Index summer steelhead from treaty Indian fisheries totaled 8.5%, compared to the 13.0% limit (Table 32 and 33).

¹When non-treaty mark selective fisheries in the lower Columbia River are large enough, there can be differences in the URB and SRW mark rate caused by the effect of the mark selective fisheries on the mark rate at Bonneville. There was no measurable effect in 2020.

2021 Fishery Impacts

Fall fisheries are structured to maximize harvest of healthy fish stocks while remaining within ESA-impact guidelines for multiple species/stocks. Tables 32-37 provide impact rate summaries for treaty Indian and non-treaty fisheries.

For 2021 preseason planning, fisheries were developed based on an URB run size of 361,540 adults and an SRW run size of 10,900 adults. According to Table A3 of the MA, returns in this range allow for a harvest rate of 45% (15% non-treaty and 30% treaty). The final URB run size was approximately 239,910 which included 10,900 Snake River Wild Chinook, allowing a total URB HR of 45% (15% non-treaty and 30% treaty). The realized URB harvest rates were 11.13% in treaty Indian fisheries and 10.52% for non-treaty fisheries. There was a mark-selective non-treaty fall Chinook fishery in 2021 and resulted in

2021 Management	Total	Preseason Goal/ Guideline
Total URB HR	21.65%	45%
Non-Treaty	10.52%	15%
Treaty Indian	11.13%	30%
Snake River Natural-origin HR	21.57%	45%
Non-Treaty	10.44%	15%
Treaty Indian	11.13%	30%
LRH Ocean/In-river ER	37.7%	38%
<i>In-River ER</i>	<i>13.5%</i>	
Non-Treaty Natural-origin A-Index Steelhead	0.54%	2.0%
Non-Treaty Natural-origin B-Index Steelhead	0.45%	2.0%
Treaty Total B-Index Steelhead	8.5%	13.0%
LCN Coho	10.6%	30.0%
Lower Columbia Chum	1.1%	5.0%
Percent of Upriver Chinook Harvestable Surplus		
Non-Treaty	30%	50%
Treaty Indian	22%	50%
McNary Escapement	176,200	60,000
Percent Upriver Coho to Bonneville Dam	63%	50%

11.13% from treaty fisheries and 10.44% SRW impacts from non-treaty fisheries. The ER for LCR natural-origin tule Chinook totaled 37.70%, compared to the limit of 38% for combined ocean and in-river (mainstem Columbia River) fisheries. The combined ER for in-river fisheries was 13.52%, or 36% of the total.

The ER for LCN Coho totaled 10.6%, compared to the limit of 30% in combined ocean and in-river fisheries. The ER from in-river fisheries was 2.8%, or 26% of the total.

Impacts to the combined hatchery and natural B-Index summer steelhead from treaty Indian fisheries totaled 8.5%, compared to the 13.0% limit. Incidental release mortalities from non-treaty

fall fisheries resulted in impacts of 0.45% to natural-origin B-Index steelhead, compared to the 2.0% limit.

2022 FALL SEASON FISHERY EXPECTATIONS

Non-Treaty Fisheries

Based on preseason run size forecasts, a preliminary fishing plan was developed for Columbia River non-treaty fisheries through the NOF management process. Specific recommendations for fall commercial seasons will be presented at Compact Hearings occurring throughout the fall management period. Initial regulations for fall-season recreational fisheries are already in place and have been publicized. As the fall management period progresses, run size updates will occur, which may alter planned fisheries. Upriver Chinook run sizes cannot typically be updated until mid-September. Stock composition and estimated impacts for all fisheries will be updated in-season as catch estimates and stock composition (determined from coded-wire tag data) become available. These data may differ from preseason expectations, which could result in modifications to fall fishery plans/seasons.

2022 Non-Treaty Columbia River Fall Fishery Chinook Fishery Plan

The plan reflects the intent of the Washington and Oregon Fish and Wildlife Commission policies/regulations and the management objective to optimize non-treaty (commercial and recreational) fisheries harvest of Chinook and Coho within the limitations of the ESA. The plan was developed during the March and April 2022 PFMC and NOF meetings, which included input from commercial and recreational fishery representatives.

ESA limits (based on preseason forecasts) for 2022 non-treaty fall fisheries include a 15% harvest rate (HR) for SRW Chinook (URB stock is the surrogate), a 38% ER for LCR tule Chinook (LRH stock is the surrogate), an 23% ER for LCN Coho (unmarked Coho are the surrogate), a 2% impact rate for natural-origin A-Index steelhead, and a 2% impact rate for natural-origin B-Index steelhead. The ERs for LCR tule Chinook and LCN Coho include impacts from combined ocean and Columbia River fisheries. Constraining stocks for Columbia River fisheries include LRH (LCR tule surrogate) and URB (SRW surrogate) Chinook and natural-origin B-Index steelhead.

The preseason expectation for combined non-treaty Columbia River (in-river) fisheries is 12.8% HR on SRW (13.3% on URBs), an ER of 9.8% on LCR tule Chinook and 3.7% ER on LCN Coho. Impacts to natural-origin A- and B-Index steelhead are expected to be 0.6% and 0.9% respectively.

The non-treaty conservation requirement for ESA-listed Chinook is shared between recreational and commercial fisheries. The sharing for in-river LRH impacts is expected to be 70% recreational and 30% commercial. Sharing of SRW impacts are currently expected to be 61% recreational and 39% commercial. Recreational fisheries below Bonneville Dam do not achieve the season objectives as described in the Oregon rules due to the LRH stock constraints.

White Sturgeon harvest was prohibited effective January 2014 in all Columbia River fisheries downstream of Bonneville Dam, consistent with policies adopted by the Fish and Wildlife Commissions of both Washington and Oregon. Retention fisheries were reinstated in June 2017.

Per Commission guidance, White Sturgeon harvest allocations remain at 80% recreational and 20% commercial.

Goals/expectations for the recreational fishery:

The following describes the planned seasons and bag limits for all fall mainstem recreational fisheries:

- The daily adult bag limit will be two salmonids throughout the season in all areas with the following exceptions:
 - Buoy 10 increases to three fish (hatchery Coho only) beginning September 8.
 - From Buoy 10 upstream to The Dalles Dam, steelhead may not be retained from August 1 through October 31.
 - From The Dalles Dam upstream to Highway 395 at Pasco, WA, the daily adult salmonid bag may not include more than one hatchery steelhead during August and steelhead may not be retained September 1 through December 31.
- Each legal angler aboard a vessel may continue to deploy angling gear until the daily adult salmonid bag limit for all anglers aboard has been achieved.
- Barbless hooks are required when fishing for salmonids
- Wild/unmarked Coho must be released downstream of the Hood River Bridge.

In the area from Buoy 10 upstream to a line at West Puget Island the recreational fishery will begin on August 1 and Chinook retention will continue through September 7 with a two salmon (Chinook and hatchery Coho only) daily limit, but no more than one may be a Chinook. Non-adipose-fin-clipped Chinook may not be retained from August 1 through 24. Steelhead may not be retained from August through October in this area. From September 8 through September 30, Chinook retention will be closed and the adult daily limit increases to three hatchery Coho. Chinook retention will be allowed again during October 1 through December 31 with only one adult Chinook allowed in the three adult salmonid limit. Preseason harvest expectations (including release mortalities) total 32,850 Chinook (3.3% URB HR, 2.8% SRW HR; 3.9% LCR tule natural-origin ER) and 63,441 Coho (including 7,451 unmarked mortalities; 2.0% LCN Coho ER). The expected impact rate for natural-origin A- and B-Index steelhead is 0.01% each. No Chum impacts are expected.

The mainstem recreational fishery from West Puget Island line upstream to Bonneville Dam will have varying Chinook retention regulations by area. Preseason harvest expectations (including release mortality) include 16,970 adult Chinook (4.1% SRW HR; 2.7% LCR natural-origin ER), and 5,696 Coho (including 528 unmarked mortalities; 0.2% LCN Coho ER). The expected impact rates for natural-origin A- and B-Index steelhead are 0.05% each. Impacts to Chum are expected to be minimal at 0.01%. Any decision to extend the fishery or modify bag limits will be made in-season and will consider fishery performance, in-season run size updates, and policy objectives.

- From the West Puget Island line upstream to the Lewis River/Warrior Rock line, Chinook retention is allowed August 1 through September 7 and October 1 through December 31. The area will close to salmonid angling September 8-30.
- From the Lewis River/Warrior Rock line upstream to Bonneville Dam, Chinook retention is allowed August 1 through September 13 and October 1 through December 31. The area will be closed to salmonid angling September 14-30.

The mainstem recreational fishery from Bonneville Dam to the Highway 395 Bridge is scheduled to be open August 1 through December 31. The season will be managed based on a total harvest expectation of 6,500 adult Chinook (0.8% SRW HR). The expected impact rates for natural-origin A- and B-Index steelhead are 0.2% and 0.3%, respectively; these rates include impacts from tributary dip-ins. The dates, area restrictions, and catch expectations described above are based on preseason planning and input from the recreational fishing community. In-season events may change many of these expectations.

Goals/expectations for the commercial fishery include:

The early fall (August) fishery is expected to begin the week of August 8 and continue through the week of August 29, with fishing periods occurring from one to three times per week, likely on Monday and Wednesday nights with two openings per week and Sunday, Tuesday, and Thursday nights when three openings per week. Fishery structure includes 9-hour (9 PM-6 AM) periods in Zones 4-5 with a 9-inch minimum mesh size. The catch expectation is 26,540 adult Chinook (3.1% SRW HR; 2.2% LCR tule natural-origin ER) and up 3,150 Coho (0.2% LCN Coho ER). The expected impact rates for natural-origin A- and B-Index steelhead are 0.2% each. No impacts to Chum are expected.

Potential Chinook-directed commercial periods in September would occur in the latter half of the month in Zones 4-5 after the fall Chinook and steelhead run size updates are available. Periods would likely be 10-hours (8 PM – 6 AM) with an 8-inch minimum mesh restriction. Late-fall commercial fishing periods targeting hatchery Coho using 3.75-inch tangle nets are planned to occur in Zones 1-3 September 26 through October 28 with five periods per week (4 AM – 10 PM). Based on preseason forecasts, approximately 25,320 Coho mortalities (1.82% LCN Coho ER) are available for late fall commercial fisheries. The combined late-fall season adult Chinook catch expectation is 8,330 fish (1.8% SRW HR; 0.4% LCR tule natural-origin ER). The expected impact rates for natural-origin A- and B-Index steelhead are 0.04% and 0.21%, respectively. Impacts to Chum are expected to be minimal at 0.1%.

The dates, areas, gear restrictions, and catch expectations described above are based on preseason planning and input from the commercial fishing industry. In-season events may change many of these expectations. Initial mainstem commercial fishing periods and regulations will be adopted at the July 27 Compact Hearing.

Select Area Fisheries

Based on 2022 run size predictions, a minimum of 71,900 Select Area Coho are expected to return for harvest in all Select Area fishing sites combined. This forecast includes 33,600 Coho to Youngs Bay, 18,600 to Tongue Point/South Channel, 17,700 to Blind Slough/Knappa Slough, and 2,000 to Deep River. SAB Chinook harvest is forecasted at 480 fish in all Select Areas combined. LRH fall Chinook will also be available for harvest in all sites. In total, harvest of Chinook in all sites combined is expected to be 4,800 fish. The 2022 fall season structure for Select Area commercial fisheries is expected to be similar to the 2021 schedule. Fishing periods and regulations will be adopted at the Compact Hearing on July 27. Impacts to ESA-listed stocks in 2022 fall Select Area commercial fisheries are expected to be 0.12% HR for SRW Chinook, 0.40% ER for natural-origin LCR fall Chinook, 0.09% ER for LCN Coho, 0.05% HR and 0.08% HR for natural-origin A- and B-Index steelhead, and 1.0% HR for Chum.

Treaty Indian Fisheries

Treaty Indian commercial gillnet fisheries using set nets and drift nets have typically occurred from mid to late August through late September or early October. Sales of platform and hook-and-line caught fish typically begin August 1 and may extend into late-October or possibly the end of the year. Fishery restrictions will likely include mesh size restrictions to target Chinook. Area restrictions to reduce impacts on specific Chinook stocks have occurred in the past but have not occurred recently. No closed areas besides the standard SCNFH closed area and other typical river mouth and dam closed areas are expected in 2022. The SCNFH closed area is normally reduced when it becomes clear that the hatchery will meet its broodstock collection objectives. Coho and steelhead harvest rates are expected to approximate recent-year averages. Sturgeon sales are generally not allowed during fall salmon gillnet fisheries. Sturgeon retention (within area-specific size slots) is typically allowed only for subsistence purposes. Sales are allowed for all other species harvested. The tribes use set and drift gillnets along with platform and hook-and-line gear. Fall gillnet fisheries typically consist of 2.5- to 4.5-day weekly periods. The tribes usually choose to begin commercial gillnet fisheries on Mondays. Sales of platform and hook-and-line caught fish, as well as fish caught in Klickitat River and Drano Lake tributary fisheries, are typically allowed throughout the fall period subject to open periods in these tributaries. Fisheries are normally full retention. The tribes plan on managing their fall season platform and hook-and-line fisheries for both commercial and subsistence use beginning August 1 and are expected to complete their commercial gillnet fishery planning in late July or early August. In most years, weekly commercial gillnet fisheries have begun about the third week in August.

For 2022, allowable ESA impact rates (based on preseason forecasts) for treaty fisheries include a limit of 30% on SRW fall Chinook and an ESA limit of 13% on B-Index steelhead, based on preseason forecasts. Actual allowed harvest rates will depend on actual run sizes.

Seasons and regulations for platform/hook-and-line fisheries, including the area downstream of Bonneville Dam will be adopted at the July 27 Compact Hearing. Seasons and regulations for the initial mainstem Treaty gillnet fishing periods are expected to be adopted at a mid-August Compact Hearing.

2022 Columbia River Fall Fishery Model Summary

The following table summarizes Chinook catch, ESA-impact, and passage expectations, based on preseason planning:

Columbia River Fall Chinook Fishery Model Summary

Ocean Option: Chin2522 12-Apr
 Columbia River Model Option: Model MR2022-Preseason Final

MR2022-Preseason Final

Management Guidelines	Goal/Guideline	SRW	Total URB
Harvest Rate	45.00%	43.0%	43.4%
Non-Treaty	15.00%	12.78%	13.33%
Treaty	30.0%	30.2%	30.0%
% of Harvestable Surplus		Total	
Non-Treaty	50%	36%	
Treaty	50%	44%	
McNary Escapement	60,000	112,200	
LRH Ocean/Inriver Exp. Rate	38%	38.0%	
Non-Treaty Wild B Index Steelhead	2%	0.86%	
Treaty Total B Index Steelhead	13%	13%	
Upriver Coho to Bonneville Dam	50%	63%	
Lower Columbia Chum	5%	1.2%	

Non-Treaty Catch Sharing			
SRW - IMPACTS		Brights - Mainstem	
	Impact	Percent	Mortalities
Sport	7.73%	61%	29,900
Comm	5.05%	39%	17,300
Total	12.78%		
Chinook - Mainstem			
	Impact	Percent	Mortalities
Sport	6.87%	70.0%	54,300
Comm	2.95%	30.0%	34,900
Total	9.82%		

	Total	LRH	LRW	BPH	URB	LRB	PUB	SAB	SRW	LRH	SRW
		ER	HR								HR
Ocean Harvest	73,610	12,830	2,820	21,190	27,140	1,010	8,620				
Columbia River Run	485,510	73,630	10,920	92,150	229,690	8,680	69,830	600	11,000	9.82%	12.78%
Harvest Below Bonneville											
2022 Fishery Description											
Zone 4-5 Wk 32. Aug 1-7	0	0	0	0	0	0	0	0	0	0.00%	0.00%
Zone 4-5 Wk 33. Aug 8-14	1	420	40	0	140	220	0	20	0	10	0.03%
Zone 4-5 Wk 34. Aug 15-21	2	4,000	340	0	1,960	1,340	10	340	0	60	0.29%
Zone 4-5 Wk 35. Aug 22-28	2	8,620	850	10	4,660	2,300	110	690	0	110	0.71%
Zone 4-5 Wk 36. Aug 29-Sep 4	3	13,500	1,290	0	6,300	3,350	330	2,230	0	160	1.14%
Zone 4-5 Wk 38. Sep 12-18	0	0	0	0	0	0	0	0	0	0	0.00%
Zone 4-5 Wk 39. Sep 19-25	<1	2,530	270	50	640	990	90	500	0	50	0.27%
Zone 4-5 Wk 40. Sep 26-Oct 2	1	1,870	0	0	770	710	200	200	0	30	0.00%
Zone 4-5 Wk 41-43 October	1	1,890	0	0	190	900	250	550	0	40	0.00%
Fall Tanglenet Wk 40-44		2,040	100	110	10	1,500	60	260	0	70	0.10%
Select Areas		4,750	3,710	0	440	280	10	100	200	10	0.40%
Buoy 10 to WPI Kept + Morts	2 fish/1 CHF	32,850	11,400	920	8,720	7,690	160	1,630	420	310	3.87%
WPI to Lewis	2 fish/1 CHF	7,040	1,440	440	630	3,280	120	1,000	0	230	1.40%
Lewis to Bonn	2 fish/1 CHF	9,930	1,220	250	10	6,180	240	2,040	0	230	1.30%
Tributary Sport	MSF	2,270	1,680	590	0	0	0	0	0	0	0.30%
Lower River Total		91,720	22,330	2,360	24,470	28,750	1,600	9,550	620	1,320	9.82%
Bonneville Dam Passage		316,330			58,300	200,950		57,080		9,680	
Harvest Above Bonneville											
Z6 - Bonn to Hwy 395	2 fish/1 CHF	6,500			990	1,860		3,650		90	0.81%
Treaty Comm. and C&S		143,660			44,750	68,910		30,000		3,320	30.00%
Hanford Reach Sport		8,010				8,010				0	
McNary Dam Passage		112,210				112,210					
Lower Granite Dam Passage										6,563	
Escapement											
Hatchery		51,300	8,560	12,570		7,090	23,430	(20)			
Natural		26,240		10,960			9,710	(10)			
		25,060	8,560	1,610	112,210	7,090	13,720	(10)			
Hatchery Surplus		13,840		3,960			730	(1,210)			
Natural Surplus			1,815	310	52,210						

Table 1. Federally-listed species found in Columbia River fishery management areas.

Species – ESU/DPS ¹	Current Designation	Listing Date	Effective Date
<u>Chinook</u>			
Snake River Fall	Threatened	22-Apr-92	22-May-92
Snake River Spring/Summer	Threatened	22-Apr-92	22-May-92
Upper Columbia Spring	Endangered	24-Mar-99	24-May-99
Upper Columbia Summer/Fall	Not Warranted	--	--
Middle Columbia Spring	Not Warranted	--	--
Lower Columbia Spring/Fall	Threatened	24-Mar-99	24-May-99
Upper Willamette Spring	Threatened	24-Mar-99	24-May-99
Deschutes River Summer/Fall	Not Warranted	--	--
<u>Steelhead</u>			
Snake River Basin	Threatened	18-Aug-97	17-Oct-97
Upper Columbia River ²	Threatened	18-Aug-97	17-Oct-97
Lower Columbia River	Threatened	19-Mar-98	18-May-98
Middle Columbia River	Threatened	25-Mar-99	24-May-99
Southwest Washington	Not Warranted	--	--
Upper Willamette	Threatened	25-Mar-99	24-May-99
<u>Sockeye</u>			
Snake River	Endangered	20-Nov-91	20-Dec-91
Okanogan River	Not Warranted	--	--
Lake Wenatchee	Not Warranted	--	--
<u>Chum</u> – Columbia River	Threatened	25-Mar-99	24-May-99
<u>Coho</u> – Columbia River	Threatened	28-Jun-05	26-Aug-05
<u>Green Sturgeon</u> – Southern DPS	Threatened	7-Apr-06	7-Jul-06
<u>Eulachon</u> – Southern DPS	Threatened	17-Mar-10	17-May-10

¹ The ESU/DPSs in bold are present in the Columbia River basin during the time when fisheries described in this report occur and therefore may be impacted by these fisheries.

² Status downgraded to threatened per U.S. District Court order in June 2009.

Table 2. Columbia River fall salmonid forecasts and actual returns, 2020-2021. ^{1,2}

Species/Stock			2021		2022
			Forecast	Return	Forecast
Fall Chinook	LRH - Lower River	Hatchery	73,800	74,707	73,600
	LRW - Lower River	N-O	20,400	16,937	10,900
	BPH - Bonneville Pool	Hatchery	47,300	73,658	92,200
	URB - Upriver Bright		361,500	239,906	229,700
	Snake River	N-O	10,900	10,902	11,000
	LRB - L. River Brights	N-O	10,100	7,803	8,700
	PUB - Pool Upr. Br.	Hatchery	62,600	66,079	69,800
	SAB - Select Area Br.	Hatchery	500	2,192	600
Total Fall Chinook			576,200	481,282	485,500
Coho	Early stock		872,700	472,304	431,400
	Late stock		470,500	194,098	252,300
	Total Coho		1,343,200	666,402	683,700
Upriver Summer Steelhead (to Bonneville Dam)	Upriver Skamania Index	Total	4,600	1,917	3,100
		N-O	2,100	1,119	1,600
	A-Index	Total	89,200	56,256	81,000
		N-O	27,500	19,071	28,100
	B-Index	Total	7,600	11,496	15,600
		N-O	1,000	1,690	1,900
	Total Upriver Steelhead	Total	101,400	69,669	99,700
	N-O	30,600	21,880	31,600	

Table 3. Stock accountability of adult fall Chinook returning to the Columbia River, 1980-2021.^{1,2,3}

Return Year	LRH	LRW	BPH	URB	BUB	LRB ³	PUB	SAB	Total Return
1980-84 Ave	106,100	21,400	76,200	88,000	3,900		4,000		299,600
1985	111,000	13,300	33,200	196,400	5,700		3,100	1,600	364,300
1986	154,800	24,500	16,600	281,600	14,200		3,200	2,000	496,900
1987	344,000	37,900	9,100	420,700	25,800		31,200	2,300	871,000
1988	309,900	41,700	12,000	339,900	41,900		36,100	3,200	784,700
1989	130,900	38,600	26,800	261,300	65,200		27,900	1,200	551,900
1990	60,000	20,300	18,900	153,600	38,100		20,800	1,100	312,800
1991	62,700	19,800	52,400	103,300	23,800		11,600	2,000	275,600
1992	62,600	12,500	29,500	81,000	20,400		10,700	2,300	219,000
1993	52,300	13,300	16,800	102,900	18,100		9,400	2,100	214,900
1994	53,600	12,200	18,500	132,800	16,600		17,100	3,200	254,000
1995	46,300	16,000	33,800	106,500	14,900		19,300	6,000	242,800
1996	75,500	14,600	33,100	143,100	27,200		32,500	4,700	330,700
1997	57,400	12,300	27,300	161,700	28,700		30,300	3,800	321,500
1998	45,300	7,300	20,200	141,600	8,000	500	28,800	3,300	255,000
1999	39,900	3,300	50,200	165,900	13,700	900	36,200	2,900	313,000
2000	27,000	10,200	20,500	156,600	11,900	700	24,600	3,500	255,000
2001	94,300	15,700	125,000	232,400	42,200	800	33,500	4,900	548,800
2002	156,400	25,200	158,300	279,500	58,300	1,800	48,100	5,700	733,300
2003	154,500	25,400	180,600	374,200	80,600	2,100	67,400	8,100	892,900
2004	109,000	21,100	175,200	362,800	53,300	2,100	67,100	7,100	797,700
2005	79,400	16,300	103,500	277,200	51,400	1,200	47,000	6,600	582,600
2006	57,300	12,600	27,900	230,400	41,600	3,600	35,200	7,200	415,800
2007	32,700	4,900	14,500	114,000	23,500	700	23,400	6,500	220,200
2008	61,600	7,800	93,800	197,300	40,800	2,500	33,000	12,900	449,700
2009	76,600	8,400	49,000	212,100	38,000	900	34,100	10,600	429,700
2010	103,300	11,500	128,600	324,900	28,800	600	49,600	8,600	655,900
2011	109,100	15,400	70,500	322,100	26,600	1,900	58,700	16,400	620,700
2012	85,000	12,100	56,900	297,800	11,600	500	49,300	11,900	525,100
2013	104,800	25,800	86,700	778,300	33,900	1,700	214,000	23,400	1,268,600
2014	101,900	25,800	127,000	684,200	31,600	2,300	169,900	16,500	1,159,200
2015	128,900	32,400	166,500	795,700	35,900	3,400	131,400	11,400	1,305,600
2016	81,500	12,300	41,300	412,900	9,600	11,000	67,200	6,700	642,500
2017	64,600	7,900	48,100	297,400	1,400	4,200	46,300	6,600	476,500
2018	53,000	8,300	28,900	149,000	0	14,200	36,000	4,000	293,400
2019	48,900	16,700	29,000	212,200	0	9,900	58,100	900	375,700
2020	77,900	35,400	52,300	299,000	0	7,100	102,700	400	574,800
2021	74,700	16,900	73,700	239,900	0	7,800	66,100	2,200	481,300

¹ Numbers may not sum due to rounding.

² The sum of the BUB, LRB, and PUB stocks represent the aggregate mid-Columbia Bright (MCB) stock.

³ LRBs included in BUB stock until 1998 when LRBs designated as a separate stock from BUBs.

Table 4. Predicted and actual returns to the Columbia River of adult fall Chinook, 2014-2021.¹

Stock	Year	Preseason		Percent of Forecast
		Forecast	Actual Return	
Lower River Hatchery (LRH)	2014	100.7	101.9	101%
	2015	96.8	128.7	133%
	2016	142.5	81.5	57%
	2017	98.8	64.6	65%
	2018	62.4	53.0	85%
	2019	55.1	48.9	89%
	2020	50.0	77.9	156%
	2021	73.8	74.7	101%
Lower River Natural (LRW)	2014	33.4	25.8	77%
	2015	19.3	32.4	168%
	2016	22.4	12.3	55%
	2017	13.6	7.9	58%
	2018	7.6	8.3	109%
	2019	14.1	16.7	118%
	2020	19.2	35.4	184%
	2021	20.4	16.9	83%
Bonneville Pool (BPH)	2014	103.2	127.0	123%
	2015	163.9	166.4	102%
	2016	100.7	41.3	41%
	2017	164.4	48.1	29%
	2018	50.1	28.9	58%
	2019	48.4	29.0	60%
	2020	45.5	52.3	115%
	2021	47.3	73.7	156%
Upriver Bright (URB)	2014	919.0	684.2	74%
	2015	518.3	795.9	154%
	2016	579.7	412.9	71%
	2017	275.2	297.4	108%
	2018	205.1	149.0	73%
	2019	159.3	212.2	133%
	2020	227.6	299.0	131%
	2021	361.5	239.9	66%
Mid-Columbia Bright (MCB)	2014	344.2	203.8	59%
	2015	114.7	170.6	149%
	2016	99.1	87.8	89%
	2017	48.1	51.9	108%
	2018	42.0	50.2	120%
	2019	69.7	68.1	98%
	2020	77.0	109.8	143%
	2021	62.6	73.9	118%
Select Area Bright (SAB)	2014	10.1	16.5	163%
	2015	12.2	11.4	93%
	2016	15.8	6.7	42%
	2017	13.7	6.6	48%
	2018	5.3	4.1	77%
	2019	3.1	0.9	29%
	2020	1.0	0.4	40%
	2021	0.5	2.2	440%
Columbia River Total	2014	1,510.6	1,159.1	77%
	2015	925.3	1,305.4	141%
	2016	960.2	642.5	67%
	2017	613.8	476.5	78%
	2018	372.5	293.5	79%
	2019	349.7	375.8	107%
	2020	420.3	574.7	137%
	2021	576.2	481.3	84%

¹ Numbers may not sum due to rounding. Reported in thousands of fish.

Table 5. Estimated Columbia River return of Snake River natural-origin fall Chinook adults, 1986-2021.

Year	Columbia River Return	Non-Treaty Zone 1-5 Harvest ¹	Bonneville Dam Count	Treaty Zone 6 Harvest	Non-Treaty Above BON Harvest ²	Lower Granite Run Size
1986	2,830	652	2,178	723	12	449
1987	1,783	491	1,292	379	2	253
1988	3,558	944	2,614	965	7	368
1989	1,981	373	1,608	608	8	295
1990	508	71	437	169	2	78
1991	1,846	275	1,571	379	17	318
1992	1,289	112	1,178	202	6	549
1993	1,475	107	1,368	270	11	742
1994	958	0	958	173	1	406
1995	1,296	10	1,286	225	9	350
1996	1,729	95	1,634	350	3	639
1997	1,839	99	1,740	459	7	797
1998	730	21	709	165	4	306
1999	2,395	163	2,232	515	11	905
2000	2,612	179	2,432	520	9	1,148
2001	14,133	778	13,355	2,020	63	5,163
2002	3,665	250	3,416	709	11	2,116
2003	8,093	675	7,417	953	33	4,257
2004	8,174	706	7,467	877	21	7,055
2005	9,500	779	8,721	1,434	49	5,299
2006	12,202	928	11,274	2,136	34	4,713
2007	9,878	567	9,311	1,492	64	3,914
2008	8,738	622	8,115	1,615	30	3,937
2009	15,576	1,568	14,008	3,831	53	4,653
2010	12,855	971	11,884	2,141	34	7,302
2011	17,156	2,228	14,928	2,918	53	8,370
2012	19,360	2,641	16,719	3,433	61	12,797
2013	34,669	3,462	31,208	6,429	141	21,124
2014	20,752	2,484	18,268	4,096	32	14,172
2015	24,054	2,530	21,523	4,319	87	16,212
2016	14,493	2,023	12,568	2,907	96	9,772
2017	11,750	1,403	10,997	3,308	86	6,966
2018	10,642	990	9,652	2,152	6	6,133
2019	15,231	974	14,256	2,925	148	6,558
2020	12,282	1,080	11,195	2,311	67	8,069
2021	10,902	1,025	9,877	1,213	112	9,322

¹ Recent year harvest data for non-treaty recreational fisheries upstream of Bonneville Dam considered preliminary until catch record card data is finalized.

² Includes release mortalities

Table 6. Returns of upriver summer steelhead to Bonneville Dam (April- October), 1984-2021.

Year	Skamania Index			A-Index				B-Index				Total Passage		
	Hatchery	Natural Origin	Total	Clipped Hatchery	Unclipped Hatchery	Natural Origin	Total	Clipped Hatchery	Unclipped Hatchery	Natural Origin	Total	Hatchery	Natural Origin	Total
1984	--	2,490	20,780	--	--	52,447	195,751	--	--	13,768	98,011	--	68,705	314,542
1985	--	3,690	19,990	--	--	51,922	281,504	--	--	12,986	40,870	--	68,598	342,364
1986	--	5,520	24,830	--	--	56,570	287,508	--	--	9,984	64,016	--	72,074	376,354
1987	--	7,380	17,790	--	--	106,690	238,283	--	--	13,990	44,959	--	128,060	301,032
1988	--	4,180	22,360	--	--	64,331	173,151	--	--	17,742	81,643	--	86,253	277,154
1989	--	3,770	15,730	--	--	57,513	193,079	--	--	12,367	77,604	--	73,650	286,413
1990	--	3,690	18,710	--	--	27,102	115,628	--	--	8,811	47,174	--	39,603	181,512
1991	--	1,220	10,880	--	--	60,264	234,048	--	--	6,207	28,265	--	67,691	273,193
1992	--	2,940	14,910	--	--	44,294	241,524	--	--	12,715	57,438	--	59,949	313,872
1993	--	1,250	14,360	--	--	28,650	136,701	--	--	4,378	36,169	--	34,278	187,230
1994	--	1,380	12,330	--	--	21,212	120,971	--	--	5,152	27,463	--	27,744	160,764
1995	--	1,150	8,220	--	--	25,997	180,037	--	--	1,847	13,221	--	28,994	201,478
1996	--	1,310	10,830	--	--	25,721	174,464	--	--	3,912	18,693	--	30,943	203,987
1997	--	930	11,890	--	--	30,852	208,209	--	--	3,913	36,663	--	35,695	256,762
1998	--	1,610	9,440	--	--	34,836	134,887	--	--	3,415	40,241	--	39,861	184,368
1999	--	1,310	7,160	--	--	56,626	176,466	--	--	3,740	22,137	--	61,676	205,763
2000	--	5,728	16,619	--	--	63,628	216,723	--	--	8,368	40,909	--	77,724	274,251
2001	--	7,952	28,725	--	--	137,230	515,079	--	--	12,047	86,426	--	157,229	630,230
2002	--	9,671	24,991	--	--	87,276	323,124	--	--	32,333	129,882	--	129,280	477,997
2003	--	1,801	14,154	--	--	67,049	305,795	--	--	6,417	37,228	--	75,267	357,177
2004	--	3,289	20,148	--	--	60,421	250,615	--	--	9,202	37,398	--	72,912	308,161
2005	--	2,123	11,221	--	--	58,917	251,631	--	--	9,619	48,968	--	70,659	311,820
2006	--	2,181	9,882	--	--	63,735	245,168	--	--	8,466	74,128	--	74,382	329,178
2007	--	1,727	9,475	--	--	77,268	258,848	--	--	9,015	51,073	--	88,010	319,396
2008	--	4,489	15,832	--	--	81,648	245,823	--	--	18,529	93,429	--	104,666	355,084
2009	--	3,528	13,884	--	--	154,045	543,195	--	--	13,727	44,540	--	171,300	601,619
2010	--	10,357	29,270	--	--	120,531	304,002	--	--	22,364	77,146	--	153,252	410,418
2011	--	2,814	9,750	--	--	101,263	318,125	--	--	7,771	36,996	--	111,848	364,871
2012	--	3,023	10,958	--	--	55,464	192,134	--	--	6,813	27,723	--	65,300	230,815
2013	--	1,661	5,738	--	--	90,496	214,074	--	--	2,907	11,511	--	95,064	231,323
2014	--	4,783	13,526	--	--	109,279	260,130	--	--	13,341	47,057	--	127,403	320,713
2015	--	3,664	8,131	--	--	84,896	234,382	--	--	5,842	18,848	--	94,402	261,361
2016	7,416	4,822	12,238	92,225	7,519	29,146	128,890	33,839	5,608	3,469	42,916	146,607	37,437	184,044
2017	2,255	1,236	3,491	75,690	3,177	27,909	106,776	5,019	804	751	6,574	86,945	29,896	116,841
2018	3,888	2,595	6,483	45,430	2,183	21,725	69,338	19,056	3,224	2,382	24,662	73,781	26,702	100,483
2019	1,612	1,522	3,134	33,507	2,367	30,300	66,174	4,214	1,180	899	6,292	42,879	32,721	75,600
2020	2,047	2,054	4,101	42,542	4,718	28,132	75,392	23,001	3,920	5,278	32,199	76,228	35,464	111,692
2021	798	1,119	1,917	35,723	1,462	19,071	56,256	8,505	1,301	1,690	11,496	47,789	21,880	69,669

¹ Prior to 2016, natural-origin abundances displayed include an unknown number of unclipped hatchery-origin fish.

Table 7. Returns of upriver summer steelhead to Lower Granite Dam, 1991-2022.¹

Run Year ²	A-Index				B-Index				Total steelhead return			
	Clipped Hatchery	Unclipped Hatchery	Natural Origin	Total	Clipped Hatchery	Unclipped Hatchery	Natural Origin	Total	Clipped Hatchery	Unclipped Hatchery	Natural Origin	Total
1991-92	69,885	0	14,135	84,020	11,883	0	3,182	15,065	81,768	0	17,317	99,085
1992-93	83,420	0	13,617	97,037	25,566	0	5,777	31,343	108,986	0	19,394	128,380
1993-94	34,657	0	7,332	41,989	15,895	0	1,790	17,685	50,552	0	9,122	59,674
1994-95	31,956	0	5,873	37,829	7,178	0	2,231	9,409	39,134	0	8,104	47,238
1995-96	62,773	0	6,721	69,494	8,317	0	1,334	9,651	71,090	0	8,055	79,145
1996-97	67,075	0	5,980	73,055	12,211	0	1,645	13,856	79,286	0	7,625	86,911
1997-98	67,019	0	7,424	74,443	10,878	0	1,325	12,203	77,897	0	8,749	86,646
1998-99	43,832	0	7,074	50,906	17,455	0	2,301	19,756	61,287	0	9,375	70,662
1999-00	54,119	0	10,184	64,303	8,834	0	914	9,748	62,953	0	11,098	74,051
2000-01	79,589	10	17,689	97,288	17,128	0	2,886	20,014	96,717	10	20,575	117,302
2001-02	191,091	5,979	37,545	234,615	30,677	0	3,174	33,851	221,768	5,979	40,719	268,466
2002-03	110,535	11,734	28,308	150,577	51,358	6,618	13,623	71,599	161,893	18,352	41,931	222,176
2003-04	106,334	11,840	21,892	140,066	23,058	2,132	7,254	32,444	129,392	13,972	29,146	172,510
2004-05	94,225	9,166	18,297	121,688	23,179	2,005	4,774	29,958	117,404	11,171	23,071	151,646
2005-06	96,644	13,903	14,586	125,133	26,143	3,345	3,544	33,032	122,787	17,248	18,130	158,165
2006-07	85,210	15,234	7,877	108,321	33,332	5,880	1,633	40,845	118,542	21,114	9,510	149,166
2007-08	102,374	14,643	11,242	128,259	20,513	3,446	2,924	26,883	122,887	18,089	14,166	155,142
2008-09	94,205	13,079	18,216	125,500	40,713	6,998	5,659	53,370	134,918	20,077	23,875	178,870
2009-10	231,003	30,385	38,210	299,598	16,555	2,700	4,529	23,784	247,558	33,085	42,739	323,382
2010-11	110,750	17,721	34,549	163,020	31,574	4,118	9,584	45,276	142,324	21,839	44,133	208,296
2011-12	113,038	7,930	35,240	156,208	17,801	2,113	4,198	24,112	130,839	10,043	39,438	180,320
2012-13	63,611	4,767	19,806	88,184	13,695	3,970	3,337	21,002	77,306	8,737	23,143	109,186
2013-14	70,332	5,328	23,470	99,130	5,546	1,593	1,885	9,024	75,878	6,921	25,355	108,154
2014-15	89,341	5,755	38,861	133,957	21,067	3,639	6,928	31,634	110,408	9,394	45,789	165,591
2015-16	88,296	4,045	30,806	123,147	8,465	1,408	3,130	13,003	96,761	5,453	33,936	136,150
2016-17	52,825	3,556	12,575	68,956	25,724	4,145	3,001	32,870	78,549	7,701	15,576	101,826
2017-18	56,738	2,258	10,454	69,450	3,845	539	263	4,647	60,583	2,797	10,717	74,097
2018-19	26,786	1,412	7,055	35,253	13,118	2,218	1,229	16,565	39,904	3,630	8,284	51,818
2019-20	20,259	1,452	9,234	30,945	2,194	871	400	3,465	22,453	2,323	9,634	34,410
2020-21	26,248	1,528	12,213	39,989	14,181	3,880	3,265	21,326	40,429	5,408	15,478	61,315
2021-22 ³	25,773	992	8,154	34,919	5,360	983	1,323	7,666	31,134	1,975	9,477	42,586

¹ Counts adjusted based on biological sampling at Lower Granite Dam.

² Run year is July 1 to June 30 the following year.

³ Preliminary abundance estimates for July 1, 2021 to June 30, 2022. Final run year estimates will be available in December 2022.

Table 8. Adult Coho returns to the Columbia River, 1980-2021.¹

Year	Lower Columbia River									
	Harvest					Hatchery Returns	Natural Escapement	Tributary Dam Count ⁷	Bonneville Dam Count	Total Run ⁸
	Commercial ^{2,3,4}		Recreational ^{5,6}							
Zones 1-5	SAFE	Estuary	Mainstem	Tributary						
1980-84 Ave	108.7	15.4	19.4	0.2	11.3	106.4		4.1	26.8	292.2
1985-89 Ave	377.7	39.3	84.1	1.3	12.6	148.9	14.3	6.9	51.7	736.9
1990	47.6	18.6	18.5	0.4	9.7	88.8	10.8	2.0	11.6	208.0
1991	327.1	80.4	209.5	1.1	29.4	243.3	26.4	5.5	58.9	981.5
1992	38.2	15.8	43.1	0.6	8.4	86.9	9.4	5.2	17.8	225.4
1993	20.7	15.0	20.9	0.6	6.3	39.4	3.7	0.8	10.6	117.9
1994	6.0	54.6	1.8	0.9	3.4	78.0	4.2	4.1	20.3	173.4
1995	0.2	21.2	5.0	0.2	2.7	32.2	2.5	2.9	10.4	77.4
1996	5.8	20.4	4.5	0.3	3.6	62.2	4.1	0.6	15.7	117.1
1997	3.8	16.7	20.4	0.8	10.8	69.7	7.1	2.8	24.3	156.4
1998	0.3	22.8	3.2	3.7	3.0	87.9	7.5	1.3	46.3	175.9
1999	57.6	21.5	9.0	1.3	18.6	124.5	14.9	1.0	40.7	289.1
2000	110.2	58.2	21.5	1.6	36.1	228.6	10.3	6.2	85.6	558.3
2001	218.7	33.7	132.0	3.1	74.9	377.3	21.0	8.2	259.5	1,128.3
2002	94.9	68.1	6.2	3.0	24.4	211.1	36.4	3.7	88.1	535.8
2003	143.8	113.5	54.4	1.1	22.5	205.4	35.4	11.4	125.7	713.2
2004	66.6	53.0	15.2	1.3	12.3	173.5	21.0	5.7	115.0	463.5
2005	30.3	64.5	6.9	0.6	9.9	142.3	13.7	3.3	83.3	354.7
2006	27.2	36.2	3.7	1.2	15.3	191.1	23.8	9.5	101.7	409.7
2007	30.2	10.1	8.4	0.9	23.3	161.0	15.3	10.6	89.2	349.0
2008	13.1	47.3	8.6	2.2	40.8	240.9	26.2	6.2	135.5	520.8
2009	43.8	80.4	48.1	4.0	36.5	260.4	29.7	32.3	224.9	760.2
2010	18.9	57.4	8.0	1.6	22.4	189.3	26.0	22.3	120.7	466.5
2011	13.5	48.8	7.6	1.7	16.4	108.3	26.7	8.7	146.5	378.1
2012	2.6	14.5	7.4	0.9	3.8	41.9	17.3	9.1	55.0	152.4
2013	9.8	38.6	7.6	1.0	9.7	81.9	23.0	21.6	59.6	252.8
2014	70.4	166.9	57.7	5.8	46.4	293.2	68.1	32.2	279.7	1,020.5
2015	4.5	26.6	36.9	1.0	6.8	43.5	8.3	4.6	37.4	169.6
2016	1.1	30.3	9.2	1.3	11.0	84.1	21.1	4.8	42.0	204.9
2017	0.9	36.9	18.2	3.1	7.3	61.1	19.8	12.3	76.0	235.6
2018	0.4	11.1	6.8	0.7	6.0	42.3	24.3	6.0	40.9	138.4
2019	2.7	18.6	22.8	1.1	3.9	50.9	23.9	12.3	73.9	210.1
2020	8.0	37.7	7.0	1.7	12.4	87.0	61.8	23.7	121.4	360.7
2021	15.4	96.7	37.0	6.0	19.9	160.8	51.2	35.0	243.6	665.6

¹ Reported in thousands of fish

² Landings since 2003 are preliminary

³ Zones 1-5 (Mainstem) includes jacks

⁴ Jacks landed in SAFE fisheries are not included (except for 1985 and 1986).

⁵ Estuary (Buoy 10) fishery. Catch from this fishery prior to 1982 is included in ocean catch totals. Some non-Columbia River fish are caught in the estuary fishery and are included here.

⁶ Mainstem (LCR) includes catch from above Astoria-Megler Bridge through 1999 and catch from above Tongue Point/Rocky Point

⁷ Includes Willamette Falls (Willamette River), North Fork Dam (Clackamas River), and Marmot Dam (Sandy River). No Marmot Dam counts after dam removal in 2007.

⁸ May not match totals found in other sections of this report due to rounding.

Table 9. Early stock adult Coho returns to the Columbia River, 1980-2021.¹

Year	Lower Columbia River									
	Harvest					Hatchery Returns	Natural Escapement	Tributary	Bonneville	
	Commercial ^{2,3,4}		Recreational ^{5,6}					Dam	Dam	
	Zones 1-5	SAFE	Estuary	Mainstem	Tributary	Count ⁷	Count	Count	Total Run ⁸	
1980-84	35.2	15.4	20.2	0.2	6.3	63.7		2.8	21.9	157.6
1985-89	126.3	39.3	52.0	1.0	6.8	78.8	6.3	5.5	45.6	360.3
1990	19.7	18.6	12.6	0.3	6.3	41.1	3.8	1.7	8.7	112.8
1991	122.8	80.4	143.3	0.8	15.1	107.2	9.2	4.3	43.2	526.3
1992	3.6	15.8	29.1	0.5	4.1	44.4	3.3	3.4	11.0	115.3
1993	5.9	15.0	16.5	0.5	2.9	22.9	1.3	0.7	8.0	73.7
1994	3.6	54.6	1.4	0.8	2.2	59.6	1.5	3.3	12.5	139.6
1995	0.0	21.2	4.9	0.2	1.6	20.4	0.9	2.3	6.9	58.4
1996	1.7	20.4	3.9	0.2	2.1	44.3	1.4	0.6	8.9	83.6
1997	1.5	16.7	19.3	0.8	6.4	39.1	2.5	2.8	18.4	107.3
1998	0.0	22.8	3.0	3.6	0.7	55.3	2.6	1.0	34.2	123.2
1999	14.0	21.5	7.8	0.9	11.1	60.0	5.2	1.0	32.9	154.4
2000	20.2	58.2	18.7	1.0	26.4	137.2	3.8	5.5	58.9	330.0
2001	67.8	33.7	114.9	2.6	40.1	200.9	7.8	6.3	225.4	699.3
2002	48.1	68.1	5.4	1.1	18.2	101.1	13.4	3.3	50.4	309.0
2003	71.2	113.5	47.4	0.8	18.0	141.3	13.4	10.8	93.8	510.2
2004	16.6	53.0	13.2	0.8	10.0	109.7	8.4	5.0	85.6	302.3
2005	14.3	63.5	6.0	0.3	7.5	88.0	5.5	2.9	63.6	251.7
2006	9.3	36.2	3.2	0.6	10.7	99.7	10.5	8.3	65.4	243.8
2007	7.9	10.1	7.3	0.5	17.1	99.6	6.2	9.7	62.2	220.6
2008	4.4	47.3	7.5	1.3	26.6	131.3	10.4	6.1	85.0	319.8
2009	20.7	80.4	41.9	2.1	20.9	144.7	12.4	31.0	135.6	489.8
2010	3.0	57.4	6.9	0.7	11.3	75.4	12.2	21.8	56.2	244.9
2011	6.2	48.8	6.6	0.9	5.6	48.1	10.9	8.3	117.7	253.1
2012	0.8	14.5	6.4	0.5	1.5	22.1	7.0	9.0	41.1	102.8
2013	3.6	38.6	6.6	0.6	3.0	42.6	9.3	20.4	33.0	157.9
2014	18.2	166.9	50.2	2.5	16.7	128.8	27.6	30.9	181.5	623.4
2015	1.2	26.6	32.1	0.5	3.3	19.3	3.4	4.3	26.9	117.8
2016	0.9	30.3	8.0	0.7	3.8	34.0	8.8	4.3	28.9	119.6
2017	0.6	36.9	15.8	1.1	3.8	27.2	7.6	11.3	47.3	151.6
2018	0.4	11.1	5.9	0.5	3.1	15.0	8.7	5.7	28.6	78.9
2019	1.0	18.6	19.8	0.6	1.5	25.5	9.1	10.9	54.2	141.2
2020	4.1	37.7	6.1	0.9	6.2	37.5	35.9	22.6	91.6	242.6
2021	8.8	96.7	32.2	3.2	11.5	84.6	19.1	34.2	180.5	470.8

¹ Reported in thousands of fish

² Landings since 2003 are preliminary

³ Zones 1-5 (Mainstem) includes jacks

⁴ Jacks landed in SAFE fisheries are not included (except for 1985 and 1986).

⁵ Estuary (Buoy 10) fishery. Catch from this fishery prior to 1982 is included in ocean catch totals. Some non-Columbia River fish are caught in the estuary fishery and are included here.

⁶ Mainstem (LCR) includes catch from above Astoria-Megler Bridge through 1999 and catch from above Tongue Point/Rocky Point the

⁷ Includes Willamette Falls (Willamette River), North Fork Dam (Clackamas River), and Marmot Dam (Sandy River). No Marmot Dam counts after dam removal in 2007.

⁸ May not match totals found in other sections of this report due to rounding.

Table 10. Late stock adult Coho returns to the Columbia River, 1980-2021.¹

Year	Lower Columbia River									
	Harvest					Hatchery Returns	Natural Escapement	Tributary Dam Count ⁷	Bonneville Dam Count	Total Run ⁸
	Commercial ^{2,3,4}		Recreational ^{5,6}							
Zones 1-5	SAFE	Estuary	Mainstem	Tributary						
1980-84 Ave	73.4	0.0	12.1	0.0	5.0	42.7			4.8	134.6
1985-89 Ave	251.4	0.0	32.1	0.4	5.8	70.2	11.6	1.4	6.0	376.6
1990	27.9	0.0	5.9	0.0	3.5	47.7	7.0	0.3	2.9	95.2
1991	204.3	0.0	66.2	0.3	14.3	136.1	17.1	1.3	15.6	455.2
1992	34.7	0.0	14.0	0.0	4.3	42.5	6.1	1.8	6.8	110.2
1993	14.8	0.0	4.4	0.1	3.4	16.5	2.4	0.1	2.7	44.3
1994	2.4	0.0	0.4	0.1	1.2	18.4	2.7	0.9	7.7	33.8
1995	0.2	0.0	0.2	0.0	1.1	11.8	1.7	0.6	3.5	19.0
1996	4.0	0.0	0.6	0.0	1.4	17.9	2.7	0.0	6.8	33.5
1997	2.3	0.0	1.0	0.0	4.4	30.7	4.6	0.0	6.0	49.0
1998	0.2	0.0	0.2	0.2	2.3	32.6	4.9	0.2	12.1	52.7
1999	43.6	0.0	1.2	0.4	7.5	64.5	9.7	0.1	7.8	134.7
2000	89.9	0.0	2.8	0.6	9.8	91.5	6.5	0.6	26.7	228.4
2001	150.9	0.0	17.2	0.5	34.8	176.4	13.2	1.9	34.2	429.1
2002	46.8	0.0	0.8	2.0	6.2	110.0	23.0	0.4	37.7	226.9
2003	72.5	0.0	7.1	0.4	4.4	64.1	22.0	0.6	31.9	203.0
2004	50.0	0.0	2.0	0.5	2.3	63.8	12.6	0.6	29.5	161.2
2005	15.9	1.0	0.9	0.3	2.4	54.2	8.3	0.3	19.7	103.0
2006	18.0	0.0	0.5	0.6	4.6	91.4	13.3	1.2	36.3	165.9
2007	22.3	0.0	1.1	0.3	6.2	61.4	9.1	0.8	27.1	128.4
2008	8.7	0.0	1.1	1.0	14.2	109.6	15.8	0.1	50.5	200.9
2009	23.1	0.0	6.3	1.8	15.7	115.8	17.3	1.2	89.3	270.4
2010	15.9	0.0	1.0	0.9	11.1	113.8	13.7	0.6	64.5	221.6
2011	7.3	0.0	1.0	0.8	10.8	60.1	15.8	0.4	28.8	124.9
2012	1.8	0.0	1.0	0.4	2.3	19.9	10.3	0.1	13.9	49.5
2013	6.1	0.0	1.0	0.3	6.7	39.3	13.6	1.2	26.6	94.9
2014	52.2	0.0	7.5	3.3	29.7	164.5	40.4	1.3	98.2	397.2
2015	3.2	0.0	4.8	0.5	3.5	24.2	4.8	0.3	10.5	51.8
2016	0.3	0.0	1.2	0.7	7.2	50.1	12.3	0.5	13.1	85.3
2017	0.4	0.0	2.4	2.0	3.5	33.9	12.2	1.0	28.7	84.0
2018	0.0	0.0	0.9	0.1	2.9	27.4	15.6	0.3	12.3	59.4
2019	1.7	0.0	3.0	0.5	2.4	25.4	14.8	1.4	19.7	68.9
2020	3.9	0.0	0.9	0.8	6.2	49.5	25.9	1.1	29.8	118.1
2021	6.6	0.0	4.8	2.8	8.4	76.2	32.1	0.8	63.1	194.8

¹ Reported in thousands of fish

² Landings since 2003 are preliminary

³ Zones 1-5 (Mainstem) includes jacks

⁴ Jacks landed in SAFE fisheries are not included (except for 1985 and 1986).

⁵ Estuary (Buoy 10) fishery. Catch from this fishery prior to 1982 is included in ocean catch totals. Some non-Columbia River fish are caught in the estuary fishery and are included here.

⁶ Mainstem (LCR) includes catch from above Astoria-Megler Bridge through 1999 and catch from above Tongue Point/Rocky Point there.

⁷ Includes Willamette Falls (Willamette River), North Fork Dam (Clackamas River), and Marmot Dam (Sandy River). No Marmot Dam counts after dam removal in 2007.

⁸ May not match totals found in other sections of this report due to rounding.

Table 11. Lower Columbia River Coho natural spawner estimates in Oregon and Washington tributaries, 2011-2020.^{1,2}

Population	2011			2012			2013			2014			2015		
	Total	Unmarked	% unmarked	Total	Unmarked	% unmarked	Total	Unmarked	% unmarked	Total	Unmarked	% unmarked	Total	Unmarked	% unmarked
Youngs Bay	476	161	34%	241	129	54%	NA	NA	--	NA	NA	--	NA	NA	--
Big Creek	333	160	48%	521	409	79%	NA	NA	--	NA	NA	--	NA	NA	--
Clatskanie	1,553	1,546	100%	696	619	89%	685	611	89%	3,397	3,246	96%	249	240	96%
Scappoose	298	298	100%	210	210	100%	979	979	100%	1,587	1,587	100%	487	487	100%
Clackamas	2,498	2,254	90%	1,755	1,580	90%	3,252	3,202	98%	12,444	10,670	86%	2,014	1,784	89%
Sandy	3,813	3,494	92%	1,198	1,165	97%	756	667	88%	6,111	5,942	97%	464	443	95%
Lower Gorge-Oregon	471	216	46%	220	96	44%	161	151	94%	739	362	49%	48	30	63%
Upper Gorge/Hood	743	232	31%	759	169	22%	1,599	561	35%	174	42	24%	11	4	36%
Grays/Chinook	1,287	53	4%	705	421	60%	1,837	677	37%	4,361	2,826	65%	439	145	33%
Elochoman/Skamokawa	1,273	551	43%	531	367	69%	1,111	650	59%	3,924	2,572	66%	381	204	54%
Mill/Abernathy/Germany	491	397	81%	376	368	98%	610	566	93%	2,208	1,941	88%	525	492	94%
L. Cowlitz (tribs. only)	3,327	3,040	91%	2,922	2,547	--	4,831	3,853	80%	19,603	18,178	93%	1,864	1,709	92%
Coweeman	2,460	2,356	96%	2,666	2,587	97%	3,982	3,501	88%	5,627	4,692	83%	1,027	803	78%
Toutle/Green	712	473	66%	1,187	841	71%	2,732	1,910	70%	6,766	4,489	66%	1,152	431	37%
SF Toutle	985	847	86%	1,771	1,582	89%	3,624	3,125	86%	9,630	7,781	81%	1,666	838	50%
Upper Cowlitz/Cispus	41,739	15,601	37%	10,872	3,306	30%	13,750	12	0%	61,581	13,844	22%	2,720	759	28%
Tilton	15,102	4,112	27%	12,770	2,746	22%	14,944	5,488	37%	28,864	18,145	63%	5,571	2,786	50%
Kalama ³	193	5	--	227	24	11%	378	45	12%	640	58	9%	118	12	10%
NF Lewis (Cedar Ck)	4,938	3,834	78%	1,627	1,375	85%	8,633	1,216	14%	10,801	2,078	19%	4,080	395	10%
EF Lewis	1,567	1,493	95%	2,318	2,179	94%	2,540	2,324	91%	2,298	1,868	81%	452	347	77%
Salmon Creek	1,272	1,236	97%	1,339	1,284	96%	1,695	1,668	98%	2,242	2,218	99%	745	731	98%
Washougal	591	546	92%	602	542	90%	793	543	68%	1,057	302	29%	370	114	31%
Lower Gorge-Washington	527	453	86%	547	454	83%	706	553	78%	837	564	67%	376	323	86%

¹ Proportion unmarked does not include substantial numbers of unmarked adults from RSI programs in the Lower Cowlitz, NF Lewis, and Salmon Creek populations.

² Washington tributary estimates for 2010-2015 updated using new methods.

³ In 2011, no carcasses were recovered to determine proportion unmarked.

⁴ Includes Hamilton, Hardy, and Duncan creeks

Table 11. Continued ²

Population	2016			2017			2018			2019			2020		
	Total	Unmarked	% unmarked	Total	Unmarked	% unmarked	Total	Unmarked	% unmarked	Total	Unmarked	% unmarked	Total	Unmarked	% unmarked
Youngs Bay	NA	NA	--	NA	NA	--	NA	NA	--	NA	NA	--	NA	NA	--
Big Creek	NA	NA	--	NA	NA	--	NA	NA	--	NA	NA	--	NA	NA	--
Clatskanie	491	464	95%	701	566	81%	78	25	32%	244	146	60%	NA	NA	--
Scappoose	1,242	1,200	97%	395	387	98%	178	178	100%	384	384	100%	NA	NA	--
Clackamas	1,787	1,628	91%	8,621	7,598	88%	3,489	3,159	91%	4,240	4,044	95%	NA	NA	--
Sandy	970	939	97%	2,384	2,384	100%	583	537	92%	1,052	1,052	100%	NA	NA	--
Lower Gorge-Oregon	425	395	93%	NA	NA	--	25	16	64%	192	184	96%	NA	NA	--
Upper Gorge/Hood	163	57	35%	NA	NA	--	149	107	72%	236	193	82%	NA	NA	--
Grays/Chinook	1,217	489	40%	881	175	20%	1,022	165	16%	1,799	570	32%	1,983	1,200	61%
Elochoman/Skamokawa	987	589	60%	958	780	81%	1,483	944	64%	2,622	1,766	67%	2,385	2,112	89%
Mill/Abemathy/Germany	1,084	944	87%	689	633	92%	861	734	85%	2,048	1,491	73%	1,704	1,571	92%
L. Cowlitz (tribs. only)	4,697	4,290	91%	3,118	2,361	76%	2,997	2,370	79%	3,905	3,696	95%	5,133	4,857	95%
Cowweman	3,067	2,654	87%	2,264	2,156	95%	3,187	3,036	95%	4,536	3,238	71%	5,684	4,910	86%
Toutle/Green	3,399	878	26%	1,013	672	66%	963	653	68%	2,618	1,616	62%	2,429	1,971	81%
SF Toutle	2,759	2,168	79%	908	832	92%	827	771	93%	2,734	2,495	91%	3,044	2,982	98%
Upper Cowlitz/Cispus	21,256	1,831	9%	18,135	7,900	44%	11,526	337	3%	9,733	3,563	37%	20,697	8,867	43%
Tilton	15,646	5,370	34%	16,526	8,075	49%	8,792	2,671	30%	5,674	--	--	11,859	2,368	20%
Kalama ³	230	79	34%	159	53	33%	204	65	32%	483	160	33%	927	320	35%
NF Lewis (Cedar Ck)	7,661	1,782	23%	7,707	2,890	37%	1,810	1,202	66%	4,362	3,695	85%	4,745	3,453	73%
EF Lewis	937	414	44%	1,444	910	63%	1,743	1,532	88%	2,552	2,353	92%	2,138	1,953	91%
Salmon Creek	1,604	1,546	96%	2,102	1,900	90%	2,625	2,364	90%	3,265	2,920	89%	3,493	3,016	86%
Washougal	758	189	25%	874	214	24%	879	188	21%	1,544	674	44%	2,198	938	43%
Lower Gorge-Washington	591	543	92%	498	406	82%	514	404	79%	1,428	1,038	73%	1,124	987	88%

¹ Proportion unmarked does not include substantial numbers of unmarked adults from RSI programs in the Lower Cowlitz, NF Lewis,

² Washington tributary estimates for 2011-2015 updated using new methods.

³ In 2011, no carcasses were recovered to determine proportion unmarked.

⁴ Includes Hamilton, Hardy, and Duncan creeks

Table 12. Columbia River Chum abundance in select Washington tributaries and the mainstem Columbia River, 2005-2021.

Location	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 Prelim.
Crazy Johnson Creek	1,418	3,819	870	1,093	996	865	2,304	3,475	1,925	1,541	4,193	5,987	3,681	899	72	2,863	6,279
WF Grays River	1,407	1,377	1,902	793	1,130	1,814	5,996	2,817	1,857	1,145	6,297	19,023	1,930	2,903	3,406	3,055	8,795
Mainstem Grays River	1,379	1,510	1,227	721	750	3,701	2,509	1,717	1,352	2,107	1,091	6,129	1,051	3,010	3,990	7,528	3,842
Grays R. broodstock take	132	119	135	88	107	288	294	220	250	246	128	128	118	250	222	195	192
I-205 area	923	869	576	644	1,154	2,148	4,912	2,586	1,466	1,472	4,757	5,245	1,647	2,518	1,339	2,242	4,872
Multnomah area	214	321	148	31	106	458	647	120	222	334	1,142	1,162	93	368	464	536	1,167
St Cloud area	97	180	3	1	29	126	343	1	84	85	344	242	103	121	89	90	460
Horsetail area	13	65	25	36	6	54	119	92	59	75	420	656	56	312	213	135	450
Ives area	288	466	132	295	171	214	162	230	175	409	1,306	1,914	347	1,639	2,940	879	3,387
Duncan Creek	7	42	9	2	26	48	85	4	27	24	153	208	7	129	76	78	483
Hardy Creek	74	109	12	3	46	175	157	75	56	108	350	354	14	193	64	104	129
Hamilton Creek	178	251	133	118	142	404	542	352	255	260	249	332	162	548	1,367	1,118	1,491
Hamilton Spring Channel	88	227	47	114	94	190	325	137	392	678	1,397	1,265	742	1,546	333	413	1,474
Grays return I-205 to Bonneville return	4,336	6,825	4,134	2,695	2,983	6,668	11,103	8,229	5,384	5,039	11,709	31,267	6,780	7,062	7,690	13,641	19,108
Sum	6,218	9,355	5,219	3,939	4,757	10,485	18,395	11,826	8,120	8,484	21,827	42,645	9,951	14,436	14,575	19,236	33,021

Table 13. Treaty Indian fall Zone 6 mainstem commercial gillnet seasons, 2021.

Gillnet Salmon and Setline Sturgeon Fisheries				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
3.5	Fall Salmon	Aug 23, 6 AM - Aug 26, 6 PM	Set and drift gill nets. 8" min. mesh size restriction.	All of Zone 6. Standard dam and river mouth sanctuaries are in effect, including the Spring Creek Hatchery sanctuary (1.5 miles downstream to 1 mile upstream of the hatchery ladder). Salmon, steelhead, shad, yellow perch, bass, walleye, catfish, and carp may be sold. Fish landed during open fishing periods may be sold after the period concludes.
3.5		Aug 30, 6 AM - Sep 2, 6 PM	Same.	Same.
4.5		Sep 6, 6 AM - Sep 10, 6 PM	Same.	Same.
4.5		Sep 13, 6 AM - Sep 17, 6 PM	Same.	Same.
4.5		Sep 20, 6 AM - Sep 24, 6 PM	Same.	Same, except the Spring Creek Hatchery sanctuary has been reduced to a 150-foot radius around the hatchery ladder.
4.5		Sep 27, 6 AM - Oct 1, 6 PM	Same.	Same.
3.5		Oct 4, 6 AM - Oct 7, 6 PM	Same.	Same.
3.5		Oct 11, 6 AM - Oct 14, 6 PM	Same.	Same.
	Fall Sturgeon			
	Bonneville Pool:	No season		
	The Dalles Pool:	No season		
	John Day Pool	No season		

Table 14. Non-treaty fall commercial fishing seasons, 2021.

Mainstem Commercial Seasons				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
9 hrs	Early Fall Gill Net	Aug 9, 9 PM - Aug 10, 6 AM	9" min. mesh size restriction. The multiple net rule is not in effect. Lighted buoys are required between official sunset and sunrise.	Zones 4-5. The Washougal and Sandy River sanctuaries are in effect. Salmon (except Chum), white sturgeon, and shad may be sold. A maximum of four white sturgeon with a fork length of 44-50 inches may be possessed or sold by each participating vessel during each calendar week. The four white sturgeon possession and sales limit applies to mainstem fisheries only.
9 hrs		Aug 11, 9 PM - Aug 12, 6 AM	Same.	Same.
9 hrs		Aug 16, 9 PM - Aug 17, 6 AM	Same.	Same.
9 hrs		Aug 18, 9 PM - Aug 19, 6 AM	Same.	Same.
9 hrs		Aug 23, 9 PM - Aug 24, 6 AM	Same.	Same.
9 hrs		Aug 25, 9 PM - Aug 26, 6 AM	Same.	Same.
9 hrs		Aug 30, 9 PM - Aug 31, 6 AM	Same.	Same.
9 hrs		Sep 1, 9 PM - Sep 2, 6 AM	Same.	Same.
10 hrs	Late Fall: Gill Net	Sep 19, 8 PM - Sep 20, 6 AM	8" min. mesh size restriction. The multiple net rule is not in effect. Lighted buoys are required between official sunset and sunrise.	Zones 4-5. The Washougal and Sandy River sanctuaries are in effect. Salmon (except Chum), white sturgeon, and shad may be sold. A maximum of six white sturgeon with a fork length of 44-50 inches may be possessed or sold by each participating vessel during each calendar week. The six white sturgeon possession and sales limit applies to mainstem fisheries only.
10 hrs		Sep 22, 8 PM - Sep 23, 6 AM	Same.	Same.
10 hrs		Sep 26, 8 PM - Sep 27, 6 AM	Same, except the multiple net rule is in effect.	Same.
18 hrs	Tangle Net	Sep 27, 4 AM - 10 PM	3 3/4" max. mesh size restriction. Unslackened single-wall multi-filament floater nets only. Monofilament nets are not allowed. Net length not to exceed 150 fathoms. There are no restrictions on the hang ratio. The use of slackers or stringers to slacken the net vertically is prohibited. Rip lines are allowed if they do not vertically slacken the net. Multiple net rule is in effect. Each boat must have two operable recovery boxes or one box with two chambers that meet the flow and size requirements standard for winter/spring tangle net fisheries.	Zones 1-3. Elokomin-A, Cowlitz River, Kalama-A, and Lewis-A sanctuaries are in effect. Adipose fin-clipped coho; Chinook, pink, and sockeye salmon, and shad may be sold. Soak times must not exceed 30 minutes. A red cork must be placed on the corkline every 25 fathoms. Nets that are fished between official sunset and official sunrise must have a lighted buoy on each end of the net that is not attached to the fishing vessel. A maximum of six white sturgeon with a fork length of 44-50 inches may be possessed or sold by each participating vessel during each calendar week (Sunday through Saturday).
18 hrs		Sep 29, 4 AM - 10 PM	Same.	Same.
10 hrs	Gill Net	Sep 29, 8 PM - Sep 30, 6 AM	Same.	Same.

Table 14. Continued

Mainstem Commercial Seasons				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
14 hrs	Tangle Net	Oct 1, 4 AM - 6 PM	Same.	Same.
12 hrs	Gill Net	Oct 3, 7 PM - Oct 4, 7 AM	Same.	Same.
18 hrs	Tangle Net	Oct 4, 4 AM - 10 PM	Same.	Same.
18 hrs		Oct 6, 4 AM - 10 PM	Same.	Same.
12 hrs	Gill Net	Oct 6, 7 PM - Oct 7, 7 AM	Same.	Same.
14 hrs	Tangle Net	Oct 8, 4 AM - 6 PM	Same.	Same.
12 hrs	Gill Net	Oct 10, 7 PM - Oct 11, 7 AM	Same.	Same.
18 hrs	Tangle Net	Oct 11, 4 AM - 10 PM	Same.	Same.
18 hrs		Oct 13, 4 AM - 10 PM	Same.	Same.
12 hrs	Gill Net	Oct 13, 7 PM - Oct 14, 7 AM	Same.	Same.
14 hrs	Tangle Net	Oct 15, 4 AM - 6 PM	Same.	Same.
18 hrs		Oct 18, 4 AM - 10 PM	Same.	Same.
18 hrs		Oct 19, 4 AM - 10 PM	Same.	Same.
18 hrs		Oct 20, 4 AM - 10 PM	Same.	Same.
18 hrs		Oct 21, 4 AM - 10 PM	Same.	Same.
14 hrs		Oct 22, 4 AM - 6 PM	Same.	Same.
18 hrs		Oct 25, 4 AM - 10 PM	Same.	Same.
14 hrs		Oct 26, 4 AM - 6 PM	Same.	Same.
18 hrs		Oct 27, 4 AM - 10 PM	Same.	Same.
18 hrs		Oct 28, 4 AM - 10 PM	Same.	Same.
14 hrs		Oct 29, 4 AM - 6 PM	Same.	Same.

Table 14. Continued

Select Area Commercial Seasons				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
12 hrs	Youngs Bay - Fall	Aug 23, 7 PM - Aug 24, 7 AM	6" max. mesh size restriction. Nets may not exceed 250 fathoms in length. Leadline not to exceed 2 lbs per fathom. Use of additional weights or anchors attached directly to the leadline is allowed upstream of markers located approximately 200 yards upstream of the mouth of the Walluski River and the upper deadline at Battle Creek Slough, in the lower Walluski River from the first dock near the mouth upstream to the Highway 202 Bridge, and in the Lewis and Clark River from the Alternate Highway 101 Bridge upstream to the overhead power lines approximately 500 feet southerly (upstream) of Barrett Slough. Red corks are required at 25-fathom intervals and must be in contrast to other corks in the remainder of the net. Nets that are fished between official sunset and official sunrise must have a lighted buoy at the end of the net that is not attached to the boat. Multiple net rule is in effect.	The Youngs Bay Select Area is defined as waters of Youngs Bay and Youngs River southeasterly of the Highway 101 Bridge upstream to the regulatory marker(s) at the confluence of the Klaskanine and Youngs rivers, including the Walluski River downstream of the Highway 202 Bridge, and the Lewis and Clark River north (downstream) of the overhead power lines approximately 500 feet south (upstream) of Barrett Slough. During the fall season, Youngs River upstream of the regulatory marker at Battle Creek Slough is closed. If the marker at Battle Creek Slough is not in place, the boundary is defined by a line projecting northeasterly from a point (46°6'35.6"N latitude 123°47'42.0"W longitude) on the southern bank of Youngs River immediately downstream of the mouth of Battle Creek Slough to a point (46°6'41.6"N latitude 123°47'36.9"W longitude) located on the northern bank of Youngs River. All waters are under State of Oregon jurisdiction and are open to Oregon and Washington fishers who possess the appropriate licenses. Salmon (except Chum), white sturgeon and shad may be sold. A maximum of three white sturgeon with a fork length of 44-50 inches may be possessed or sold by each participating vessel during each calendar week (Sunday through Saturday).
12 hrs		Aug 26, 7 PM - Aug 27, 7 AM	Same.	Same.
3 1/2		Aug 30, 7 PM - Sep 3, 7 AM	Same.	Same.
53		Sep 6, 7 PM - Oct 29, noon	Same.	Same.

Table 14. Continued

Select Area Commercial Seasons (continued)				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
12 hrs	Tongue Point / South Channel - Fall	Aug 23, 7 PM - Aug 24, 7 AM	<p>Tongue Point: 6" max. mesh size restriction. Nets may not exceed 250 fathoms in length and leadline may not exceed 2 lbs per fathom.</p> <p>South Channel: 6" max. mesh size restriction. Nets may not exceed 250 fathoms in length and there is no weight restriction on the leadline. Use of additional weights or anchors attached directly to the leadline is allowed.</p> <p>In both fishing sites, nets that are fished between the official sunset and official sunrise must have a lighted buoy at the end of the net that is not attached to the boat. The multiple net rule is in effect.</p>	<p>Tongue Point Select Area is defined as those waters of the Columbia River bounded by a line from a regulatory marker on the eastern shore of Tongue Point (midway between the red USCG light "2" at the tip of Tongue Point and the northern-most pier (#8) at the Tongue Point Job Corps facility) to the flashing green USCG light "3" on the rock jetty at the northwest tip of Mott Island, a line from a regulatory marker at the southeast end of Mott Island northeasterly to a regulatory marker on the northwest shore of Lois Island, and a line from a regulatory marker located on the Oregon shore approximately 300 yards northwest of the railroad bridge crossing the John Day River projecting easterly to a regulatory marker on the southwest shore of Lois Island. If the marker on the eastern shore of Tongue Point is not in place, the downstream boundary is defined by a line projecting from a point (46°12'31.1"N latitude 123°45'34.0"W longitude) on the eastern shore of Tongue Point to the flashing green USCG light "3" on the rock jetty at the northwest tip of Mott Island. If the marker on the Oregon shore is not in place, the upstream boundary is defined by a line projecting from a point (46°10'57.7"N latitude 123°44'35.3"W longitude) on the Oregon shore approximately 300 yards northwest of the railroad bridge crossing the John Day River projecting easterly to a regulatory marker on Lois Island. The South Channel is defined as those waters bounded by a line from a regulatory marker on the Oregon shore at John Day Point projecting northeasterly to a regulatory marker on Lois Island, and a line from a regulatory marker on Settler Point projecting northwesterly to the flashing red USCG light "10" then projecting westerly to the eastern tip of Burnside Island. Fishers in Tongue Point area may have on-board un-stored gill nets legal for the South Channel fishing area. Permanent transportation rules are in effect. Salmon (except chum), white sturgeon and shad may be sold. A maximum of three white sturgeon with a fork length of 44-50 inches may be possessed or sold by each participating vessel during each calendar week (Sunday through Saturday).</p>
12 hrs		Aug 26, 7 PM - Aug 27, 7 AM	Same.	Same.
12 hrs Nightly		Aug 30 - Sep 3, 7 PM - 7 AM nightly	Same.	Same.
18 hrs Nightly		Sep 6 - Sep 10, 4 PM - 10 AM nightly	Same.	Same.
18 hrs Nightly		Sep 13 - Sep 17, 4 PM - 10 AM nightly	Same.	Same.
18 hrs Nightly		Sep 20 - Sep 24, 4 PM - 10 AM nightly	Same.	Same.

Table 14. Continued

Select Area Commercial Seasons (continued)				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
18 hrs Nightly	Tongue Point/ South Channel- (Cont.)	Sep 27 - Oct 1, 4 PM - 10 AM nightly	Same.	Same.
18 hrs Nightly		Oct 4 - Oct 8, 4 PM - 10 AM nightly	Same.	Same.
18 hrs Nightly		Oct 11 - Oct 15, 4 PM - 10 AM nightly	Same.	Same.
18 hrs Nightly		Oct 18 - Oct 22, 4 PM - 10 AM nightly	Same.	Same.
18 hrs Nightly		Oct 25 - Oct 29, 4 PM - 10 AM nightly	Same.	Same.
12 hrs	Blind Slough / Knappa Slough - Fall	Aug 23, 7 PM - Aug 24, 7 AM	9 3/4" max. mesh size restriction. Nets may not exceed 100 fathoms in length. No weight restriction on leadline. Use of additional weights and anchors attached to the leadline is allowed. Nets that are fished between the official sunset and official sunrise must have a lighted buoy at the end of the net that is not attached to the boat. The multiple net rule is in effect.	Blind Slough is defined as those waters of Blind Slough and Gnat Creek from a north-south line formed by regulatory markers at the mouth of Blind Slough to a regulatory marker in Gnat Creek located approximately 0.5 miles southeasterly (upstream) of the Barendse Road Bridge. Knappa Slough is defined as those waters of Knappa Slough, Calendar Slough, and Big Creek Slough bounded to the north (upstream) by a line projecting from a regulatory marker on the eastern shore of Karlson Island to the northernmost regulatory marker at the mouth of Blind Slough and bounded to the west (downstream) by a line projecting southerly from a regulatory marker on the southwestern tip of Karlson Island through regulatory markers on the western tips of Minaker Island to a marker on the Oregon shore. The waters of Knappa Slough within a 100-foot radius of the railroad bridge crossing Big Creek are closed. Salmon (except chum), white sturgeon and shad may be sold. A maximum of three white sturgeon with a fork length of 44-50 inches may be possessed or sold by each participating vessel during each calendar week (Sunday through Saturday).
12 hrs		Aug 26, 7 PM - Aug 27, 7 AM	Same.	Same.
12 hrs Nightly		Aug 30 - Sep 3, 7 PM - 7 AM nightly	Same.	Same.
18 hrs Nightly		Sep 6 - Sep 10, 4 PM - 10 AM nightly	Same.	Same.
18 hrs Nightly		Sep 13 - Sep 17, 4 PM - 10 AM nightly	Same.	Same.

Table 14. Continued

Select Area Commercial Seasons (continued)				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
18 hrs Nightly	Blind Slough / Knappa Slough - (Cont.)	Sep 20 - Sep 24, 4 PM - 10 AM nightly	Same.	Same.
18 hrs Nightly		Sep 27 - Oct 1, 4 PM - 10 AM nightly	Same.	Same.
18 hrs Nightly		Oct 4 - Oct 8, 4 PM - 10 AM nightly	Same.	Same.
18 hrs Nightly		Oct 11 - Oct 15, 4 PM - 10 AM nightly	Same.	Same.
18 hrs Nightly		Oct 18 - Oct 22, 4 PM - 10 AM nightly	Same.	Same.
18 hrs Nightly		Oct 25 - Oct 29, 4 PM - 10 AM nightly	Same.	Same.
15 hrs nightly	Deep River - Fall	Sep 13 - Sep 17, 6 PM - 9 AM nightly	6" max. mesh size restriction. Nets may not exceed 100 fathoms in length. No weight restriction on leadline. Use of additional weights and anchors attached to the leadline is allowed. Nets that are fished between the official sunset and official sunrise must have a lighted buoy at the end of the net that is not attached to the boat. The multiple net rule is in effect. Nets are not allowed to be tied off to any stationary structures. Nets may not fully cross the navigational channel. It is unlawful to operate in any river, stream or channel any gillnet gear longer than three-fourths the width of the river, stream, or channel.	The Deep River fishing area includes all waters from West Deep River Road Bridge at the town of Deep River downstream to the mouth defined by a line from USCG navigation marker #16 southwest to a marker on the Washington shore. Salmon (except chum), white sturgeon and shad may be sold. A maximum of three white sturgeon with a fork length of 44-50 inches may be possessed or sold by each participating vessel during each calendar week.
15 hrs nightly		Sep 20 - Sep 24, 6 PM - 9 AM nightly	Same.	Same.
15 hrs nightly		Sep 27 - Oct 1, 6 PM - 9 AM nightly	Same.	Same.
15 hrs nightly		Oct 4 - Oct 8, 6 PM - 9 AM nightly	Same.	Same.
15 hrs nightly		Oct 11 - Oct 15, 6 PM - 9 AM nightly	Same.	Same.
15 hrs		Oct 18, 5 PM - Oct 19, 8 AM	Same.	Same.

Table 14. Continued

Select Area Commercial Seasons (continued)				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
15 hrs	Deep River- Fall (Cont.)	Oct 20, 5 PM - Oct 21, 8 AM	Same.	Same.
15 hrs		Oct 25, 5 PM - Oct 26, 8 AM	Same.	Same.
15 hrs		Oct 27, 5 PM - Oct 28, 8 AM	Same.	Same.
15 hrs		Nov 1, 5 PM - Nov 2, 8 AM	Same.	Same.
15 hrs		Nov 3, 5 PM - Nov 4, 8 AM	Same.	Same.
15 hrs		Nov 8, 5 PM - Nov 9, 8 AM	Same.	Same.
15 hrs		Nov 10, 5 PM - Nov 11, 8 AM	Same.	Same.
15 hrs		Nov 15, 5 PM - Nov 16, 8 AM	Same.	Same.
15 hrs		Nov 17, 5 PM - Nov 18, 8 AM	Same.	Same.
15 hrs		Nov 22, 5 PM - Nov 23, 8 AM	Same.	Same.
15 hrs		Nov 24, 5 PM - Nov 25, 8 AM	Same.	Same.

Table 15. Kept catch (adults and jacks) in fall season mainstem fisheries, 2021.

Treaty Fisheries^{1,2}						
Fishery ¹	Chinook	Coho	Chum	Pink	Summer Steelhead	White Sturgeon
Commercial Gillnet, Platform. and Hook & Line (8/26-10/5)	84,502	23,226	0	0	3,249	30
Permit Gillnet (8/19-22)	78	12	0	0	5	0
Platform, Hook & Line (8/1-25 and 10/6-12/31)	397	0	0	0	140	0
Fall Setline	0	0	0	0	0	0
Treaty Total	84,977	23,238	0	0	3,394	30
Non-Treaty Fisheries						
Fishery ¹	Chinook	Coho	Chum ³	Pink	Summer Steelhead	White Sturgeon
Early Fall Mainstem Commercial	21,228	2,768	--	--	--	297
Late Fall Mainstem Commercial	5,963	10,341	--	--	--	98
<i>Subtotal</i>	<i>27,191</i>	<i>13,109</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>395</i>
Beach Seine Commercial	0	0	--	--	--	--
Purse Seine Commercial	0	0	--	--	--	--
<i>Subtotal</i>	<i>0</i>	<i>0</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>
Select Areas Commercial	4,474	99,057	--	9	--	371
<i>Subtotal</i>	<i>4,474</i>	<i>99,057</i>	<i>--</i>	<i>9</i>	<i>--</i>	<i>371</i>
Buoy 10 Sport ⁴	20,789	37,031	--	--	11	--
Lower River Sport ⁴	21,180	5,804	--	--	11	866
Bonn. Dam to Hwy 395 Sport ⁴	6,502	5,554	--	--	21	--
Hanford Reach Sport ⁴	12,217	234	--	--	0	--
<i>Subtotal</i>	<i>60,688</i>	<i>48,623</i>	<i>--</i>	<i>--</i>	<i>43</i>	<i>866</i>
Non-Treaty Total	92,353	160,789	--	9	43	1,632
Grand Total	177,330	184,027	0	9	3,437	1,662

¹ Commercial landings are preliminary. See Tables 13, 14, 16, 20, and 29 for details on specific time, area, and gear restrictions during commercial seasons.

² Includes take-home, sales to wholesale dealers, and direct to public sales.

³ Chum possession and sales prohibited beginning in October 2013.

⁴ Data does not include release mortalities.

Table 16. Fishing periods, gear, and landings from mainstem Columbia River non-treaty commercial seasons, 2021.

Season	Fishing Period	Week	Hours	Zones	Mesh Size	WSTGLimit ¹	Del.	Chinook	Coho	Sockeye	Pink	Chum	White Sturgeon	
Spring	No season.	--	--	--	--	--	--	--	--	--	--	Prohibited	--	
	<i>Spring Season Totals (and average number of deliveries):</i>							0	0	0	0	0	0	0
Summer	No season.	--	--	--	--	--	--	--	--	--	--	Prohibited	--	
	<i>Summer Season Totals (and average number of deliveries):</i>							0	0	0	0	0	0	0
August	Aug 9, 9 PM - Aug 10, 6 AM	33	9	4-5	9"-9 3/4"	4	20	129	0	0	0	Prohibited	21	
	Aug 11, 9 PM - Aug 12, 6 AM	33	9	4-5	9"-9 3/4"	4	13	204	2	0	0	Prohibited	6	
	Aug 16, 9 PM - Aug 17, 6 AM	34	9	4-5	9"-9 3/4"	4	36	240	0	0	0	Prohibited	37	
	Aug 18, 9 PM - Aug 19, 6 AM	34	9	4-5	9"-9 3/4"	4	32	463	12	0	0	Prohibited	23	
	Aug 23, 9 PM - Aug 24, 6 AM	35	9	4-5	9"-9 3/4"	4	75	4,952	469	0	0	Prohibited	50	
	Aug 25, 9 PM - Aug 26, 6 AM	35	9	4-5	9"-9 3/4"	4	80	5,770	686	0	0	Prohibited	38	
	Aug 30, 9 PM - Aug 31, 6 AM	36	9	4-5	9"-9 3/4"	4	81	5,492	920	0	0	Prohibited	65	
	Sep 1, 9 PM - Sep 2, 6 AM	36	9	4-5	9"-9 3/4"	4	79	3,978	679	0	0	Prohibited	57	
	<i>August Season Totals (and average number of deliveries):</i>							52	21,228	2,768	0	0	0	297
	Late-Fall	Sep 19, 8 PM - Sep 20, 6 AM	39	10	4-5	8"-9 3/4"	6	54	1,965	801	0	1	Prohibited	41
Sep 22, 8 PM - Sep 23, 6 AM		39	10	4-5	8"-9 3/4"	6	36	998	358	0	0	Prohibited	17	
Sep 26, 8 PM - Sep 27, 6 AM		40	10	4-5	8"-9 3/4"	6	19	662	206	0	0	Prohibited	13	
Sep 27, 4 AM - 10 PM		40	18	1-3	3-3/4" maxtangle-net	6	42	211	2,123	0	0	Prohibited	2	
Sep 29, 4 AM - 10 PM		40	18	1-3	3-3/4" maxtangle-net	6	24	109	846	0	0	Prohibited	2	
Sep 29, 8 PM - Sep 30, 6 AM		40	10	4-5	8"-9 3/4"	6	17	460	188	0	0	Prohibited	6	
Oct 1, 4 AM - 6 PM		40	14	1-3	3-3/4" maxtangle-net	6	23	67	1,260	0	0	Prohibited	1	
Oct 3, 7 PM - Oct 4, 7 AM		41	12	4-5	8"-9 3/4"	6	12	407	152	0	0	Prohibited	8	
Oct 4, 4 AM - 10 PM		41	18	1-3	3-3/4" maxtangle-net	6	26	68	1,035	0	0	Prohibited	1	
Oct 6, 4 AM - 10 PM		41	18	1-3	3-3/4" maxtangle-net	6	26	46	576	0	0	Prohibited	0	
Oct 6, 7 PM - Oct 7, 7 AM		41	12	4-5	8"-9 3/4"	6	6	328	37	0	0	Prohibited	2	
Oct 8, 4 AM - 6 PM		41	14	1-3	3-3/4" maxtangle-net	6	19	28	591	0	0	Prohibited	0	
Oct 10, 7 PM - Oct 11, 7 AM		42	12	4-5	8"-9 3/4"	6	5	298	23	0	0	Prohibited	1	
Oct 11, 4 AM - 10 PM		42	18	1-3	3-3/4" maxtangle-net	6	28	31	577	0	0	Prohibited	1	
Oct 13, 4 AM - 10 PM		42	18	1-3	3-3/4" maxtangle-net	6	27	32	472	0	0	Prohibited	1	
Oct 13, 7 PM - Oct 14, 7 AM		42	12	4-5	8"-9 3/4"	6	5	231	19	0	0	Prohibited	0	
Oct 15, 4 AM - 6 PM		42	14	1-3	3-3/4" maxtangle-net	6	13	8	315	0	0	Prohibited	0	
Oct 18, 4 AM - 10 PM	43	18	1-3	3-3/4" maxtangle-net	6	12	5	196	0	0	Prohibited	0		
Oct 19, 4 AM - 10 PM	43	18	1-3	3-3/4" maxtangle-net	6	7	1	47	0	0	Prohibited	0		
Oct 20, 4 AM - 10 PM	43	18	1-3	3-3/4" maxtangle-net	6	11	1	105	0	0	Prohibited	0		
Oct 21, 4 AM - 10 PM	43	18	1-3	3-3/4" maxtangle-net	6	0	0	0	0	0	Prohibited	0		
Oct 22, 4 AM - 6 PM	43	14	1-3	3-3/4" maxtangle-net	6	3	0	44	0	0	Prohibited	0		
Oct 25, 4 AM - 10 PM	44	18	1-3	3-3/4" maxtangle-net	6	8	4	138	0	0	Prohibited	0		
Oct 26, 4 AM - 10 PM	44	18	1-3	3-3/4" maxtangle-net	6	8	2	104	0	0	Prohibited	0		
Oct 27, 4 AM - 10 PM	44	18	1-3	3-3/4" maxtangle-net	6	4	1	53	0	0	Prohibited	0		
Oct 28, 4 AM - 10 PM	44	18	1-3	3-3/4" maxtangle-net	6	8	0	66	0	0	Prohibited	2		
Oct 29, 4 AM - 6 PM	44	14	1-3	3-3/4" maxtangle-net	6	3	0	9	0	0	Prohibited	0		
<i>Late-Fall Season Totals (and average number of deliveries):</i>							17	5,963	10,341	0	1	0	98	
<i>FALL TOTALS:</i>							24	27,191	13,109	0	1	Prohibited	395	
<i>2021 Grand Totals:</i>							27,191	13,109	0	1	Prohibited	395		

¹ A white sturgeon possession and sales limit applied during mainstem fishing periods that occurred during August 9 through October 29.

Table 17. Lower Columbia River winter/spring/summer/fall commercial landings, 2021.

<i>Winter/Spring/Summer</i>											
<i>(Final — OR/WA Fish Tickets—January 3, 2022)</i>											
Season	CHINOOK		<i>Z 1–5 Spring Chinook</i>		SOCKEYE		SHAD		WHITE STURGEON ¹		
	<i>Mainstem</i>	Numbers	Pounds	<i>Adults</i>	<i>Jacks</i>	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds
Winter Sturgeon <i>(no season during 2021)</i>		—	--	—	--	—	--	—	--	—	--
Spring <i>(no season during 2021)</i>		—	--	—	--	—	--	—	--	—	--
Summer <i>(no season during 2021)</i>		—	--	—	--	—	--	—	--	—	--
Shad (Area 2S)		—	--	—	--	—	--	2,033	5,075	—	--
Mainstem Totals		0	0	—	--	0	0	2,033	5,075	0	0
<i>Select Areas</i>											
Youngs Bay Winter		467	5,296			0	0	0	0	91	2,618
Youngs Bay Spring		2,717	30,820			0	0	0	0	133	4,032
Youngs Bay Summer		1,395	16,382			2	4	0	0	20	601
Tongue Point Winter		69	831			0	0	0	0	25	751
Tongue Point Spring		252	2,936			0	0	0	0	85	2,563
Tongue Point Summer		74	807			0	0	0	0	42	1,449
Blind & Knappa Sloughs Winter		131	1,534			0	0	0	0	5	147
Blind & Knappa Sloughs Spring		882	9,326			0	0	0	0	8	213
Blind & Knappa Sloughs Summer		518	5,909			0	0	0	0	1	25
Deep River Winter		6	95			0	0	0	0	11	345
Deep River Spring		36	404			0	0	0	0	7	195
Select Area Totals		6,547	74,340			2	4	0	0	428	12,939
Lower Columbia River Commercial GRAND TOTALS	Chinook	6,547	74,340			2	4	2,033	5,075	428	12,939
Winter/Spring/Summer 2021											
<i>Fall</i>											
Season	CHINOOK		COHO		PINK		CHUM		WHITE STURGEON ¹		
	<i>Mainstem</i>	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds
August (Early-Fall) (Zone 4–5; 9 - 9 3/4 inch)		21,228	323,849	2,768	17,228	0	0	No Retention		297	9,035
August (Early-Fall) Subtotals		21,228	323,849	2,768	17,228	0	0			297	9,035
Late-Fall (Zone 4 - 5; 8 - 9 3/4 inch gillne)		5,349	71,959	1,784	14,743	1	6	No Retention		88	2,536
Late-Fall (Zone 1 - 3; 3 3/4 inch tangle-nc)		614	6,133	8,557	55,360	0	0	No Retention		10	323
Late-Fall Subtotals		5,963	78,092	10,341	70,103	1	6			98	2,859
Fall Mainstem Totals		27,191	401,941	13,109	87,331	1	6			395	11,894
<i>Select Areas</i>											
Youngs Bay		2,012	21,201	42,651	328,178	6	26	No Retention		61	1,896
Tongue Point		1,468	16,925	31,056	238,253	1	4	No Retention		221	6,994
Blind Slough & Knappa Slough		820	10,081	17,509	130,142	2	10	No Retention		33	984
Deep River		174	1,691	7,841	63,097	0	0	No Retention		56	1,653
Fall Select Area Totals		4,474	49,898	99,057	759,670	9	40			371	11,527
Lower Columbia River Commercial GRAND TOTALS	Chinook	31,665	451,839	112,166	847,001	10	46	No Retention		766	23,421
Fall 2021											
FINAL GRAND TOTALS 2021											
for Lower Columbia R. Commercial Fisheries	CHINOOK	38,212	526,179	112,166	847,001	10	46	No Retention		1,194	36,360
	SOCKEYE			SHAD		SMELT (Mainstem)		GREEN STURGEON			
	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Numbers	Pounds	Numbers	Pounds
	2	4	2,033	5,075		10,997		No Retention			

¹ The sale of white sturgeon was allowed in mainstem commercial fisheries below Bonneville Dam during August 9 through October 29. White sturgeon were also allowed to be sold during Select Area commercial fisheries from February 18 through November 25.

Table 18. Stock composition of adult fall Chinook catch in mainstem Columbia River fisheries, 2021.¹

<i>Non-Treaty Fisheries</i>	LRH	LRW	BPH	URB	MCB ²	Other ³	Total
Buoy 10 Recreational ⁴	6,764	851	5,928	5,334	466	1,217	20,560
Lower Columbia Recreational ⁴	4,008	645	691	10,003	3,950	123	19,420
Above Bonneville Dam Recreational ^{4,5}	0	0	0	13,709	3,631	231	17,571
August Commercial	2,539	0	10,746	3,700	2,369	30	19,384
September/October Commercial	293	0	181	3,369	1,964	0	5,807
Select Area Commercial	2,503	0	534	345	188	467	4,037
<i>Subtotal</i>	16,107	1,496	18,080	36,460	12,568	2,068	86,779
<i>Treaty Fisheries</i>							
Sales to Licensed Buyers	95	0	17,827	21,509	11,866	15	51,312
C&S, OTB and other non-ticketed catch	22	0	4,033	5,189	3,793	4	13,041
<i>Subtotal</i>	117	0	21,860	26,698	15,659	19	64,353
Grand Total	16,224	1,496	39,940	63,158	28,227	2,087	151,132

¹ Based on Big Sheet BS21P; catch totals may not match data presented elsewhere in this report.

² Includes lower river bright (LRB) stock.

³ Out of basin stocks/strays, including Select Area Bright (SAB) fall Chinook.

⁴ Includes release mortalities.

⁵ Bonneville Dam to McNary Dam and Hanford Reach.

Table 19a. Fall season A-Index summer steelhead harvest and incidental release mortalities in mainstem Columbia River non-treaty fisheries, 1999-2021.¹

Year	Commercial Below BON ²		Recreational Below BON ³			Recreational BON Pool			Recreational TDA-Hwy 395			Recreational Dip-Ins ⁴			Fall Season Total	
	Hatchery-Release Mortalities (clipped and unclipped)	Natural-Origin Release Mortalities	Hatchery-Origin		Natural-Origin	Hatchery-Origin		Natural-Origin	Hatchery-Origin		Natural-Origin	Hatchery-Origin		Natural-Origin	Hatchery-Origin	Natural-Origin
			Kept	Rel. Mort.	Rel. Mort.	Kept	Rel. Mort.	Rel. Mort.	Kept	Rel. Mort.	Rel. Mort.	Kept	Rel. Mort.	Rel. Mort.		
1999	125	35	3,577	--	123	472	--	14	3,741	--	112	3,167	--	96	11,082	380
2000	217	67	4,401	--	165	761	--	22	4,102	--	124	9,089	--	264	18,571	642
2001	394	87	4,419	--	192	1,385	--	33	8,979	--	253	17,319	--	412	32,496	978
2002	565	153	2,971	--	139	616	--	21	6,368	--	258	9,230	--	319	19,749	889
2003	1,384	165	3,943	--	182	905	--	35	3,577	--	151	12,772	--	475	22,580	1,007
2004	868	206	2,387	--	95	953	--	39	1,830	--	70	8,362	--	324	14,399	734
2005	549	112	2,462	--	102	686	--	21	4,084	--	136	9,698	--	299	17,479	671
2006	423	120	3,610	--	157	817	--	27	4,010	--	140	9,447	--	308	18,307	751
2007	182	54	4,293	--	158	971	--	29	6,671	--	201	11,586	--	350	23,703	792
2008	404	102	1,952	18	74	1,040	7	30	2,605	24	90	3,950	29	110	10,029	406
2009	781	195	7,068	62	346	1,971	10	53	6,592	61	169	20,180	128	489	36,853	1,252
2010	472	172	4,770	43	230	1,317	10	52	2,361	19	115	6,667	50	262	15,707	830
2011	1,025	290	11,364	167	576	2,860	29	99	4,106	48	140	7,666	82	251	27,346	1,356
2012	417	141	5,166	61	251	918	10	34	4,552	75	152	4,739	59	164	15,997	742
2013	388	175	6,034	51	593	1,107	7	65	2,401	42	102	7,048	67	357	17,144	1,292
2014	572	277	6,184	56	455	1,343	11	75	2,580	28	131	7,426	59	378	18,258	1,316
2015	430	145	4,168	26	228	1,033	5	41	4,685	34	164	10,920	53	418	21,353	997
2016	487	125	1,497	20	73	691	5	18	1,685	18	43	4,086	37	87	8,525	345
2017	264	70	198	43	52	70	3	6	171	97	75	329	158	106	1,332	307
2018	79	29	1,117	6	75	37	0	10	0	0	0	981	21	178	2,242	293
2019	48	23	0	23	20	4	2	5	40	1	8	150	72	128	340	184
2020	101	31	0	24	11	0	0	0	33	8	13	126	39	50	331	105
2021	150	52	10	34	19	0	0	1	20	2	2	28	23	29	268	103
5-yr Ave	129	41	265	26	35	22	1	4	53	22	19	323	62	98	902	198
10-yr Ave	294	107	2,437	34	178	520	4	25	1,617	31	69	3,583	59	190	8,579	568

¹ From target and non-target fisheries occurring in August-October downstream of The Dalles Dam and in August-December upstream of The Dalles Dam. Stock composition derived from data collected during sampling at Bonneville Dam. Prior to 2008, natural-origin release mortalities displayed include an unknown number of unclipped hatchery-origin fish. Estimates for 2019-21 are preliminary, and all data are subject to change. BON = Bonneville Dam, TDA = The Dalles Dam

² Reflects incidental release mortalities (clipped and unclipped). Includes mortalities from pilot beach seine and purse seine fisheries that occurred in 2015 and 2016. Beginning in 2018, includes estimated mortalities in the Select Area commercial fisheries.

³ Beginning in 2017, includes mortalities from the Buoy 10 recreational fishery.

⁴ Includes dip-in mortalities in select tributaries upstream of Bonneville Dam where non-local steelhead may "dip in" to seek cool-water refuge. Kept catch based on Catch Record Cards when creel-based estimates not available.

Table 19b. Fall season B-Index summer steelhead harvest and incidental release mortalities in mainstem Columbia River non-treaty fisheries, 1999-2021.¹

Year	Commercial Below BON ²		Recreational Below BON ³			Recreational BON Pool			Recreational TDA-Hwy 395			Recreational Dip-Ins ⁴			Fall Season Total	
	Hatchery-Release Mortalities (clipped and unclipped)	Natural-Origin Release Mortalities	Hatchery-Origin		Natural-Origin	Hatchery-Origin		Natural-Origin	Hatchery-Origin		Natural-Origin	Hatchery-Origin		Natural-Origin	Hatchery-Origin	Natural-Origin
			Kept	Rel. Mort.	Rel. Mort.	Kept	Rel. Mort.	Rel. Mort.	Kept	Rel. Mort.	Rel. Mort.	Kept	Rel. Mort.	Rel. Mort.		
1999	52	9	469	--	5	103	--	1	994	--	14	751	--	11	2,369	41
2000	56	14	649	--	31	140	--	4	1,986	--	23	1,979	--	51	4,809	123
2001	214	24	615	--	22	170	--	3	3,199	--	32	4,224	--	53	8,422	134
2002	331	92	550	--	54	191	--	9	5,307	--	154	4,801	--	175	11,181	483
2003	389	62	228	--	19	87	--	5	654	--	25	1,646	--	87	3,004	198
2004	267	69	92	--	6	65	--	3	489	--	16	965	--	38	1,878	132
2005	209	48	179	--	16	101	--	4	1,740	--	59	1,868	--	73	4,098	200
2006	241	26	638	--	15	181	--	3	2,605	--	50	3,802	--	70	7,467	164
2007	145	24	453	--	12	199	--	4	4,795	--	107	4,034	--	84	9,626	231
2008	301	53	639	6	24	322	2	8	2,657	30	36	2,625	21	51	6,602	171
2009	77	24	257	4	26	128	2	5	2,962	61	66	3,141	32	103	6,662	224
2010	245	74	1,264	5	62	433	1	15	2,417	13	68	3,362	14	106	7,755	326
2011	239	29	689	10	21	203	2	4	1,127	21	16	1,468	20	21	3,780	92
2012	63	19	452	10	29	127	3	5	2,477	64	37	1,066	27	27	4,288	116
2013	52	7	105	1	3	49	1	1	693	17	14	698	17	10	1,632	35
2014	151	20	191	6	10	158	4	3	1,184	31	17	1,908	47	32	3,682	83
2015	53	12	44	2	4	46	1	2	840	25	23	645	15	21	1,671	61
2016	64	10	365	15	9	191	3	2	1,629	36	11	2,396	39	21	4,738	53
2017	42	7	30	2	2	10	0	0	13	29	2	41	12	4	179	15
2018	22	3	69	6	3	3	0	0	0	0	0	133	22	18	254	24
2019	15	2	0	1	0	3	1	0	0	0	0	41	17	9	79	11
2020	136	18	0	8	2	0	0	0	22	10	4	91	30	18	297	42
2021	45	5	1	5	1	0	0	0	3	1	0	4	6	2	64	8
5-yr Ave	52	7	20	5	2	3	0	0	8	8	1	62	17	10	175	20
10-yr Ave	64	10	126	6	6	59	1	1	686	21	11	702	23	16	1,688	45

¹ From target and non-target fisheries occurring in August-October downstream of The Dalles Dam and in August-December upstream of The Dalles Dam. Stock composition derived from data collected during sampling at Bonneville Dam. Prior to 2008, natural-origin release mortalities displayed include an unknown number of unclipped hatchery-origin fish. Estimates for 2019-21 are preliminary, and all data are subject to change. BON = Bonneville Dam, TDA = The Dalles Dam

² Reflects incidental release mortalities (clipped and unclipped). Includes mortalities from pilot beach seine and purse seine fisheries that occurred in 2015 and 2016. Beginning in 2018, includes estimated mortalities in the Select Area commercial fisheries.

³ Beginning in 2017, includes mortalities from the Buoy 10 recreational fishery.

⁴ Includes dip-in mortalities in select tributaries upstream of Bonneville Dam where non-local steelhead may "dip in" to seek cool-water refuge. Kept catch based on Catch Record Cards when creel-based estimates not available.

Table 20. Time, area, and gear restrictions for early fall non-treaty commercial mainstem fisheries, 2009-2021.

Year/Fishery	Date(s)	Hours	Area	Mesh Size
2009	Aug 4-5, Aug 6-7	7pm – 7am nightly	Zones 1-5	9" min
	Aug 9-10	"	Zones 2-5	"
	Aug 18-19, Aug 20-21	8pm – 6am nightly	Zones 3-5 upstream of Kalama River	"
	Aug 25-26	"	Zone 5	"
2010	Aug 3-4, Aug 5-6	7pm – 7am nightly	Zones 1-5	9" min
	Aug 8-9	"	"	"
	Aug 10-11	"	Zones 2-5	"
	Aug 19-20	8pm – 6am nightly	Zones 4-5	"
	Aug 22-23, Aug 24-25	9pm – 6am nightly	"	"
2011	Aug 4-5	9pm – 6am nightly	Zones 1-5	9" min
	Aug 16-17, Aug 18-19	"	Zones 4-5	"
	Aug 21-22, Aug 23-24	"	"	"
	Aug 25-26, Aug 28-29	"	"	"
	Aug 30-31	"	"	"
2012	Aug 5-6	9pm – 6am nightly	Zones 1-5	9" min
	Aug 12-13, Aug 14-15	"	Zones 4-5	"
	Aug 16-17, Aug 19-20	"	"	"
	Aug 21-22, Aug 23-24	"	"	"
	Aug 26-27, Aug 28-29	"	"	"
2013	Aug 11-12, Aug 13-14	9pm – 6am nightly	Zones 4-5	9" min
	Aug 15-16, Aug 18-19	"	"	"
	Aug 20-21, Aug 22-23	"	"	"
	Aug 25-26	"	"	"
	Aug 28-29	9pm – 2am	"	"
2014 Gillnet	Aug 3-4, Aug 5-6	9pm – 6am nightly	Zones 4-5	9" min
	Aug 7-8, Aug 10-11	"	"	"
	Aug 12-13, Aug 14-15	"	"	"
	Aug 17-18, Aug 19-20	"	"	"
	Aug 21-22, Aug 24-25	"	"	"
	Aug 26-27, Aug 28-29	"	"	"
	Sep 1-2	9pm – 2am	"	"
2014 Seine	Aug 19, 21, 26, 28	6am – 7:30pm	Zones 1-2	3.5" max
	2015 Gillnet	Aug 9-10, Aug 11-12	9pm – 6am nightly	Zones 4-5
2015 Seine	Aug 13-14, Aug 16-17	"	"	"
	Aug 18-19, Aug 20-21	"	"	"
	Aug 23-24, Aug 25-26	"	"	"
	Aug 27-28	"	"	"
	Aug 31	2am – 6am	Zones 4-5	9" min
	Aug 24-26, 31	6am – 8pm	Zones 2-3	3.5" max
	2016 Gillnet	Aug 7-8, Aug 9-10	9pm – 6am nightly	Zones 4-5
2016 Seine	Aug 11-12, Aug 14-15	"	"	"
	Aug 16-17, Aug 18-19	"	"	"
	Aug 21-22, Aug 23-24	"	"	"
	Aug 25-26, Aug 28-29	"	"	"
	Aug 30-31	"	"	"
2016 Gillnet	Aug 22, 24, 29, 31	6am – 4pm	Zones 2-3 Beach	3.5" max
	"	"	Zones 1, 3 Purse	"
2017 Gillnet	Aug 22-23, Aug 24-25	9pm – 6am nightly	Zones 4-5	9" min
	Aug 27-28, Aug 29-30	"	"	"
	Aug 31-Sep 1	"	"	"
2018 Gillnet	Aug 21-22, Aug 23-24	9pm – 6am nightly	Zones 4-5	9" min
	Aug 26-27	"	"	"
	Aug 29-30	10pm – 5am nightly	"	"
2019 Gillnet	Aug 14-15, Aug 19-20	9pm – 6am nightly	Zones 4-5	9" min
	Aug 21-22, Aug 26-27	"	"	"
2020 Gillnet	Aug 10-11, Aug 12-13	9pm – 6am nightly	Zones 4-5	9" min
	Aug 17-18, Aug 19-20	"	"	"
	Aug 24-25, Aug 26-27	"	"	"
2021 Gillnet	Aug 9-10, Aug 11-12	9pm – 6am nightly	Zones 4-5	9" min
	Aug 16-17, Aug 18-19	"	"	"
	Aug 23-24, Aug 25-26	"	"	"
	Aug 30-31, Sep 1-2	"	"	"

Table 21. Landed catch from early fall non-treaty commercial mainstem fisheries, 1970-2021.

Year	Season ¹	Fishing				Sturgeon ³	
		Days	Chinook	Coho	Steelhead ²	White	Green
1970-74 Ave.	Aug 9-26	12	96,260	29,660	5,800	2,660	1,320
1975-79 Ave.	Aug 8-21	6	51,560	3,320	--	4,500	1,060
1980-84 Ave.	Aug 30-Sep 3 (2 yrs no season)	<0.5	30,600	2,480	--	680	300
1985	None	0	--	--	--	--	--
1986	Jul 30-Aug. 6	4	800	0	--	5,400	5,100
1987	Aug. 9-12	3	11,500	100	--	3,900	3,200
1988	Aug. 14-15	0.5	51,100	300	--	1,700	2,300
1989	Aug. 7-29	13	29,800	100	--	1,800	0
1990	Aug. 12-24	10	6,700	20	--	1,500	0
1991	Aug. 25-29	4	5,400	10	--	500	0
1992	Sept. 8-9	0.5	2,200	400	--	800	1,800
1993	None	0	--	--	--	--	--
1994	None	0	--	--	--	--	--
1995	None	0	--	--	--	--	--
1996	Aug. 26-29	3	4,400	0	--	300	0
1997	Aug. 4 - 25	2	1,300	1	--	1,900	1,500
1998	Aug. 4 - 26	2	1,800	0	--	2,600	700
1999	Aug. 4 - 24	2	1,400	0	--	2,900	500
2000	Aug. 3-23	3	7,400	200	--	2,800	600
2001	Aug. 5-25	7	6,600	660	--	5,700	340
2002	Aug. 4-28	10	19,500	60	--	1,700	0
2003	Aug. 4-28	8	15,700	300	--	2,600	11
2004	Aug. 3-26	8	11,300	40	--	2,500	6
2005	Aug. 4-26	8	11,400	90	--	2,100	30
2006	Aug. 2-25	8	10,700	800	--	1,900	--
2007	Aug. 2-24	4	4,000	60	--	2,700	--
2008	Aug. 3-25	7	14,400	80	--	2,800	--
2009 ⁴	Aug. 4-26	6	28,200	1,300	--	3,000	--
2010	Aug. 3-25	7	21,800	440	--	1,900	--
2011 ⁵	Aug. 4-31	8	25,000	1,600	--	1,300	--
2012	Aug. 5-29	9	23,300	300	--	1,000	--
2013	Aug 11-29	8	44,300	400	--	700	--
2014 ⁶	Aug 3-Sept 2	13	46,900	830	--	--	--
2015 ⁶	Aug 9-31	9.5	33,400	160	--	--	--
2016 ⁶	Aug 7-31	11	46,300	410	--	--	--
2017	Aug 22-Sept 1	5	14,000	220	--	500	--
2018	Aug 21-30	4	8,300	380	--	400	--
2019	Aug 14-27	4	6,500	210	--	500	--
2020	Aug 10-27	6	16,600	350	--	400	--
2021	Aug 9-Sept 2	8	21,200	2,770	--	300	--

¹ Minimum mesh size: 1970-1974 7-1/4"; 1975-1979 8"; and 1980-2020 9" (except: 1980, 1983, & 1992 no mesh restr.; 8" during the following - 1982, 1987, 1988 (below Longview Br.), early-August portions of 2002 & 2003, and early/mid-August portions of 2004-2006).

² Sale of steelhead in non-treaty fisheries prohibited since 1975.

³ Sale of Green Sturgeon prohibited effective July 7, 2006. Retention of White Sturgeon prohibited during 2014-16.

⁴ One Chum salmon was landed during the 2009 August 18-19 fishing period.

⁵ Eight Pink salmon were landed during August 2011.

⁶ Estimated catch from mainstem Columbia River commercial seine fisheries not included.

Table 22. Landed catch from late fall mainstem and Select Area non-treaty commercial fishing seasons, 1980-2021.

Year	Mainstem Season ¹	Mainstem Fishing Days	Chinook		Coho		Chum ^{3,8}	Steelhead ⁴	Sturgeon	
			Columbia Mainstem	Select Area ²	Columbia Mainstem	Select Area ²			White ⁵	Green ⁶
1980-84 Ave.	Sep 10-Nov 16	21	17,880	15,840	101,540	19,960	1,080	--	5,740	670
1985-89 Ave.	Sep 12-Nov 15	39	165,640	16,100	377,380	40,640	1,520	--	3,780	1,320
1990	Sep 18-Oct 31	26	35,300	3,100	47,400	27,600	800	--	3,100	2,200
1991	Sep 10-Nov 5	32	33,500	2,100	324,400	82,100	400	--	2,400	3,200
1992	Sep 22-Oct 30	22	14,100	1,500	37,900	19,600	700	--	4,200	400
1993	Sep 20-Oct 20	17	16,700	300	20,600	15,500	40	--	7,100	2,200
1994	Oct 9-Oct 19	4	1,500	100	6,000	57,800	20	--	3,400	200
1995	Oct 9 & Oct 12	2	50	500	200	22,300	0	--	6,000	400
1996	Sep 16-Oct 25	17	7,600	5,000	5,600	22,400	20	--	6,700	600
1997	Sep 24-Nov 7	23	3,800	4,000	3,800	17,100	39	--	7,900	100
1998	Oct 7-Nov 6	7	1,000	2,100	300	23,600	11	--	8,200	200
1999	Sep 20-Nov 4	23	4,600	2,100	57,600	23,000	101	--	4,300	400
2000	Sep 18-Nov 1	21	3,440	2,300	110,400	58,300	26	--	5,300	700
2001	Sep 17-Oct 31	27	14,900	3,100	219,100	33,800	116	--	20	0
2002	Sep 16-Oct 31	19	16,100	8,700	99,500	70,400	12	--	4,500	200
2003	Sep 15-Oct 31	23	42,700	9,700	149,500	117,100	6	--	3,600	30
2004	Sep 19-Oct 29	16	29,800	12,600	66,500	51,900	90	--	3,300	50
2005	Sep 19-Oct 28	18	16,100	8,700	32,300	65,800	10	--	3,900	20
2006	Sep 19-Oct 25	10	15,300	4,600	27,500	37,700	3	--	3,600	--
2007	Sep 19-Oct 31	26	8,200	4,500	30,100	10,500	38	--	2,900	--
2008	Sep 18 – Oct 31	23	13,700	14,000	13,000	55,200	22	--	3,300	--
2009	Sep 24 – Oct 28	21	6,800	12,000	43,900	81,000	29	--	2,100	--
2010	Sep 22 – Oct 22	11	9,400	20,700	18,500	58,800	275	--	1,500	--
2011	Sep 18 – Oct 20	10	26,400	22,900	11,800	49,500	144	--	1,200	--
2012	Sep 19 – Oct 22	15	13,500	23,700	2,300	15,400	37	--	400	--
2013	Sep 15 – Nov 1	34	40,700	24,200	9,400	42,300	4 ⁸	--	400	--
2014 ⁷	Sep 14 – Oct 31	40	52,200	24,200	68,900	168,600	-- ⁸	--	-- ⁹	--
2015 ⁷	Sep 15 – Oct 20	10	47,800	18,200	3,700	27,400	-- ⁸	--	-- ⁹	--
2016 ⁷	Sep 18-23	2	11,600	12,400	300	34,700	-- ⁸	--	-- ⁹	--
2017	Sep 17-20	2	5,400	12,000	700	38,000	-- ⁸	--	500	--
2018	No season	0	0	6,600	0	12,100	-- ⁸	--	100	--
2019	Sep 30 – Oct 25	12	2,400	3,400	2,500	19,300	-- ⁸	--	200	--
2020	Sep 15 – Oct 30	23	17,000	3,000	7,400	43,500	-- ⁸	--	200	--
2021	Sep 19 – Oct 29	27	6,000	4,500	10,300	99,100	-- ⁸	--	500	--

¹ Number of Oregon and Washington terminal areas and fishing days vary from year to year, and some early fall fisheries are included. Between 1983 and 1995 only Oregon terminal fisheries occurred. Prior to 1979, landings listed for Youngs Bay are minimal since salmon could be sold outside Youngs Bay during concurrent mainstem fishing periods.

² Includes total fall season landings from Washington terminal (1980-1982), Youngs Bay (1980-present), Tongue Point/South Channel, Blind Slough/Knappa Slough, and Deep River (1996-present), and Steamboat Slough (2000-2005) Select Area fisheries.

³ Includes landings from Select Area fall fisheries beginning in 1997.

⁴ Sale of steelhead in non-treaty commercial fisheries prohibited since 1975.

⁵ Includes landings from Select Area fall fisheries.

⁶ Green Sturgeon retention prohibited since July 7, 2006.

⁷ Estimated catch from mainstem Columbia River commercial seine fisheries not included.

⁸ Chum possession and sales prohibited for non-treaty commercial fisheries beginning in October, 2013.

⁹ White Sturgeon retention prohibited during 2014-16.

Table 23. Select Area fall commercial fisheries landings, 2009-2021

Year	Site	Chinook	Coho	Pink	Chum ²	White Sturgeon
2009	Youngs Bay	6,565	49,329		0	72
	Tongue Point	872	16,918		1	11
	Blind Slough ¹	3,991	10,043		0	20
	Deep River	562	4,660		2	11
		11,990	80,950		3	114
2010	Youngs Bay	8,048	27,564		0	37
	Tongue Point	1,402	6,734		0	31
	Blind Slough ¹	10,205	5,201		1	45
	Deep River	1,011	19,260		11	3
		20,666	58,759		12	116
2011	Youngs Bay	12,339	26,538	13	1	No Retention
	Tongue Point	2,527	6,504	19	1	No Retention
	Blind Slough ¹	5,768	1,388	4	2	No Retention
	Deep River	2,295	15,083	6	129	No Retention
		22,929	49,513	42	133	0
2012	Youngs Bay	16,197	5,986		3	No Retention
	Tongue Point	2,466	3,902		0	No Retention
	Blind Slough ¹	3,366	1,534		2	No Retention
	Deep River	1,691	3,932		20	No Retention
		23,720	15,354		25	0
2013	Youngs Bay	14,362	14,254	3	3	39
	Tongue Point	5,843	14,165	5	0	42
	Blind Slough ¹	2,362	3,882	2	1	14
	Deep River	1,595	10,002	5	0	8
		24,162	42,303	15	4	103
2014	Youngs Bay	11,850	65,936	1	Prohibited	No Retention
	Tongue Point	5,471	50,752	0	Prohibited	No Retention
	Blind Slough ¹	4,669	24,620	0	Prohibited	No Retention
	Deep River	2,166	27,262	1	Prohibited	No Retention
		24,156	168,570	2		0
2015	Youngs Bay	6,844	11,500	0	Prohibited	No Retention
	Tongue Point	3,623	9,721	1	Prohibited	No Retention
	Blind Slough ¹	3,407	1,700	1	Prohibited	No Retention
	Deep River	4,305	4,524	1	Prohibited	No Retention
		18,179	27,445	3		0
2016	Youngs Bay	6,398	15,784	0	Prohibited	No Retention
	Tongue Point	2,007	11,284	0	Prohibited	No Retention
	Blind Slough ¹	2,027	1,493	0	Prohibited	No Retention
	Deep River	2,011	6,162	3	Prohibited	No Retention
		12,443	34,723	3		0
2017	Youngs Bay	6,277	13,603	3	Prohibited	115
	Tongue Point	2,251	12,534	0	Prohibited	82
	Blind Slough ¹	1,636	2,460	0	Prohibited	9
	Deep River	1,870	9,382	3	Prohibited	31
		12,034	37,979	6		237
2018	Youngs Bay	2,945	4,229	0	Prohibited	52
	Tongue Point	1,035	3,682	1	Prohibited	32
	Blind Slough ¹	1,401	1,477	0	Prohibited	23
	Deep River	1,223	2,723	1	Prohibited	10
		6,604	12,111	2		117
2019	Youngs Bay	853	3,589	0	Prohibited	88
	Tongue Point	879	7,229	1	Prohibited	106
	Blind Slough ¹	953	7,269	0	Prohibited	4
	Deep River	686	1,204	0	Prohibited	14
		3,371	19,291	1		212
2020	Youngs Bay	870	19,783	0	Prohibited	0
	Tongue Point	916	10,903	0	Prohibited	0
	Blind Slough ¹	1,150	10,424	0	Prohibited	0
	Deep River	81	2,390	1	Prohibited	0
		3,017	43,500	1		0
2021	Youngs Bay	2,012	42,651	6	Prohibited	61
	Tongue Point	1,468	31,056	1	Prohibited	221
	Blind Slough ¹	820	17,509	2	Prohibited	33
	Deep River	174	7,841	0	Prohibited	56
		4,474	99,057	9		371

¹ Includes fishing periods in Knappa Slough.

² Chum possession and sales prohibited beginning in October, 2013 in all Select Area fishing sites.

Table 24. Fall-season recreational harvest of Chinook and Coho in Oregon Select Area sites and adjacent tributaries, 2008-2021.^{1, 2}

Year	Chinook	Coho
2008	1,104	297
2009	1,267	418
2010	909	256
2011	812	208
2012	1,003	96
2013	932	181
2014	1,146	971
2015	563	641
2016	544	115
2017	568	162
2018	796	169
2019	65	148
2020	92	74
2021	255	588

¹ *Big Creek, Gnat Creek, Knappa/Blind sloughs, Klaskanine River (includes N. and S. Forks), Lewis & Clark River, Youngs River and Bay, and John Day River.*

² *Based on catch records, which can be delayed a year at least a year.*

Table 25. Angler trips and kept catch in the Buoy 10 recreational fishery, 1982-2021.¹

Fishery	Angler Trips	Chinook		Coho		Total	
		Catch	Catch/ Trip	Catch	Catch/ Trip	Catch	Catch/ Trip
1982 Buoy 10 Total	17,336	723	0.04	18,857	1.09	19,580	1.13
1983 Buoy 10 Total	7,128	604	0.08	3,574	0.50	4,178	0.59
1984 Buoy 10 Total	67,365	12,177	0.18	74,370	1.10	86,547	1.28
1985 Buoy 10 Total	32,156	2,655	0.08	25,387	0.79	28,042	0.87
1986 Buoy 10 Total	102,190	15,600	0.15	120,422	1.18	136,022	1.33
1987 Buoy 10 Total	124,594	42,100	0.34	47,170	0.38	89,270	0.72
1988 Buoy 10 Total	186,051	30,770	0.17	143,417	0.77	174,187	0.94
1989 C&H Total	7,922	492	0.06	3,195	0.40	3,687	0.47
1989 Buoy 10 Total	144,848	15,900	0.11	78,720	0.54	94,620	0.65
1989 Grand Total	152,770	16,392	0.11	81,915	0.54	98,307	0.64
1990 C&H Total	3,225	54	0.02	28	0.01	82	0.03
1990 Buoy 10 Total	76,411	5,149	0.07	18,435	0.24	23,584	0.31
1990 Grand Total	79,636	5,203	0.07	18,463	0.23	23,666	0.30
1991 C&H Total	2,759	39	0.01	1,151	0.42	1,190	0.43
1991 Buoy 10 Total	168,921	11,549	0.07	207,527	1.23	219,076	1.30
1991 Grand Total	171,680	11,588	0.07	208,678	1.22	220,266	1.28
1992 Buoy 10 Total	115,481	10,655	0.09	43,082	0.37	53,737	0.47
1993 Buoy 10 Total	75,774	5,288	0.07	20,932	0.28	26,220	0.35
1994 Buoy 10 Total	9,253	0	0.00	1,795	0.19	1,795	0.19
1995 Buoy 10 Total	25,186	607	0.02	5,026	0.20	5,633	0.22
1996 Buoy 10 Total	18,034	1,409	0.08	4,537	0.25	5,946	0.33
1997 Buoy 10 Total	55,725	13,153	0.24	20,357	0.37	33,510	0.60
1998 Buoy 10 Total	29,998	5,784	0.19	3,175	0.11	8,959	0.30
1998 Astoria Bridge Total	11,044	3,484	0.32	3,142	0.28	6,626	0.60
1998 Grand Total	41,042	9,268	0.23	6,317	0.15	15,585	0.38
1999 Buoy 10 Total	49,568	9,850	0.20	8,960	0.18	18,810	0.38
2000 Buoy 10 Total	72,518	6,085	0.08	21,478	0.30	27,563	0.38
2001 Buoy 10 Total	125,829	12,709	0.10	132,035	1.05	144,744	1.15
2002 Buoy 10 Total	84,434	19,438	0.23	6,205	0.07	25,643	0.30
2003 Buoy 10 Total	88,827	16,316	0.18	54,440	0.61	70,756	0.80
2004 Buoy 10 Total	68,818	16,016	0.23	15,169	0.22	31,185	0.45
2005 Buoy 10 Total	55,183	9,287	0.17	6,878	0.12	16,165	0.29
2006 Buoy 10 Total	40,608	1,710	0.04	3,683	0.09	5,393	0.13
2007 Buoy 10 Total	36,064	3,776	0.10	8,356	0.23	12,132	0.34
2008 Buoy 10 Total	32,467	8,349	0.26	8,573	0.26	16,922	0.52
2009 Buoy 10 Total	72,803	5,941	0.08	48,127	0.66	54,068	0.74
2010 Buoy 10 Total	52,300	6,807	0.13	7,980	0.15	14,787	0.28
2011 Buoy 10 Total	49,409	10,919	0.22	7,614	0.15	18,533	0.38
2012 Buoy 10 Total	65,070	18,550	0.29	7,385	0.11	25,935	0.40
2013 Buoy 10 Total	65,767	22,594	0.34	7,620	0.12	30,214	0.46
2014 Buoy 10 Total	107,522	26,788	0.25	57,744	0.54	84,532	0.79
2015 Buoy 10 Total	108,319	36,535	0.34	36,920	0.34	73,455	0.68
2016 Buoy 10 Total	94,950	17,780	0.19	9,182	0.10	26,962	0.28
2017 Buoy 10 Total	93,547	28,398	0.30	18,834	0.20	47,232	0.50
2018 Buoy 10 Total	67,318	11,620	0.17	6,761	0.10	18,381	0.27
2019 Buoy 10 Total	76,987	11,274	0.15	22,775	0.30	34,049	0.44
2020 Buoy 10 Total	72,443	14,633	0.20	7,064	0.10	21,697	0.30
2021 Buoy 10 Total	105,865	20,789	0.20	37,031	0.35	57,820	0.55

¹ Includes catch and effort from the 1989-1991 Chinook/Hammond fisheries and 1998 Astoria Bridge fishery.

Table 26. Fall Salmon angler trips and kept catch on the lower Columbia River, August-October, 1980-2021.

Year	Angler Trips	Chinook		Coho		Steelhead	
		Adults	Jacks	Adults	Jacks	Kept	Released
1980	25,262	1,155	390	85	81	213	0
1981 ¹	29,213	1,022	1,174	139	579	776	0
1982 ¹	20,909	117	696	96	803	0	0
1983 ¹	26,817	962	1,250	174	2,329	79	0
1984 ¹	38,837	1,472	1,316	715	538	1,747	684
1985 ¹	44,793	2,032	5,449	1,106	444	3,418	593
1986	47,855	2,146	3,136	4,027	503	3,390	1,188
1987	59,322	4,357	1,437	930	3,047	2,274	1,038
1988	51,831	4,443	1,492	475	1,491	3,905	603
1989	64,911	5,523	935	184	382	3,698	897
1990	57,180	3,568	1,257	351	2,919	2,503	588
1991	51,470	2,640	530	1,090	1,277	4,442	850
1992	48,993	1,871	1,401	586	1,511	6,443	879
1993	50,011	3,694	512	551	52	5,958	1,134
1994 ¹	27,678	229	37	941	83	2,854	710
1995 ¹	50,165	4,563	1,172	199	85	5,067	591
1996	55,437	9,324	448	774	61	3,270	386
1997	64,477	8,447	389	813	504	3,065	494
1998 ¹	65,884	6,993	629	595	574	2,747	564
1999 ¹	70,673	8,652	322	1,276	502	4,046	1,282
2000	80,759	7,620	1,332	1,620	2,429	5,050	1,957
2001	97,253	9,355	804	3,068	381	5,034	2,141
2002	110,796	21,182	757	3,011	367	3,521	1,931
2003	113,330	26,195	465	1,145	21	4,171	2,008
2004 ²	87,404	17,719	497	1,273	62	2,479	1,006
2005 ^{1,2}	86,594	18,256	184	586	21	2,641	1,182
2006 ^{1,2}	89,287	13,398	318	1,173	38	4,248	1,723
2007 ^{1,2}	79,793	8,089	634	881	28	4,746	1,693
2008 ^{1,2}	80,772	10,675	770	2,248	327	2,591	1,213
2009 ^{1,2}	117,975	14,711	1,843	3,989	45	7,325	4,380
2010 ^{1,2}	114,285	17,326	949	1,584	19	6,034	3,394
2011 ^{1,2}	147,343	28,169	2,551	1,667	17	12,053	7,729
2012 ^{1,2,3}	128,831	22,438	4,175	884	95	5,618	3,514
2013 ^{2,3}	141,481	31,879	2,583	951	240	6,139	6,471
2014 ^{1,2,3}	143,946	26,336	2,688	5,761	115	6,375	5,269
2015 ^{1,2,3}	131,374	41,525	1,909	995	99	4,212	2,605
2016 ^{1,2,3}	133,300	25,133	1,780	1,317	98	1,852	1,168
2017 ^{1,2,3}	114,721	26,138	1,701	3,114	62	237	881
2018 ^{1,2}	69,629	9,802	697	650	32	1,104	861
2019 ^{1,2}	58,655	7,165	587	1,046	108	0	366
2020 ^{1,2}	90,413	19,677	2,132	1,537	232	0	385
2021 ^{1,2}	87,268	18,900	2,280	5,524	280	11	478

¹ Partial Chinook closure year.

² One adult Chinook daily bag limit (adopted during all or part of the fishery).

³ Includes 7-day mark-selective fisheries (MSF) in 2012, 2014, 2015, and 2017, a 20-day MSF in 2013 and a 21-day MSF in 2016.

Table 27. Mainstem fall Chinook recreational fisheries upstream of Bonneville Dam, 2003-2021.

Bonneville Dam to Hwy 395 Recreational Fishery		
Year	Kept Adult Chinook	Chinook Season
2003	4,005	Aug 1 - Dec 31
2004	3,465	Aug 1 - Dec 31
2005	3,515	Aug 1 - Dec 31, Chinook closed Oct 1 - 19
2006	2,224	Aug 1 - Dec 31, Chinook closed Sep 16 - 29
2007	2,763	Aug 1 - Dec 31, Chinook closed Sep 20 - 28
2008	3,125	Aug 1 - Dec 31
2009	3,349	Aug 1 - Dec 31
2010	5,272	Aug 1 - Dec 31
2011	5,212	Aug 1 - Dec 31
2012	5,974	Aug 1 - Dec 31
2013	19,995	Aug 1 - Dec 31
2014	9,864	Aug 1 - Dec 31
2015	13,260	Aug 1 - Dec 31
2016	5,802	Aug 1 - Dec 31
2017	5,851	Aug 1 - Oct 21
2018	958	Aug 1 - Sept 12, salmon closed Sep 13-Dec 31
2019	3,644	Aug 1 - Sept 25, salmon closed Sep 26-Dec 31
2020	6,442	Aug 1 - Sep 8, Sep 11-13, Sep 19 - Dec 31
2021 ¹	6,141	Aug 1 - Dec 31
Hanford Reach Recreational Fishery		
Year	Kept Adult Chinook	Chinook Season
2003	6,457	Aug 16 - Oct 22
2004	8,082	Aug 16 - Oct 22
2005	7,542	Aug 16 - Oct 22
2006	4,055	Aug 16 - Oct 22
2007	4,614	Aug 16 - Oct 22
2008	5,638	Aug 1 - Oct 22
2009	6,553	Aug 1 - Oct 15
2010	10,985	Aug 1 - Oct 21
2011	11,614	Aug 1 - Oct 21
2012	13,097	Aug 1 - Oct 21
2013	24,906	Aug 1 - Oct 31
2014	28,679	Aug 1 - Oct 31
2015	33,885	Aug 16 - Oct 31
2016	16,859	Aug 16 - Oct 31
2017	11,496	Aug 16 - Oct 31
2018	8,672	Aug 16 - Oct 16
2019	11,822	Aug 16 - Oct 31
2020	14,651	Aug 16 - Oct 31
2021 ¹	11,277	Aug 16 - Oct 31

¹ Preliminary

Table 28. Treaty fishery open area and Spring Creek Sanctuary restrictions during fall season commercial set and drift gillnet seasons, 1995-2021.

Year	Open Area	Spring Creek Sanctuary
1995	Zone 6	Large sanctuary all season
1996	All of Zone 6 except closed below Hood River Bridge Sep 23-28	Large sanctuary all season
1997	All of Zone 6 except closed below Hood River Bridge Sep 9-13	Large sanctuary Aug 7-Sep 6. Enlarged sanctuary from Light #27 to Light #35, Washington shore to mid-channel, Sep 17-20
1998	All of Zone 6 except closed below Hood River Bridge Sep 8-12	Large sanctuary Sep. 1-12. Enlarged sanctuary from Light #27 to Light #35, Washington shore to mid-channel, September 15-28
1999	Zone 6	Small sanctuary all season
2000	Zone 6	Large sanctuary all season
2001	Zone 6	Large sanctuary Aug 28-Sep 8. Small sanctuary Sep 11-29
2002	Zone 6	Large sanctuary Aug 28-Aug 31. Small sanctuary Sep 11-28
2003	Zone 6	Small sanctuary all season
2004	Zone 6	Small sanctuary all season
2005	Zone 6	Small sanctuary all season
2006	Zone 6	Large sanctuary all season
2007	Zone 6	Large sanctuary all season
2008	Zone 6	Large sanctuary Aug 19 – Sept 26. Sept 30-Oct 10 reduced to 50' radius. No sanctuary Oct 20-23
2009	Zone 6	Large sanctuary 5 of 6 weekly fishing periods. No min. mesh restrictions all season
2010	Zone 6	Small sanctuary all season, except no sanctuary final week (Oct 19-22). 8" min. mesh restrictions on final 3 weekly periods
2011	Zone 6	Standard sanctuary first 5 openings. Small sanctuary final two weeks. 8" min. mesh restrictions all season
2012	Zone 6	Standard sanctuary first 4 openings. Small sanctuary last 3 openings. 8" min. mesh restriction all season.
2013	Zone 6	Standard sanctuary first 3 openings. Small sanctuary last 4 openings. 8" min. mesh restriction all season.
2014	Zone 6	Standard sanctuary first 5 openings. Small Sanctuary last 4 openings. 8" min mesh restriction all season
2015	Zone 6	Standard sanctuary first 5 openings. Small sanctuary last two openings. 8" min mesh restriction all season
2016	Zone 6	Standard sanctuary first 4 openings and 6th opening. Small sanctuary 5th opening and last three openings. 8" min mesh restriction for the first seven out of nine openings.
2017	Zone 6	Standard sanctuary all openings. 8" min mesh restriction for all openings.
2018	Zone 6	Standard sanctuary for first four openings. Small Sanctuary for last two. 8" min mesh restriction for all openings.
2019	Zone 6	Standard sanctuary for first five openings. Small Sanctuary for last one. 8" min mesh restriction for all openings.
2020	Zone 6	Standard sanctuary for first three openings. Small Sanctuary for last four openings. 8" min mesh restriction for all openings.
2021	Zone 6	Standard sanctuary for first three openings. Small Sanctuary for last five openings. 8" min mesh restriction for all openings.

Table 29. Fall mainstem Columbia River treaty fishery landings, 1980-2021.

Year	Season ²	Fishing Days ³	Numbers Landed ¹			
			Chinook Adults	Coho	Steelhead ⁴	White Sturgeon ⁵
1980-84 Ave ⁶	Aug 6- Nov 5	15	41,760	1,640	19,720	260
1985-89 Ave ⁷⁻¹¹	Aug 23-Oct 15	36.6	116,620	11,880	63,260	3,125
1990 ¹²	Aug. 8-Sept. 29	34	79,300	2,900	30,700	1,700
1991 ¹³	Aug. 12-Oct. 28	20	51,100	12,800	41,100	--
1992	Aug. 10-Oct. 17	32	28,100	1,000	52,400	100
1993	Aug. 9-Oct. 2	26	30,400	1,000	28,800	100
1994 ¹⁴	Aug. 29-Oct. 15	10	33,700	1,300	15,500	500
1995	Aug. 29-Sept. 15	9	41,400	400	20,400	400
1996	Sept. 2-Sept. 28	17	63,200	700	19,000	300
1997	Aug. 27-Sept. 20	16	65,000	600	22,700	<100
1998	Aug. 25-Sept. 25	22	44,700	1,500	12,600	<100
1999	Aug. 31-Oct. 2	22	77,200	2,300	17,300	0
2000	Aug. 30-Sept. 23	17	52,100	6,300	15,500	0
2001 ¹⁵	Aug. 28-Sept. 29	18	103,900	5,400	29,200	806
2002	Aug 28-Sep 28	18.5	129,700	1,600	13,800	300
2003 ¹⁶	Aug 26-Oct 11	27.5	123,600	5,800	14,900	200
2004	Aug 25-Oct 16	30	127,600	10,300	14,600	64
2005	Aug 22-Sept. 30	25	113,500	5,400	13,700	138
2006	Aug 21-Oct 6	29.5	76,290	7,577	21,130	78
2007 ¹⁷	Aug 22-Oct 6	25.5	36,782	8,030	19,457	90
2008 ¹⁷	Aug 19 – Oct 23	37	106,625	21,625	26,339	94
2009 ¹⁷	Aug 24- Oct 1	23	98,622	15,675	36,755	34
2010 ¹⁷	Aug 24- Oct 22	25.5	132,642	11,485	26,733	150
2011 ¹⁷	Aug 22- Oct 6	28.5	114,247	22,941	15,034	853
2012 ¹⁷	Aug 21-Oct 4	22.5	82,879	7,070	15,211	109
2013 ¹⁷	Aug 19-Oct 3	27.5	227,568	8,850	17,156	77
2014 ¹⁷	Aug 18-Oct 16	41.5	264,458	40,480	25,551	76
2015 ¹⁷	Aug 17-Oct 2	33.5	258,957	2,956	16,571	13
2016 ¹⁷	Aug 22-Oct 21	40.5	132,167	6,114	13,555	54
2017 ¹⁷	Aug 21-Oct 5	30.5	117,463	8,731	8,439	71
2018 ¹⁷	Aug 27-Oct 6	22.0	54,653	4,526	6,208	348
2019 ¹⁷	Aug 26-Oct 5	19.0	62,746	3,180	2,880	38
2020 ¹⁷	Aug 24-Oct 7	26.5	101,076	15,015	9,411	88
2021 ¹⁷	Aug 23-Oct 14	32.0	64,353	23,226	3,249	30

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

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

³ Mainstem commercial seasons only, unless otherwise noted.

⁴ Sales to licensed buyers during sockeye and fall seasons only through 1984. Sales to licensed buyers, general public and C&S catch from 1985-present.

⁵ No sturgeon sales allowed in set net fisheries since 1991. Includes landings in fall set-line fisheries.

⁶ Includes Nov 1-5 coho fishery below Klickitat River.

⁷ Spring Creek sanctuary area open to fishing Aug 23-28 and Aug 29-Sep 3. ~~Chinook and steelhead catches in the Spring Creek sanctuary area are reported in the mainstem Columbia River fishery.~~ occurred above Priest Rapids Dam. Over half of the coho catch (24,100) occurred in the Klickitat River dipnet fishery.

⁹ An additional catch of 2,200 Chinook occurred above Priest Rapids Dam.

¹⁰ Includes Sep 28-Oct 1 test fishery in John Day Pool. No sturgeon sales allowed after Sep 3. An additional catch of 2,300 Chinook and an estimated 300 steelhead occurred above Priest Rapids Dam. Includes 5,500

¹¹ No sturgeon sales allowed. An additional catch of 800 Chinook occurred above Priest Rapids Dam. Includes 6,100 coho captured in an extended Klickitat River dipnet season.

¹² An additional 200 Chinook catch occurred above Priest Rapids Dam. Includes 1,900 coho captured in an extended Klickitat River dipnet season.

¹³ Includes 5,500 coho captured in an extended Klickitat River dipnet season.

¹⁴ An additional catch of 570 Chinook and 70 steelhead occurred above Priest Rapids Dam. An additional catch of 220 Chinook and 80 steelhead occurred above McNary Dam.

¹⁵ Target sturgeon gillnet seasons adopted for Zone 61 (Bonneville Pool) during November 14-30 and Zone 63 (John Day Pool) during November 14-December 7.

¹⁶ Target sturgeon gillnet season adopted for Zone 61 (Bonneville Pool) during December 1-14. No sturgeon were landed.

¹⁷ Includes all fall season harvest – Aug 1-Dec 31.

Table 30. Fall treaty fisheries catch composition, 2021.¹

Fishery			Numbers Landed				
			Chinook ²	Steelhead	Sturgeon	Coho ²	Walleye
Permit Gillnet	Week 31-34 8/1-21		78	5	0	12	0
Platform, Hook & Line	Weeks 31-34 (8/1-22)	Ticket	95	94	0	0	0
		Non-Ticket	302	46	0	0	0
	Late Fall (thru 12/31)	Ticket	0	0	0	0	0
		Non-Ticket	0	0	0	0	0
	PHL Total:		397	140	0	0	0
Commercial Gillnet	Week 35 (8/23-8/26)	Ticket	5,815	164	0	253	1
		Non-Ticket	1,026	61	2	413	3
		Total	6,841	225	2	666	4
	Week 36 (8/30-9/2)	Ticket	17,954	303	0	1,950	8
		Non-Ticket	3,168	176	11	344	1
		Total	21,122	479	11	2,294	9
	Week 37 (9/6-9/10)	Ticket	20,807	318	0	4,999	8
		Non-Ticket	3,672	231	5	882	1
		Total	24,479	549	5	5,881	9
	Week 38 (9/13-9/17)	Ticket	14,167	311	0	3,207	2
		Non-Ticket	2,500	200	4	566	6
		Total	16,667	511	4	3,773	8
	Week 39 (9/20-9/24)	Ticket	6,431	365	0	4,165	3
		Non-Ticket	1,135	85	2	735	6
		Total	7,566	450	2	4,900	9
	Week 40 (9/27-10/1)	Ticket	3,952	294	0	2,409	3
		Non-Ticket	714	210	0	425	2
		Total	4,666	504	0	2,834	5
	Week 41 (10/4-10/7)	Ticket	1,008	156	0	587	2
		Non-Ticket	1,184	126	3	762	12
Total		2,192	282	3	1,349	14	
Week 42 (10/11-10/14)	Ticket	514	88	0	1,300	6	
	Non-Ticket	455	161	3	229	11	
	Total	969	249	3	1,529	17	
GN Total:		84,502	3,249	30	23,226	75	
Fall Setline	Drano Steelhead none		20	0			
Grand Total		84,977	3,414	30	23,238	75	

¹ Ticketed catch estimates based on preliminary landings. Non-ticketed catch includes C&S (take home) and sales directly to the public. Includes sales from Zone 6 and downstream of Bonneville Dam, consistent with state/tribal MOUs/MOAs. Commercial gillnet catch includes platform and hook and line catch during the statistical week that the gillnet opening occurred.

² Includes adults and jacks

Table 31. Aerial set net counts for Zone 6 treaty Indian fall gillnet salmon fisheries during statistical weeks, 35-40, 1999-2021.

Year	Number of Set Nets		
	Average	Minimum	Maximum
1999	435	366	468
2000	527	485	626
2001	370	296	452
2002	364	306	436
2003	275	183	331
2004	231	113	297
2005	339	187	450
2006	387	205	502
2007	429	205	528
2008	555	443	691
2009	619	403	707
2010	634	441	758
2011	588	434	672
2012	629	343	762
2013	595	403	726
2014	499	412	571
2015	520	401	671
2016	542	423	703
2017	458	396	515
2018	489	301	622
2019	425	340	503
2020	462	346	529
2021	332	239	480

Table 32. Fall season treaty impact rates on natural-origin and total B-Index (since 2008) upriver summer steelhead, 1999-2021.¹

Year	Natural Origin Impacts		Total B	B-Index Allowed	
	A-Index	B-Index		Wild	Total B
1999	5.4%	12.6%		15%	
2000	4.3%	14.3%		15%	
2001	4.0%	11.5%		15%	
2002	2.7%	3.4%		15%	
2003	2.5%	14.9%		15%	
2004	3.2%	11.1%		15%	
2005	3.8%	12.3%		15%	
2006	5.2%	16.0%		15%	
2007	3.6%	11.6%		15%	
2008	4.6%	13.3%	14.7%	NA	15%
2009	5.2%	14.4%	17.1%	NA	20%
2010	4.0%	13.3%	15.5%	NA	20%
2011	5.9%	32.7%	25.0%	NA	20%
2012	6.0%	12.7%	13.1%	NA	15%
2013	6.6%	15.6%	13.8%	NA	13%
2014	7.6%	16.4%	13.4%	NA	20%
2015	6.3%	14.4%	15.1%	NA	13%
2016	8.6%	15.6%	10.0%	NA	20%
2017	6.9%	8.3%	6.0%	NA	13%
2018	4.5%	5.7%	5.3%	NA	13%
2019	3.7%	6.4%	6.9%	NA	13%
2020	4.9%	13.2%	13.0%	NA	15%
2021	5.1%	11.2%	8.5%	NA	13%
5-yr Ave	5.0%	9.0%	7.9%		13%
10-yr Ave	6.0%	11.9%	10.5%		15%

¹ Beginning in 2008, under the U.S. v Oregon Management Agreement, treaty fisheries during the fall season are managed for total B-Index impacts (not just wild). The result is that treaty and non-treaty impacts are no longer additive when comparing to allowed rates. All data subject to change. Includes sales to licensed buyers only prior to 1994. Includes sales to the general public and C&S catch beginning in 1994.

² Run sizes prior to 2016 are not corrected for unclipped hatchery origin fish and therefore unclipped harvest impacts over-estimate of the true wild impact rate.

Table 33. Fall season non-treaty harvest and impact rates on natural-origin A- and B-Index upriver summer steelhead, 1999-2021.¹

Year	Harvest Mortalities		Harvest Impact Rate		Allowed Impact Rate	
	A-Index	B-Index	A-Index	B-Index	A-Index	B-Index
1999	380	41	0.67%	1.09%	2.0%	2.0%
2000	642	123	1.01%	1.47%	2.0%	2.0%
2001	978	134	0.71%	1.11%	2.0%	2.0%
2002	889	483	1.02%	1.50%	2.0%	2.0%
2003	1,007	198	1.50%	3.08%	2.0%	2.0%
2004	734	132	1.21%	1.44%	2.0%	2.0%
2005	671	200	1.14%	2.08%	2.0%	2.0%
2006	751	164	1.18%	1.94%	2.0%	2.0%
2007	792	231	1.02%	2.56%	2.0%	2.0%
2008	406	171	0.50%	0.93%	2.0%	2.0%
2009	1,252	224	0.81%	1.63%	2.0%	2.0%
2010	830	326	0.69%	1.46%	2.0%	2.0%
2011	1,356	92	1.34%	1.18%	2.0%	2.0%
2012	742	116	1.34%	1.71%	2.0%	2.0%
2013	1,292	35	1.43%	1.20%	2.0%	2.0%
2014	1,316	83	1.20%	0.62%	2.0%	2.0%
2015	997	61	1.17%	1.05%	2.0%	2.0%
2016	345	53	1.18%	1.54%	2.0%	2.0%
2017	307	15	1.10%	1.99%	2.0%	2.0%
2018	293	24	1.35%	1.02%	2.0%	2.0%
2019	184	11	0.61%	1.19%	2.0%	2.0%
2020	105	42	0.37%	0.80%	2.0%	2.0%
2021	103	8	0.54%	0.45%	2.0%	2.0%
5-yr Ave	198	20	0.9%	1.3%	2.0%	2.0%
10-yr Ave	568	45	1.11%	1.23%	2.0%	2.0%

¹ Harvest mortalities are non-retention mortalities from commercial and recreational fisheries occurring in August-October downstream of The Dalles Dam and in August-December upstream of The Dalles Dam. Prior to 2008, natural-origin release mortalities displayed include an unknown number of unclipped hatchery-origin fish. Estimates for 2019 and 2020 are preliminary, and all data are subject to change.

Table 34. Lower Columbia Natural (LCN) Coho ocean and in-river exploitation rates, 2005-2021.

Year ¹	Exploitation Rates			
	Ocean	In-River ²	Actual	Allowed
2005	11.0%	6.5%	17.5%	21.4%
2006	6.8%	6.5%	13.3%	15.0%
2007	11.9%	6.7%	18.6%	20.0%
2008	3.6%	3.7%	7.3%	8.0%
2009	10.7%	10.5%	21.2%	20.0%
2010	7.6%	6.9%	14.5%	15.0%
2011	5.8%	7.7%	13.5%	15.0%
2012	9.9%	3.4%	13.3%	15.0%
2013	9.8%	3.3%	13.1%	15.0%
2014	12.0%	5.3%	17.2%	22.5%
2015	17.1%	7.2%	24.3%	23.0%
2016	8.0%	2.0%	9.0%	18.0%
2017	7.0%	4.0%	11.0%	18.0%
2018	9.4%	1.7%	11.1%	18.0%
2019	15.9%	3.6%	19.5%	23.0%
2020	4.9%	2.1%	7.0%	18.0%
2021	7.8%	2.8%	10.6%	30.0%

¹ LCN Coho listed under the federal Endangered Species Act in Aug

² Includes non-treaty mainstem and Select Area commercial and sport fisheries.

Table 35. Lower Columbia River tulle fall Chinook exploitation rates, 2006-2021.¹

Year	Exploitation Rates			Allowed	InRiverHR
	Ocean	Columbia ²	Total		
2003		4.7%			7.7%
2004		7.4%			9.9%
2005		7.9%			12.7%
2006	34.9%	11.0%	45.9%	49%	17.0%
2007	40.7%	8.8%	49.5%	42%	14.9%
2008	27.4%	7.2%	34.6%	41%	10.0%
2009	23.4%	11.0%	34.3%	38%	14.3%
2010	28.8%	6.2%	34.9%	38%	8.7%
2011	30.7%	10.1%	40.8%	37%	14.5%
2012	32.8%	10.2%	43.1%	41%	15.2%
2013	23.6%	9.3%	32.9%	41%	
2014	33.0%	7.4%	40.4%	41%	
2015	27.5%	7.5%	34.9%	41%	
2016	25.6%	10.4%	36.0%	41%	
2017	28.4%	7.7%	36.1%	41%	
2018	25.7%	8.9%	34.5%	38%	
2019	21.0%	10.3%	31.3%	38%	
2020	14.4%	11.4%	25.7%	38%	
2021	24.2%	13.5%	37.7%	38%	

¹ Preliminary pending review

² Fall season non-treaty fisheries.

Table 36. ESA impact summary for fall season fisheries, 2021.

Management Guidelines	Pre-Season		Post Season	
	ESA Allowed	Planned Total	ESA Allowed	Actual Total
Fall Chinook ²				
Snake River natural-origin	45.00%	45.00%	45.00%	21.57%
Non-Treaty	15.00%	15.00%	15.00%	10.44%
Treaty	30.00%	30.00%	30.00%	11.13%
LCN Tule ER (Ocean and Columbia R.)	38.0%	38.0%	38.0%	37.7%
Upriver Summer Steelhead ³				
Non-Treaty natural-origin A-Index Steelhead	2.00%	1.00%	2.00%	0.54%
Non-Treaty natural-origin B-Index Steelhead	2.00%	1.00%	2.00%	0.45%
Treaty Total B-Index Steelhead	13.00%	13.00%	13.00%	8.50%
LCR Coho ER (Ocean and Columbia R.)	30.00%	10.12%	30.00%	10.58%
Lower Columbia Chum	5.00%	1.53%	5.00%	1.10%

¹ Adults only. All data preliminary.

² Non-treaty data includes fisheries from Buoy 10 upstream to Hwy. 395, near Pasco, WA.

³ Non-treaty summer steelhead impacts include tributary catch from “dip-ins”.

Table 37. Upriver bright and Snake River natural-origin fall Chinook in-river harvest rates, 2007-2021.

Upriver Bright Harvest Rates				
Year	Treaty	Non-Treaty	Total	Post-Season Allowed
2007	15.95%	7.44%	23.39%	31.29%
2008	19.91%	7.83%	27.74%	31.25%
2009 ¹	27.36%	10.16%	37.52%	31.25%
2010	18.02%	8.13%	26.15%	33.25%
2011	24.88%	13.94%	38.82%	45.00%
2012	20.53%	14.06%	34.59%	45.00%
2013	20.60%	11.03%	31.63%	45.00%
2014	22.31%	12.47%	34.78%	45.00%
2015	19.94%	11.46%	31.40%	45.00%
2016	23.26%	14.77%	38.03%	45.00%
2017	26.34%	16.10%	42.44%	45.00%
2018	20.22%	9.35%	29.57%	31.25%
2019 ²	19.21%	7.37%	26.58%	45.00%
2020	18.87%	9.34%	28.21%	45.00%
2021	11.13%	10.52%	21.65%	45.00%

Snake River Natural Origin Harvest Rates				
Year	Treaty	Non-Treaty	Total	Post-Season Allowed
2007	15.95%	7.44%	23.39%	31.29%
2008	19.91%	7.83%	27.74%	31.25%
2009 ¹	27.36%	10.16%	37.52%	31.25%
2010	18.02%	8.13%	26.15%	33.25%
2011	24.88%	13.94%	38.82%	45.00%
2012	20.53%	14.06%	34.59%	45.00%
2013	20.70%	10.58%	31.28%	45.00%
2014	22.37%	12.23%	34.60%	45.00%
2015	20.00%	11.21%	31.21%	45.00%
2016	23.26%	14.62%	37.88%	45.00%
2017	26.34%	15.95%	42.29%	45.00%
2018	20.22%	9.35%	29.57%	31.25%
2019 ²	19.21%	7.37%	26.58%	45.00%
2020	18.87%	9.34%	28.21%	45.00%
2021	11.13%	10.44%	21.57%	45.00%

¹ Due to the final SRW abundance, post-season allowed harvest rates were reduced from 27% and 11% for treaty and non-treaty fisheries, respectively.

² Due to the URB abundance exceeding 200,000 based on the final run-reconstruction, post-season allowed harvest rates increased from preseason