2025 JOINT STAFF REPORT CONCERNING STOCK STATUS AND FISHERIES FOR STURGEON AND SMELT

Joint Columbia River Management Staff

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Washington Department of Fish and Wildlife
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January 7, 2025

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INTRODUCTION

This report describes sturgeon (white sturgeon) and smelt (eulachon) populations in the mainstem Columbia River and includes a review of fisheries, current management plans and guidelines, and past management actions and strategies. This report is part of an annual series produced by the joint Columbia River Management staff of the Oregon Department of Fish & Wildlife (ODFW), Washington Department of Fish & Wildlife (WDFW), the Columbia River Intertribal Fish Commission (CRITFC), and the Columbia River Treaty Tribes (the Nez Perce Tribe, the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes of the Warm Springs Reservation of Oregon, and the Confederated Tribes and Bands of the Yakama Nation). The *U.S. v. Oregon* Technical Advisory Committee (TAC) has reviewed this report.

THE COMPACT/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, sustainable harvest, treaty rights, and the impact on species listed under the Endangered Species Act (ESA). Working together under the principles of the Columbia River 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

Consideration of recreational and non-treaty commercial fisheries for white sturgeon in the Columbia River and tributaries downstream of Bonneville Dam during 2025 will be based on the most current stock status information.

The Sturgeon Management Task Force (SMTF) will meet in January 2025 to review results of the 2024 stock assessment in Bonneville Pool and to discuss management options for 2025, including harvest guidelines for Zone 6 sturgeon fisheries.

Retention fisheries in the pools between Bonneville Dam and McNary Dam (Zone 6) typically open January 1 under permanent rules; however, temporary season modifications to 2025 fisheries in Bonneville and The Dalles pools were adopted in November 2024.

Non-treaty commercial fisheries for eulachon in the Columbia River will be considered at a Compact hearing in January 2025. Recreational fisheries in the Cowlitz and Sandy rivers will be addressed after in-season information is available. In September 2023, the states completed an updated Washington and Oregon Management Plan and will use this management framework to guide fisheries in 2025.

ENDANGERED SPECIES ACT (ESA)

Salmon and Steelhead

The majority of Columbia Basin salmon and steelhead stocks are listed under the federal ESA as shown in the table below. 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.

Federally-Listed Fish Species Found in Columbia River Fishery Management Areas			
Species – *ESU/DPS*	Current Designation	Listing Date	Effective Date
Chinook			
Snake River Fall	Threatened	April 22, 1992	May 22, 1992
Snake River Spring/Summer	Threatened	April 22, 1992	May 22, 1992
Upper Columbia River Spring	Endangered	March 24, 1999	May 24, 1999
Upper Columbia Summer/Fall	Not warranted	--	--
Middle Columbia Spring	Not warranted	--	--
Lower Columbia River	Threatened	March 24, 1999	May 24, 1999
Upper Willamette River Spring	Threatened	March 24, 1999	May 24, 1999
Deschutes River Summer/Fall	Not warranted	--	--
Steelhead			
Snake River Basin	Threatened	August 18, 1997	October 17, 1997
Upper Columbia River	Threatened[1]	August 18, 1997	October 17, 1997
Lower Columbia River	Threatened	March 19, 1998	May 18, 1998
Middle Columbia River	Threatened	March 25, 1999	May 24, 1999
Southwest Washington	Not warranted	--	--
Upper Willamette	Threatened	March 25, 1999	May 24, 1999
Sockeye			
Snake River	Endangered	November 20, 1991	Dec. 20, 1991
Okanogan River	Not warranted	--	--
Lake Wenatchee	Not warranted	--	--
Chum – Columbia River	Threatened	March 25, 1999	May 24, 1999
Coho – Columbia River	Threatened	June 28, 2005	August 26, 2005

Green Sturgeon – Southern DPS	Threatened	April 7, 2006	July 7, 2006
Eulachon – Southern DPS	Threatened	March 18, 2010	May 17, 2010

[1] *Status downgraded to threatened per U.S. District Court order in June 2009.*

The current BA addresses Columbia River treaty and non-treaty fisheries for upriver Chinook, upriver coho, sockeye, steelhead, and white sturgeon, as described in the *2018–2027 U.S. v. Oregon* Management Agreement (2018–2027 MA; TAC 2017). The BA was submitted in June 2017, and a Biological Opinion (BO) was subsequently issued by the NMFS in February 2018 (NMFS 2018). Impacts on listed salmonid species from eulachon and sturgeon fisheries described in this report are expected to be zero.

Eulachon

In March 2010, the NMFS published a rule (75 FR 13012) to list the southern Distinct Population Segment (DPS) of eulachon as threatened under the ESA, which became effective May 17, 2010. This DPS encompasses all populations within the states of Washington, Oregon, and California and extends from the Skeena River in British Columbia (inclusive) south to the Mad River in northern California (inclusive). In December 2011, NMFS designated critical habitat which, in the Columbia basin, encompasses the mainstem Columbia River from the mouth upstream to Bonneville Dam as well as the Grays River, Skamokawa Creek, Elochoman River, Cowlitz and lower Toutle rivers, Kalama River, Lewis River, and Sandy River (76 FR 65323). The 2018–2027 *U.S. v. Oregon* BO addresses the incidental take of ESA-listed eulachon in 2018–2027 Columbia River salmon, steelhead, and sturgeon target fisheries.

Green Sturgeon

In April 2006, the NMFS published a rule (71 FR 17757) to list the southern DPS of the North American green sturgeon (those spawning in the Sacramento River, California) as threatened, which became effective June 6, 2006. Effective November 9, 2009, the Columbia River below river mile (RM) 46 was designated as critical habitat of the southern DPS (74 FR 52299). The BO covering non-treaty fisheries described in the 2018–2027 *U.S. v. Oregon* MA also addresses impacts on green sturgeon. Given that (1) the sale of green sturgeon from Columbia River commercial fisheries was prohibited effective July 6, 2006 and (2) the retention of green sturgeon in Columbia River recreational fisheries was prohibited effective January 1, 2007, impacts on green sturgeon from fisheries described in this report are expected to be very low.

Marbled Murrelet

The threatened status of the marbled murrelet has not changed since these seabirds were initially listed under the federal ESA on October 1, 1992 (57 FR 45328). On September 24, 1997, the U.S. Fish and Wildlife Service (USFWS) released a recovery plan for the threatened marbled murrelet covering the states of Washington, Oregon, and California (USFWS 1997). In September 2004, June 2009, and May 2019, the USFWS concluded five-year reviews of the status of the marbled murrelet and determined that no change in the bird's threatened status was warranted (USFWS 2004; USFWS 2009; USFWS 2019). On October 5, 2011, revised critical habitat was designated for the marbled murrelet (76 FR 61599). In July 2021, the ODFW Commission reclassified the status of the marbled murrelet from threatened (as initially designated in May 1995) to endangered under the Oregon Endangered Species Act, aligning the species' state status with that of both

Washington and California. Fisheries described in this report are not likely to adversely affect this species.

STURGEON MANAGEMENT AND FISHERIES DOWNSTREAM OF BONNEVILLE DAM

Stock Status

White sturgeon abundance in the lower Columbia River (LCR) collapsed at the end of the 19th century due to overfishing and remained depressed through the first half of the 20th century. The population began to rebound only after the adoption of management actions aimed at reducing overall harvest and protecting broodstock, particularly the 6-foot maximum size limit regulation enacted in 1950. White sturgeon abundance subsequently increased significantly through the 1990s and supported robust recreational and commercial fisheries. Abundance of sub-adult fish began declining in the mid-2000s, prompting changes in harvest quotas and retention seasons.

Tagging and recovery programs were initiated by Oregon and Washington in 1986 to provide data necessary to estimate the annual abundance of white sturgeon inhabiting the LCR. Abundance estimates, based on marking/tagging conducted in one year and mark recovery extending into the following year, were produced from 1987 through 2012, except for 1994 and 2004 (Table 1). The abundance estimates refer to the year of tagging, although final estimates required recoveries through the following year. During 1988–1992, abundance estimates for the historic legal-size fish (pertaining to fish measuring 42–60 inches total length (TL) or 38–54 inches fork length (FL)) were generally low, averaging 55,600 fish. This legal-size abundance improved significantly during 1993–1997, averaging 169,200 fish, with a slight decline during 1998–2007 to a stable average of 131,400 fish. Beginning in 2008, legal-size abundance estimates declined more abruptly, reaching a low of 65,300 fish in 2010.

In 2011, ODFW finalized the Oregon Lower Columbia River and Oregon Coast White Sturgeon Conservation Plan (WSCP; ODFW 2011). In response to uncertainties identified in the WSCP, ODFW initiated an additional survey in 2010 using research setlines during July, August, and September to recover white sturgeon tagged in May and June. This “in-year” approach is meant to allow researchers to estimate current-year abundance and to project an estimate of the next year’s abundance.

Concurrent abundance estimates for the historic legal-size sturgeon resulting from the “traditional” approach using mark-recoveries through fishery sampling and the newer approach using mark-recoveries from setline sampling are available for 2010–2012 (Table 1). Since 2013, the setline-recovery approach produced progressively increasing population estimates through 2016. However, the 2016 estimate of 224,000 legal-size fish represented an increase of 56% from 2015, raising concern about the accuracy of the estimate since it was not fully supported by catch rate data in gillnet or setline tagging efforts. The mark-recapture survey results are susceptible to positive bias if marked fish do not mix adequately prior to the subsequent recovery effort. Therefore, a more conservative legal abundance estimate of 165,600 fish based on setline catch rates was used for management purposes in 2017, rather than the projected abundance of 237,900 fish. In 2017 the legally harvestable slot-limit was decreased from 38–54 in FL to 44–50-inch FL; however, for the purpose of reviewing trends in the historical legal-size abundance through time, we will continue to refer to the 38–54 inch FL slot as the “legal-size” fish in this report. The

abundance estimate for 2017 of 199,800 legal-sized fish came in mid-way between the two projections for 2017, but still maintained the general trend of improved abundance of these fish since 2012. However, the 2018 and 2019 legal-size abundance estimates declined to 162,200 and 168,200 fish respectively, indicating growth of this population segment abundance may have peaked in 2016–2017.

The 2020 legal-size abundance estimate of 199,500 fish was 19% higher than the 2019 abundance estimate and 34% higher than the 2020 projection of 144,900 fish. Sampling issues related to the COVID-19 pandemic reduced tag recovery efforts and resulted in only four recaptures and a less precise abundance estimate than usual. Similar to 2016, setline and gillnet tagging catch rates did not reflect this apparent increase in abundance so a more conservative estimate of 160,250, based on the 2019 projection of 2020 abundance, was used for sturgeon fishery management in 2021. The estimated abundance of legal-size fish has continued to decline from 110,134 in 2021 to 65,557 fish in 2023. This abundance was higher in 2024, but still less than most estimates observed prior to 2022. These results are consistent with ongoing low catch rates in the setline and gillnet sampling surveys and may be a result of low survival and recruitment of juvenile sturgeon over the past decade.

The traditional legal-size slot can also be split into two sub-classes (lower sub-class: 38–43 inch FL or 42–48 inch TL and upper sub-class: 43–54 inch FL or 48–60 inch TL) to evaluate trends in size class distribution within the legal-size range through time (Table 1). Reduced recruitment to the lower sub-class of the legal-size slot drove the past decline of the overall legal-size abundance. Since 1992, the proportion of fish in this size class has generally declined from an average of 76% in 1987–2003 to an average of 48% of the overall legal-size abundance since 2014. This shift in the composition of legal-size fish from predominately lower sub-class fish to a more even distribution of both size groups, may be a consequence of ageing fish and chronic poor recruitment in recent years.

Due to low catch rates of spawner-size adult (>66 inches FL) white sturgeon, a three-year running average of the adult abundance estimate is used to help smooth year-to-year variability and better interpret trends in abundance. In 2011–2015, the mean abundance was depressed, averaging about 3,050 fish (Figure 1). Annual abundance estimates since 2016 for this size class steadily increased through 2020 then plateaued through 2022. This increasing trend may indicate that some management strategies, such as the closure of LCR sturgeon retention fisheries in 2014–2017 and the more restrictive slot size and harvest guideline upon re-opening fisheries in 2017, have successfully escaped more adults into the spawning size range. The 2022–2024 running average is 13,175 fish, which is higher than the desired status threshold of 9,250 adult fish identified in the WSCP. Although the running average is higher than the threshold, similar to what was seen for the running average between 2019–2022, it is important to note that due to the considerable overlap in the confidence intervals for the spawner-size abundance estimates, it can be difficult to discern a clear difference in abundance between years.

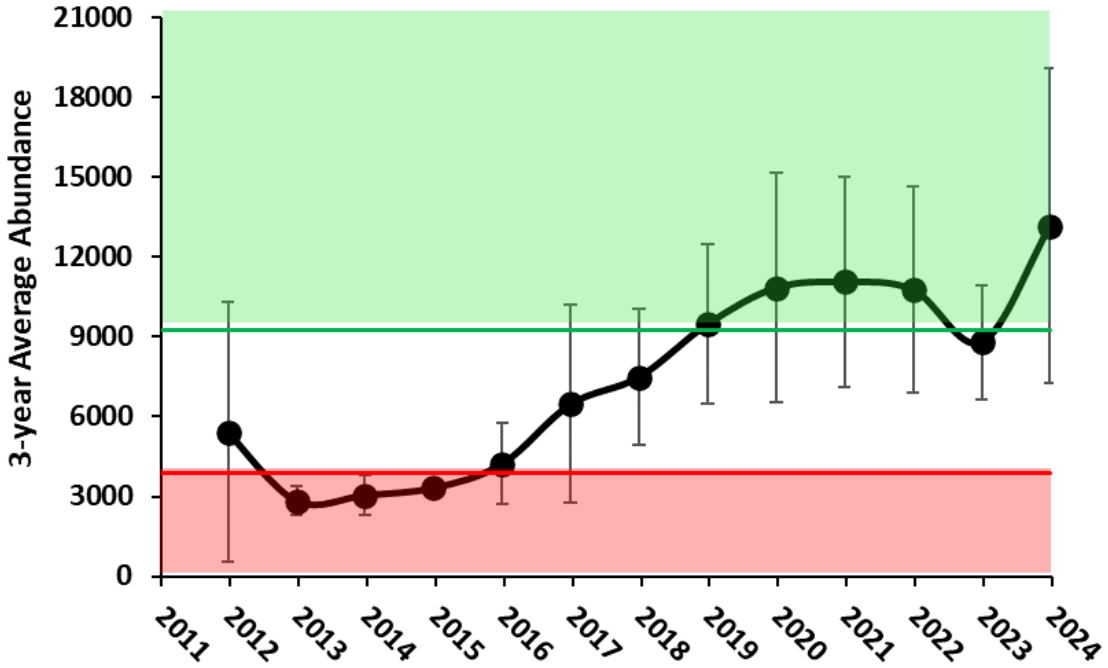

Figure 1. Three-year running average estimated abundance of White Sturgeon ≥ 167 cm FL from the lower Columbia River, 2012-2024. Fewer than three years of data were available prior to 2012 so averages are not available. Error bars represent one standard deviation.

During 2004–2019 and 2021–2024, annual monitoring of young-of-year (YOY) white sturgeon recruitment in the LCR was conducted in the late fall targeting juvenile sturgeon that were spawned earlier the same year. Staff deploy small-mesh gillnets at standard index sites throughout the lower Columbia and Willamette rivers. The catch per set of YOY sturgeon (CPUE) and proportion of sets capturing at least one YOY sturgeon (Ep) are used as indices to monitor trends in recruitment (Table 2). Results during all years sampled indicate at least a low level of recruitment occurs annually in both in the LCR and the lower Willamette River (LWR). High flows in 2017 resulted in a marked improvement in juvenile production with YOY catch rates increasing to the highest levels observed since 2009 for the LCR and the highest ever (since 2010) for the LWR. Sampling in 2018 showed mixed results; both indices were the fifth lowest for the mainstem Columbia River but a record high for the LWR, essentially doubling 2017 results. Juvenile production in 2019 was below average in the LCR and two-thirds of the recent 5-year average in the LWR. No sampling occurred in 2020 due to budget and COVID-19 pandemic issues. Juvenile production in 2021 was the lowest detected within the Columbia River and the second lowest detected within the Willamette River. The lengthy and unprecedented heatwave across the Pacific Northwest from June 26 to July 2, 2021 may have inhibited sturgeon spawning and juvenile survival. In 2022, juvenile production improved over the 2021 estimates but was still far below the average values in the both the LCR and the LWR. Sampling in 2023 was mixed with another year of improved catch in the LWR, but the second lowest catch of YOY in the LCR over the last ten years. Juvenile production in 2024 was the lowest detected within the LCR, similar to results from 2021. In the LWR, juvenile production was the second lowest ever detected, declining below the results from 2021 with only 2011 producing a lower juvenile index value. It is unknown the exact cause for the observed decline in juvenile production since there are a myriad of possible contributing factors

and a lack of detailed data; however, the Joint States of Washington and Oregon are pursuing funding opportunities to further evaluate this question. It is clear, nonetheless, that the relatively low proportion of juvenile and sub-legal sturgeon in recent years is indicative of long-term productivity issues in the population.

Predation by sea lions has created a substantial threat to the white sturgeon population, especially for adult-size fish taken by Steller sea lions (SSL). Observers for the U.S. Army Corps of Engineers (USACE) documented a steady annual increase in the number of individual SSL at Bonneville Dam (RM 145), from zero animals in 2002 to 89 individual animals in 2011. From spring 2012 through spring 2020, annual observations of individual animals ranged from 45–80 during monitoring. Between July 27 through December 31, 2022 an average of 7.8 (±S.D. 6.1) SSLs were recorded each day, with peaks in abundance occurring in mid-August (15 SSLs), late-September (17 SSLs), and late-November (32 SSLs). During the traditional spring season monitoring (January–May) in 2023, observations of SSLs were low before increasing in April with a peak of 54 animals observed on May 1. Abundance was monitored daily and an average of 4.5 (±S.D. 8.0) SSLs were observed each day during the spring period. Mean abundances in 2022–2023 were 58% and 51% lower than the 10-year averages for the fall and spring monitoring periods respectively (USACE 2024).

Predation of adult-size fish observed by WDFW and ODFW employees in the vicinity of Beacon Rock (RM 142) peaked during December 2005 through March 2006, with over 50 kills reported. Activity then declined following initiation of a cooperative state and tribal hazing program in March 2006 that successfully moved the SSL out of the area by early April. Hazing activity was conducted again in February 2007, December 2007 through May 2008, and from February through May in 2009 and 2010; however, these efforts steadily grew less effective each year. Crews were often able to distract individuals from feeding but were unsuccessful in driving them out of the area (the Columbia River Gorge). In 2011, WDFW and ODFW staff expanded the area of observation from Tanner Creek (~RM 144; lower boundary of USACE observation area) downstream to Rooster Rock State Park (~RM 129), to document rates of predation in this area. Results of this work, combined with USACE observations, indicate significant predation of white sturgeon occurs throughout the 16-mile stretch immediately downstream of Bonneville Dam, with most activity confined to the upper 10 miles. The WDFW and ODFW observations near Beacon Rock suggest SSL diet in this downstream stretch is comprised of a higher proportion of adult-size white sturgeon than has been documented by the USACE observation program.

The spring USACE observation program at Bonneville Dam (primarily January–May) documented a steady increase in total predation of all sizes of white sturgeon through 2011. Even though California sea lions (CSL) are also present in high numbers, most of the observed take of sturgeon is by SSL, with very few incidences of sturgeon predation attributed to CSL. Estimated consumption of white sturgeon in this small area increased from an observed take of just one white sturgeon in 2005 to a peak of 3,003 fish in 2011 (Table 3). Beginning in 2017, the USACE expanded the observer program to include the late fall and winter (mid-August through December). During this timeframe pinniped predation on sturgeon has been consistently reported at much higher rates than in the spring timeframe. It is unlikely that sea lion feeding preference has changed so the reduced predation observed in the Bonneville Dam tailrace is likely the result of white sturgeon avoiding this area in winter and spring and instead seeking out other areas of the Columbia River and tributaries with lower predation potential. Estimates of sturgeon predation

during the fall and winter period were significantly lower in 2022, however that may be a result of fewer than average observation periods as this number is limited by the 20-animal trigger.

Predation on smaller white sturgeon throughout the river continues based on anecdotal observations by staff and reports from anglers and commercial fishers. Predation on sturgeon also appears to be increasing in other parts of the LCR and LWR as well. In 2009, ODFW generated estimates of total annual predation impacts on sturgeon by SSL and CSL in the LCR and LWR as an element of a population-viability analysis. The modeled losses increased from 6,700 fish in 2009 to a presumed maximum of 10,600 fish by 2014. During spring monitoring in years 2018–2022, annual predation estimates ranged from 40–187 white sturgeon (mean = 108), and during the 2017–2021 fall monitoring annual predation estimates ranged from 238–1,119 fish (mean = 613). Loss of juvenile white sturgeon to predation may be impacting sublegal abundance and recruitment to fisheries. Loss of adult fish is contributing to lower population productivity and reduced recruitment to fisheries.

Monitoring of pinniped predation at Willamette Falls by ODFW and cooperators in recent years indicates additional white sturgeon losses are occurring in this area, primarily by SSL. During the 2018–2022 spring monitoring, annual predation estimates ranged from 60–194 white sturgeon (mean = 104). There was no estimated predation of sturgeon by SSLs at Willamette Falls in 2023 monitoring, but there were anecdotal reports of predation outside of the sampling timeframe. Anecdotal reports of sea lion predation on white sturgeon in areas downstream of Willamette Falls continue.

Management of LCR Sturgeon Fisheries

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

Past Management Actions

Sturgeon management actions were initiated in 1897 with the adoption of a November to February season and a 4-foot TL minimum size limit for commercially landed sturgeon in Washington. Oregon adopted these same rules in 1899 along with a ban on Chinese-type long lines. During 1899–1908, the commercial sale of sturgeon was generally prohibited. Beginning in 1909, commercial sturgeon sales were allowed during salmon seasons only. Between 1940 and 1989, fishery management actions primarily consisted of modifying catch limits for the recreational fishery and size restrictions for recreational and commercial fisheries. Most significant was the adoption of a 6-foot TL maximum size limit regulation for all fisheries in 1950 to protect broodstock and aid rebuilding of the Columbia River white sturgeon population. Additionally, commercial sturgeon setline fisheries initiated in 1975 were phased out during 1983–1985.

During 1989–2013, the management strategy for LCR white sturgeon fisheries was to optimize harvest while allowing for the continued rebuilding of the population. Significant management actions taken during 1985–1996 to restrict catches to sustainable levels included: (1) increasing the minimum size limit in recreational fisheries, (2) reducing the maximum size limit in all fisheries, (3) reducing daily and annual catch limits for recreational fisheries, and (4) adopting annual catch guidelines for commercial fisheries.

Primarily due to angling regulation changes, recreational catch dropped from a peak of 62,400 fish in 1987 to a low of 17,300 fish in 1990. Commercial catch also dropped from a peak of 11,600 fish in 1986 to a low of 3,800 fish in 1991, due to reductions in fishing opportunities. In 1986, the recreational daily bag limit for legal-sized fish (36–72 inches TL) was reduced from three to two and an annual bag limit of 30 fish was adopted in Oregon. In 1990, the annual bag limit was reduced to 15 fish annually. The daily bag limit was modified in 1991 to only allow the retention of one 40–48-inch fish and one 48–72-inch fish per day. The maximum size limit for all white sturgeon fisheries was reduced from 72 inches to 66 inches TL in 1994. In 1996, recreational regulations were further restricted with a daily catch limit of one fish between 42–66 inches TL and a ten fish annual catch limit. The maximum size limit for both fisheries was reduced from 66 inches TL to 60 inches TL in 1997. These regulation changes culminated in adoption of WFWC policy C-3001 on Lower Columbia Sturgeon Management and a series of one-to-three-year Joint State Management Agreements (Accords) between Washington and Oregon that guided Columbia River sturgeon management during 1997–2013.

In 2004, the annual recreational harvest limit was reduced to five sturgeon. The measurement used to determine if a fish is within the legal slot limit was adjusted from using a total length (TL) measurement to using a fork length (FL) measurement[1]. At this time, the definition of the legal slot was changed from 42–60 inches TL to the equivalent 38–54 inches FL. In 2013 the annual recreational harvest limit was again reduced, to just two sturgeon, followed by a three-year period without recreational and commercial retention fisheries for sturgeon. In 2017, recreational and commercial retention fisheries were re-opened at a reduced overall harvest guideline and the legal-size slot limit was narrowed to 44–50 inches FL. This management strategy remained in effect through 2022.

Joint State White Sturgeon Management Accords

The 1997–2013 Accords mentioned above contained a variety of fishery regulations including: (1) size limits for recreational and commercial fisheries, (2) daily and annual catch limits for recreational anglers, (3) gear restrictions for recreational and commercial fisheries, (4) the allowance of target sturgeon seasons in the commercial fishery, and (5) protective measures for adult-size sturgeon.

One key aspect of most of the Accords through 2009 was the adoption of a three-year average harvestable number of sturgeon designed to reduce the risk of exceeding what were deemed sustainable levels. The total harvestable number has been allocated 80% for recreational fisheries and 20% for commercial fisheries since implementation of the first Accord in 1997.

The tenets of the Accords also allowed for modifications if new information suggested that a change was warranted. While the Accords were in effect, additional management actions were occasionally necessary. Abundance of legal-size fish did not increase as expected during the initial two years of the first Accord and, based on that new information, the annual harvestable number was reduced from 67,300 to 50,000 fish for 1999 fisheries.

In December 2002, the WFWC and OFWC (Commissions) established sturgeon management protocol to help guide the development of recreational and commercial fisheries during 2003–2005. Due to the declining trend in abundance, the Commissions adopted a 20% reduction in the

1 The conversions for size-slot measurements are as follows: 42-inch TL = 38-inch FL, 45-inch TL = 41-inch FL, 48-inch TL = 43-inch FL, and 60-inch TL = 54-inch FL.

annual harvestable number for 2003–2005from 50,000 fish to 40,000 fish. This reduction generated a conflict in season-shaping preferences among competing recreational interests for the areas downstream (estuary) and upstream (non-estuary) of the Wauna powerline crossing at RM 40. After much debate, the Commissions allocated 60% of the recreational share to the estuary fishery and 40% to the non-estuary (i.e., above Wauna) fishery.

By 2004, work with the Columbia River Recreational Advisory Group (CRRAG) had established that fishery goals differed for those who participated in the estuary fishery compared to those who participated in the non-estuary fishery. For the area upstream of the Wauna powerlines, anglers preferred retention opportunity throughout as much of the year as possible, especially during the spring and fall timeframes. A days-per-week approach was adopted to achieve this, with retention allowed on Thursdays, Fridays, and Saturdays, and catch-and-release allowed on non-retention days. Retention was closed during August and September to help ensure that the annual harvest guideline lasted through the fall timeframe. For the estuary fishery, anglers preferred retention opportunity seven days per week, and a retention season that lasted at least through July 4. To achieve this, beginning in May 2004, the minimum size limit for this area was increased to 45 inches TL to slow catch rates and prolong the retention season. This modification required the annual guideline for the estuary be reduced by 17% (from 19,200 fish to 16,000 fish) to maintain a comparable overall harvest rate. These basic season structures continued in subsequent Accords. Other changes to recreational fishery regulations enacted during 2004–2005 included reducing the annual limit from ten fish to five fish and requiring anglers to use only one single-point barbless hook.

The fourth Accord covered the three-year period from 2006–2008. The major tenets from the prior Accord remained intact, including the 40,000 fish annual harvestable number (36,800 actual fish with adjustments to the estuary guidelines), the 80% recreational and 20% commercial allocations, and the 60% estuary and 40% non-estuary recreational sub-allocations. The agreement also called for basic monitoring of marine mammal predation on white sturgeon.

This Accord also lowered the maximum size limit for green sturgeon in the commercial fishery from 66 inches TL to 60 inches TL to provide additional protection. However, when the southern DPS green sturgeon were ESA-listed as threatened (effective July 6, 2006) the states subsequently prohibited sales (and therefore retention) of green sturgeon from Columbia River commercial fisheries effective July 6, 2006 and retention of green sturgeon in Columbia River recreational fisheries effective January 1, 2007.

The 2006–2008 Accord for Columbia River sturgeon management was renewed for 2009 to allow for development of the Oregon WSCP and refine a strategy for long-term LCR white sturgeon management. Also in 2009, Oregon and Washington converted from a TL to a FL measurement standard for commercial fisheries.

Due in part to the quickly changing status of the population, the Accord was again renewed for just one year in 2010. The updated WFWC policy C-3001 called for a reduction in harvest of no less than 45% from the previous level, to address the declines in abundance and uncertainties surrounding the impact of predation. Negotiations between the Directors of the ODFW and WDFW resulted in a 2010 Accord that set the harvestable number at 24,000 fish for 2010, a 40% reduction from the previous guideline.

The commercial fishery has not been allowed to fish between Beacon Rock and Bonneville Dam since 1938. However, it wasn't until 1996 that the states adopted a recreational sturgeon sanctuary

just downstream from Bonneville Dam, prohibiting all sturgeon angling within this area to protect spawning white sturgeon. A boat-based catch-and-release fishery targeting sturgeon larger than the legal-size limit (oversize) had been intensifying in this area since 1990. Angling for sturgeon from boats was prohibited during May and June within this sanctuary, which extended 4.5 miles downstream to Beacon Rock. In 2000, this area closure was extended through mid-July to provide additional protection to the adult population.

In 2004, the duration of the sturgeon-angling prohibition within the spawning sanctuary was extended through the end of July and the bank fishery was incorporated into the closure. Washington adopted a regulation extending the sanctuary boundary an additional 1.6 miles further downstream to U.S. Coast Guard (USCG) Navigation Marker 85. Oregon did not adopt this change, and Washington rescinded the regulation in order to maintain concurrence with Oregon. Instead, the Accord was modified to include a "Best Fishing Practices" program that identified angling practices designed to maximize post-release survival rates in the oversize catch-and-release fishery. The spawning sanctuary boundary was eventually extended to USCG Navigation Marker 85 with the 2006–2008 Accord.

In 2010, the Directors agreed to move the downstream sanctuary boundary to USCG Navigation Marker 82, adjacent to the upper end of Skamania Island, closing about nine total miles of river to sturgeon angling. The closure period was extended an additional month, covering May through August. Also in 2010, the state of Oregon established a 1-mile spawning sanctuary in the LWR from the I-205 Bridge upstream to Willamette Falls during May 1–August 31 following documentation of successful white sturgeon spawning in this area. In 2013, the Willamette River sanctuary was expanded an additional 5.3 miles downstream to the Lake Oswego-Oak Grove Railroad Bridge.

A new three-year Accord was adopted by the Commissions in February of 2011 for 2011–2013. No changes were made to allocations among fisheries or areas, and spawning sanctuaries remained as adopted in 2010. However, harvest guidelines during the period were established as a 22.5% annual harvest rate or a cap of 17,000 total harvested fish, whichever was lower. This harvest level was to be derived annually from projected abundance in the coming year, based on in-year stock assessment abundance estimates. This resulted in a harvest guideline for 2011 that was 29% lower than the 2010 guideline.

The 2011–2013 Accord was amended for 2012 to reflect revised policy guidance based on continued concern for the status of the population. The 2012 Amendment specified that the harvest guideline be based on a 16% harvest rate of the legal-size segment of the population, or 10,400 white sturgeon in 2012 (39% lower than the 2011 guideline). Harvest sharing remained at 80/20 sport/commercial. Since this 2012 Amendment, no new or modified Accords have been adopted.

The WSCP was developed during 2008–2011 and adopted by the OFWC in August 2011. WDFW staff was integrally involved in development of Oregon's conservation plan and the completed plan has since been endorsed by WDFW. The Oregon WSCP examines factors and threats that may be limiting the abundance and productivity of LCR white sturgeon and identified critical unknowns and data gaps pursuant to these factors and threats. Population goals and objectives were developed, and strategies and actions identified to address the limiting factors and threats.

A Columbia River Fishery Management Workgroup, formed in 2012 to develop strategies and recommendations for restructuring Columbia River fisheries, developed two specific recommendations for LCR sturgeon fisheries. The first was to allocate only 90% of the harvest

guideline derived from the 16% harvest rate, holding 10% in reserve as a conservation buffer. In response to a reduced harvest guideline for 2013, each Commission adopted reduced statewide annual recreational bag limits, from five fish to two fish, effective April 2013. In addition, the Directors negotiated a 15% hold-back in the harvest guideline for combined 2013 fisheries. Harvest sharing remained at 80/20 sport/commercial. The 16% allowable harvest rate was reduced to 13.6%, resulting in a 10,105 fish harvest guideline for 2013.

The second recommendation by the Workgroup to the Commissions was to consider implementing rules prohibiting retention of LCR-origin white sturgeon if the forecasted decline in the 2012 legal-size abundance held true, which did turn out to be the case. In response, the OFWC adopted rules prohibiting retention of white sturgeon in the LCR, LWR, and Oregon coastal areas effective January 1, 2014. The WFWC adopted similar rules, prohibiting white sturgeon retention effective January 1, 2014 in the LCR, Washington coast, Puget Sound, and their tributaries. Retention of white sturgeon remained closed during 2014–2016.

In response to an increase in the estimated legal-size abundance over the three-year closure period, recreational and commercial retention fishing in the Columbia River re-opened in 2017with a significantly reduced harvest guideline(6,235 fish). Use of conservative annual harvest rates (~4%) remained in effect through 2022; however, due to declines in abundance of legal-size fish retention fisheries were not adopted during 2023 or 2024. See Table 8 for an annual summary of seasons and regulations for commercial fisheries. Table 9 summarizes annual regulations for LCR recreational fisheries.

Adjustments for Harvest outside the Mainstem Columbia River

Past harvest guidelines and allocations pertained specifically to harvest in the mainstem Columbia River and Select Areas. However, white sturgeon from the LCR migrate into and can be harvested in various Columbia River tributaries and coastal estuaries. Harvest outside the Columbia was generally low, averaging 2.6% of the legal abundance based on 1996–2007 tag recovery data but can be higher, as observed in 1996 when tag recoveries from fisheries outside the Columbia River increased to 5.3%. During that year, harvest of white sturgeon along the coast correspondingly peaked at a level more than double the average harvest for the previous decade. This phenomenon was recognized as a concern, so the Columbia River harvest guideline identified in the original 1997–1999 Joint State Accord was adopted with the contingency that it could change with a substantial increase in harvest outside the Columbia River system. To assure that future harvest guidelines and allocations remained equitable, the Commissions adopted policy in subsequent Accords calling for management of sturgeon fisheries outside the mainstem Columbia River to be consistent with Columbia River conservation and management needs.

The 2000 Willapa Bay Fishery Management Framework was developed to address this policy. The Willapa Framework incorporated white sturgeon harvest guidelines for commercial and recreational fisheries based on the historic relationship between Willapa Bay and Columbia River harvest levels. The Willapa Bay guideline was adjusted by the same (20%) reduction made to the Columbia River guideline in 2003, resulting in a 1,769 fish guideline. Following adoption of the plan, non-treaty commercial harvest in Willapa Bay declined; however, harvest in treaty fisheries in Grays Harbor and tributaries generally increased. Collectively, the combined harvest remained consistent from 1997–2013. The Willapa guideline was adjusted downward by 40% in 2010, by 29% in 2011, and by 39% in 2012 to keep in step with the reductions adopted for the LCR. Also in 2012, Washington implemented restrictions to Puget Sound recreational sturgeon fisheries. The

year-round retention fishery was reduced to two retention periods, June 1–30 and September 1–October 15. Effective January 1, 2014, retention of white sturgeon was prohibited along the Washington coast, including Puget Sound, and all coastal bays and tributaries. This prohibition remained in effect through 2021.

During 2004–2012, there was a significant shift in the winter and early-spring recreational sturgeon harvest from the mainstem Columbia River into the Willamette River. This shift may have been due to warmer winter water temperatures (2–5°F higher) in the Willamette and generally poor eulachon returns to the Columbia River through 2012 that appeared to attract more sturgeon (and recreational fishers) to the Willamette River during January–May. Due to this increasing trend, staff re-calculated harvest estimates (and adjusted guidelines) for the Willamette recreational fishery to account for harvest in excess of the 1986–1996 baseline level (or adjusted baseline in more recent years). The adjusted harvest estimates for the Willamette River fishery were added to harvest estimates for the Columbia River fishery upstream of the Wauna powerlines to reflect the total recreational harvest more accurately for this river section.

The harvest adjustments (increases) for the Willamette River fishery were based on information available from the ODFW creel survey and angler catch record card data during 2004–2009 (Table 5). Prior to 2009, the Willamette River creel program had been focused on estimating harvest of spring Chinook salmon. Accordingly, the program typically only operated from March through June of each year. To derive full-year catch estimates, including timeframes not included during creel surveys, staff used adjusted catch-record-card estimates. Catch estimates from catch record cards for the time period in which creel surveys were conducted were compared with catch estimates from creel surveys to derive a ratio of creel- and catch-record-derived harvest. This ratio was then applied to catch-record-card harvest estimates for time periods outside the creel survey period.

In 2009, the Willamette creel program was expanded to include the January–February timeframe but catches in the remainder of the open season were still generated by the catch card/creel survey ratio method. During 2010–2013, the creel survey was conducted during all timeframes in which sturgeon retention was allowed, and no expansions for non-sampled periods were needed. Based on the above methods, annual white sturgeon harvest in the LWR averaged 1,531 fish (range 989–2,206) during 1986–1996, 1,871 fish (range 1,263–2,811) during 1997–2003, and 5,193 fish (range 2,327–9,148) during 2004–2010. During 2010–2014, the LWR recreational sturgeon fishery was managed under a separate harvest guideline. The 2012 Amendment to the Accord specified a 1,768 fish guideline for the Willamette River for that year, including the baseline harvest of 520 sturgeon. The guideline for 2013, including the 520 fish baseline, was 1,733 fish. When retention fisheries were reinstated in 2017, the harvest-baseline concept for the Willamette River was eliminated to improve harvest rate accounting.

Beginning in 2018, harvest of white sturgeon in the Cowlitz River was accounted for in the mainstem Columbia River fishery upstream of Wauna estimates. A monitoring program was initiated to collect catch per unit effort (CPUE) information and gain a qualitative understanding of sturgeon fishing effort within the Cowlitz. In 2018 only one kept fish was encountered by samplers and in 2019 no kept fish were encountered by samplers. In 2019, a conservative harvest estimate of 50 fish was agreed upon to account for poor sampler coverage. In 2020 the monitoring program was revised to include a quantitative estimate of effort. Based on information that suggested nearly all of the sturgeon fishing effort occurs out of or near two boat launch locations between Olequa Creek and the confluence with the Columbia River, an access-

access monitoring design was employed. On all open weekend dates, staff monitored both locations and interviewed sturgeon anglers for catch and trip length. Average number of anglers per boat, the ratio of sturgeon/salmon anglers, and average CPUE of that day were applied to any boat trailers or bank anglers that remained when staff finished their survey. On all weekend openers WDFW assumes greater than 90 percent of anglers were interviewed by staff.

2024 Management Actions

ODFW and WDFW staff met with the CRRAG and the Columbia River Commercial Advisory Group (CRCAG) in January 2024 to provide an update on the population status of LCR white sturgeon based on the 2023 stock assessment. Estimates generated from the 2022 population survey indicated the abundance of 38–54-inch FL fish had continued to decline and were at the lowest level since 2012. Additionally, the proportion of juveniles in the population showed continued declines.

Based on this information, conservation concerns expressed by CRRAG and CRCAG advisors, and the increasing difficulty in prosecuting retention fisheries with meaningful harvest opportunity, the states did not adopt any retention opportunity for LCR white sturgeon in either commercial or recreational fisheries during 2024. In February 2024, staff distributed information to the advisor groups and the public explaining this decision.

Sturgeon Fisheries

Reduced salmon fishing opportunities during the mid-1970s through the late 1990s greatly increased the popularity and importance of sturgeon for both commercial and recreational fisheries. The healthy white sturgeon population allowed the commercial industry to develop fisheries and markets in a time when commercial salmon fishing opportunities had been drastically reduced. A similar lack of stable recreational salmon fisheries resulted in increased popularity of sturgeon angling since the mid-1980s. Over time, reduced white sturgeon harvest guidelines impacted all Columbia River sturgeon fisheries. Based on Commission guidance, retention of white sturgeon in Columbia River commercial and recreational fisheries downstream of Bonneville Dam was prohibited during 2014–2016. These retention fisheries were closed again beginning in 2023.

Past Commercial Sturgeon Fisheries

Since the late 19th century, commercial harvest of sturgeon remained very low until the mid-1940s. Through 1968, annual landings only occasionally exceeded 5,000 fish. During 1969–2009, landings exceeded 5,000 fish annually except in 1991. Since 2010, landings have been less than 4,400 fish annually. Harvest peaked in the late 1970s through the early 1980s with annual landings ranging from 9,400 to 22,800 fish. During the 1990s, catches ranged from a low of 3,800 fish in 1991 to a high of 13,900 fish in 1998. During 1997–2013, commercial sturgeon fisheries were managed to remain within harvest guidelines while maximizing economic benefit and achieving conservation objectives for other species. Harvest guidelines and landings estimates are provided in Table 6.

Plans for distributing the commercial allocation among the various fishing seasons were developed annually with input from the CRCAG to provide harvest opportunities throughout the year and maintain optimum market value. Weekly landing limits became an important tool in maintaining

consistent commercial fisheries since first used in 2002. As noted earlier in this report, the retention of green sturgeon has been prohibited in commercial fisheries since July 2006. Based on guidance from both commissions, white sturgeon retention and sales in non-treaty commercial fisheries was prohibited from January 2014 through May 2017. Retention fisheries were reinstated in 2017 with annual commercial harvest guidelines of less than 1,245 fish. Harvest in commercial fisheries was again closed beginning in 2023. Columbia River non-treaty commercial season structures and regulations are described in Table 8.

2024 Commercial Fishery

Commercial harvest of white sturgeon was not allowed in 2024 due to the states' concerns about the abundance of legal-sized fish and on-going issues with productivity in the population downstream of Bonneville Dam.

Past Recreational Sturgeon Fisheries

Mainstem Columbia River recreational harvest guidelines for white sturgeon decreased steadily from approximately 54,000 fish in 1997 to about 6,000 fish in 2013 in response to declining abundance of legal-sized white sturgeon (Table 4). During this time, sturgeon angler trips declined from over 200,000 trips per year to just over 33,000 trips in 2013. Based on guidance from the OFWC and WFWC in December 2013, LCR recreational sturgeon fisheries closed to retention effective January 1, 2014. Sturgeon retention fisheries remained closed through 2016 downstream of Bonneville Dam and in the LWR below Willamette Falls. Catch-and-release angling remained open during the retention closure; however, sturgeon angler trips in each of those years decreased by about 90% from 2013 levels.

During this retention closure, the abundance of legal and over-legal white sturgeon increased, and the states approved the resumption of limited retention fisheries for white sturgeon in the LCR and LWR beginning in 2017. For that year, an overall recreational catch guideline of 4,990 white sturgeon was established based on a 3.8% harvest rate on the abundance of 44–50-inch TL fish in the legal-size population and harvest was allocated to the Columbia River estuary (60%), Columbia River between Wauna and Bonneville Dam (25%), and lower Willamette River (15%). Despite the conservative harvest guidelines and restrictive daily and annual bag limits, the 2017 retention fisheries were very popular and produced a total harvest of 3,665 legal-sized white sturgeon from 23,700 angler trips. Anglers in the estuary made 13,700 trips and kept 3,235 legal size sturgeon during five retention days in June and anglers in the Columbia upstream of Wauna made 10,000 trips and kept 430 legal size sturgeon during three open retention days in October. ODFW did not adopt a retention fishery in the lower Willamette River in 2017 given the potential to exceed the 700 fish guideline in a one-day fishery.

The states approved similar sturgeon fisheries for the Columbia River in 2018–2022. Based on input from the CRRAG, the states shifted the start of the estuary fishery to mid-May, when catch rates would be lower, to increase the number of retention days and moved the start of the fishery upstream of Wauna to mid-September when catch rates would be higher to increase the likelihood of achieving the quota for that area. Harvest in the estuary fishery averaged 1,820 white sturgeon during 2018–2022, ranging from zero fish in 2020, when issues related to the COVID-19 pandemic prevented the states from adopting a spring fishery, to 2,838 fish in 2019. Harvest in the fishery upstream of Wauna during those years ranged from 685 to 1,049 fish, averaging 870 fish. ODFW

adopted retention fisheries for white sturgeon in the Willamette River in 2020 and 2021, which produced respective harvest of 167 and 87 white sturgeon.

Abundance metrics for the lower Columbia River white sturgeon population remained mixed in 2022. The abundance of legal-size fish was estimated to be 78,400 fish, which was the lowest abundance for this segment of the population since 2012. Also of concern, total white sturgeon abundance had declined from over one million fish in 2010, with a high proportion of juveniles in the population, to 180,000 fish in 2022. While the legal abundance was enough to support some harvest, providing a meaningful fishing opportunity for recreational anglers would be challenging without risk of exceeding catch guidelines at the reduced harvest levels. The states ultimately decided not to adopt any retention fisheries for white sturgeon in the lower Columbia or lower Willamette rivers in 2023. Table 9 summarizes annual recreational regulations, and Tables 4, 5, and 7 display harvest guidelines and catch data.

2024 Recreational Sturgeon Fishery

Staff met with the CRRAG in January 2024 and presented a status update for white sturgeon. While the abundance of juvenile and over-legal sturgeon improved in 2023, the abundance of legal-size sturgeon continued to decline, with 64,400 fish estimated for that year. Furthermore, projections showed the abundance of legal-sized sturgeon would likely continue to decline over the short term. Staff advised the CRRAG that the states did not recommend any harvest opportunity for sturgeon in sport or commercial fisheries again in 2024. Most of the advisors expressed concern over the status of the white sturgeon population and agreed with the recommendation. On February 9, 2024, staff distributed a Columbia River fishery update to provide background information and to inform the public the states would not propose any retention fisheries for sturgeon in 2024.

Below Wauna (Estuary)

The states did not adopt a retention fishery for white sturgeon in the estuary in 2024. Anglers in the estuary made 1,263 trips for catch-and-release sturgeon angling in 2024 and released 509 sublegal, 1,896 legal, and 2,076 over-legal white sturgeon.

Above Wauna (non-Estuary)

The states did not adopt a retention fishery for white sturgeon in the lower Columbia River upstream of Wauna in 2024. Anglers in the lower Columbia River upstream of the Wauna power lines made 933 trips for catch-and-release sturgeon angling through September 30, 2024, and released 368 sublegal, 310 legal, and 333 over-legal white sturgeon. Trips and catch for October through December are not available.

Willamette River

ODFW did not adopt a retention fishery for sturgeon in the lower Willamette River for 2024. Anglers in the lower Willamette River made 1,654 trips for catch-and-release sturgeon angling during March through June 2024 and released 960 sublegal, 1,401 legal, and 1,097 over-legal white sturgeon.

Summary of 2024 Recreational Fisheries

Sturgeon retention was not opened in the LCR and LWR recreational fisheries during 2024. Sturgeon anglers made a minimum of 2,196 total trips on the LCR and 1,654 trips in the LWR in 2024 for catch-and-release angling. All sturgeon fishery monitoring was done incidentally to creel surveys for salmon/steelhead fisheries and sturgeon effort conducted outside of these fishing

seasons was not monitored in 2024.

Expectations for 2025 Lower Columbia River Sturgeon Fisheries

Per permanent regulations, recreational sturgeon fisheries are restricted to catch-and-release only in the LCR and LWR, unless retention seasons are adopted.

Joint state staff will not be recommending retention of white sturgeon for either recreational or non-treaty commercial fisheries downstream of Bonneville Dam in 2025. While data supports the conclusion that the population could support limited harvest, it has become difficult to prosecute retention fisheries with meaningful harvest opportunity within the legal-size abundance. Permanent regulations allow for recreational catch-and-release sturgeon angling all year, except angling for sturgeon is prohibited May 1 through August 31 within the sanctuary areas designated below Bonneville Dam and Willamette Falls.

STURGEON MANAGEMENT AND FISHERIES UPSTREAM OF BONNEVILLE DAM

Stock Status

The Columbia River white sturgeon population historically ranged throughout the Columbia basin, upstream into Idaho and Canada; however, with the construction of Bonneville Dam in 1938, the population became segregated and fish residing upstream could no longer migrate freely between freshwater and marine environments. The population was further segregated with the completion of McNary Dam in 1953, The Dalles Dam in 1957, and John Day Dam in 1968, resulting in functionally separate populations in Bonneville, The Dalles, John Day, and McNary pools. Today, a total of 12 dams on the mainstem Columbia River, from Grand Coulee Dam to Bonneville Dam, and five on the lower Snake River, from Hells Canyon Dam to Ice Harbor Dam, fragment white sturgeon populations throughout the basin. Inaccessibility to the marine environment and habitat alterations, primarily due to hydroelectric development and upstream navigation, has rendered these populations less productive than those residing downstream of Bonneville Dam.

The SMTF, established within the framework of the *U.S. v. Oregon* Management Agreement, consists of representatives from Oregon, Washington, and the Columbia River treaty Indian tribes (Nez Perce, Umatilla, Warm Springs, and Yakama). The purpose of the SMTF is to review sturgeon management issues and set harvest management guidelines for the upcoming year in the reservoirs between Bonneville and McNary dams, hereafter referred to as the Zone 6 management area.

Since 1994, sturgeon fisheries occurring in Zone 6 are managed separately in accordance with reservoir-specific harvest guidelines set forth by the SMTF (Table 11). Abundance of sturgeon populations in each of the three Zone 6 pools is estimated every three years to monitor the effects of hydro-system operations and fishery management strategies. Mark-recapture population estimates are derived using directed sampling with gillnets and setlines. Significant harvest reductions were enacted beginning in 1988 and abundance in all three pools increased as a result

of reduced harvest and other mitigation efforts. Additionally, trends in cohort strength have varied cyclically in correlation with water-year types (e.g., high-flow years versus low-flow years). High-flow years generally yield more recruits and subsequent increased harvest guidelines as these relatively larger cohorts move into the legal-size class, whereas low-flow years generally yield the opposite effect.

The most recent estimates of legal-size abundance are 17,592 38–54-inch FL fish in Bonneville Pool (2024), 9,982 43–54-inch FL fish in The Dalles Pool (2023) and 5,660 43–54-inch FL fish in John Day Pool (2022). Prior estimates back to 1976 of 33–65-inch FL (36–72-inch TL) fish are presented in Table 12. Recent trends include an increase in abundance estimates of legal-sized fish for The Dalles and Bonneville pools since 2017 and 2018, respectively, and harvest guidelines were increased. The 2024 abundance estimate for legal-sized fish in Bonneville Pool increased from the previous 2021 estimate, however lower recruitment during recent years has led to the lowest abundance of juvenile sturgeon since 2003. The Bonneville Pool guideline increased in 2022 and will be revisited in 2025 by the SMTF. During 2024, The Dalles Pool exploitation rate on legal-size fish was reduced from 12 percent to 10 percent, but due to the higher abundance of legal-size fish estimated from the 2023 stock assessment this resulted in a higher overall harvest guideline. The John Day Pool harvest guideline was left unchanged in 2023 as the stock assessment analyses indicate that legal-size abundance has remained relatively static.

Sturgeon Fisheries

Sturgeon fisheries in Zone 6 consist of treaty commercial and subsistence fisheries and non-treaty recreational fisheries. For treaty fisheries, three main gear types are used which consist of hook-and-line, setlines, and gillnets, although a small number of legal-sized sturgeon are also caught in hoop-nets. Non-treaty recreational fishing is restricted to hook-and-line only.

Pool-specific harvest guidelines are shaped to meet fishery demands and harvest allocations are split between the treaty commercial and non-treaty recreational fisheries. Within each pool, the harvest allocations vary with equal harvest shares allocated to recreational and treaty commercial fisheries in Bonneville Pool, and a larger allocation for treaty commercial fisheries in The Dalles and John Day pools. Treaty harvest of sturgeon for subsistence purposes is considered separate and is not included against the commercial catch guidelines. Subsistence catch is estimated through a creel monitoring program conducted by the tribes and reported to the SMTF.

Due to continued poor annual production of sturgeon in the Snake River upstream of Ice Harbor Dam, the WFWC adopted permanent rules prohibiting retention of sturgeon in this area effective July 1, 2015. On March 9, 2020, the WFWC adopted permanent rules to prohibit retention of sturgeon in recreational fisheries upstream of McNary Dam, in the McNary Pool/Hanford Reach, and in the lower Snake River (downstream of Ice Harbor Dam). Additionally, all sturgeon spawning sanctuaries, located just downstream of each of the mainstem Columbia dams from Bonneville to Priest Rapids and Ice Harbor Dam in the lower Snake River, are closed to sturgeon angling (both for retention and catch-and-release) between May 1 and August 31, annually. The sturgeon spawning sanctuaries downstream of Priest Rapids Dam, within the Hanford Reach area, and downstream of McNary Dam were also extended spatially – see the current Washington and Oregon sport fishing regulations for more detail concerning area-specific fishing regulations (www.wdfw.wa.gov/fishing/regulations; www.myodfw.com/fishing).

2024 Treaty Fisheries

In 2024, the slot limit sizes for sturgeon retention were 43–54 inches FL in The Dalles and John Day pools and 38–54 inches FL in the Bonneville Pool. Seasons consisted of a January setline fishery and a winter fishery using setline gear beginning in February and ending in early March.

During the January setline fishery, 308 sturgeon were harvested from Bonneville Pool, 332 sturgeon from The Dalles Pool, and 76 from the John Day Pool. There were no winter gillnet fishery openings in February or March. A setline fishery occurred in the John Day Pool from February 13–20 and from March 7–11. Setline fishing occurred in The Dalles Pool from February 13–20. In the Bonneville Pool, setline fishing occurred from February 10–12 and March 2–4. During the February/March setline fisheries, landings totaled 1,498 fish, which included 822 in Bonneville Pool, 541 in The Dalles Pool, and 251 in John Day Pool (Table 14). There were no summer or late-fall setline fisheries in 2024 since the entire commercial treaty guidelines for the Bonneville and John Day pools were harvested during the winter fisheries (Table 16).

Commercial season harvest totals were 165%, 103%, and 98% of the respective harvest guidelines for Bonneville, The Dalles, and John Day pools (Table 16). Treaty subsistence sturgeon fishing is open year-round and normally involves the retention of legal-sized sturgeon caught in association with other commercial and subsistence fishing activity. The subsistence catch in 2024 is estimated to be 895 fish, or 408% of the previous 5-year average of 220 sturgeon (Table 14).

2024 Non-Treaty Recreational Fisheries

Recreational sturgeon-retention fisheries have historically begun on January 1 in the Zone 6 reservoirs per permanent rule and continue until the reservoir-specific guideline is met (Table 15). On October 31, 2023, the states held a Joint State hearing to consider altering the seven days-per-week seasons in Bonneville Pool and The Dalles Pool. Three days-per-week seasons on Mondays, Wednesdays, and Saturdays were adopted for both fisheries. The fisheries were adopted to open on Monday, January 1, then follow the days-per-week structure until February 7 in Bonneville Pool and January 29 in The Dalles Pool. Permanent rules were not altered in John Day Pool for the 2024 season. After guidelines are met and retention is closed for the year, catch-and-release angling is allowed, except within the designated sanctuary areas downstream of the dam tailraces between May 1 and August 31.

Opening day in Bonneville Pool saw particularly high levels of effort and harvest, with 488 fish harvested representing a 184% increase over the 2023 opening day total. The surge in participation and catch success meant the guideline would likely be reached much earlier than forecasted, prompting the states to close the retention fishery after two days (the end of January 3). This decision, made during a Joint State hearing on January 3, ensured a minimal exceedance of current established harvest limits. In Bonneville Pool, the 2024 harvest was estimated at 692 fish, representing 103% of the guideline. Overall, effort and success rates were extremely high, with a 90% rise in overall effort and an 80% increase in catch rates compared to 2023.

The Dalles Pool fishery experienced similar increases in effort and harvest during the 2024 season, with a total harvest of 271 fish, equivalent to 99% of the revised guideline. Harvest on opening day was near quadruple the previous year's opening day total, with a 297% increase, reflecting both higher angler effort and improved catch rates. Across the entire retention season, average catch rates rose by 111%, and effort doubled compared to 2023. This also led to an early closure of the retention fishery after two days and 189 fish harvested, as decided at the same Joint State

hearing mentioned above. After the SMTF increased the non-treaty guideline from 190 to 275 fish in mid-January, two additional retention days, February 24 and February 28, were adopted during a Joint State hearing. This resulted in a final season-total harvest of 271 fish in The Dalles Pool.

Effort and harvest in the John Day Pool during 2024 were similar to what occurred during the 2020–2022 seasons. Catch rates were steady throughout the season, with slightly more harvest in January and slightly less in March relative to these years. This is in contrast with 2023, where milder weather conditions and warmer water temperatures allowed anglers to fish more often and for longer periods of time during periods of relatively high catch rates. This led to a closure on January 29, 2023, the shortest retention season on record in the John Day Pool. Retention during 2024 was closed on March 14 after a season length of 74 days, similar to the average season length of 71 days between 2020–2022.

The recreational sturgeon fisheries in the lower Snake River (downstream of Ice Harbor Dam) and in McNary Pool/Hanford Reach were closed to retention beginning in 2014 and 2021, respectively, under permanent regulations.

Expectations for 2025 Sturgeon Fisheries upstream of Bonneville Dam

As per permanent regulations, treaty Indian winter commercial seasons include a setline fishery during January 1–31. January setline fisheries may be adjusted in-season, if warranted. Additional gillnet or setline fisheries are typically scheduled annually to occur during February–March. Setline fisheries are more likely to be adopted than gillnet fisheries in these months.

Prior to 2022, recreational retention fisheries in Bonneville, The Dalles, and John Day pools began January 1 per permanent regulations, and continued until the reservoir-specific guidelines were met. However, prior to the 2022 recreational fishery in The Dalles Pool, Oregon and Washington held a Joint State hearing to consider a days-per-week structure to the retention fishery due to the rate at which the catch guideline had been met and exceeded during 2019 and 2021. A days-per-week approach helps facilitate catch monitoring, slows harvest accrual, and allows sufficient time between open retention days for the states to take action when it is required. Oregon and Washington adopted this season structure for Bonneville and The Dalles pools during 2023 and 2024.

A Joint State hearing was held by the states on November 8, 2024 and a two days-per-week structure was adopted for the 2025 retention fisheries in Bonneville and The Dalles pools. No changes to the permanent season structure in John Day Pool were recommended at this hearing as expected season length was similar to four of the previous five years, but the states continue to evaluate annually whether modification is necessary. The SMTF will meet in January 2025 to review updated stock assessment data and will consider new harvest guidelines for Bonneville Pool.

SMELT MANAGEMENT AND FISHERIES

Stock Status

Of the numerous streams and rivers occupied by the southern Distinct Population Segment of eulachon (locally referred to as Columbia River smelt), the Columbia River has historically supported the largest spawning run. Eulachon return to the Columbia River to spawn when they are 2–7 years old, with a majority returning at ages three and four. The fish may begin to enter the Columbia River in November and December, and typically reach peak spawner abundance in February or March. Depending on environmental conditions and subsequent run timing, the presence of adult fish and larvae have been documented in the Columbia River through April and into May. Eulachon typically spawn in the mainstem Columbia River downstream of Bonneville Dam and in the Cowlitz River, with inconsistent runs and spawning events also occurring in the Grays, Skamokawa, Elochoman, Lewis, Kalama, and Sandy rivers.

Eulachon run sizes to the Columbia River during the past two decades have varied, with noticeable peaks in 2001–2003 and 2013–2016 and a low in 2018. Since 2019, run sizes have been higher than the 10-year average, with runs during 2022 and 2023 being the two highest since 2011. Since 2022 run sizes have been following a decreasing trend.

Adult Returns and Larval Recruitment

Historically, commercial landings were used to estimate the size of the eulachon spawning run within the Columbia River basin (Table 18); however, the documentation of effort, which would have provided the context necessary to evaluate the bias of market demand, does not exist. In current eulachon fisheries, catch per unit of effort is defined as the total weight (pounds) of eulachon caught per landing, providing the context necessary to estimate run size (Tables 19 and 20).

Since 2011, eulachon larval density data collected during the winter and spring, has been combined with information on daily river flow and adult sizes, fecundity and sex ratios to derive an annual estimate of spawning stock biomass (SSB; expressed in pounds) for spawning areas upstream of the standard mainstem Columbia River sample site at RM 34 (Clifton Channel –Price Island transect). The SSB is a conservative estimate of the minimum number of spawning adults needed to produce the eulachon larval outflow observed and assumes an equal male-to-female ratio on the spawning grounds. The actual number of spawning adults is likely greater than the SSB estimate when considering egg and larvae mortalities upstream of the sampling site, spawning activity downstream of the sampling site, and predation. The total number of spawning adult fish up until 2024 was estimated using the observed historical average of 11.16 adult eulachon per pound. For 2024, it was estimated using biological data collected for adult eulachon caught in the mainstem commercial fishery.

The SSB for the Columbia River increased annually from 2012 through 2014, peaking at an estimated 16,600,000 pounds, and then declined to an estimated 400,000 pounds in 2018. SSB improved to 4,205,000 pounds in 2019. During the spring of 2020, SSB sampling was truncated due to fieldwork restrictions enacted to comply with COVID-19 pandemic precautions as mandated by the Governor of Washington (proclamation 20-25). Based on larval sampling during the ten-week sampling season, a minimum of 1,900,000 pounds of eulachon contributed to the

return in 2020. If the progression of the run size was similar before and after the end of sampling, we can be reasonably confident that eulachon abundance was similar to, or potentially higher than, the 4,205,000 pounds estimated for 2019. In 2021 the SSB trend continued to increase and was estimated at 9,000,000 pounds. Peak larval outflow, measured as larval and egg density per cubic meter, typically occurs between early March and mid-April. In 2019 peak outflow was observed the first week of April, which was similar timing to the 2021 and 2022 peaks. The SSB for 2022 was estimated at 18,300,000 pounds, double the estimate for the previous year and the highest since the SSB was first calculated in 2011. In 2023 the SSB estimate was 17,000,000, only slightly lower than the previous year, and the second highest on record. In contrast to the previous years, the peak larval outflow was observed during the second week of May, which is considerably later than usual.

In 2024, the field season spanned 21 weeks from January 5 through May 16, with sampling conducted in 18 of those weeks. Due to unsafe weather conditions and a temporary WDFW agency-wide moratorium on field activities, sampling was missed one week in January and two weeks in February. To target anticipated peak larval outflow, sampling efforts were increased to twice weekly during the third week of March and the first and third weeks of April. The highest observed larval outflow occurred during the first week of April. The SSB for 2024 is estimated at 10,400,000 pounds, a notable decrease compared to the previous two years, but still greater than the 10-year average of 8,600,000 pounds.

The total annual run size includes harvest (commercial, recreational, and tribal subsistence) along with the SSB estimate to account for fish removed before spawning occurred (Table 19). These run size numbers (and SSB estimates) indicate moderate to high levels of larval outflow in 2013–2016, a drop in 2017–2018, and a return to higher levels from 2019–2024. However, high larval outflows are not necessarily correlated with a strong cohort and subsequently provide little information as to the strength of future returning year classes due to the high variability in marine survival.

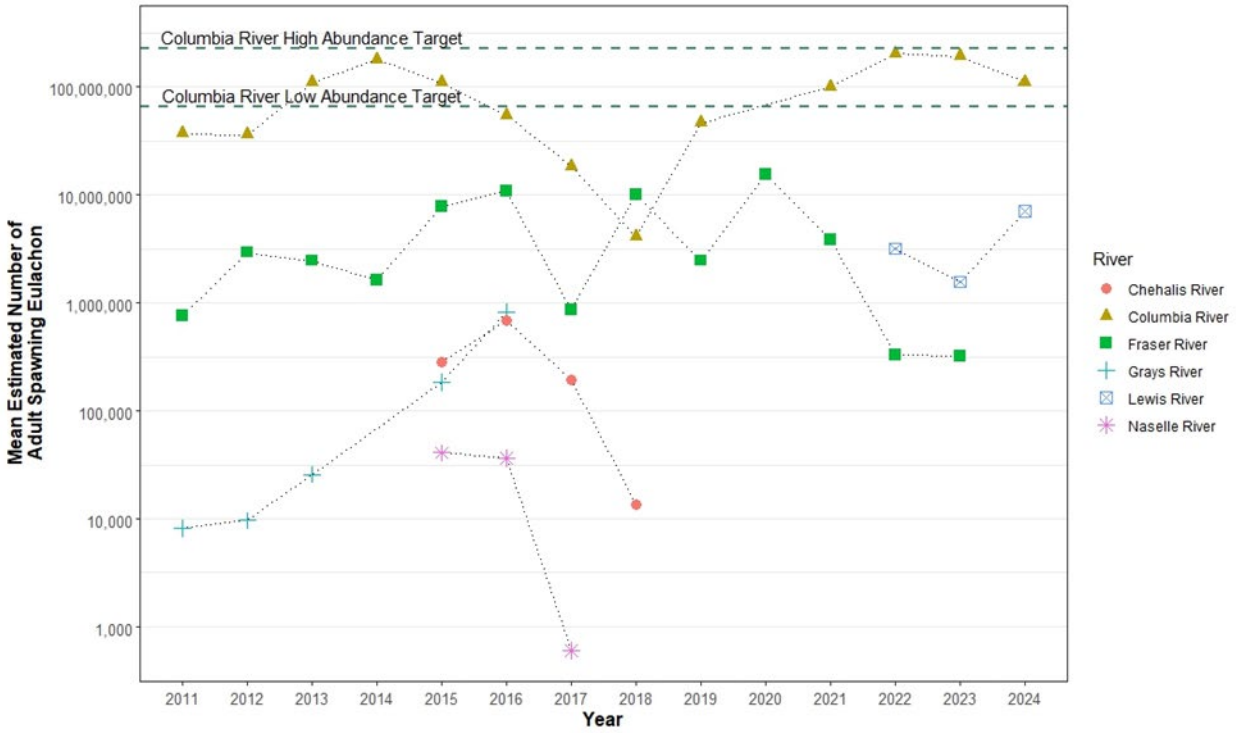

Figure 2. The estimated number of eulachon spawning in the Columbia, Fraser, Chehalis, Naselle, and Grays rivers in 2011–2024. Estimates are calculated by multiplying the annual Spawning Stock Biomass (SSB) total weight by a standard 11.16 fish per pound. Estimates for the Fraser River derived from data provided by the Canadian Department of Fisheries and Oceans (DFO). The Fraser River estimate for 2024 was not finalized at the time of this publication. No estimate for the Columbia River is available for 2020 due to truncated sampling.

In 2005, Columbia River average larval densities reached the lowest recorded levels since the inception of the larval sampling program and remained depressed for at least six years (longer than the average generation cycle for the species; Figure 3 and Table 20). Despite several low adult runs in preceding years; the larval densities rose during 2011 and reached a then-record level in 2014. Prior to 2011, annual eulachon larval densities for the mainstem Columbia River aligned well with the adult CPUE trend from commercial mainstem fisheries (Figure 3). Commercial CPUE data show that a similar trend occurred after the initial population crash in the mid-1990s—i.e., low larval production in 1994–2000 (7 years) followed by a spike in adult returns and larval densities in 2001. Strict restrictions imposed on fishing periods during the 2014–2018 commercial fishery altered the fishing effort around the tidal cycle and reduced the strength of the relationship between larval density and CPUE.

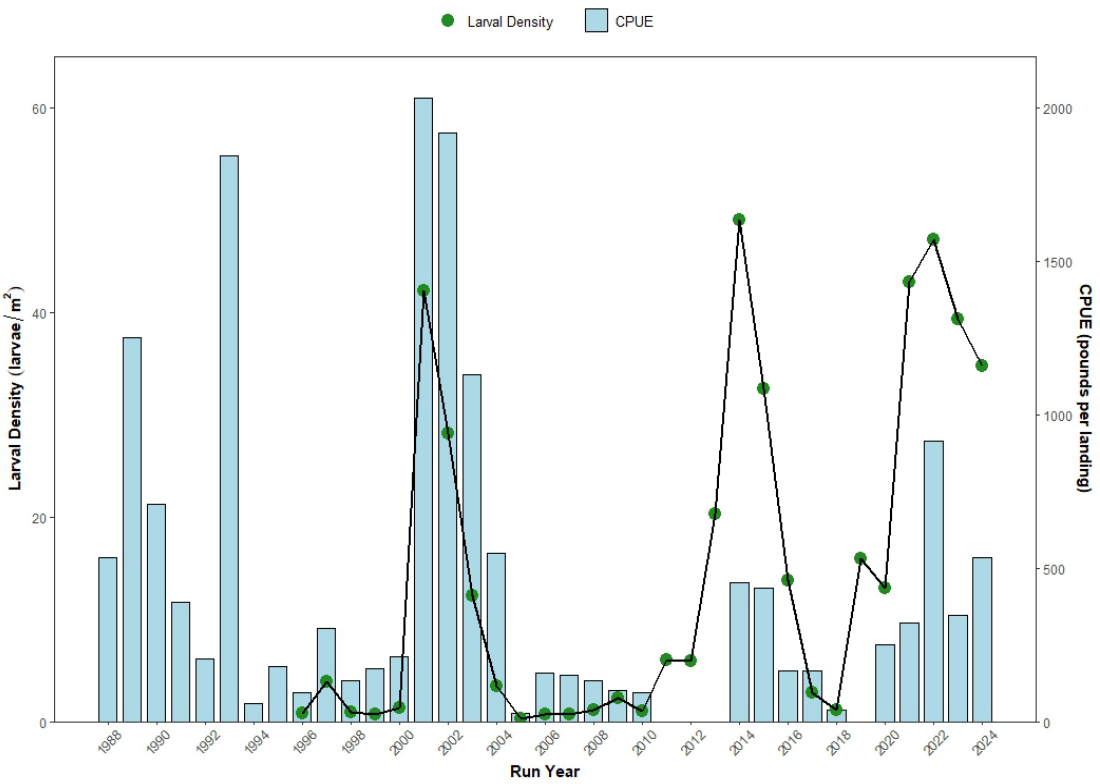

Figure 3. Comparison of adult eulachon catch per unit effort (CPUE) in terms of total pounds per landing in the mainstem Columbia River commercial gillnet fishery and mean larval densities captured at mainstem Columbia index sites using plankton tow nets, 1988–2024. Commercial fisheries CPUE data is not available for 2011–2013 or 2019 due to no fisheries occurring in those years.

Based on the similarity in trends between landings data and the larval densities observed, the older brood years (2017 and 2018) produced relatively small numbers of larvae in comparison to recent brood years (2019 and 2020). For example, the 2017 larval density was very low, and the 2018 estimate was only 1.1 larvae per cubic meter, the lowest since 2010. However, in 2019, it was the younger 2016 and 2017 brood years that contributed the most to the spawning run (most fish returned at Age-2 and Age-3 in 2019). The age composition of the 2020 eulachon run consisted of mostly Age-3 and Age-4 fish, resulting from spawning events in 2016 and 2017. Additionally, the 2021 run shows the majority of returning fish as Age-3, followed by Age-4, pointing to a relatively high number of returning fish from the low larval output in 2018. The 2022 run was composed mostly of Age-3 and Age-4 fish from 2019 and 2020 brood years. Similarly, the age structure of the 2023 run was consistent with age structures observed during 2021 and 2022 with the majority of the run returning as Age-3 and Age-4 fish (45% and 42% respectively). In 2024, the age structure of the run shifted to a much higher ratio of Age-4 fish, comprising 56% of the total run. These fish originated from the 2020 brood year, which produced considerably fewer larvae than the 2021 brood year. In contrast, Age-3 fish from the 2021 brood year made up just 30% of the run.

The data here indicate a bottleneck in survival occurs either during the larvae's transition from freshwater to saltwater, or during juvenile rearing in the ocean prior to their run back to freshwater and thus larval densities are no longer considered when forecasting run sizes.

Freshwater to Saltwater Transition

Environmental conditions in freshwater affect the incubation time (the period from egg fertilization to hatching), timing and duration of the larval out-migration, nearshore ocean distribution of larvae, and overall larval survival during the transition from freshwater to saltwater. Specifically, the timing and availability of adequate water temperatures and flow volume may affect where larvae are located (i.e., within the estuary or into marine waters) when transitioning from endogenous yolk-larvae to exogenously feeding larvae. Eulachon larvae have fully developed sensory systems, mouths, and digestive tracts at the time of yolk sac absorption, indicating that prey availability at the transition to first feeding is critical to survival.

In 2020 and 2022 the winter/spring Columbia River water temperatures were warm with near normal flows suggesting an average downstream transport time but faster than average development. The temperatures in early 2021 and 2023 were colder, ideal for early-season larvae, but increased to warmer conditions which, along with poor flow conditions, could have adversely impacted the later outflowing larvae. Although plume volume and particle residence time data are not available after 2018, conditions appear to be neutral to negative for early life-stage survival of 2020 and 2022 brood year fish (fish returning in 2024 as Age-5 and Age 3, respectively), and increasingly negative for 2021 and 2023 brood year fish based on warmer water temperatures and flow anomalies less than the historical median (fish returning in 2025 as Age-4 and Age-2 respectively).

Ocean Phase

All southern DPS eulachon stock groups have remained depressed since the coast-wide collapse, suggesting that protracted poor ocean conditions are prevalent off the Pacific Coast. Various indices of oceanic environmental conditions, including the Pacific Decadal Oscillation Index (PDO; https://www.ncdc.noaa.gov/teleconnections/pdo/),the Southern Oscillation Index (SOI; https://www.ncdc.noaa.gov/teleconnections/enso/indicators/soi/), and the Oceanic Niño Index (ONI; https://www.cpc.ncep.noaa.gov/data/indices/oni.ascii.txt) may serve as indicators to estimate eulachon survival during the ocean-phase. For example, warm PDO phases coincide with enhanced coastal ocean biological productivity in Alaska and inhibited productivity off the west coast of the contiguous United States. From 2014 through 2016, PDO was trending in a warm phase, which signifies unfavorable ocean conditions for early eulachon survival. Cohorts that were produced from the strong adult runs in 2014–2016, did not materialize as strong adult runs in the following years. However, in 2017 and 2018, there was a decrease in the PDO values which may have led to improved ocean conditions for cohorts rearing in the marine environment at this time. Values increased to neutral levels in 2019, then decreased again from 2020–2024 to some of the lowest values in the 25-year time series. These favorable conditions have coincided with the relatively strong returns observed during recent years. Other indices of ocean environmental condition (SOI and ONI) likewise suggest that conditions since 2019 in the ocean have overall been favorable, particularly in 2021 and 2022, but have trended in a direction less favorable to eulachon marine survival since 2023.

The productivity of copepods, a primary prey base for eulachon off the Pacific Northwest coast, is highly affected by coastal upwelling; however, upwelling alone cannot predict copepod composition. Strong upwelling is a positive indicator for ocean survival of eulachon, but only if the deep source waters are cold and nutrient rich. Copepods sampled off Newport, Oregon from late 2010 through early 2014 were comprised primarily of nutritionally rich, cold-water northern

species, though upwelling had been weak during 2014. Upwelling improved in 2015, but due to the extended period of warm water conditions, the seasonal shift from a warm winter copepod community to a cold summer community did not occur, thereby limiting the availability of nutrient rich prey. The upwelling in 2016 and 2017 was extremely weak and because of continued warm water conditions, the eulachon food base remained dominated by the nutrient-poor warm-water species. In 2018 and 2019, upwelling improved and the copepod community transitioned back to the northern cold-water species indicating that the marine ecosystem may be returning to normal. In particular, the 2019 northern copepod anomaly was higher than normal with the trend continuing to increase through 2020, which had the highest northern copepod anomaly since 2008. The 2021 northern copepod anomaly was similar to the previous year. The 2022 and 2023 northern copepod anomalies were slightly less positive and more neutral than previous years but still in the positive range to support productive foraging conditions. In 2024 the northern copepod anomaly remained positive, but declined again by approximately half, suggesting foraging conditions were not as suitable for eulachon.

During the months of May through September, it is not unusual for small areas of the continental shelf (out beyond the 30-meter depth contour) to become hypoxic (dissolved oxygen levels less than 1.4 ml/L) in the lower 10–30 meter of the water column. The presence of hypoxic waters may be lethal to eulachon and the plankton they feed upon. The NMFS Northwest Fisheries Science Center has reported in recent years that broad areas of the shelf north of Newport, Oregon have been hypoxic. It is estimated that 28–40% of the total shelf area experienced hypoxia in 2012–2014. This condition improved in 2015–2017 when the area affected decreased to approximately 3–10% annually; however, during June of 2018 up to 58% of the shelf area experienced hypoxia. This decreased to approximately 30% of total shelf area during 2019. The incidence of hypoxic conditions increased between 2017 and 2022, with 2021 experiencing the earliest observed onset of hypoxia in 35 years, beginning in April and lasting into early October. The hypoxic conditions during 2022 were similar to 2021, also beginning in April but only lasting through early September. Technical hypoxic conditions were not observed on the shelf during 2023, though near-hypoxic conditions did occur during August. The recent upswing in hypoxia events may be detrimental to all returning brood years. The actual location of the eulachon or their preferred food source relative to the hypoxic zones, and the ability of them to avoid or escape from these zones, is not known. We assume that when 25% or more of the shelf area experiences hypoxia, it is more likely that the eulachon will be negatively affected.

Historically, eulachon have been one of the main species of bycatch encountered during the April–October Washington and Oregon pink shrimp fishery. Since being ESA-listed as Threatened in 2010, steps were taken to reduce the eulachon bycatch by the pink shrimp trawl fishery, including adjusting the existing bycatch reduction devices (BRDs) and implementing LED lights to deter eulachon from entering the shrimp trawl. These methods have proven very effective; however, eulachon bycatch still does occur and potentially remains a useful indicator of eulachon population trends. Increased bycatch in the pink shrimp fishery tends to occur during years with better smelt returns and suggests higher numbers of eulachon in their Ocean phase which is a positive indicator for future runs. In 2019, 139 metric tons of bycatch was reported for the OR/WA pink shrimp trawl fishery off the Washington coast, which was the highest since 2015. Similar numbers were reported in 2020 (135 metric tons) and in 2021 there was an increase in eulachon bycatch with 231 metric tons reported. Reported bycatch in 2022 was similar to 2019 and 2020 with the eulachon bycatch dropping to 100 metric tons. Bycatch data is not yet available for the 2023 or 2024 fisheries.

Fishery Management Actions

In 2001, WDFW, with input from ODFW, finalized the Washington and Oregon Eulachon Management Plan (WOEMP) which contained recommended policies concerning eulachon fishery management. These policies were considered 'wise-use' management precepts consistent with an ecosystem approach in making resource decisions. In the plan, fishery recommendations were categorized into three levels, depending on run size expectations based on (1) parental run strength as indexed by fishery landings, (2) juvenile production as indicated by larval sampling, and (3) estimates of ocean productivity. Columbia River eulachon harvest was regulated in accordance with the WOEMP from 2001 through March 2010 prior to closure of all Columbia River eulachon fisheries. When fisheries resumed in 2014, they were prosecuted at levels lower than that prescribed in the WOEMP. These very limited opportunities allowed managers to gather biological data on adult eulachon returns and maintain a connection between the public and this resource.

In 2023 the states finalized the 2nd edition of the WOEMP which utilizes three pre-season abundance indicators to inform target harvest rates for commercial and recreational fisheries. The plan also includes in-season triggers that allow managers to alter harvest rates up or down depending on the apparent strength of that year's run.

Eulachon Fisheries

Past Commercial, Recreational, and Tribal Fisheries

Smelt fisheries historically occurred in the mainstem Columbia River and tributaries, primarily the Cowlitz River. Mainstem fisheries primarily consisted of the predominant commercial gillnet fishery, a smaller commercial fishery using small trawls, and a minimal recreational fishery. The Cowlitz River provided the most consistent recreational and commercial fishing opportunities of the Columbia tributaries; however, smaller fisheries also existed in the Grays, Kalama, Lewis, and Sandy rivers. Columbia River tributary commercial and recreational fisheries used dip nets to capture smelt; most recreational anglers targeted eulachon from the bank whereas commercial fishers primarily targeted eulachon by boat. Additionally, local tribes have harvested eulachon for ceremonial and subsistence purposes since time immemorial.

As Columbia River eulachon abundance began to decline during the early 1990s, fishery managers restricted fisheries to increase escapement to spawning areas. Beginning in 1995, Columbia River mainstem and tributary commercial fisheries were greatly reduced in response to exceptionally poor landings. In 1997–2000, commercial fisheries were further restricted to test fisheries with limited days per week and a short season. These test fisheries were intended to allow minimal eulachon catch and collection of biological data to provide fishery managers with data necessary to assess the annual run strength. Starting in 2001, commercial fisheries were managed according to the initial WOEMP.

In response to the ESA listing in 2010, the states prohibited commercial sales of eulachon from Columbia River and tributary fisheries effective December 10, 2010 and closed all recreational eulachon fisheries effective January 1, 2011. In 2014–2018, the states worked closely with NMFS to adopt limited, conservation-minded commercial and recreational eulachon fisheries. These were research-based, closely monitored, and provided the opportunity to collect biological data to

evaluate the run size and age structure of the Columbia River sub-population. No fisheries occurred during 2019, but since 2020 the states have adopted limited commercial and recreational seasons. Fishery assessment data allows for a better understanding and calibration of the SSB estimation calculations and help state agencies provide NMFS with improved data for a viability assessment as part of a eulachon recovery plan.

2024 Commercial, Recreational, and Tribal Fisheries

Based on the framework provided in the WOEMP, the states entered the 2024 eulachon season in Harvest Phase 2, which specifies a pre-season target harvest rate for non-treaty fisheries of two percent and allows for limited commercial and recreational fisheries. On January 23, the states adopted a commercial eulachon fishery in the lower Columbia River set initially for twenty-three 12-hour periods on Mondays, Wednesdays, and Thursdays from January 24 through March 14 (Table 22). A total of 36 pounds of eulachon were harvested during the first five periods, then catch rates increased on February 5, with two deliveries totaling 1,093 pounds. Peak catch rate during the season occurred three days later on February 8 with an average delivery of 1,108 pounds. Several fishers reported reducing their effort in order to constrain catch to an amount that they would be able to sell. Since this was the third period this season where the average catch rate exceeded 400 pounds, an in-season upgrade into Harvest Phase 3 was triggered, which allows for a five percent total harvest rate. Catch declined during the remainder of February, with the final two periods of the month having no harvest and light effort. Another pulse of eulachon entered the lower Columbia River during the first week of March and 3,201 pounds were caught over three consecutive periods. At a Compact hearing on March 13, the states adopted a six-period extension to the commercial fishery spanning March 18–28, however no harvest was reported during these periods. A total of 11,768 pounds of eulachon were harvested during the 2024 commercial fishery, similar to the 2020 and 2021 seasons, but less than half of harvest during 2022. No commercial tributary fisheries were set in 2024 (Table 22).

During early February Washington began to consider a recreational eulachon fishery on the Cowlitz River after the minimum 200 pounds per delivery that is recommended in the WOEMP was observed in the mainstem Columbia commercial fishery. Washington adopted one day of recreational fishing for February 15 on the Cowlitz River (Table 24). The fishery was open for five hours between 8:00 AM and 1:00 PM with a daily limit of ten pounds per person. Effort and harvest was highest within the upper extent of the open area near Castle Rock, Washington. Catch rates were generally lower towards the downstream end near Kelso, Washington. A total of 52,496 pounds of eulachon were harvested from 8,597 trips. After another pulse of eulachon was observed in the Cowlitz River, Washington adopted a second day of recreational fishing for March 5. The fishery on this date was open for five hours, but between 1:00 PM and 6:00 PM. Effort was high at the onset of the opener, but quickly dropped off because catch rates were extremely low. A total of 1,178 pounds of eulachon were harvested from 4,621 trips during this second opener.

Eulachon were observed in the Sandy River at the beginning of March; however, ODFW opted not to open a Sandy River recreational eulachon fishery in 2024.

Tribal ceremonial and subsistence fisheries occurred in the Cowlitz River in 2024. The estimated tribal harvest of 53,675 pounds was similar to the amount harvested during 2023 (Table 19).

Expectations for 2025 Eulachon Fisheries

Eulachon returns to the Columbia River during the past two decades have varied, with noticeable peaks in 2001–2003 and 2013–2016 and a low in 2018. Each brood year contributing to a given run will have a different recruitment and survival profile. Since returns of Age-6 and Age-7 fish are typically minor, the 2025 forecast is based on brood years 2020–2023 that represent adult returns at ages 5, 4, 3, and 2, respectively. The 2025 run is expected to be primarily comprised of returns from the 2021 and 2022 brood years (i.e., Age-4 and Age-3 returns) with greater than normal contributions from the 2020 brood (Age-5) given that this cohort represented the majority of eulachon returning in 2024. Environmental conditions for Age-2 fish were neutral in the saltwater phase and negative during the freshwater phase and they typically do not contribute substantially to adult returns.

A summary of factors used to forecast the Columbia River eulachon adult return in 2025 are shown below.

		Cohort Survival Factors		
Brood Year	Age at Spawn	Freshwater Phase	Ocean Phase	Forecasted Contribution
2020	5	0	+	+
2021	4	-	+	+
2022	3	0	+	-
2023	2	-	0	-

Overall, the 2025 return is expected to continue the downward trend observed over the past two years and be similar, but likely lower in magnitude when compared to the 10-year average of 8.6 million pounds. Cohorts representing ages that typically contribute the most to adult returns (3–4-year-olds) experienced primarily positive marine environmental conditions. However, these conditions have trended in a negative direction during recent years. Both upwelling and Northern copepod anomalies, which are typically considered positively correlated with eulachon survival, have been less positive since 2023. The 2024 run was predominately made up of Age-4 fish. The last time this trend was observed was in 2016, which preceded several years of returns well below the average. Marine conditions for eulachon were much less favorable in 2016 than they are now, therefore the expectation is for a lesser impact to eulachon survival. The 2025 run will likely be similar to, or slightly less than, the recent 10-year average. This abundance forecast may support limited eulachon fisheries in the Columbia and Cowlitz rivers during 2025. The states will use the decision-making framework provided in the current WOEMP to guide their recommendations when crafting fishery recommendations and will continue to monitor the return in-season to evaluate potential adjustments to fisheries.

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Table 1. Estimated and projected abundance of 42–60-inch total length (38–54-inch fork length) white sturgeon in the lower Columbia River, 1987–2024.

		Setline (S)		Estimated abundance (%) by size class	
Year	Historic (H)	Actual	Projected [1]	42-48 in. TL; 38-43 in. FL	48-60 in. TL; 43-54 in. FL
1987	104,000			75,900 (73%)	28,100 (29%)
1988	68,100			34,400 (51%)	33,700 (49%)
1989	48,700			31,900 (66%)	16,800 (34%)
1990	37,800			25,800 (68%)	12,000 (32%)
1991	44,200			32,500 (74%)	11,700 (26%)
1992	79,100			70,400 (89%)	8,700 (11%)
1993	129,700			115,500 (89%)	14,200 (11%)
1994 [2]	N/A			N/A	N/A
1995	202,200			143,200 (71%)	59,000 (29%)
1996	170,600			137,100 (80%)	33,500 (20%)
1997	174,300			146,600 (84%)	27,700 (16%)
1998	140,700			116,800 (83%)	23,900 (17%)
1999	134,500			116,800 (87%)	17,700 (13%)
2000	134,700			117,300 (87%)	17,400 (13%)
2001	127,500			102,200 (80%)	25,300 (20%)
2002	121,600			87,400 (72%)	34,200 (28%)
2003	131,200			85,000 (65%)	46,200 (35%)
2004 [2]	N/A			N/A	N/A
2005	136,900			106,900 (78%)	30,000 (22%)
2006	123,400			88,100 (71%)	35,300 (29%)
2007	131,700			101,800 (77%)	29,900 (23%)
2008	101,200			69,800 (69%)	31,400 (31%)
2009	95,000			65,000 (68%)	30,000 (32%)
2010	65,300	100,300		39,100 (60%)	26,200 (40%)
2011	72,800	80,600	77,000	46,300 (64%)	26,500 (36%)
2012	83,400	72,700	65,000	52,600 (63%)	30,800 (37%)
2013 [3]	N/A	113,900	74,300	N/A	N/A
2014	N/A	131,000	131,700	76,200 (55%)	54,800 (45%)
2015	N/A	143,900	138,200	74,100 (51%)	69,700 (49%)
2016	N/A	224,000	147,100	104,100 (46%)	119,900 (54%)
2017	N/A	199,800	237,900	86,300 (43%)	113,500 (57%)
2018	N/A	162,200	198,300	70,300 (43%)	91,900 (57%)
2019	N/A	168,200	164,100	76,900 (46%)	91,300 (54%)
2020 [4]	N/A	199,500	148,800	97,200 (49%)	102,300 (51%)
2021	N/A	110,100	201,400	56,400 (51%)	53,700 (49%)
2022	N/A	78,400	101,600	39,400 (50%)	39,000 (50%)
2023	N/A	65,600	74,500	32,400 (49%)	33,200 (51%)
2024 [5]	N/A	103,800	62,900	42,700 (41%)	61,100 (59%)

[1] *Projected abundance is based on the previous year's setline estimate. Projections do not include harvest.*

[2] *Abundance estimates were not developed in 1994 and in 2004.*

[3] *Since 2013, abundance estimates have been developed using the setline method rather than the historic*

[4] *Partial/incomplete sampling season in 2020 due to COVID-19 restrictions.*

[5] *Preliminary estimte.*

Table 2. Catch per set (CPUE) and proportion of positive sets (Ep) for young-of-year white sturgeon in the lower Columbia and Willamette rivers, 2004–2024.

	Lower Columbia River		Willamette River	
Year	CPUE	Ep	CPUE	Ep
2004	1.29	0.44	--	--
2005	1.74	0.49	--	--
2006	1.88	0.52	--	--
2007 [1]	--	--	--	--
2008	1.23	0.45	--	--
2009	5.66	0.78	--	--
2010	0.19	0.18	0.43	0.24
2011	0.58	0.34	0.06	0.06
2012	0.77	0.35	0.25	0.22
2013 [2]	0.21	0.12	--	--
2014	0.56	0.31	1.38	0.38
2015	0.06	0.05	0.58	0.26
2016	0.20	0.14	0.75	0.50
2017	1.64	0.58	1.75	0.50
2018	0.43	0.27	3.96	0.83
2019	0.30	0.19	1.13	0.58
2020 [1]	--	--	--	--
2021	0.02	0.02	0.17	0.17
2022	0.20	0.18	0.42	0.29
2023	0.09	0.07	0.88	0.42
2024 [3]	0.02	0.02	0.08	0.08

[1] *No sampling conducted.*

[2] *Incomplete sampling in Willamette River.*

[3] *Preliminary estimate.*

Table 3. Estimated consumption of white sturgeon by pinnipeds at the Bonneville Dam tailrace, 2005–2023. 2024 observation data was not available at the time this report was finalized. The data is sourced from U.S. Army Corps of Engineers observation program (http://pweb.crohms.org/tmt/documents/FPOM/2010/Task%20Groups/Task%20Group%20Pinnipeds/). These reports indicate that the overall Spring sampling period is January through July, and the Fall-Winter Sampling Period is August through December, though actual observation dates were initiated when 20 pinnipeds were present and concluded when all pinnipeds departed the tailrace.

	Spring Sampling Period			Fall-Winter Sampling Period
Year	Total hours observed	Observed sturgeon catch	Adjusted sturgeon catch estimate	Adjusted sturgeon catch estimate (95% CI)
2005	1,109	1	--	
2006	3,650	265	413	
2007	4,433	360	664	
2008	5,131	606	1,139	
2009	3,455	758	1,710	
2010	3,609	1,100	2,172	
2011	3,315	1,353	3,003	
2012	3,404	1,342	2,498	
2013	3,247	314	635	
2014	2,947	79	146	
2015	2,995	24	44	
2016	1,974	30	90	
2017	1,142	6	24	238 (183-281)
2018	1,410	46	148	359 (301-416)
2019	836	22	187	762 (583-915)
2020	331	9	57	589 (433-744)
2021	132	1	N/A	1119 (786-1414)
2022	205	4	40	10 (0-16)
2023	228	4	37	--

Table 4. Annual recreational white sturgeon harvest and guidelines in the lower Columbia River, 1994–2024.

	Below Wauna [1]		Above Wauna		Combined	
Year	Catch	Guideline [2]	Catch	Guideline [3]	Catch	Guideline
1994	15,578	N/A	17,893	N/A	33,471	
1995	29,714	N/A	15,423	N/A	45,137	
1996	27,694	N/A	15,068	N/A	42,762	
1997	24,511	N/A	13,646	N/A	38,157	53,840
1998	30,303	N/A	11,293	N/A	41,596	53,840
1999	29,238	N/A	10,561	N/A	39,799	40,000
2000	24,267	N/A	16,238	N/A	40,505	40,000
2001	21,619	N/A	19,597	N/A	41,216	39,500
2002	26,234	N/A	12,045	N/A	38,279	38,300
2003	18,367	19,200	13,565	12,800	31,932	32,000
2004	15,050	16,000	10,519	12,800	25,569	28,800
2005	17,911	17,783	11,891	11,560	29,802	29,343
2006	15,726	16,000	8,545	12,800	24,271	28,800
2007	19,131	16,274	10,675	13,852	29,806	30,126
2008	13,614	13,143	7,959	12,387	21,573	25,530
2009	13,109	15,529	4,599	11,430	17,708	26,959
2010	6,491	9,600	4,831	4,835	11,322	14,435
2011	6,117	6,800	2,908	3,410	9,025	10,210
2012	4,466	4,160	1,859	2,080	6,325	6,240
2013	4,559	4,042	1,942	2,021	6,501	6,063
2014 [4]	0	0	0	0	0	0
2015 [4]	0	0	0	0	0	0
2016 [4]	0	0	0	0	0	0
2017	3,235	3,000	430	1,245	3,665	4,245
2018 [5]	2,412	2,960	1,050	1,230	3,462	4,190
2019 [5]	2,838	2,960	735	1,230	3,573	4,190
2020 [5,6]	0	2,750	857	1,140	857	3,890
2021 [5]	2,549	2,960	885	1,230	3,434	4,190
2022 [5]	1,292	1,920	891	800	2,183	2,720
2023 [4]	0	0	0	0	0	0
2024 [4]	0	0	0	0	0	0

[1] *Recreational catch estimates for 1993-2002 are above and below the western tip of Puget Island (RM 38).*

[2] *The switch to a 45-inch min. (TL) size limit in 2004 required a 17% reduction in the base guideline.*

[3] *Actual in-season guidelines were different than represented here. Beginning in 2010, the guideline for the area above Wauna does not include the Willamette guideline.*

[4] *No sturgeon retention allowed during 2014-2016 or 2023-2024.*

[5] *The Cowlitz River was opened with the Above Wauna fishery in 2018–2022.*

[6] *No estuary sturgeon retention allowed during 2020.*

Table 5. Annual recreational white sturgeon harvest and guidelines in the lower Willamette River, 2004–2024. No sturgeon retention fisheries were opened during years in which total catch was zero.

Year	Catch [1]	Catch in Excess of Baseline [2]	Catch in Excess of Baseline [3]	Guideline	% of Guideline
2004	4,099	1,225	2,874	N/A	
2005	2,327	1,225	1,102	N/A	
2006	3,348	1,225	2,123	N/A	
2007	6,555	1,225	5,330	N/A	
2008	9,148	1,225	7,923	N/A	
2009	7,346	1,225	6,121	N/A	
2010	3,529	735	2,794	2,865	98%
2011	2,690	520	2,170	2,030	107%
2012	1,535	520	1,015	1,248	81%
2013	1,410	520	890	1,213	73%
2014	0	0	0	0	N/A
2015	0	0	0	0	N/A
2016	0	0	0	0	N/A
2017	0	0	0	745	0%
2018	0	0	0	740	0%
2019	0	0	0	740	0%
2020	167	0	0	690	24%
2021	87	0	0	740	12%
2022	0	0	0	480	0%
2023	0	0	0	0	N/A
2024	0	0	0	0	N/A

[1] *Harvest estimates revised November 2011 based on updated punch card and existing creel information.*

[2] *Baseline harvest levels for the lower Willamette River were based on average harvest during 1986-1996 (1,225 fish). The lower Willamette River baseline decreased to 735 fish in 2010 and 520 fish in 2011 consistent with declining llegal abundance estimates. The baseline was eliminated in 2017.*

[3] *During 2003-2009, harvest in excess of the baseline was applied to the above Wauna recreational harvest guideline. Beginning in 2010, a separate harvest guideline was established for the lower Willamette River.*

Table 6. Annual commercial white sturgeon landings and harvest guidelines in the lower Columbia River, 1993–2024. No sturgeon retention fisheries were opened during years in which total catch was zero.

	Mainstem							Select Area				
Year	Winter Sturgeon [1]	Winter Salmon [1]	Summer	Early August	Late August	Late Fall	Total	Winter/ Spring/ Summer	Fall	Total	Grand Total	Guideline
1993	990			0	0	7,010	8,000	30	20	50	8,050	6,000
1994	2,990			0	0	3,380	6,370	30	0	30	6,400	6,000
1995	0			0	0	5,980	5,980	110	70	180	6,160	8,000
1996	800			0	330	6,580	7,710	580	110	690	8,400	8,000
1997	2,710			1,740	140	7,790	12,380	350	100	450	12,830	13,460
1998	2,680			2,540	90	8,060	13,370	360	170	530	13,900	13,460
1999	1,780			2,770	60	4,180	8,790	520	190	710	9,500	10,000
2000	2,260			2,490	300	5,130	10,180	540	160	700	10,880	10,000
2001	3,060			4,720	1,020	0	8,800	490	20	510	9,310	9,100
2002	2,720			1,340	380	4,200	8,640	650	330	980	9,620	9,800
2003	1,490	27		2,170	410	3,430	7,527	250	170	420	7,947	8,000
2004	1,696	174	9	1,550	917	3,219	7,565	184	117	301	7,866	8,000
2005	473	70	1,369	1,129	965	3,793	7,799	279	74	353	8,152	8,200
2006	288	1,651	544	1,548	363	3,492	7,886	317	109	426	8,312	8,000
2007	1,424	47	414	2,646	91	2,734	7,356	257	148	405	7,761	7,850
2008	869	17	523	2,706	103	3,170	7,388	337	134	471	7,859	7,927
2009	1,697	21	624	2,213	756	2,001	7,312	311	114	425	7,737	8,000
2010	518	28	289	1,578	297	1,348	4,058	211	116	327	4,385	4,800
2011	50	125	504	967	353	1,187	3,186	201	0	201	3,387	3,400
2012	40	14	281	585	409	368	1,697	225	0	225	1,922	2,080
2013	15	274	326	0	719	324	1,658	254	100	354	2,012	2,021
2014 [2]	0	0	0	0	0	0	0	0	0	0	0	0
2015 [2]	0	0	0	0	0	0	0	0	0	0	0	0
2016 [2]	0	0	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	0	485	239	724	266	237	503	1,227	1,245
2018	0	0	0	0	413	0	413	296	117	413	826	1,230
2019	0	0	0	0	509	0	509	487	212	699	1,208	1,230
2020	0	0	0	74	332	161	567	547	0	547	1,114	1,140
2021	0	0	0	27	270	98	395	428	371	799	1,194	1,230
2022	0	0	0	7	177	85	269	260	168	428	697	800
2023	0	0	0	0	0	0	0	0	0	0	0	0
2024	0	0	0	0	0	0	0	0	0	0	0	0

[1] *Prior to 2003, values reflect all winter commercial fisheries.*

Table 7. Recreational and commercial white sturgeon harvest and guidelines in the lower Columbia River and tributaries, 1997–2024. No sturgeon retention fisheries were opened during years in which total catch was zero.

	Recreational		Commercial		Combined	
Year	Catch [1]	Guideline + LWR Baseline [2]	Catch	Guideline	Catch [1]	Guideline [2]
1997	38,157	53,840	12,830	13,460	50,987	67,300
1998	41,596	53,840	13,900	13,460	55,496	67,300
1999	39,799	40,000	9,500	10,000	49,299	50,000
2000	40,505	40,000	10,880	10,000	51,385	50,000
2001	41,216	40,000	9,310	9,100	50,526	49,100
2002	38,279	38,500	9,620	9,700	47,899	48,200
2003	31,932	32,000	7,947	8,000	39,879	40,000
2004	29,668	30,025	7,866	8,000	36,309	38,025
2005	32,129	30,568	8,152	8,200	39,056	38,768
2006	27,619	30,025	8,312	8,000	34,706	38,025
2007	36,361	31,351	7,761	7,850	42,897	39,201
2008	30,721	26,755	7,859	7,927	37,355	34,682
2009	25,054	28,184	7,737	8,000	31,566	36,184
2010	14,851	18,035	4,385	4,800	18,501	22,835
2011	11,715	12,760	3,387	3,400	14,582	16,160
2012	7,860	8,008	1,922	2,080	9,262	10,088
2013	7,911	7,796	2,012	2,021	9,403	9,817
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	3,665	4,990	1,227	1,245	4,892	6,235
2018	3,462	4,930	826	1,230	4,288	6,160
2019	3,573	4,930	1,208	1,230	4,781	6,160
2020	1,024	4,580	1,114	1,140	2,138	5,720
2021	3,521	4,930	1,194	1,230	4,715	6,160
2022	2,183	3,200	697	800	2,880	4,000
2023	0	0	0	0	0	0
2024	0	0	0	0	0	0

[1] *Catch includes the total recreational harvest in the lower Willamette River (LWR) and mainstem Columbia River for all years. Catch also includes total harvest in the Cowlitz River beginning in 2018.*

[2] *Actual guidelines used in-season may have been different than shown here. Includes LWR baseline plus total guideline.*

Table 8. Summary of mainstem commercial seasons and sturgeon regulations in the lower Columbia River, 1997–2024.

Winter/Spring	
Sturgeon catch also occurs in spring Chinook target fisheries. When applicable, annual approach for the winter/spring season typically included 200 sturgeon be set aside for Chinook-directed fisheries. Catches of sturgeon in these fisheries is typically low; therefore, weekly landing limits for sturgeon were generally not utilized in winter/spring salmon-directed fisheries.	
1997–2002	Two 30-hr fishing periods per week from the 2nd week of January through mid-February (Zones 1–5).
2003	Three 30-hr fishing periods (one per week) followed by one 12-hr period. January only (Zones 1–5).
2004	Five 24-hr fishing periods from mid-January through mid-February (Zones 1–5).
2005	Seven 24-hr fishing periods from January through late February (Zones 1–5).
2006	Ten fishing periods from January–February (Zones 1–5). Seven were 24 hours and three were 12 hours.
2007	Nine fishing periods from January–February. Seven were 24 hours and two were 18 hours (Zones 1–5).
2008	Eleven fishing periods from January–February. Six were 24 hours and five were 18 hours. Three openers were restricted to portions of Zones 4–5 and the remainder occurred in Zones 1–5.
2009	Eight fishing periods, January–February (Zones 1–5). Six 24-hr periods and two 18-hr periods. Landing limit of 12 during the last four periods.
2010	Five 24-hr fishing periods, January–February (Zones 1–5). Fifteen fish landing limit in effect.
2011	Four 24-hr fishing periods took place in late-January to early-February (Zones 1–5) with a 10 white sturgeon/vessel/week landing limit in effect. Some sturgeon harvest also occurs during the spring Chinook fishery. Protocol adopted for the winter/spring timeframe was 800 total (400 for set aside for winter sturgeon, and 400 for winter/spring salmon). Catches of sturgeon in winter/spring salmon directed fisheries is typically low; therefore, weekly landing limits for sturgeon are generally not utilized.
2012	Three 24-hr fishing periods took place during January 30–February 7 in Zones 1–5 with a 10 white sturgeon/vessel/week landing limit in effect. Some sturgeon harvest also occurs during the spring Chinook fishery; there were two fishing periods in early April (April 3 & 10) with six white sturgeon/vessel/week allowed.
2013	Three 24-hr fishing periods took place during January 31–February 7 in Zones 1–5 with a 10 white sturgeon/vessel/week landing limit in effect. Some sturgeon harvest also occurs during the spring Chinook fishery; there was one 9-hr fishing period on April 9th in Zones 1–5 with no landing limit for white sturgeon, and three fishing periods during May in Zones 1–5 with landing limits (May 15, 14-hrs with a five white sturgeon/vessel/weekly limit; May 22–23, a 12-hr fishing period also with a five white sturgeon/vessel/weekly limit, and May 29–30, a 12-hr fishing period with a three white sturgeon/vessel/weekly limit).
2014–2016	No winter sturgeon fisheries. Sturgeon retention was not allowed during 2014, 2015, and 2016.
2017	No mainstem commercial winter or spring fisheries.
2018	No mainstem commercial winter or spring fisheries.
2019	No mainstem commercial winter or spring fisheries.
2020	No mainstem commercial winter or spring fisheries.
2021	No mainstem commercial winter or spring fisheries.
2022	One tanglenet fishing period on May 23 in reduced Zones 4–5 with landing limits of three white sturgeon/vessel/weekly limit. No white sturgeon were landed.
2023	No mainstem commercial winter or spring fisheries.
2024	One tanglenet fishing period on May 20 in Zones 1–5. The retention and sale of white sturgeon was not allowed.

Summer	
2004	Two 12-hr fishing periods during late June and early July targeting sockeye and summer Chinook.
2005	Six 10-hr fishing periods during late June through late July targeting summer Chinook.
2006	Three 10-hr and ten 12-hr fishing periods from late June through July 31 targeting summer Chinook. Retention of green sturgeon in commercial fisheries was prohibited effective July 6, 2006.
2007	Two 10-hr fishing periods in late June and early July targeting summer Chinook. Weekly limit 5 white sturgeon per vessel.
2008	Three 10-hr fishing periods in late June and early July targeting summer Chinook. A 6-hr target sockeye fishery also occurred in Area 2S on June 30, 2008. Weekly limit 5 white sturgeon per vessel.
2009	One 12-hr fishing period on June 18 and two 10-hr fishing periods on June 24 and 30 targeting summer Chinook. Weekly limit 5 white sturgeon per vessel.
2010	Two 10-hr fishing periods on June 17 and 22 targeting summer Chinook. Weekly limit of 3 white sturgeon per vessel.
2011	Two 8-hr fishing periods, one on June 16–17 and another on June 22–23. The weekly limit was 5 white sturgeon per vessel.
2012	One 8-hr fishing period took place on June 17–18. The weekly limit was 5 white sturgeon per vessel.
2013	Two 8-hr fishing periods took place on June 16–17, and July 15–16. The weekly limit was five white sturgeon per vessel during the first fishing period, and two white sturgeon per vessel during the second period.
2014–2016	No sturgeon retention allowed.
2017–2024	No mainstem commercial summer fisheries.

Table 8 (continued). Summary of mainstem commercial seasons and sturgeon regulations in the lower Columbia River, 1997–2024.

Early August	
1998-2001	One 12-hr fishing period below Longview Bridge targeting sturgeon during the 1st week of August.
2002	Three fishing periods with a five white sturgeon per vessel per day limit. Possession and sales prohibited during the final two fishing periods.
2003–2005	Four 12-hr Chinook fishing periods each year in Zones 1–5.
2006	Six fishing periods in all or portions of Zones 1–5. Weekly landing limits ranged from five to seven white sturgeon per vessel.
2007	Three early August periods of 12 hours each in Zones 1–5. Weekly landing limits of 12 white sturgeon per vessel.
2008	Five fishing periods (four in Zones 1–5 and one in Zones 2–5). Weekly landing limits of 10 white sturgeon per vessel per week.
2009	Three 12-hr fishing periods (two in Zones 1–5 and one in Zones 2–5).
2010	Four 12-hr fishing periods (three in Zones 1–5 and one in Zones 2–5).
2011	One 9-hr fishing period in Zones 1–5 with a weekly landing limit of 10 white sturgeon per vessel.
2012	One 9-hr fishing period in Zones 1–5 (August 5–6) with a weekly landing limit of seven white sturgeon per vessel.
2013	There were no early-August seasons in Zones 1–5 during 2013.
2014–2016	No sturgeon retention allowed.
2017–2019	No mainstem commercial early August fisheries.
2020	Two 9-hr fishing periods in Zones 4–5 with weekly landing limits of five white sturgeon per vessel August 10–13.
2021	Two 9-hr fishing periods in Zones 4–5 with weekly landing limits of four white sturgeon per vessel August 9–12.
2022	One 9-hr fishing periods in Zones 4–5 with weekly landing limits of four white sturgeon per vessel August 10–11.
2023–2024	No sturgeon retention allowed.

Late August	
1997–2003	Target Chinook seasons in Area 2S or expanded Area 2S during late August.
2004–2005	Four fishing periods during mid to late-August with varying area and possession limit restrictions.
2006	One fishing period in Zones 3–5 and one in Zones 4–5 (upstream of the I-205 Bridge),with a weekly landing limit of seven white sturgeon.
2007	One 11-hr fishery in Zones 4–5 with a three white sturgeon per vessel weekly landing limit.
2008	Two fishing periods in Zones 4–5, with a weekly landing limit of three white sturgeon.
2009	Two 10-hr fishing periods in Zones 3–5 (upstream of Kalama River) with a weekly landing limit of nine white sturgeon and one 10-hr period in Zone 5 only with a weekly landing limit of three white sturgeon.
2010	One 10-hr and two 9-hr fishing periods in Zones 4–5, with a weekly landing limit of four white sturgeon.
2011	Seven 9-hr fishing periods in Zones 4–5 with weekly landing limits of 10 white sturgeon per vessel.
2012	Eight 9-hr fishing periods in Zones 4–5 with weekly landing limits of three white sturgeon per vessel August 12–24; and five white sturgeon per vessel August 26–29.
2013	Eight 9-hr fishing periods in Zones 4–5 with weekly landing limits of four white sturgeon per vessel August 11–29.
2014–2016	No sturgeon retention allowed.
2017	Five 9-hr fishing periods in Zones 4–5 with weekly landing limits of six white sturgeon per vessel August 22–September 1.
2018	Three 9-hr fishing periods and one 7-hr fishing period in Zones 4–5. Weekly landing limits of six white sturgeon per vessel August 21–27 and seven white sturgeon per vessel August 29–30.
2019	Four 9-hr fishing periods in Zones 4–5 with weekly landing limits of seven white sturgeon per vessel August 14–27.
2020	Four 9-hr fishing periods in Zones 4–5 with weekly landing limits of five white sturgeon per vessel August 17–27.
2021	Six 9-hr fishing periods in Zones 4–5 with weekly landing limits of four white sturgeon per vessel August 16–September 2.
2022	Seven 9-hr fishing periods in Zones 4–5 with weekly landing limits of four white sturgoen per vessel August 15–September 2.
2023–2024	No sturgeon retention allowed.

Table 8 (continued). Summary of mainstem commercial seasons and sturgeon regulations in the lower Columbia River, 1997–2024.

Late Fall	
Fisheries occur during mid-September through the end of October and include both salmon- and sturgeon-directed fisheries. Salmon seasons vary	
1997–2000	Target fall sturgeon seasons occurred.
2001	Sturgeon sales prohibited in late-fall due to high landings earlier in the year.
2002	A five white sturgeon per day per vessel possession and sales limit was in effect for nearly the entire late fall season except for the final 3-day fishing period when sturgeon possession and sales were prohibited.
2003	Sturgeon possession and sales limits ranged 3–9 per vessel per week.
2004	Sturgeon possession and sales limit of five white sturgeon per vessel per week was in place for most of the late fall period, but was increased to ten fish during the final three fishing periods.
2005	Sturgeon possession and sales limits ranged 3–15 fish per vessel.
2006	White sturgeon possession and sales limits were maintained at eight white sturgeon per week per vessel when retention was allowed.
2007	White sturgeon possession and sales limits ranged 7–12 white sturgeon per vessel through October 5, after which white sturgeon sales in the mainstem were prohibited.
2008	Most fishing periods occurred in Zones 4–5, however, some fishing did occur in all or portions of Zones 1–3. Sturgeon sales were allowed in all periods, with weekly landing limits of 10 fish per vessel through October 3, followed by three fish landing limits thereafter.
2009	Most fishing periods occurred in Zones 4–5, however, some fishing did occur in all or portions of Zones 1–3. Sturgeon sales were allowed through October 23, with weekly landing limits ranging 5–8 fish per vessel. Sales were prohibited after October 23.
2010	Eleven fishing periods during September 22–October 22 with weekly landing limits of 5–8 fish per vessel.
2011	Ten fishing periods during September 18–October 20 with weekly landing limits of 2–7 white sturgeon per vessel.
2012	Sturgeon retention allowed in five (September 19–28 and October 4–5) of 15 late fall fishing periods. The landing limit for the first four fishing periods (three in Zones 4–5, and the fourth in Zones 1–5) was five white sturgeon per vessel. On October 4–5, (one period in Zones 1–5), the vessel limit was two white sturgeon.
2013	Sturgeon retention was allowed for the first seven of 34 late fall fishing periods (September 15–30). The landing limit was two white sturgeon per vessel during each week sturgeon were allowed. Sturgeon retention was not allowed October 1–November 1.
2014–2016	No sturgeon retention allowed.
2017	Two 10-hr fishing periods in Zones 4–5 with weekly landing limits of five white sturgeon per vessel, September 17–20.
2018	No mainstem commercial late fall fishery.
2019	No mainstem commercial late fall fishery.
2020	Two 10-hr fishing periods in Zones 4–5 with weekly landing limits of four white sturgeon per vessel during September 15–22.
2021	Four 10-hr and four 12-hr fishing periods in Zones 4–5 (8" min. mesh). Fourteen 18-hr and five 14-hr fishing periods in Zones 1–3 (tangle net). Weekly landing limits of six white sturgeon per vessel, September 19–October 29.
2022	Three 10-hr and four 12-hr fishing periods in Zones 4–5 (8" min. mesh). Twenty 18-hr and five 14-hr fishing periods in Zones 1–3 (Tangle net). Weekly landing limits of six white sturgeon per vessel, September 18–October 28.
2023–2024	No sturgeon retention allowed.

Table 9. History of sturgeon regulations for the lower Columbia River recreational fishery, pre-1940–2024.

Year	Daily Bag Limit	Annual Bag Limit	Size Restrictions	Other Regulations
Pre-1940	None	None	None	None
1940	Only 3 < 4'	"	"	"
1942	Five (3 < 4' and 2 ≥ 4')	"	"	"
1950	"	"	30" min.–72" max.	"
1951	3 Fish	"	"	"
1957	"	"	"	Cannot remove head or tail in the field.
1958	"	"	36" min.–72" max.	
1986	2 Fish	OR-30	"	OR--required sturgeon tag: WA--no gaffing.
1989	"	OR-30, WA-15	40" min.–72" max.	WA--required sturgeon tag. New minimum size limit effective April 1.
1990	"	15	"	Single-point barbless hooks required. OR--no gaffing.
1991	"1 and 1" slot limit	"	"	Daily limit changed to one fish 40-<48" and one fish 48-72".
1992	"	"	"	WA--60" max. length effective April 16, 1992-April 15, 1993. WA--Beacon Rock to Bonneville Dam sturgeon spawning sanctuary (boat and bank) April 16 - June 15, 1992.
1994	"	10	42" min.–66" max.	Daily limit changed to one fish 42-<48" and one fish 48-66".
1995	"	"	"	LCR closed to retention September 1-December 31.
1996	1 Fish	"	"	One 42-66" fish daily bag limit effective April 1. Closed to boat angling from Beacon Rock to Bonneville Dam May 1-June 30.
1997	"	"	42" min.–60" max.	80% allocation of 67,300 annual harvest guideline to sport fishery (53,840).
1999	"	"	"	Harvest guideline adjusted to 50,000 in-season (40,000 sport). U.S. Army Corps implements Bonneville Boat Restricted Zone from Robins Is. to Hamilton Is. boat ramp.
2000	"	"	"	Retention disallowed below Wauna powerlines April 1-30. Beacon Rock-Bonneville boat angling closure extended through 7/15. Annual limit 10 fish even if licensed in both states.
2001	"	"	"	LCR closed to retention August 1-September 30.
2002	"	"	"	LCR closed to retention on Sundays and Mondays during March 3-May 13 and seven days per week during July 25-November 22.
2003	"	"	"	32,000 annual harvest guideline split 40% above Wauna and 60% below Wauna. Retention allowed above Wauna January 1-March 23 and July 1-October 31 and below Wauna January 1-June 27.
2004	"	5	42" min.–60" max. 45" min. below Wauna during May 15-July 3	28,800 annual harvest guideline split 12,800 above Wauna and 16,000 below Wauna. Retention allowed above Wauna January 1-31, then three days per week (Thur.-Sat.) during February 1-July 31 and October 1-December 31. Retention allowed below Wauna January 1-April 30 under permanent rules, then May 15-July 3 with a 45" minimum size limit. Closed to boat and bank angling from Beacon Rock to Bonneville Dam May 1-July 31. Annual limit reduced to five sturgeon.
2005	"	"	42" min.–60" max. 45" min. below Wauna during May 14-July 10 and July 15-August 15	29,343 annual harvest guideline split 11,560 above Wauna and 17,783 below Wauna. Retention allowed above Wauna three days per week (Thur.-Sat.) January 1-July 31 and October 1-December 31. Retention allowed below Wauna January 1-April 30 under permanent rules, then May 14-July 10 and July 15-August 15 with a 45" minimum size limit.

Table 9 (continued). History of sturgeon regulations for the lower Columbia River recreational fishery, pre-1940–2024.

Year	Daily Bag Limit	Annual Bag Limit	Size Restrictions	Other Regulations
2006	"	"	42" min.–60" max. 45" min. below Wauna during May 13-July 4	28,800 annual harvest guideline split 12,800 above Wauna and 16,000 below Wauna. Retention allowed above Wauna three days per week (Thur.-Sat.) during January 1-July 31 and October 1-December 31. Retention allowed below Wauna January 1-April 30 under permanent rules, then May 13-July 4 with a 45" minimum size limit. Closed to boat and bank angling from Navigation Marker 85 to Bonneville Dam May 1-July 31.
2007	"	"	42" min.–60" max. 45" min. below Wauna during May 12-July 4	30,126 harvest guideline split 13,852 above Wauna and 16,274 below Wauna. Retention allowed above Wauna three days per week (Thur.-Sat.) January 1-31 and four days per week (Thur-Sun.) February 1-July 31 and seven days per week August 18-December 31. Sturgeon retention allowed below Wauna January 1-April 30 under permanent rules then May 12-July 4 with a 45" minimum size limit. Retention of green sturgeon prohibited.
2008	"	"	42" min.–60" max. 45" min. below Wauna during May 10-July 26	25,530 harvest guideline split 12,387 above Wauna and 13,143 below Wauna. Retention allowed above Wauna four days per week (Thur-Sun.) January 1-December 31. Sturgeon retention allowed below Wauna January 1-April 30 under permanent rules then May 10-June 24, July 10-12, July 17-19, and July 26 with a
2009	"	"	38" min. FL–54" max. FL 41" min. FL below Wauna during May 9-July 25	Fork length measurement. 26,959 harvest guideline split 11,430 above Wauna and 15,529 below Wauna. Retention allowed above Wauna three days per week (Thur.-Sat.) January 1-July 31 and October 1-December 31. Retention allowed below Wauna January 1-April 30 under permanent rules, then May 9-June 28, July 2-5, 10-12, 17-19 and 24-26 with a 41" minimum size (FL) limit.
2010	"	"	38" min. FL–54" max. FL 41" min. FL below Wauna during May 22-August 1	17,300 annual harvest guideline split 7,700 above Wauna (including a sub-allocation for the Willamette River of 2,865) and 9,600 for the estuary. Retention allowed above Wauna three days per week (Thur.-Sat.) January 1-July 31 and October 1-December 31, except closed inside Sand Island (near Rooster Rock) April 29-July 31. Closed to all sturgeon angling during May 1-August 31 from Skamania Island upstream to Bonneville Dam. Retention allowed below Wauna January 1-April 30 under permanent rules, then May 22-July 11 and July 15-August 1 with a 41" minimum
2011	1	5	38" min. FL–54" max. FL 41" min. FL below Wauna during May 14-July 31	12,240 annual harvest guideline split 5,440 above Wauna (including a sub-allocation for the Willamette River of 2,030) and 6,800 for the estuary. Retention allowed above Wauna three days per week (Thur.-Sat.) January 1-July 31 and October 1-December 31, except closed inside Sand Island (near Rooster Rock) January 1-April 30. Retention allowed below Wauna January 1-April 30 under permanent rules, then May 14-July 31 with a 41" minimum
2012	"	"	38" min. FL–54" max. FL 41" min. FL below Wauna during May 12-July 4	7,488 annual harvest guideline split 3,328 above Wauna (including a sub-allocation of 1,248 for the Willamette), and 4,160 for the estuary. Retention allowed above Wauna three days per week (Thur.-Sat.) January 1-July 31. Retention allowed below Wauna January 1-April 30 under permanent rules, then May 12-July 4 with a 41" minimum size (FL) limit.

Table 9 (continued). History of sturgeon regulations for the lower Columbia River recreational fishery, pre-1940–2024.

Year	Daily Bag Limit	Annual Bag Limit	Size Restrictions	Other Regulations
2013	“	2	38" min. FL–54" max. FL 41" min. FL below Wauna during May 11-June 20	7,276 annual harvest guideline split 3,234 above Wauna (including a sub-allocation of 1,213 for the Willamette), and 4,042 for the estuary. Retention allowed above Wauna three days per week (Thur.-Sat.) January 1-June 15. Retention allowed below Wauna January 1-April 30 under permanent rules, then May 11-June 20 with a 41” minimum size (FL) limit.
2014	0	0	No retention.	Catch and release only.
2015	0	0	No retention.	Catch and release only.
2016	0	0	No retention.	Catch and release only.
2017	1	2	44" min. FL–50" max. FL	4,245 annual harvest guideline split 1,245 above Wauna and 3,000 for the estuary. Retention allowed in the estuary June 5, 7, 10, 12, and 14 with no angling allowed after 2 pm. Retention allowed above Wauna October 21, 26, and 28.
2018	"	"	"	4,190 annual harvest guideline split 1,230 above Wauna and 2,960 for the estuary. Retention allowed in the estuary May 14, 16, 19, 21, 23, 26, 28, 30 and June 2, 4 and 9 with no angling allowed after 2 pm. Retention allowed above Wauna September 15 and 22.
2019	"	"	"	4,190 annual harvest guideline split 1,230 above Wauna and 2,960 for the estuary. Retention allowed in the estuary May 13, 15, 18, 20, 22, 25, 27, 29 and June 1, 3 and 5 with no angling allowed after 2 pm. Retention allowed above Wauna September 21 and 28 and October 12, 19, and 24.
2020	"	"	"	3,890 annual harvest guideline split 1,140 above Wauna and 2,750 for the estuary. No retention season allowed in the estuary. Retention allowed above Wauna September 12, 19, 26, 29, and October 3.
2021	"	"	"	4,190 annual harvest guideline split 1,230 above Wauna and 2,960 for the estuary. Retention allowed in the estuary May 10, 12, 15, 17, 19, 22, 24, 26, 29, 31 and June 2, 5 and 12 with no angling allowed after 2 pm. Retention allowed above Wauna September 11, 18, 19, 22, 25, and 29.
2022	"	"	"	2,720 annual harvest guideline split 800 above Wauna and 1,920 for the estuary. Retention allowed in the estuary May 11, 14, 18, 21, 23, 25, 28, 30 and June 1, 4, 8 and 11 with no angling allowed after 2 pm. Retention allowed above Wauna September 10, 14,
2023	0	0	No retention.	Catch and release only.
2024	0	0	No retention.	Catch and release only.

Table 10. Recreational and commercial sturgeon kept catch (in 1,000s) and white sturgeon catch sharing percentages in the lower Columbia River, 1977–2024.

	White Sturgeon					Green Sturgeon		
Year	Recreational Catch [1]	%	Commercial Catch [2]	%	Total Catch	Recreational Catch	Commercial Catch [2]	Total Catch
1977-79 Ave	29.2	70	13.3	30	42.5	0.0	1.2	1.2
1980-84 Ave	31.5	70	13.2	30	44.7	<0.1	1.2	1.3
1985-89 Ave	44.9	84	8.3	16	53.2	<0.1	3.5	3.8
1990-94 Ave	30.3	83	6.0	17	36.3	0.1	2.0	2.1
1995-99 Ave	41.5	80	10.2	20	51.7	0.1	0.8	0.9
2000-04 Ave	36.0	80	9.1	20	45.1	<0.1	0.4	0.4
2005-09 Ave	29.1	78	8.0	22	37.1	<0.1	0.0	<0.1
2010	14.1	76	4.4	24	18.5	<0.1	0.0	<0.1
2011	11.2	77	3.4	23	14.6	<0.1	0.0	<0.1
2012	7.3	79	1.9	21	9.2	<0.1	0.0	<0.1
2013	7.4	79	2.0	21	9.4	0.0	0.0	0.0
2014 [3]	0.0	0	0.0	0	0.0	0.0	0.0	0.0
2010-14 Ave	8.0	78	2.9	22	10.9	<0.1	0.0	<0.1
2015 [3]	0.0	0	0.0	0	0.0	0.0	0.0	0.0
2016 [3]	0.0	0	0.0	0	0.0	0.0	0.0	0.0
2017	3.7	75	1.2	25	4.9	0.0	0.0	0.0
2018	3.5	81	0.8	19	4.3	0.0	0.0	0.0
2019 [4]	3.5	74	1.2	26	4.7	0.0	0.0	0.0
2015-19 Ave	2.1	77	6.5	23	8.6	0.0	0.0	0.0
2020 [4]	1.0	48	1.1	52	2.1	0.0	0.0	0.0
2021 [4]	3.5	74	1.2	26	4.7	0.0	0.0	0.0
2022 [4]	2.2	76	0.7	24	2.9	0.0	0.0	0.0
2023 [3]	0.0	0	0.0	0	0.0	0.0	0.0	0.0
2024 [3]	0.0	0	0.0	0	0.0	0.0	0.0	0.0
2020-24 Ave	1.3	68	0.6	32	1.9	0.0	0.0	0.0

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

[2] *Includes Youngs Bay (1979-present) and other Select Area landings (1998-present).*

[3] *No sturgeon retention allowed during 2014-2016 and 2023-2024.*

[4] *Includes catches from the Cowlitz River since 2019 and the lower Willamette since 2020.*

Table 11. Annual treaty and recreational white sturgeon harvest and guidelines by pool in Zone 6, 2012–2024. [1]

	Bonneville Pool		The Dalles Pool		John Day Pool	
Year	Catch	Guideline	Catch	Guideline	Catch	Guideline
Treaty Commercial Fisheries						
2012	2,203	2,000	996	1,000	1,347	1,000
2013	1,274	1,100	669	"	1,042	"
2014	706	"	496	"	1,267	"
2015	445	"	258	325	884	"
2016	224	325	260	"	809	"
2017	368	"	326	"	209	295
2018	406	"	415	415	166	210
2019	630	500	426	"	187	175
2020	748	"	508	"	182	210
2021	1,537	"	523	560	166	"
2022	909	675	829	"	187	"
2023	830	"	441	"	268	"
2024	1,111	675	852	825	206	210
Non-Treaty Recreational Fisheries						
2012	1,796	2,000	279	300	473	500
2013	1,022	1,100	314	"	509	"
2014	877	"	121	"	492	"
2015	874	"	115	100	532	"
2016	349	325	96	"	520	"
2017	276	"	84	"	126	105
2018	452	"	180	135	81	"
2019	448	500	79	"	129	"
2020	431	"	205	"	102	"
2021	655	"	235	190	98	"
2022	622	675	204	"	94	"
2023	600	"	188	"	95	"
2024	692	"	271	275	96	"

[1] *Harvest estimates prior to 2012 are available in previous Sturgeon/Smelt Joint Staff Reports.*

Table 12. Annual white sturgeon abundance estimates by pool in Zone 6, 1976–2024.[1]

	Bonneville Pool		The Dalles Pool		John Day Pool	
Year	33-65 inch [2]	Legal slot [3]	33-65 inch [2]	Legal slot [3]	33-65 inch [2]	Legal slot [3]
1976-1978	5,400	--	--	--	--	--
1987	--	--	18,900	--	--	--
1988	--	--	6,300	--	--	--
1989	17,900	--	--	--	--	--
1990	--	--	--	--	2,200	--
1991	--	--	--	--	--	--
1992	--	--	--	--	--	--
1993	--	--	--	--	--	--
1994	19,800	--	6,500	--	--	--
1995	--	--	--	--	--	--
1996	--	--	--	--	24,100	4,050
1997	--	--	46,800	8,163	--	--
1998	--	--	--	--	--	--
1999	45,600	--	14.,735	--	--	--
2000	--	--	--	--	--	--
2001	--	--	--	--	14,200	1,074
2002	--	--	20,600	5,997	--	--
2003	34,220	6,880	--	--	--	--
2004	--	--	--	--	12,800	1,094
2005	--	--	11,800	1,149	--	--
2006	42,100	6,240	--	--	--	--
2007	--	--	--	--	26,600	1,587
2008	--	--	76,800	1,680	--	--
2009	117,600	29,641	--	--	--	--
2010	--	--	--	--	33,800	4,350
2011	--	--	54,900	2,730	--	--
2012	72,000	14,212	--	--	--	--
2013	--	--	--	--	24,400	9,620
2014	--	--	34,600	1,854	--	--
2015	35,000	5,890	--	--	--	--
2016	--	--	--	--	14,000	5,177
2017	--	--	35,200	3,664	--	--
2018	37,000	8,222	--	--	--	--
2019	--	--	--	--	20,200	6,443
2020	--	--	27,855	5,650	--	--
2021	33,896	10,063	--	--	--	--
2022	--	--	--	--	17,253	5,660
2023	--	--	43,447	9,982	--	--
2024 [4]	39,905	18,744	--	--	--	--

[1] Data compiled from annual reports for BPA Project 1986-050-00 and from Sturgeon Management Task Force summaries.

Management Task Force summaries.

[2] The 33-65 inch fork length size group equates to traditional 36-72 inch total length size group.

[3] Prior to 1994, the legal size slot varied and was not always consistent between Oregon and Washington. From 1994-1996, legal size was 42–66 inches in Bonneville Pool, and 48–66 inches in The Dalles and John Day pools. In 1997, the legal maximum was changed to 60 inches. In 2009 measurements changed from total length to fork length (38–54 inches in Bonneville Pool, and 43–54 inches in The Dalles and John Day pools).

[4] Preliminary estimate.

Table 13. Treaty commercial white sturgeon seasons and harvest in Zone 6, 2019–2024.

Fishery	Dates	Open Pools [1]	Length (days)	Mesh Size Restriction	Catch [2]
		2019			
Winter	January 1-31	All	30	Setline	74
"	February 1-19	TD	19	None	407
"	February 1-27	JD	27	None	57
"	March 1-23	BO	23	None	587
Summer	July 26-August 8	JD	14	Setline	118
				Total	**1,243**
		2020			
Winter	January 1-31	All	30	Setline	320
"	February 1-8	TD	7.5	None	395
"	February 1-8, 12-17, 20-24	JD	15.5	None	137
"	February 20 - March 5	BO	12.5	None	592
				Total	**1,444**
		2021			
Winter	January 1-31	All	30	Setline	182
"	February 1-6	TD	5.5	None	393
"	February 1-6, 12-17, 24-26	JD	11.5	None	148
"	February 20 - March 5	BO	4.5	None	1,503
				Total	**2,226**
		2022			
Winter	January 1-31	All	30	Setline	115
"	February 1-5, 10-12, 16-18	TD	4.5	None	726
"	February 1-28, March 12-16	JD	31	None	187
"	March 2-4	BO	2.5	None	896
				Total	**1,924**
		2023 [3]			
Winter	January 1-31	All	30	Setline	604
"	February 4-6, March 6-9	TD	7.5	None, March 6-9 Setline only	371
"	February 1-13	JD	19.5	None	251
"	February 27-March 1	BO	2.5	Setline	313
				Total	**1,538**
		2024			
Winter	January 1-31	All	30	Setline	**671**
"	February 13-20	TD	7.5	Setline	**541**
"	February 13-20, March 7-11	JD	12	Setline	**135**
"	February 10-12, March 2-4	BO	5	Setline	**822**
				Total	**2,169**

[1] *BO = Bonneville Pool, TD = The Dalles Pool, JD = John Day Pool.*

[2] *Legal-sizes of 38-54 inches FL in Bonneville Pool and 43-54 inches FL adopted January 29, 2009.*

[3] *Preliminary estimates*

Table 14. White sturgeon harvest in treaty commercial, subsistence, and recreational fisheries in Zone 6, 2010–2024. [1]

Year	Treaty Commercial			Treaty Subsistence	Non-Treaty Recreational
	Gill Net	Setline	Total		
2010	2,889	137	3,026	616	1,946
2011	2,799	1,102	3,901	652	3,087
2012	4,153	393	4,546	447	2,548
2013	2,917	68	2,985	366	1,845
2014	2,362	107	2,469	270	1,490
2015	1,273	314	1,587	208	1,521
2016	978	315	1,293	144	965
2017	857	46	903	103	486
2018	556	431	987	84	713
2019	1,144	239	1,383	140	656
2020	1,124	320	1,444	295	738
2021	2,044	182	2,226	233	988
2022	1,809	115	1,924	156	920
2023	622	916	1,538	274	883
2024 [2]	0	2,169	2,185	895	1059

[1] *Harvest estimates prior to 2010 are available in previous Sturgeon/Smelt Joint Staff Reports.*

[2] *Estimates are preliminary. Gillnet catch includes some setline catch in The Dalles Pool.*

Table 15. Recreational white sturgeon retention seasons in Zone 6, 2012–2024. [1]

Year	Bonneville Pool	The Dalles Pool	John Day Pool
2013	Jan 1-Feb 10, Jun 14-15, Jun 21	Jan 1-Nov 11	Jan 1- June 28
2014	Jan 1-Feb 17, Feb 24-Mar 9, Jun 13-14, Jun 20-21, Jul 11-12, Jul 18-19	Jan 1- July 31	Jan 1-June 13
2015	Jan 1-Mar 1, Jun 19-21, Jun 26-28, Jul 3-5	Jan 1- May13	Jan 1-June 2
2016	Jan 1-Feb 7, Jun 18	Jan 1-Apr 29	Jan 1-May 28
2017	Jan 1-Mar 24, Jun 10, Jun 23	Jan 1-Mar 24	Jan 1-Mar 29
2018	Jan 1-Feb 3, Jun 15	Jan 1-19, June 15	Jan 1-Feb 11
2019	Jan 1-Apr 12	Jan 1-Jan 6	Jan 1-Apr 2
2020	Jan 1-Feb 13	Jan 1-Feb 17	Jan 1-Mar 9
2021	Jan 1-Jan 7	Jan 1-Jan 4	Jan 1-Mar 18
2022	Jan 1-19, Mar 9	Jan 1-Mar 21 (M/W/Sa Only)	Jan 1-Mar 9
2023	Jan 1, Jan 2-11 (M/W/Sa Only)	Jan 1, Jan 2-25 (M/W/Sa Only)	Jan 1-29, Feb 11,15,18
2024	Jan 1-3 (M/W/Sa Only)	Jan 1-3, Feb 24, 28 (M/W/Sa Only)	Jan 1-Mar 14

[1] *Retention dates prior to 2013 are available in previous Sturgeon/Smelt Joint Staff Reports.*

Table 16. Preliminary Zone 6 treaty commercial harvest of white sturgeon by season and pool, with guidelines, 2024.

Reservoir	January Setline	Feb/Mar Setline	Winter Gill Net	Summer Setline	Late Fall Setline	Commercial + OTB Total	Guideline
Bonneville	289	822	--	--	--	1,111	675
The Dalles	311	541	--	--	--	852	825
John Day	71	135	--	--	--	206	210
Total	**671**	**1,498**	**0**	**0**	**0**	**2,169**	**1,710**

"--" indicates no fishery during this timeframe.

Table 17. Columbia River and tributary commercial Eulachon landings (in thousands of pounds), 1938–2024.

Year (s)		Columbia River [1]	Grays River	Cowlitz River	Kalama River	Lewis River	Sandy River	Total
1938-1949	Range	200-1,000	0-59	1-3,000	0-77	0-2,000	0-1,400	1,000-5,700
	Average	610	18	1,400	13	300	300	3,000
1950-1959	Range	400-1,300	0-16	0-2,000	0-44	0-900	0-500	1,300-2,600
	Average	800	3	700	11	200	100	1,800
1960-1969	Range	100-800	0-53	1,000	0-0	0-82	0-0	800-1,500
	Average	700	10	600	0	8	0	1,100
1970-1979	Range	900	0-6	100	0-300	0-900	0-800	500-3,200
	Average	300	1	1,400	4	100	100	2,000
1980-1989	Range	53-500	0-35	100-3,700	0-8	0-2,700	0-300	500-3,800
	Average	200	4	2,500	1	600	59	2,400
1990-1999	Range	0.2-37	0.0	0-3,673	0-67	0-22	0.0	9-3,674
	Average	13	0.0	1,029	7	2	0.0	1,051
2000-2009	Range	0.1-159	0.0	0-464	0.0	0-529	0-23	0.2-1083
	Average	37	0	102	0	102	2	244
2010		3.6	0.0	0.0	0.0	0.0	0.0	3.6
2011-2013 [2]		--	--	--	--	--	--	--
2014		18.6	0.0	0.0	0.0	0.0	0.0	18.6
2015		16.5	0.0	0.0	0.0	0.0	0.0	16.5
2016		4.8	0.0	0.0	0.0	0.0	0.0	4.8
2017		5.0	0.0	0.0	0.0	0.0	0.0	5.0
2018		0.1	0.0	0.0	0.0	0.0	0.0	0.1
2019 [2]		--	--	--	--	--	--	--
2020		10.3	0.0	0.0	0.0	0.0	0.0	10.3
2021		11.0	0.0	0.0	0.0	0.0	0.0	11.0
2022		27.4	0.0	0.0	0.0	0.0	0.0	27.4
2023		1.7	0.0	0.0	0.0	0.0	0.0	1.7
2024		11.8	0	0	0	0	0	11.8

[1] *Prior to 2010, season totals may contain landings from previous December.*

[2] *Commercial fisheries were closed December 2010 through 2013, following the ESA listing of Eulachon as a threatened species, and again in 2019 due to projected low run abundance.*

Table 18. Eulachon CPUEs and landings in Columbia River commercial fisheries, 1990–2024.

	CPUEs by Calendar Week [1]								Season Totals	
Year	5	6	7	8	9	10	11	12	CPUE	Pounds [2]
1990	0	0	0	0	0	0	--	--	709	6,381
1991	0	107	685	0	0	940	--	--	389	5,841
1992	344	232	290	0	0	50	--	--	203	2,644
1993	18	0	224	1,731	2,274	3,100	--	--	1,843	33,172
1994	0	0	0	0	35	109	--	--	59	235
1995	216	250	67	0	137	35	--	--	180	7,612
1996	122	0	445	59	150	20	--	--	95	7,208
1997	161	216	672	214	0	0	--	--	304	37,069
1998	94	30	17	0	0	0	--	--	134	11,866
1999	143	183	297	110	0	0	--	--	172	20,834
2000	371	123	330	241	37	0	--	--	211	31,042
2001	0	520	1,604	2,322	3,875	2,194	--	--	2,033	158,809
2002	1,401	2,014	106	0	2,057	7,320	--	--	1,920	57,980
2003	445	581	778	4,350	2,216	2,486	--	--	1,132	66,875
2004	34	693	368	47	21	153	--	--	548	15,431
2005	25	28	0	0	0	0	--	--	27	108
2006	194	209	14	0	0	0	--	--	157	13,099
2007	0	0	0	209	163	39	--	--	153	8,702
2008	0	63	210	58	1	0	--	--	133	11,381
2009	34	3	65	50	45	47	--	--	101	5,539
2010	43	22	7	3	0	0	--	--	96	3,539
2011-13 [3]	--	--	--	--	--	--	--	--	--	--
2014	--	--	0	32	631	200	--	--	453	18,558
2015	--	76	534	469	61	--	--	--	435	16,546
2016	--	146	225	148	36	--	--	--	166	4,822
2017	1	0	258	121	53	--	--	--	167	5,019
2018	51	8	0	0	0	--	--	--	37	110
2019 [3]	--	--	--	--	--	--	--	--	--	--
2020	--	198	402	261	81	--	--	--	250	10,255
2021	30	5	41	6	576	224	6	--	323	10,997
2022	0	0	0	354	945	1,304	856	140	913	27,398
2023	0	0	0	0	0	270	757	--	345	1,726
2024	36	828	354	78	65	1,067	113	--	535	11,768

[1] *CPUE = pounds per delivery.*

[2] *May include landings from previous December.*

[3] *Commercial fisheries were closed December 2010 through 2013, following the ESA listing of Eulachon as a threatened species, and again in 2019 due to projected low run abundance.*

Table 19. Eulachon run size and estimated harvest in Columbia River commercial, sport, and tribal fisheries, 2011–2024.

Year	Weeks sampled for SSB	Run size (SSB plus harvest in pounds) [1]	Harvest (pounds)				
			Commercial				
			Mainstem	Tributary	Sport	Tribal	Combined
2011	19	3,300,000	--	--	--	--	0
2012	25	3,200,000	--	--	--	--	0
2013	29	9,600,000	--	--	--	7,470	7,470
2014	22	16,600,000	18,560	--	203,880	6,970	229,410
2015	33	11,400,000	16,550	--	290,770	10,400	317,720
2016	25	5,100,000	4,820	--	141,050	8,560	154,430
2017	18	1,600,000	5,019	--	541	1,900	7,531
2018	13	400,000	110	--	--	--	110
2019	16	4,205,000	--	--	--	23,660	23,660
2020	10	-- [2]	10,255	--	35,040	23,900	69,195
2021	17	9,000,000	10,997	--	91,250	55,940	158,187
2022	19	18,300,000	27,398	--	169,543	27,385	224,326
2023	20	17,000,000	1,726	--	55,595	10,806	68,127
2024	17	10,400,000	11,768	--	53,675	16,842	82,285

[1] *Rounded to the nearest 100,000 pounds.*

[2] *The 2020 SSB estimate is incomplete due to truncated sampling during March due to the effects of the COVID-19 pandemic.*

Table 20. Eulachon larval sampling densities in the lower Columbia River and select tributaries, 1999–2024. 1

Year	Catch (eggs and larvae per cubic meter) [2]						
	Mainstem Columbia	Cowlitz River	Grays River	Elochoman River	Kalama River	Lewis River	Sandy River
1999	0.7	0.2	0.6	0.8	0.4	0.0	0.1
2000	1.3	41.6	25.7	3.5	0.1	0.2	0.1
2001	42.1	192.0	24.4	0.0	5.5	17.6	N/S
2002	28.2	283.0	N/S	N/S	0.5	0.6	N/S
2003	12.3	1.4	N/S	24.5	N/S	36.2	0.1
2004	3.5	0.9	20.4	N/S	N/S	N/S	N/S
2005	0.3	N/S	0.6	N/S	N/S	N/S	N/S
2006	0.7	0.1	0.0	N/S	N/S	N/S	N/S
2007	0.7	2.8	N/S	N/S	N/S	0.3	N/S
2008	1.1	6.2	44.0	3.3	N/S	<0.1	N/S
2009	2.3	0.1	0.2	N/S	N/S	0.5	N/S
2010	1.0	4.2	178.9	N/S	N/S	0.9	N/S
2011	6.0	29.1	0.2	2.0	0.4	<0.1 [3]	N/C
2012	5.9	N/C [4]	1.6	N/S	N/S	N/S	N/S
2013	20.3	N/C [4]	1.4	N/S	N/S	N/S	N/S
2014	49.0	N/C [4]	N/S	N/S	N/S	N/S	N/S
2015	32.5	N/C [4]	13.4	N/S	N/S	N/S	N/S
2016	13.8	N/C [4]	48.7	N/S	N/S	N/S	N/S
2017	2.8	N/C [4]	N/S	N/S	N/S	N/S	N/S
2018	1.1	N/C [4]	N/S	N/S	N/S	N/S	N/S
2019	15.9	N/C [4]	N/S	N/S	N/S	N/S	N/S
2020	13.1	N/C [4]	N/S	N/S	N/S	N/S	N/S
2021	43.0	N/C [4]	N/S	N/S	N/S	N/S	N/S
2022	47.1	N/C [4]	N/S	N/S	N/S	19.1	N/S
2023	39.4	N/C [4]	N/S	N/S	N/S	6.4	N/S
2024	34.8	N/C [4]	N/S	N/S	N/S	42.7	N/S

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

[2] *N/S = not sampled. N/C = larval density not calculated, but some larvae collected.*

[3] *Average density observed by the Cowlitz Tribe Natural Resources staff was 28 larvae per cubic meter.*

[4] *Average density observed by the Cowlitz Tribe Natural Resources staff, but unavailable.*

Table 21. Mainstem Columbia River commercial smelt seasons, 2000–2024.

Year	Season	Fishery Level/Harvest Phase [1]	Weekly Period	Days Open
2000/2001	Dec 1 – Dec 31	--	7 days/week, 24 hrs/day	31
	Jan. 3 – Mar. 7	One	3 AM – 9 PM Wed	10
	Mar. 12 – Mar. 31	Two (3/06)	3 AM – 9 PM Mon & Wed	6
2001/2002	Dec. 1 – Dec. 31	--	7 days/week, 24 hrs/day	31
	Jan. 2 – Jan. 31	Two	3 AM – 9 PM Sun & Wed	9
	Feb. 1 – Mar. 31	Two (1/31)	3 AM – 9 PM Sun, Wed & Fri	26
2002/2003	Dec. 1 – Dec. 31	--	7 days/week, 24 hrs/day	31
	Jan. 1– Mar. 31	Three	3 AM – 9 PM Sun, Tues, Thurs, & Fri	51
2003/2004	Dec. 1– Dec. 31	--	7 days/week, 24 hrs/day	31
	Jan. 1 – Mar. 21	Three	3 AM – 9PM Sun, Tues, Thurs, & Fri	34
	Mar. 22– Mar. 31	Two (3/18)	3 AM – 9 PM Fri, & Sun	2
2004/2005	Dec. 1 – Dec. 31	--	7 days/week, 24 hrs/day	31
	Jan. 1– Feb. 23	Two	3 AM – 9 PM Mon, & Thurs	15
	Feb. 24 – Mar. 31	One (2/23)	3 AM – 9 PM Thurs	6
2005/2006	Dec. 1 – Dec. 31	--	7 days/week, 24 hrs/day	31
	Jan. 1 – Mar. 2	One	7 AM – 4 PM Mon, & Thurs	20
	Mar. 7	One (3/08)	7 AM – 4 PM Mon	1
	Mar. 13 – Mar. 31	One (3/08)	7 AM – 4 PM Mon & Thurs	6
2006/2007	Dec. 1 – Dec. 31	--	7 days/week, 24 hrs/day	31
	Jan. 1 – Mar. 31	One	7 AM – 4 PM Mon,& Thurs	20
	Mar. 11	One (3/05)	7 AM – 4 PM Sun	1
	Mar. 15– Mar. 31	One (3/05)	7 AM – 4 PM Mon & Thurs	5
2007/2008	Dec. 1 – Dec. 31	--	7 days/week, 24 hrs/day	31
	Jan. 1 – Mar. 31	One	7 AM – 4 PM Mon & Thurs	26
2008/2009	Dec. 1 – Dec. 31	--	7 days/week, 24 hrs/day	31
	Jan. 1 – Mar. 31	One	7 AM – 2 PM Mon & Thurs	26
2009/2010	Dec. 1 – Dec. 31	--	7 days/week, 24 hrs/day	31
	Jan. 1 – Mar. 31	One	7 AM – 2 PM Mon & Thurs	25
2011–2013	Closed [2]	--	--	0
2014	Feb. 10 – Mar. 6	< One	7 AM – 2 PM Mon & Thurs	8
2015	Feb. 2 – Feb. 26	< One	7 AM – 2 PM Mon & Thurs	8
2016	Feb. 1 – Feb. 25	< One	7 AM – 2 PM Mon & Thurs	8
2017	Feb. 2 – Feb. 27	< One	7 AM – 2 PM Mon & Thurs	8
2018	Feb. 1 – Feb. 26	< One	7 AM – 2 PM Mon & Thurs	8
2019	Closed [2]	--	--	0
2020	Feb. 3 – Feb. 27	< One	5 AM – 5 PM Mon & Thurs	8
2021	Jan. 28 – Mar. 11	< One	5 AM – 5 PM Mon & Thurs	13
2022	Jan. 26 – Mar. 18	< One	5 AM – 5 PM Mon, Wed, & Fri	23
2023	Jan. 25 – Mar. 16	< One	5 AM – 5 PM Mon, Wed, & Thurs	22
2024	Jan. 24 - Mar. 28	Two	5 AM – 5 PM Mon, Wed, & Thurs	29

[1] *From 2001-2023 fishery levels are described in the Washington and Oregon Eulachon Management Plan 1st Edition. From 2024-present harvest phases are described in the Washington and Oregon Eulachon Management Plan 2nd Edition.*

[2] *Commercial fisheries were closed December 2010 through 2013, following the ESA listing of Eulachon as a threatened species, and again in 2019 due to projected low run abundance.*

Table 22. Washington and Oregon tributary commercial smelt seasons, 2002–2024. [1]

Year	Cowlitz River [2]	Kalama River [3]	Lewis River [4]	Oregon Rivers
2002	***1/02–1/31:*** 6 PM Sun – 6 AM Mon, and 6 PM Wed – 6 AM Thu ***2/01–2//25:*** 6 PM Sun – 6 AM Mon, 6 PM Tue – 6 AM Wed, and 6 PM Wed – 6 AM Thu ***2/26–3/31:*** 6 PM Sun – 6 AM Mon, 6 PM Tue – 6 AM Wed, 6 PM Wed – 6 AM Thu, and 6 PM Thu – 6 AM Fri	***2/05–2/25:*** 6 PM Sun – 6 AM Mon, 6 PM Tue – 6 AM Wed, and Wed – 6 AM Thu ***2/26–3/31:*** 6 PM Sun – 6 AM Mon, 6 PM Tue – 6 AM Wed, 6 PM Wed – 6 AM Thu, and 6 PM Thu – 6 AM Fri	***2/05–3/31:*** 6 PM Sun – 6 AM Mon, 6 PM Tue – 6 AM Wed, and Wed – 6 AM Thu ***2/26–3/31:*** 6 PM Sun – 6 AM Mon, 6 PM Tue – 6 AM Wed, 6 PM Wed – 6 AM Thu, and 6 PM Thu – 6 AM Fri	24-hours daily
2003	***1/01–3/31:*** 6 PM Sun – 6 AM Mon, 6 PM Tue – 6 AM Wed, and 6 PM Wed – 6 AM Thu	***1/01–3/31:*** 6 PM Sun – 6 AM Mon, 6 PM Tue – 6 AM Wed, and 6 PM Wed – 6 AM Thu	***1/01–3/31:*** 6 PM Sun – 6 AM Mon, 6 PM Tue – 6 AM Wed, and 6 PM Wed – 6 AM Thu	24-hours daily
2004	***1/01–3/17:*** 6 PM Sun – 6 PM Tue and 6 PM Wed – 6 PM Fri ***3/18–3/31:*** 6 PM Sun – 6 AM Mon and 6 PM Wed – 6 AM Thu	***1/01–3/17:*** 6 PM Sun – 6 PM Tue and 6 PM Wed – 6 PM Fri ***3/18–3/31:*** 6 PM Sun – 6 AM Mon and 6 PM Wed – 6 AM Thu	***1/01–3/17:*** 6 PM Sun – 6 PM Tue and 6 PM Wed – 6 PM Fri ***3/18–3/31:*** 6 PM Sun – 6 AM Mon and 6 PM Wed – 6 AM Thu	24-hours daily
2005	***1/01–2/22:*** 6 PM Sun – 6 AM Mon and 6 PM Wed – 6 AM Thu ***2/23–3/31:*** 6 PM Wed – 6 AM Thu	Closed	***1/01–2/22*** 6 PM Sun – 6 AM Mon and 6 PM Wed – 6 AM Thu ***2/23–3/31:*** 6 PM Wed – 6 AM Thu	24-hours daily
2006	***1/01–3/31:*** 6 PM –11:59 PM Sun and Wed	Closed	Closed	24-hours daily
2007	***1/01–3/31:*** 6 PM –11:59 PM, Sun and Wed	Closed	Closed	24-hours daily
2009	***1/01–3/31*** 6AM – 10:PM, Saturdays	Closed	Closed	24-hours daily
2010	***2/03–2/28*** 7 PM –10 PM Sun and Wed	Closed	Closed	24-hours daily through November
2011–2024 [5]	Closed	Closed	Closed	Closed

[1] *Washington tributaries not listed were closed by emergency regulation during this period. All tributary commercial fisheries are restricted to dip net gear.*

[2] *Area restricted to downstream of Peterson's Eddy (approximately River Mile [RM] 8.0).*

[3] *Area restricted to downstream of Modrow Bridge (RM 2.9).*

[4] *Area restricted to the mainstem and North Fork downstream from the overhead powerlines near Eagle Island (approximately RM 11.5).*

[5] *Tributary commercial fisheries were closed effective December 2010, following the ESA listing of Eulachon as a threatened species. These fisheries have not been re-established.*

Table 23. Lower Columbia River mainstem and tributary recreational smelt seasons, 2002–2024.

Year	Season Structure
2002	The Columbia River and Oregon tributaries open seven days per week the entire year. Washington tributaries open Saturdays, Sundays, and Wednesday from 6 AM to 10 PM during January 1–February 25, 2002. Washington tributaries open seven days per week from 6 AM to 10 PM during February 26–March 31, 2002.
2003	The Columbia River and Oregon tributaries open seven days per week the entire year. Washington tributaries open seven days per week from 6 AM to 10 PM during January 1–March 31, 2003.
2004	The Oregon portion of the Columbia River and Oregon tributaries open seven days per week the entire year (25-lbs. daily limit), and the Washington portion of the Columbia River was open seven days per week during January 1–March 31, 2004 (20-lbs. daily limit). Washington tributaries were open seven days per week from 6 AM to 10 PM during January 1–March 19, 2004, and on Wednesdays and Saturdays from 6 AM to 10 PM during March 19–31, 2004 (20-lbs. daily limit).
2005	The Oregon portion of the Columbia River and Oregon tributaries open seven days per week the entire year (25-lbs. daily limit), and the Washington portion of the Columbia River was open seven days per week during January 1–March 31, 2005 (25-lbs. daily limit). Washington tributaries (Grays River, Cowlitz River, Kalama River, and Lewis River) were open on Tuesdays and Saturdays from 6 AM to 10 PM during January 1–February 23, 2005 (10-lbs. daily limit), and in the Cowlitz River only, on Saturdays from 6 AM to 10 PM during February 26–March 31, 2005 (10-lbs. daily limit).
2006–2007	The Oregon portion of the Columbia River and Oregon tributaries open seven days per week the entire year (25-lbs. daily limit), and the Washington portion of the Columbia River was open seven days per week during January 1–March 31 (25-lbs. daily limit). Washington tributaries were closed with the exception of the Cowlitz River, which was open on Saturdays only, from 6 AM to 10 PM, during January 1–March 31 (10-lbs. daily limit).
2007–2009	The Oregon portion of the Columbia River and Oregon tributaries open seven days per week the entire year (25-lbs. daily limit), and the Washington portion of the Columbia River was open seven days per week during January 1 – March 31 (25-lbs. daily limit). Washington tributaries were closed with the exception of the Cowlitz River, which was open on Saturdays only, from 6 AM to 10 PM, during January 1 – March 31 (10-lbs. daily limit).
2009–2010	The Oregon portion of the Columbia River and Oregon tributaries open seven days per week the entire year (10-lbs. daily limit), and the Washington portion of the Columbia River was open seven days per week during January 1–March 31 (10-lbs. daily limit). Washington tributaries were closed with the exception of the Cowlitz River, which was open on Saturdays only from 7 AM to 3 PM, during February (10-lbs. daily limit).
2011–2013 [1]	Closed
2014	Columbia River closed. All tributaries closed except the Cowlitz River on the Washington shore, which was open on Saturdays (6 AM–noon) during February 8 – March 8 (10-lbs. daily limit) and the Sandy River on the Oregon shore, which was open on Saturdays (6 AM–noon) during March 1–22 (10-lbs. daily limit).
2015	Columbia River closed. All tributaries closed except the Cowlitz River on the Washington shore, which was open 6 AM–noon on Saturday February 7 and 14 (10-lbs. daily limit) and the Sandy River on the Oregon shore, which was open 6 AM–noon on Saturday March 7 and Sunday March 15 (10-lbs. daily limit).
2016	Columbia River closed. All tributaries closed except the Cowlitz River on the Washington shore, which was open 7 AM–1PM on Saturday February 6 (10-lbs. daily limit).
2017	Columbia River closed. All tributaries closed except the Cowlitz River on the Washington shore, which was open 8 AM–1 PM on Saturday February 25 (10-lbs. daily limit).
2018–2019 [1]	Closed
2020	Columbia River closed. All tributaries closed except the Cowlitz River on the Washington shore, which was open 8 AM–1 PM on Friday February 14 and Wednesday February 26 (10-lbs. daily limit).
2021	Columbia River closed. All tributaries closed except the Cowlitz River on the Washington shore, which was open 8 AM–1 PM on Tuesday March 2 (10-lbs. daily limit).
2022	Columbia River closed. All tributaries closed except the Cowlitz River on the Washington shore, which was open 8 AM–1 PM on Saturday March 5 (10-lbs. daily limit).
2023	Columbia River closed. All tributaries closed except the Sandy River on the Oregon shore, which was open noon–7 PM on Thursday March 30 (10-lbs. daily limit).
2024	Columbia River closed. All tributaries closed except the Cowlitz River on the Washington shore, which was open 8 AM-1 PM on Thursday, Feburary 15th and 1 PM-6 PM on Tuesday March 5 (10-lbs. daily limit).

[1] *Recreational fisheries were closed December 2010 through 2013, following the ESA listing of Eulachon as a threatened species, and again in 2018 and 2019 due to projected low run abundance.*