
Columbia River Commercial Advisor Group Meeting

January 11, 2024

10:00a-12:00p

Hybrid (Rainier City Hall,
virtual)

Prepared by: Columbia River Joint Staff

Columbia River Commercial Advisor Group Meeting

Rainier City Hall: Rainier City Hall 106 W B St, Rainier, OR 97048

Join online: [Click here to join the meeting](#) ID: 254454587556 Passcode: rh9zNb

Or call in (audio only): 1-564-999-2000 Conference ID: 313543523#

10:00a – 12:00p January 11, 2024

Agenda	
<ul style="list-style-type: none"> ● Welcome and Introductions (30 minutes) <ul style="list-style-type: none"> ○ Ground rules ○ Introduction ○ Roles and expectations ○ Agenda review 	
<ul style="list-style-type: none"> ● Update on white sturgeon (30 minutes) <ul style="list-style-type: none"> ○ 2023 Lower Columbia population status and trends ○ 2024 Lower Columbia fishery discussion 	
<ul style="list-style-type: none"> ● Update on Eulachon (smelt) (15 minutes) <ul style="list-style-type: none"> ○ Populations trend ○ 2024 outlook 	
<ul style="list-style-type: none"> ● Summary of 2023 Salmon Fisheries (5 minutes) 	
<ul style="list-style-type: none"> ● Ocean Conditions & Forecasts (10 minutes) 	
<ul style="list-style-type: none"> ● Additional Discussion (as time permits) (30 minutes) 	
<ul style="list-style-type: none"> ● Future Meetings <ul style="list-style-type: none"> ○ WA Alternative Gear Advisory Board, January 19, Ridgefield WDFW, 10a-12p ○ Compact Hearing (smelt), January 23, 10a ○ Select Area Commercial Fishing Public Meeting, January 24, Astoria, WA ○ WA Fish and Wildlife Commission (C-3630 annual review), January 24-26 ○ Compact Hearing (Select Area commercial), February 13, 10a ○ Joint State Hearing (spring Chinook sport), February 21, 10a ○ CRCAG (WA logbook rule making), Ridgefield WDFW, February 23, 10a-1p ○ Pacific Fishery Management Council, March 5-11, Fresno, CA ○ CRCAG (2024 fall seasons), virtual, TBD during March PFMC ○ Pacific Fishery Management Council, April 5-11, Seattle, WA 	

Ground rules

- Focus on the task at hand – *stick to the agenda*
- Be a conduit and collaborator – *share information*
- One person at a time to speak – speak your name to be added to the speaking list
 - Non-advisers will observe meeting and stay on mute – *comments may be permitted at the end of the meeting if time permits*
- Be respectful of others
 - Mute phone or line; take side conversations into another room
 - Be tough on issues and questions, not on people or organizations
 - No personal attacks, insults or threats
 - Listen to others
 - Speak and act professional – *no offensive, disrespectful, or derogatory language, including profanity*
 - Allow for a balance of speaking time – *limit length and number of times to speak on each topic*
- For virtual meetings
 - *6 to mute/unmute
 - Chat will not be monitored or used except for technical assistance

Columbia River Recreational Advisory Group (2024–2026)

<u>Name</u>	<u>City</u>	<u>State</u>
Les Clark	Chinook	WA
Jim Coleman	St. Helens	OR
Darren Crookshanks	Longview	WA
Bryce Devine	Longview	WA
Steve Fick	Astoria	OR
Tim Heuker	Cascade Locks	OR
Bill Hunsinger	Astoria	OR
Otis Hunsinger	Astoria	OR
Greg Johnson	Vancouver	WA
Brian Love	Brush Prairie	WA
Kent Martin	Skamokawa	WA
Greg Matthews	Astoria	OR
Aaron Miller	Naselle	WA
Nathan Rogol	Astoria	OR
Robert Sudar	Longview	WA
Derek Wall	Astoria	OR
Jim Wells	Astoria	OR
Ken Wirkkala	Ilwaco	WA

2024 Joint State Staff (OR-WA) roles

ODFW

Ocean Salmon and Columbia River Program (OSCRP)

- Ocean and Columbia River cross-regional fisheries management
- FCRPS hydro-system

Tucker Jones (971-673-6067), Clackamas

- Ocean Salmon and Columbia River Program Manager
 - Supervises OSCRP Program
- Policy level representation in various inter-jurisdictional forums
- OR representative for Compact/Joint State hearings

Columbia River Management

Jeff Whisler (971-673-6024), Clackamas

- Columbia River Fisheries Manager
 - Design, recommend, and implement fisheries in Columbia/lower Willamette rivers
- Supervise ODFW Columbia River Management program/staff
- Lead technical staff for Compact/Joint State hearings
- *U.S. v OR* Technical Advisory Committee (TAC) representative

Hannah Moore (971-673-6029), Clackamas

- Primary technical analyst
- Technical staff for Compact/Joint State hearings
- TAC representative

Rob Reagan (971-673-6017), Clackamas

- Columbia and Willamette River Project Leader
- Responsible for coordinating sampling of fisheries in lower Columbia/Willamette rivers
- Primary contact for Willamette Falls fishway/counts

Cameron Duff (971-673-6057), Clackamas

- Select Area /Estuary Fisheries Project Leader
- Primary contact for Select Area commercial fisheries
 - Responsible for implementing and evaluating Select Area fisheries
- Responsible for coordinating sampling of Estuary fisheries in lower Columbia River

WDFW

Kelly Cunningham – Fish Program Director (360-790-0778), Olympia

- Fish Program lead, supervise Charlene

Columbia River Management Unit (CRMU)

- Columbia River cross-regional fisheries management
- FCRPS hydro-system

Charlene Hurst – Columbia River Management Unit Lead (360-605-5247), Ridgefield

- Columbia River Policy lead, supervise Ryan, Laura, Mark, Eric Winther (northern pikeminnow), Charlie Morrill (hydro)
- Decision maker for Compact/Joint State hearings
- *U.S. v OR* policy representative

Ryan Lothrop – Columbia River Fisheries Manager (360-701-3602), Olympia

- Columbia River fishery lead, supervise Quinten, Beth, and Shannon
- Fishery coordinator with eastside regions, ODFW and tribes
- TAC representative and lead WA technical staff for Compact/Joint State hearings

Shannon Conley – Columbia River Fishery Policy Analyst (564-653-0500), Olympia

- Technical and statistical analyst for CRMU fisheries
- TAC representative (WA lead)

Quinten Daugherty – Columbia River Fishery Management Biologist (360-844-0205), Ridgefield

- Technical analyst, and design, recommend, and implement mainstem fisheries
- Technical staff for Compact/Joint State hearings and TAC representative

Beth Deacy – Columbia River Fishery Sampling Coordinator (360-600-7069), Ridgefield

- Coordinates fishery sampling and test fisheries, supervise Nathan White (field biologist) and Ken Keller (Pacific States Marine Fisheries Commission supervisor biologist)

Laura Heironimus – Sturgeon, Smelt, Lamprey lead (360-719-0677), Ridgefield

- Supervises sturgeon, smelt, and lamprey research/monitoring programs
- Lead on white sturgeon and eulachon conservation and management
- Provides support for Compact/Joint State Hearings
- Supervise Matt Sturza (sturgeon/smelt biologist) and Monica Blanchard (lamprey biologist)

Matt Sturza – Sturgeon, Smelt Biologist (360-355-5643), Ridgefield

- Coordinates and directs sturgeon/smelt population assessment and fishery monitoring projects
- Supervises sturgeon/smelt sampling staff
- On detail as Sturgeon, Smelt, Lamprey lead position until March 2024

Mark Sorel – Columbia River Fishery Analyst (607-351-7352), Ridgefield

- Provides analytical/statistical support
- TAC representative

Lower Columbia River White Sturgeon

Abundance and CPUE Trends

Table 1. Estimated and projected abundance of 38–54 inch FL (96–137 cm) white sturgeon in the LCR from 2008–2021 based on mark-recapture surveys. Historic method is the number of fish present at the start of July (2008–2009) or May (2010–2012), while the setline method is the number of fish present at the start of the year. Preliminary estimates are italicized.

Year	Historic method estimate	Setline method		Harvest guideline
		Estimate (95% C.I.)	Projection ¹	
2008	101,200	--	--	40,000
2009	95,000	--	--	40,000
2010	65,300	100,300	--	24,000
2011	72,800	80,600	77,000	17,000
2012	83,400	72,700	65,000	10,400
2013	--	113,900	74,300	10,105
2014	--	131,000 (75,500 – 186,480)	131,700	--
2015	--	143,900 (85,700 – 202,100)	138,200	--
2016	--	224,000 (118,300 – 329,600)	147,100	--
2017	--	199,800 (69,900 – 329,700)	237,900	6,235
2018	--	162,200 (93,400 – 230,950)	198,300	6,160
2019	--	168,200 (100,100-236,300)	164,100	6,160
2020 ²	--	199,500 (40,100-358,800)	148,800	5,720
2021	--	110,100 (65,719-154,548)	201,400	6,160
2022	--	78,400 (40,411-116,368)	101,600	4,000
2023	--	65,600 (40,226-90,889)	74,500	--
2024	--	--	64,400	TBD

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

² Due to sampling issue related to COVID-19 pandemic, the sample size was lower than standards and therefore the estimate of 199,500 during 2020 has considerable uncertainty.

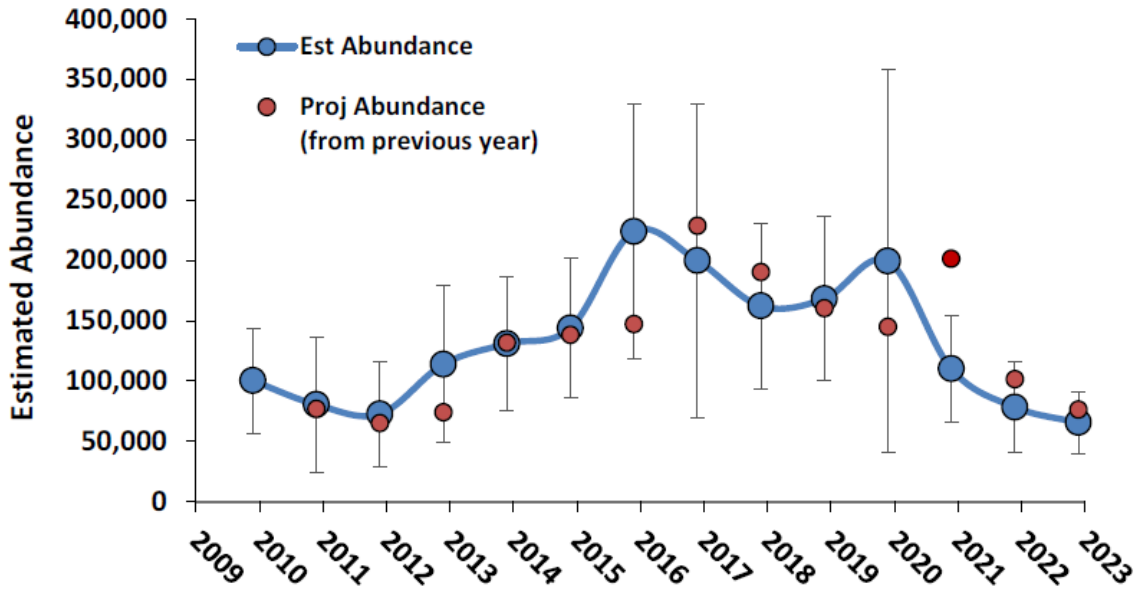


Figure 1. Estimated and projected abundance for 96–137 cm FL White Sturgeon from the LCR, 2010 – 2023. Error bars represent 95% CIs for the estimated abundance.

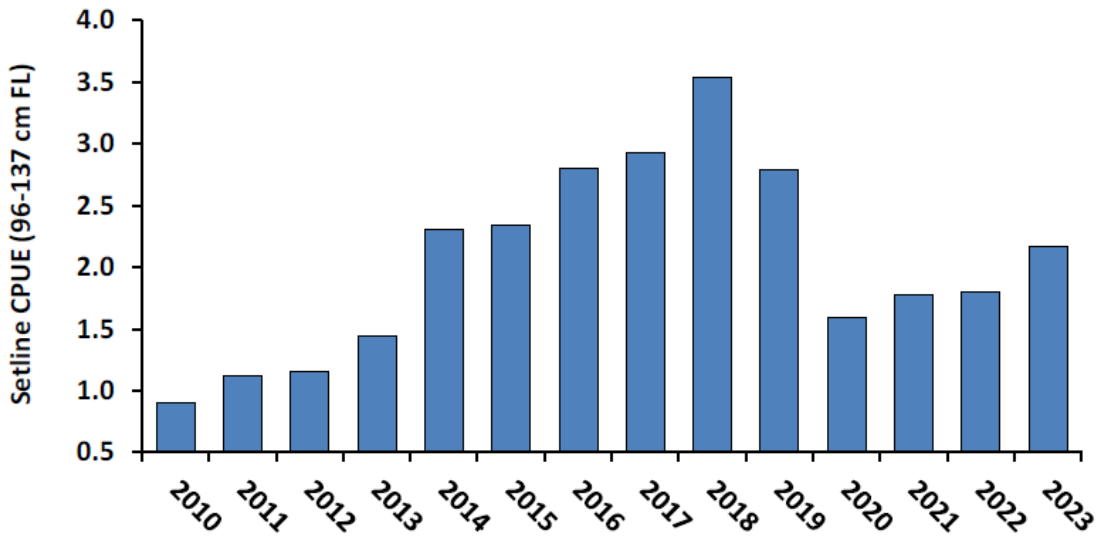


Figure 2. CPUE of 96 – 137 cm FL White Sturgeon caught with setlines in the LCR, 2010 – 2023.

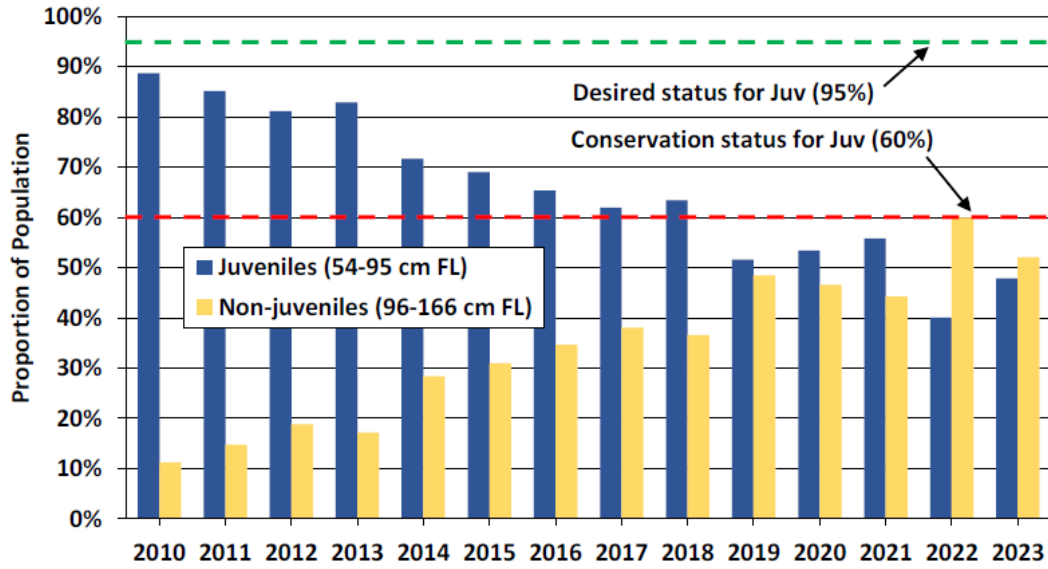


Figure 3. Lower Columbia River White Sturgeon population composition, 2010 – 2023.

Adult Abundance and CPUE Trends

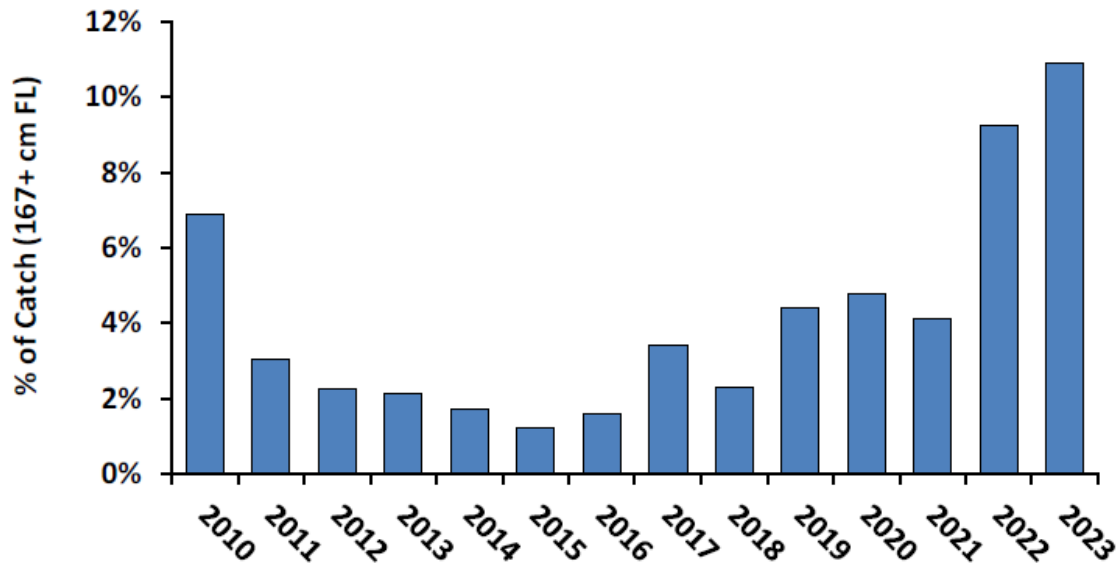


Figure 4. Percent of LCR setline catch comprised of White Sturgeon ≥ 167 cm FL, 2010 – 2023.

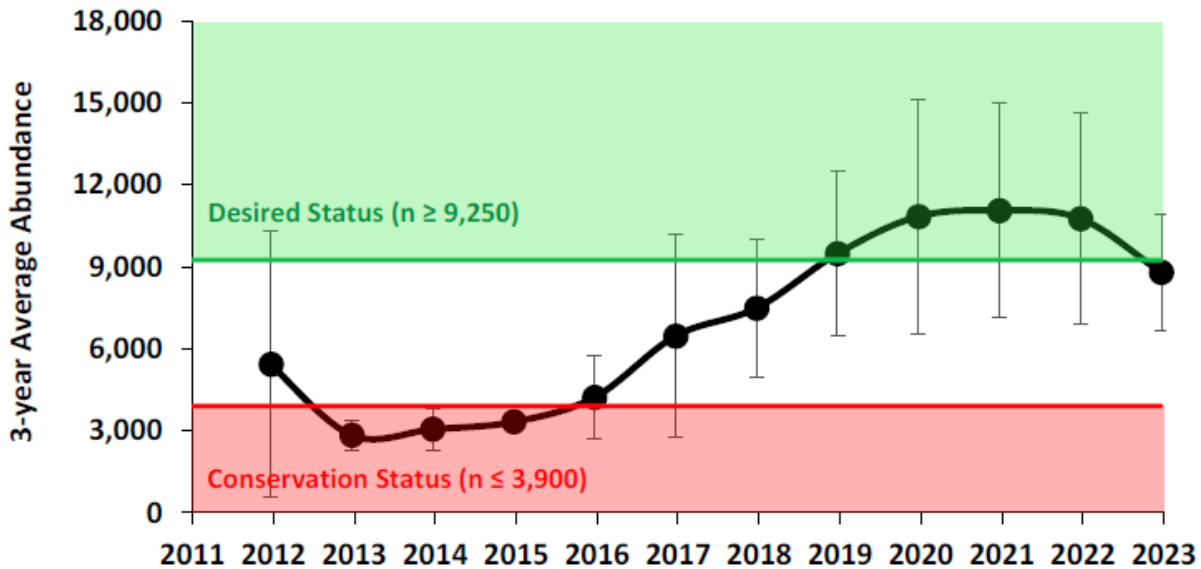


Figure 5. Three-year running average estimated abundance for White Sturgeon ≥ 167 cm FL from the LCR, 2012 – 2023. Less than three years of data were available prior to 2012, therefore no averages were calculated. Error bars represent one standard deviation.

Length Frequency Trend

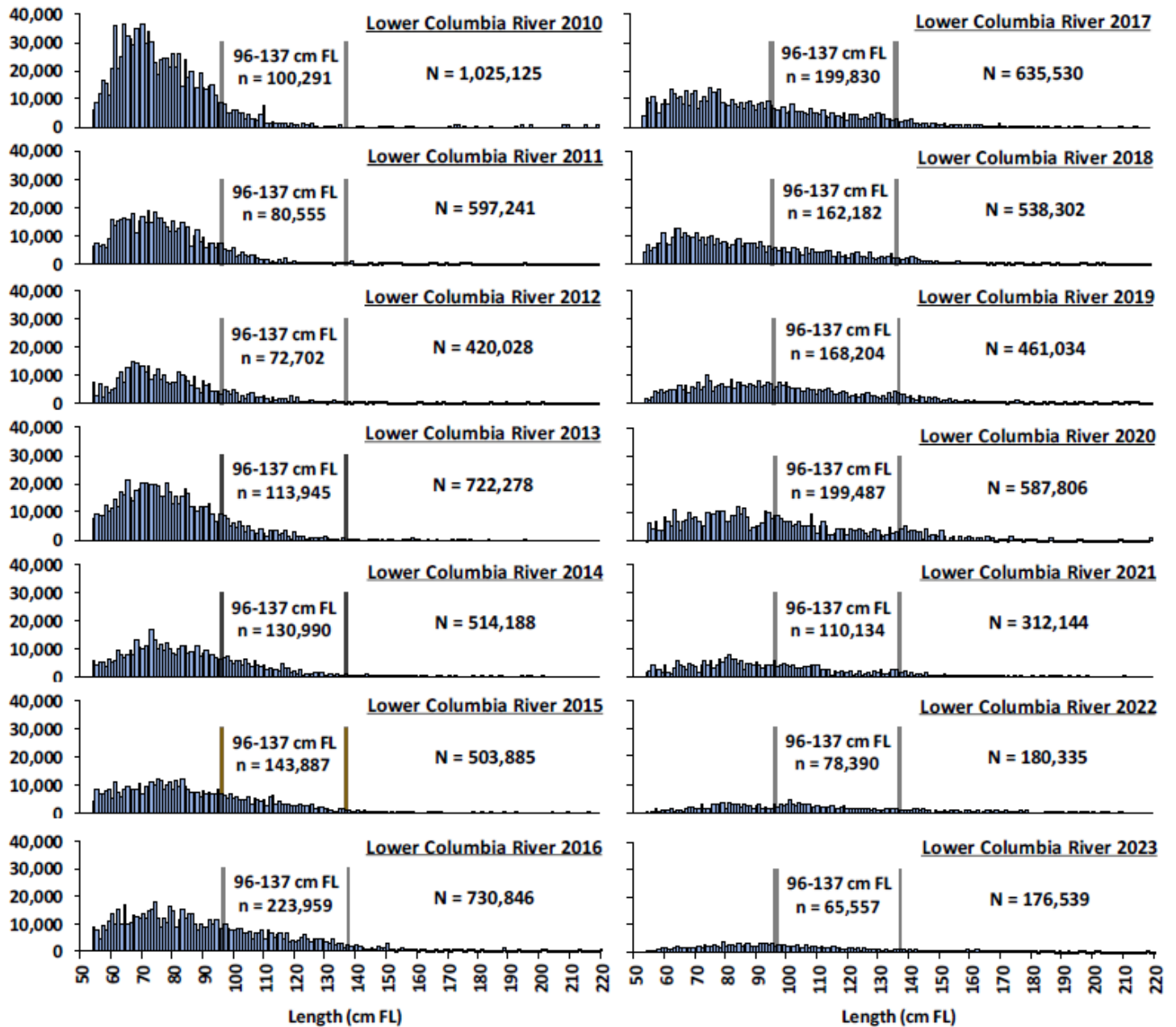


Figure 6. Estimated abundance by 1-cm length increments of White Sturgeon ≥ 54 cm FL from the LCR, 2010 – 2023.

Legal-size Abundance Forecasts

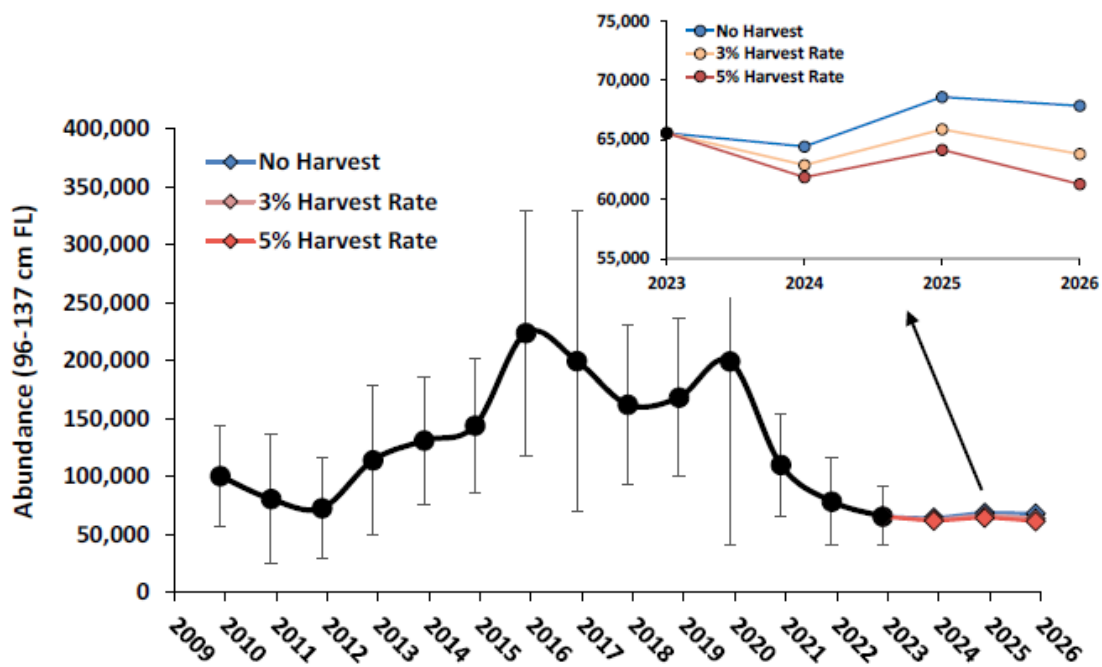


Figure 8. Projected abundance of White Sturgeon 96 – 137 cm FL in the LCR under different annual harvest rates.

Sub-yearling (Age-0) Production

Table 2. Annual recruitment index (E_p) and catch-per-net (CPN) for age-0 White Sturgeon from the Willamette River (Will R) and the lower Columbia River (LCR), 2004 – 2023.

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

¹ No age-0 sampling in either the lower Columbia or Willamette rivers.

² No age-0 sampling in the Willamette River.

2024 LCR Fisheries:

In 2023, staff provided updates on the LCR white sturgeon status to the Columbia River Fishery Advisor groups. Advisors expressed some conservation concerns about population metrics. Additionally, advisors expressed concerns about a lack of meaningful harvest opportunities.

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. Therefore, there was no retention of white sturgeon for either commercial or recreational fisheries downstream of Bonneville Dam in 2023.

The continued prolonged recruitment shortfall has reduced the abundance of legal-size fish, impacting our ability to prosecute meaningful retention fisheries again in 2024.

Columbia River Eulachon Smelt

Stock Status

- In the last decade, the adult run size has ranged from a low of 370,000 pounds in 2018 to 18,300,000 pounds in 2022 (Figure 1).
- In 2023, a complete field season was conducted with sampling occurring over 21 weeks from January 13 through May 24. The spawning-stock biomass (SSB) for 2023 is estimated at 16,900,000 pounds, which is the second highest SSB recorded using the current SSB sampling methodology. After factoring in harvest in 2023 fisheries, the run size is estimated at 17,000,000 pounds.

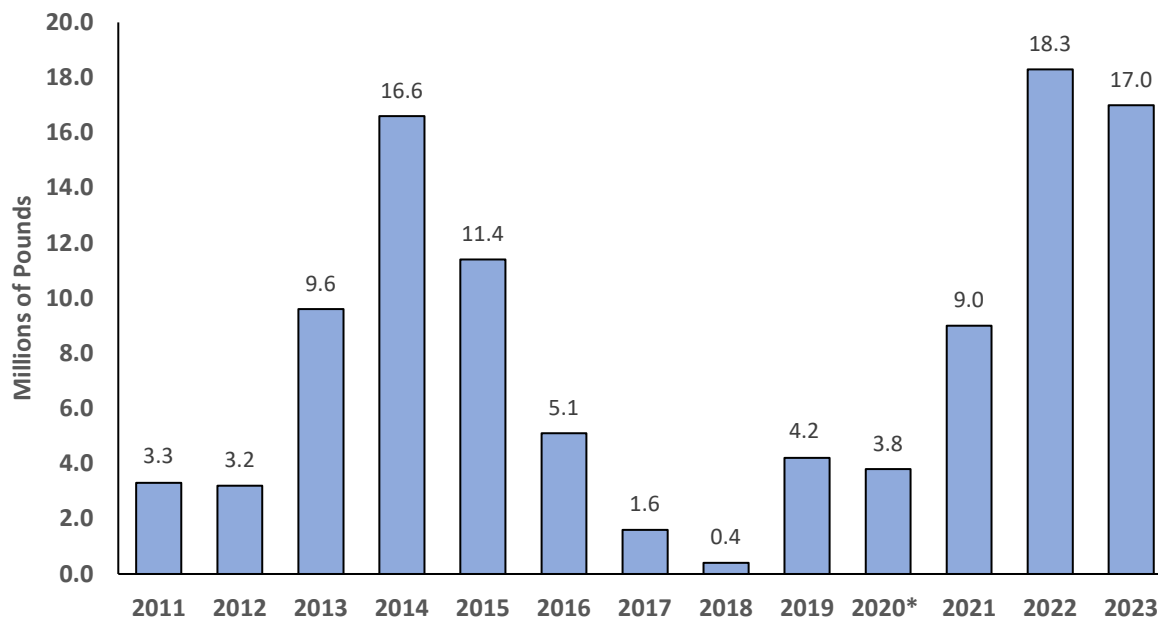


Figure 1. Columbia River Eulachon abundance, in millions of pounds, by year. The 2020 run size estimate is unreliable due to an incomplete sampling season.

Abundance indicators for 2024

- A strong 2023 return of Eulachon adults from brood year 2020 may indicate another strong return from this cohort in 2024.
- Improved in-river environmental conditions during outmigration for the 2019 (Age-5), and 2020 (Age-4) cohorts likely improved survival to the ocean:
 - January through March, river temperatures were cool to warm and the flow quick, which may have led to normal or late yolk sac absorption.
 - March through June, estuary water particle residence time was shorter than average, which might lead to an early to normal ocean arrival time.
 - April through June, the volume of the Columbia River plume was large, which may have improved conditions for larvae entering the ocean environment.
- Conversely warm water temperatures during the 2021 larval outflow period could have negatively impacted early survival of this cohort (Age-3).
- Ocean Indices such as PDO, SOI, and ONI improved from 2020 through 2023 to the most productive values in over a decade; however, marine upwelling in 2022 and 2023 was weak and

combined with warming sea surface temperatures during the spring of 2022 indicates some uncertainty for marine survival during these years.

- The overall copepod richness anomaly has improved and remained in the positive range from 2020 through 2023, although the biomass of nutritionally richer northern species of copepod began to slightly decline in 2022.

Table 1. Summary of factors to forecast the Columbia River Eulachon adult return in 2024.

Brood Year	Age at Spawn	Cohort Survival Factors		Forecasted Contribution
		Freshwater Phase	Ocean Phase	
2019	5	+	0	0
2020	4	0	+	+
2021	3	-	+	+
2022	2	0	+	0

2023-24 Observations

- Sightings of smelt were reported in the lower Cowlitz during December.
- Pinniped activity observed in the lower Columbia and Cowlitz rivers in late December.

Use of the commercial fishery data

- The biological data collected during the commercial fishery allow for investigation of the structure of the annual Eulachon run into the Columbia River including run distribution, run strength, weight distribution, age composition, sex ratio, stage of maturity, and fecundity.
- Fishery assessment provides data to evaluate the utility of SSB calculations and provides context to historical landings data. For example, there appears to be a correlation between the pounds per landing data provided by the mainstem commercial fishery and the data from the larval density survey (Figure 2).

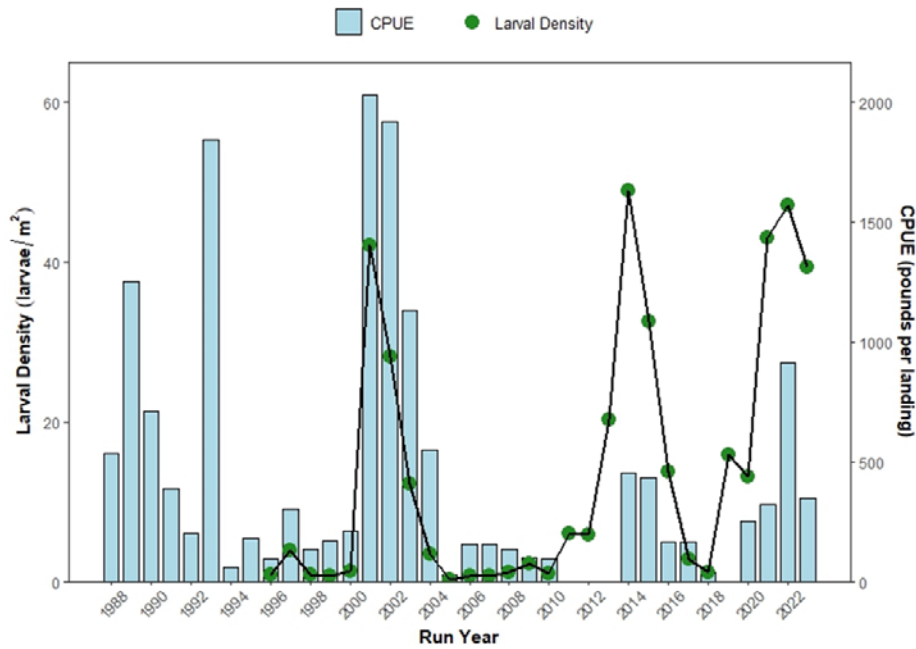


Figure 2. Comparison of adult Eulachon catch per unit effort (CPUE) in terms of total pounds per landing in the mainstem Columbia River commercial gillnet fishery and mean larval densities captured at mainstem Columbia index sites using plankton tow nets, 1988–2023.

Table 2. Columbia River Eulachon run size and harvest estimates, 2011–2023.

Year	Weeks sampled for SSB	Run size (SSB plus harvest in pounds) ¹	Harvest (pounds)				
			Commercial		Sport	Tribal	Combined
			Mainstem	Tributary			
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	22	17,000,000	1,726	--	55,595	10,806	68,127

¹ Rounded to the nearest 100,000 pounds.

² The 2020 SSB estimate is incomplete due to truncated sampling during March

2024 Management Considerations

- **2024 Forecast:** Overall, the 2024 run is expected to be similar to the 2023 run, though some variable ocean conditions leave some uncertainty in that forecast.
- **2024 Fisheries:**
 - Commercial Harvest:
 - Staff are considering a 2024 fishery season structure as follows:
 - Season: M, W & Th, late January-early March
 - Area: Zones 1-3
 - Gear: Gill net only
 - *Commercial fishing season subject to decision at the Compact hearing, scheduled for January 23, 2024.*
 - Recreational Fisheries:
 - Plan to consider recreational fisheries after an observed minimum daily CPUE of 200 pounds per delivery for at least one period from the commercial fishery.
 - Similar to previous years, we plan to use additional observations of smelt within the Cowlitz River to ensure adequate fish exist to prosecute a fishery.
 - Staff are preparing to consider 1-3 recreational smelt dipping days between the Cowlitz and Sandy rivers.

Summary of 2023 Salmon Fisheries (all data considered preliminary)

Lower Columbia River Recreational Fisheries Summary

2023 Lower Columbia River Recreational Fisheries Catch Summary.																	
Time Period	Area	Species Allowed	Days for Chinook	Salmonid Anglers	Adult Chin. Kept	Adult Chin. Rel'd	Jack Chin. Kept	Jack Chin. Rel.	Sthd Kept 3/	Sthd Rel'd	Sockeye Kept 4/	Sockeye Rel'd	Adult Coho Kept	Adult Coho Rel'd	Jack Coho Kept	Jack Coho Rel.	
Feb	Buoy 10 to I-5	ChS, StW		2,326	0	0	0	0	15	8	0	0	0	0	0	0	
March	LCR	ChS, StW	31	18,345	457	84	7	7	96	123	0	0	0	0	0	0	
April	LCR	ChS, StW	11	23,086	2,409	356	0	15	21	20	0	0	0	0	0	0	
May 16-18	Buoy 10 to I-5	StS, ChS Jx	0	306	0	52	9	0	3	0	0	0	0	0	0	0	
May 19-31	TP-I5/TP-Bonn.	ChS, StS	13	16,414	1,825	627	426	37	181	17	0	0	0	0	0	0	
June 1-15	TP-Bonn.	Shad only	0	0	0	0	0	0	0	3	0	0	0	0	0	0	
ChS Totals 1/	(February 1-June 15)		55	60,477	4,691	1,119	442	59	316	171	0	0	0	0	0	0	
June 16-30	Astoria Br-BO	ChR, StS, Sok	15	21,899	2,013	564	188	69	469	197	981	47	0	0	0	0	
July 1-31	Astoria Br-BO	StS, Sok, ChR Jx	0	14,145	6	386	43	80	1,435	1,597	384	24	0	0	0	0	
ChR Totals 2/	(June 16-July 31)		15	36,044	2,019	950	231	149	1,904	1,794	1,365	71	0	0	0	0	
Spring/Summer Totals			70	96,521	6,710	2,069	673	208	2,220	1,965	1,365	71	0	0	0	0	
Aug	WPI-BO	ChF, Co	31	33,530	6,761	662	270	235	0	569	0	0	213	171	3	0	
Sep	WPI-BO	ChF, Co	30	53,232	18,078	1,459	1,965	247	0	41	0	0	2,042	1,055	173	68	
Oct	WPI-BO	ChF, Co	31	10,953	2,567	220	506	45	0	0	0	0	1,033	260	219	29	
ChF Totals 5/	(August 1-October 31)		92	97,715	27,406	2,341	2,741	527	0	610	0	0	3,288	1,486	395	97	
LCR Spring Summer and Fall			162	194,236	34,116	4,410	3,414	735	2,220	2,575	1,365	71	3,288	1,486	395	97	
OR Buoy 10	B10-TP	ChF, Co	53	58,607	15,313	13,155	0	0	0	117	0	0	7,359	5,223	0	0	
WN Buoy 10	B10-TP	ChF, Co	53	19,572	2,823	2,519	0	0	0	0	0	0	2,473	1,821	0	0	
	TP-WPI	ChF, Co	53	1,623	494	404	0	0	0	0	0	0	304	168	0	0	
Buoy 10 Total 6/	(August 1- October 31)		53	79,802	18,630	16,078	0	0	0	117	0	0	10,136	7,212	0	0	
B10 and Mainstem Fall Totals			92	177,517	46,036	18,419	2,741	527	0	727	0	0	13,424	8,698	395	97	
LCR and B10 Grand Totals			162	274,038	52,746	20,488	3,414	735	2,220	2,692	1,365	71	13,424	8,698	395	97	

1/ Spring Chinook open: B10 - I-5 Bridge February 1-28; B10 - Beacon Rock March 1-April 11; B10 - Beacon Rock plus the banks between Beacon Rock and Bonneville May 19-31.

2/ Retention of adult hatchery summer Chinook open June 16-30 from the Astoria-Megler Bridge to Bonneville Dam.

3/ Hatchery steelhead open: B10 - Bonneville Dam February 1-April 11; TP - I-5 May 16-18; TP - Bonneville Dam May 19-31; Astoria- Megler Bridge - Bonneville Dam Jun 16- July 31. One steelhead bag limit effective June 16.

4/ Sockeye retention was open during June 16-July 31 from the Astoria-Megler Bridge to Bonneville Dam.

5/ Fall Chinook and hatchery coho was open as follows: WPI-WR open Aug 1-Sep 4, Sep 15-17 and Sep 22-Dec 31; WR-BO open Aug 1-Dec 31.

6/ Buoy 10 and TP - WPI: open for hatchery Chinook and coho August 1-20, 24-27, 2 fish/ 1 Chinook. Coho open September 5-7 with a three fish bag limit. Chinook reopened Sep 8-Dec 31, 3 fish/ 1 Chinook (hatchery or wild).

Zone 6 Recreational Fisheries Summary

2023 Zone 6 (Bonneville Dam - McNary Dam) Spring, Summer, and Fall Salmon Fisheries. Final, post-season estimates from ODFW creel monitoring program.													
Area/Pool	Time Period	Species Allowed	Salmonid Anglers	Adult Chin. Kept	Adult Chin. Rel'd	Jack Chin. Kept	Total Sthd Kept	Total Sthd Rel'd	Adult Coho Kept	Adult Coho Rel.	Jack Coho Kept	Sockeye Kept	Sockeye Rel'd
Bonneville			1,302	177	30	4	0	2	0	0	0	0	0
The Dalles	Apr 1 - Jun 15	Chinook, steelhead	3,860	473	88	41	0	0	0	0	0	0	0
John Day			2,804	388	386	104	0	20	0	0	0	0	0
Spring Management Period Total (Jan 1 - June 15)			7,966	1,038	504	149	0	22	0	0	0	0	0
Bonneville	Jun 16 - Jul 31	Chinook, steelhead, sockeye	529	14	75	0	0	25	0	0	0	29	22
The Dalles			430	40	10	9	0	0	0	0	0	0	4
John Day			344	0	0	0	0	0	0	0	0	0	21
Summer Management Period Total (June 16-July 31)			1,303	54	85	9	0	25	0	0	0	50	26
Bonneville	Aug 1 - Nov 19	Chinook, steelhead, coho	31,978	11,901	1,663	1,321	0	270	2,861	377	552	0	0
The Dalles			11,737	2,999	184	562	0	12	493	28	10	0	6
John Day			5,287	948	26	192	0	22	91	32	0	0	0
Fall Management Period Total 3/ (August 1-December 31)			49,002	15,848	1,873	2,075	0	304	3,445	437	562	0	6
Grand Total			58,271	16,940	2,462	2,233	0	351	3,445	437	562	50	32

1/ Open April 4 - May 6; 2 fish, 1 Chinook. Open area Tower Island powerlines upstream to OR/WA border.

2/ Open June 16 - July 31. 2 fish/ 1 steelhead. Closed July 1- July 31 for retention of Chinook.

3/ Open August 1 - December 31. 2 fish, 1 Chinook. Only hatchery Coho may be retained downstream of the Hood River Bridge.

Upstream of McNary Dam Recreational Summary

Fishery	Kept Adults	Released Adults	Chinook Season
Spring Chinook: Snake R.	411	71	May 2-5, 9-12, 23-26
Spring Chinook: McNary – OR/WA border	21	10	April 1 – May 6, 19-24
Summer Chinook: HWY 395 – PRD	43	12	June 16-30
Sockeye: Hwy 395 – PRD	1,067	3	June 16 – August 15
Summer Chinook: Above PRD+tribs	5,735	1,384	July 1 – October 15
Sockeye: Above PRD	33,909	55	
Fall Chinook: Hanford Reach	10,388	0	August 16 – December 31

Fall Recreational Fishery Summary

<p>Fall Season Buoy 10 TP/RP-WPI</p>	<p>Chinook open 8/1-20, 24-27, 8/30-9/4 (MSF), 2 fish/1 CHF; 9/5-9/7, 3 Coho; 9/8-12/31 (nMSF CHF) 3 fish/1 CHF Coho open 8/1-9/1, 9/15-12/31 STH retention closed Aug-Oct 79,802 trips, 18,630 Chinook kept – 11th highest (16,178 rel) 10.136 Coho kept (7,212 rel) LRH handle lower than preseason expectation</p>
<p>Fall Season LCR Sport WPI - BON</p>	<p>Chinook and Coho open WPI - Warrior R. 8/1-9/4; 9/15-9/17, 9/22-12/31, 2 Fish/1 Chinook Warrior R. - BON: 8/1-12/31, 2 Fish/1 Chinook STH retention closed Aug-Oct 97,715 trips Aug-Oct – highest since 2017 (12th highest since 1980) 27,406 adult Chinook kept 2,341 rel 3,288 Coho kept 1,487 rel 0 STH kept (610 rel H+W) LRH handle tracked lower than preseason expectation</p>
<p>Fall Season BON - McNary</p>	<p>Chinook and Coho open 8/1-12/3 1 CHF bag STH closed Aug-Oct BON Pool; Sep-Dec TDA/JD/McN pools 49,002 trips Aug-Dec 31; 15,848 adult Chinook kept (1,873 rel) 3,445 Coho kept (437 rel); 2 STH kept (304 rel H+W) C&E higher than preseason expectation</p>
<p>Fall Season McNary-Hwy 395</p>	<p>Same season as JD-McN 1380 trips; 45 Chinook, 19 Coho and 0 STH kept 6 Chinook, 8 Coho and 31 STH (H+W) released</p>
<p>Fall Season Hanford Reach</p>	<p>Fall Chinook open 8/16-12/31; 6 fish/1 adults 26,369 trips; 10,388 adults and 415 jack Chinook kept; 53 Coho kept; Similar Chinook harvest as 2022</p>

Lower Columbia River Commercial Landings Summary

Season	Fishing Period	Week	Hours	Zones	Mesh Size	WSTGLimit	Del.	Chinook	Coho	Sockeye	Pink	Chum	White Sturgeon	
Spring	No season.	-	-	-	-	-	-	-	-	-	-	Prohibited	Prohibited	
	<i>Spring Season Totals (and average number of deliveries):</i>							0	0	0	0	0	-	-
Summer	No season.	-	-	-	-	-	-	-	-	-	-	Prohibited	Prohibited	
	<i>Summer Season Totals (and average number of deliveries):</i>							0	0	0	0	0	-	-
August	Aug 9, 9 PM - Aug 10, 6 AM	32	9	4-5	9'-9 3/4"	Prohibited	15	407	0	0	0	Prohibited	Prohibited	
	Aug 14, 9 PM - Aug 15, 6 AM	33	9	4-5	9'-9 3/4"	Prohibited	32	1,133	4	1	0	Prohibited	Prohibited	
	Aug 16, 9 PM - Aug 17, 6 AM	33	9	4-5	9'-9 3/4"	Prohibited	23	200	0	0	0	Prohibited	Prohibited	
	Aug 21, 9 PM - Aug 22, 6 AM	34	9	4-5	9'-9 3/4"	Prohibited	48	2,327	15	0	0	Prohibited	Prohibited	
	Aug 23, 9 PM - Aug 24, 6 AM	34	9	4-5	9'-9 3/4"	Prohibited	54	2,635	37	0	0	Prohibited	Prohibited	
	Aug 27, 9 PM - Aug 28, 6 AM	35	9	4-5	9'-9 3/4"	Prohibited	59	7,421	118	0	0	Prohibited	Prohibited	
	Aug 29, 9 PM - Aug 30, 6 AM	35	9	4-5	9'-9 3/4"	Prohibited	64	7,557	433	0	0	Prohibited	Prohibited	
	Aug 31, 9 PM - Sep 1, 6 AM	35	9	4-5	9'-9 3/4"	Prohibited	50	5,703	1,055	0	0	Prohibited	Prohibited	
	<i>August Season Totals (and average number of deliveries):</i>							43	27,383	1,662	1	0	-	-
	Sep 17, 8 PM - Sep 18, 6 AM	38	10	4-5	8'-9 3/4"	Prohibited	31	1,714	448	0	0	Prohibited	Prohibited	
	Sep 18, 4 AM - 10 PM	38	18	1-3	3-3 4/4" m ax tangle-net	Prohibited	19	340	701	0	0	Prohibited	Prohibited	
	Sep 19, 8 PM - Sep 20, 6 AM	38	10	4-5	8'-9 3/4"	Prohibited	6	449	78	0	0	Prohibited	Prohibited	
	Sep 20, 4 AM - 10 PM	38	18	1-3	3-3 4/4" m ax tangle-net	Prohibited	30	419	1,084	0	0	Prohibited	Prohibited	
	Sep 22, 4 AM - 6 PM	38	14	1-3	3-3 4/4" m ax tangle-net	Prohibited	21	276	714	0	0	Prohibited	Prohibited	
	Sep 24, 8 PM - Sep 25, 6 AM	39	10	4-5	8'-9 3/4"	Prohibited	14	775	144	0	0	Prohibited	Prohibited	
Sep 25, 4 AM - 10 PM	39	18	1-3	3-3 4/4" m ax tangle-net	Prohibited	11	141	497	0	0	Prohibited	Prohibited		
Sep 26, 4 AM - 10 PM	39	18	1-3	3-3 4/4" m ax tangle-net	Prohibited	16	94	519	0	0	Prohibited	Prohibited		
Sep 26, 8 PM - Sep 27, 6 AM	39	10	4-5	8'-9 3/4"	Prohibited	8	370	80	0	0	Prohibited	Prohibited		
Sep 27, 4 AM - 10 PM	39	18	1-3	3-3 4/4" m ax tangle-net	Prohibited	9	22	163	0	0	Prohibited	Prohibited		
Sep 28, 4 AM - 10 PM	39	18	1-3	3-3 4/4" m ax tangle-net	Prohibited	8	37	304	0	0	Prohibited	Prohibited		
Sep 28, 7 PM - Sep 29, 7 AM	39	12	4-5	8'-9 3/4"	Prohibited	5	144	47	0	0	Prohibited	Prohibited		
Sep 29, 4 AM - 6 PM	39	14	1-3	3-3 4/4" m ax tangle-net	Prohibited	19	83	1,124	0	0	Prohibited	Prohibited		
Oct 1, 7 PM - Oct 2, 7 AM	40	12	4-5	8'-9 3/4"	Prohibited	6	252	42	0	0	Prohibited	Prohibited		
Oct 2, 4 AM - 10 PM	40	18	1-3	3-3 4/4" m ax tangle-net	Prohibited	12	36	157	0	0	Prohibited	Prohibited		
Oct 3, 4 AM - 10 PM	40	18	1-3	3-3 4/4" m ax tangle-net	Prohibited	10	46	192	0	0	Prohibited	Prohibited		
Oct 4, 4 AM - 10 PM	40	18	1-3	3-3 4/4" m ax tangle-net	Prohibited	4	9	47	0	0	Prohibited	Prohibited		
Oct 4, 7 PM - Oct 5, 7 AM	40	12	4-5	8'-9 3/4"	Prohibited	5	219	76	0	0	Prohibited	Prohibited		
Oct 5, 4 AM - 10 PM	40	18	1-3	3-3 4/4" m ax tangle-net	Prohibited	8	51	121	0	0	Prohibited	Prohibited		
Oct 6, 4 AM - 6 PM	40	14	1-3	3-3 4/4" m ax tangle-net	Prohibited	2	8	49	0	0	Prohibited	Prohibited		
Oct 8, 7 PM - Oct 9, 7 AM	41	12	4-5	8'-9 3/4"	Prohibited	5	197	23	0	0	Prohibited	Prohibited		
Oct 9, 4 AM - 10 PM	41	18	1-3	3-3 4/4" m ax tangle-net	Prohibited	6	2	28	0	0	Prohibited	Prohibited		
Oct 10, 4 AM - 10 PM	41	18	1-3	3-3 4/4" m ax tangle-net	Prohibited	1	2	7	0	0	Prohibited	Prohibited		
Oct 11, 4 AM - 10 PM	41	18	1-3	3-3 4/4" m ax tangle-net	Prohibited	2	2	17	0	0	Prohibited	Prohibited		
Oct 11, 7 PM - Oct 12, 7 AM	41	12	4-5	8'-9 3/4"	Prohibited	5	262	2	0	0	Prohibited	Prohibited		
Oct 12, 4 AM - 10 PM	41	18	1-3	3-3 4/4" m ax tangle-net	Prohibited	0	0	0	0	0	Prohibited	Prohibited		
Oct 13, 4 AM - 6 PM	41	14	1-3	3-3 4/4" m ax tangle-net	Prohibited	1	2	17	0	0	Prohibited	Prohibited		
Oct 15, 7 PM - Oct 16, 7 AM	42	12	4-5	8'-9 3/4"	Prohibited	4	299	1	0	0	Prohibited	Prohibited		
Oct 16, 4 AM - 10 PM	42	18	1-3	3-3 4/4" m ax tangle-net	Prohibited	0	0	0	0	0	Prohibited	Prohibited		
Oct 17, 4 AM - 10 PM	42	18	1-3	3-3 4/4" m ax tangle-net	Prohibited	1	3	3	0	0	Prohibited	Prohibited		
Oct 18, 4 AM - 10 PM	42	18	1-3	3-3 4/4" m ax tangle-net	Prohibited	0	0	0	0	0	Prohibited	Prohibited		
Oct 18, 7 PM - Oct 19, 7 AM	42	12	4-5	8'-9 3/4"	Prohibited	4	261	0	0	0	Prohibited	Prohibited		
Oct 19, 4 AM - 10 PM	42	18	1-3	3-3 4/4" m ax tangle-net	Prohibited	0	0	0	0	0	Prohibited	Prohibited		
Oct 20, 4 AM - 6 PM	42	14	1-3	3-3 4/4" m ax tangle-net	Prohibited	0	0	0	0	0	Prohibited	Prohibited		
Oct 23, 4 AM - 10 PM	43	18	1-3	3-3 4/4" m ax tangle-net	Prohibited	0	0	0	0	0	Prohibited	Prohibited		
Oct 24, 4 AM - 10 PM	43	18	1-3	3-3 4/4" m ax tangle-net	Prohibited	0	0	0	0	0	Prohibited	Prohibited		
Oct 25, 4 AM - 10 PM	43	18	1-3	3-3 4/4" m ax tangle-net	Prohibited	0	0	0	0	0	Prohibited	Prohibited		
Oct 26, 4 AM - 10 PM	43	18	1-3	3-3 4/4" m ax tangle-net	Prohibited	0	0	0	0	0	Prohibited	Prohibited		
Oct 27, 4 AM - 6 PM	43	14	1-3	3-3 4/4" m ax tangle-net	Prohibited	0	0	0	0	0	Prohibited	Prohibited		
<i>Late-fall Zones 1-3 subtotal (and average number of deliveries):</i>							6	1,573	5,744	0	0	-	-	
<i>Late-fall Zones 4-5 subtotal (and average number of deliveries):</i>							8	4,942	941	0	0	-	-	
<i>Late-Fall Season Totals (and average number of deliveries):</i>							7	6,515	6,685	0	0	-	-	
2023 Grand Totals:								Chinook	Coho	Sockeye	Pink	Chum	White Sturgeon	
								33,898	8,347	1	0	Prohibited	Prohibited	

Ocean Conditions and Forecasts

2023 OCEAN CONDITION INDICATORS TREND

		■ good ■ fair ■ poor																										
ECOSYSTEM INDICATORS		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
CLIMATE & ATMOSPHERIC	PDO (Sum Dec-March)	Red	Yellow	Green	Yellow	Yellow	Red	Yellow	Red	Yellow	Yellow	Green	Green	Red	Green	Green	Yellow	Yellow	Red	Red	Red	Red	Yellow	Red	Yellow	Green	Green	Green
	PDO (Sum May-Sept)	Yellow	Green	Yellow	Green	Yellow	Red	Yellow	Red	Yellow	Red	Green	Yellow	Yellow	Green	Green	Yellow	Red	Red	Red	Red	Yellow	Red	Yellow	Green	Green	Green	Green
	ONI (Average Jan-June)	Red	Green	Green	Yellow	Yellow	Red	Yellow	Red	Yellow	Yellow	Green	Yellow	Red	Green	Green	Yellow	Yellow	Red	Red	Red	Yellow	Green	Red	Red	Green	Green	Yellow
LOCAL PHYSICAL	SST NDBC buoys (°C; May-Sept)	Red	Green	Yellow	Green	Yellow	Yellow	Red	Yellow	Green	Yellow	Green	Yellow	Green	Green	Yellow	Red	Red	Red	Red	Yellow	Yellow	Red	Yellow	Green	Red	Yellow	
	Upper 20 m T (°C; Nov-Mar)	Red	Yellow	Yellow	Green	Yellow	Red	Yellow	Red	Yellow	Green	Green	Yellow	Red	Green	Green	Yellow	Green	Red	Red	Red	Yellow	Red	Yellow	Green	Yellow	Green	
	Upper 20 m T (°C; May-Sept)	Yellow	Yellow	Yellow	Green	Green	Yellow	Red	Red	Yellow	Yellow	Green	Green	Yellow	Yellow	Green	Red	Red	Red	Yellow	Yellow	Yellow	Red	Red	Green	Red	Green	
	Deep Temp (°C; May-Sept)	Red	Green	Yellow	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	Yellow	Yellow	Green	Green	Yellow	Yellow	Red	Red	Yellow	Yellow	Red	Yellow	Red	Red	Red	
	Deep Salinity (May-Sept)	Red	Green	Yellow	Green	Green	Red	Red	Yellow	Yellow	Green	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red	Red	Yellow	Yellow	Green	Yellow	Red	Red	Red	
LOCAL BIOLOGICAL	Copepod richness (May-Sept anom)	Red	Green	Green	Yellow	Yellow	Red	Yellow	Red	Red	Yellow	Yellow	Yellow	Red	Green	Yellow	Green	Yellow	Red	Red	Red	Red	Yellow	Yellow	Green	Green	Green	
	N copepod biomass (May-Sept anom)	Red	Red	Yellow	Yellow	Green	Red	Yellow	Red	Red	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Green	Red	Red	Red	Red	Yellow	Green	Green	Yellow	Yellow	
	S copepod biomass (May-Sept anom)	Red	Green	Green	Green	Green	Yellow	Red	Red	Yellow	Yellow	Green	Yellow	Red	Yellow	Yellow	Green	Yellow	Red	Red	Red	Red	Yellow	Red	Yellow	Green	Green	
	Biological transition	Red	Yellow	Yellow	Green	Yellow	Red	Red	Red	Yellow	Yellow	Green	Green	Yellow	Green	Green	Yellow	Green	Red	Red	Red	Red	Yellow	Yellow	Yellow	Green	Yellow	
	Nearshore Ichthyoplankton (Jan-Mar)	Red	Green	Yellow	Green	Green	Red	Red	Red	Yellow	Yellow	Green	Yellow	Yellow	Green	Green	Yellow	Yellow	Red	Red	Red	Red	Yellow	Yellow	Green	Yellow	Green	
	Near & offshore Ichthyoplankton (community index Jan-Mar)	Yellow	Green	Green	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Green	Green	Yellow	Yellow	Red	Red	Red	Red	Red	Red	Yellow	Yellow	Yellow	
	Chinook salmon juvenile catch	Red	Green	Green	Red	Green	Green	Red	Red	Red	Yellow	Green	Green	Green	Green	Yellow	Green	Yellow	Yellow	Red	Red	Red	Red	Yellow	Yellow	Yellow	Red	
	Coho salmon juvenile catch	Red	Yellow	Red	Green	Green	Green	Red	Red	Red	Red	Green	Green	Yellow	Yellow	Red	Yellow	Yellow	Yellow	Yellow	Red	Red	Red	Yellow	Yellow	Yellow	Green	
MEANS & RANKS	Mean of ranks	22.1	7.6	9.4	9.1	7.3	16.6	19.9	20.9	13.4	11.9	3.8	10.8	14.4	8.8	7.4	9.9	15.5	21.8	21.5	19.9	14.6	18.8	14.9	6.9	11.9	11.4	
	Rank of the mean rank	Red	Green	Green	Green	Green	Red	Red	Red	Yellow	Yellow	Green	Yellow	Yellow	Green	Green	Yellow	Yellow	Red	Red	Red	Yellow	Red	Yellow	Green	Yellow	Yellow	
NOT INCLUDED IN THE MEAN OF RANKS OR STATISTICAL ANALYSES	Physical Spring Trans (UI based)	Green	Green	Red	Red	Green	Yellow	Yellow	Red	Yellow	Green	Green	Green	Yellow	Yellow	Red	Yellow	Red	Yellow	Green	Red	Yellow	Yellow	Yellow	Green	Red	Red	
	Physical Spring Trans. Hydrographic	Red	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Red	Yellow	Yellow	Green	Yellow	Red	Green	Yellow	Green	Yellow	Red	Red	Red	Yellow	Yellow	Yellow	Red	Red	Yellow	
	Upwelling Anomaly (sum April-May)	Yellow	Green	Red	Green	Yellow	Yellow	Yellow	Red	Yellow	Yellow	Green	Yellow	Red	Red	Red	Yellow	Yellow	Red	Red	Red	Green	Green	Yellow	Red	Red	Yellow	
	Length of Upwelling Season (UI based)	Green	Green	Red	Yellow	Green	Yellow	Yellow	Red	Yellow	Yellow	Green	Yellow	Yellow	Red	Yellow	Yellow	Yellow	Red	Red	Red	Yellow	Yellow	Yellow	Red	Red	Yellow	
	Copepod Community Index (May-Sept)	Red	Green	Green	Yellow	Green	Red	Yellow	Red	Red	Yellow	Green	Yellow	Yellow	Yellow	Green	Green	Yellow	Yellow	Red	Red	Red	Yellow	Yellow	Green	Green	Yellow	

* NOAA ocean condition scorecard for outmigrating salmon with ratings from 1 (best) to 24 (worst). The years shown correspond to the years the smolts entered the ocean.

** This table is easier to interpret if printed in color. Green represents more favorable indicators. Yellow is intermediate and Red indicates unfavorable.

Columbia River Adult Salmon Returns: Actual and Forecasted[†]

		2023 Forecast	2023 Return	2024 Forecast
Spring Chinook	Upriver Total *	198,600	141,179	121,000
	Upper Columbia	41,400	24,917	19,400
	<i>Upper Columbia natural-origin</i>	5,800	2,836	2,700
	Snake River Spring/Summer **	85,900	82,433	63,500
	<i>Snake River natural-origin **</i>	13,200	10,826	9,200
	Lower River Total	117,000	75,407	84,600
	Total Spring Chinook	315,600	216,586	205,600
	<u>Area-specific detail</u>			
	Willamette River	71,000	38,373	48,800
	Sandy River	7,800	6,312	7,700
	Select Areas ***	22,100	18,789	18,100
	Cowlitz River	9,000	6,217	4,700
	Kalama River	2,400	2,525	1,900
	Lewis River	4,700	3,191	3,400
	Wind River ***	4,400	5,068	4,200
	Drano Lake/Little White Salmon River ***	8,000	7,550	5,300
	Hood River ***	n/a	2,038	n/a
	Klickitat River ***	1,400	651	1,300
	Deschutes River ***	n/a	2,387	n/a
	John Day River ***	n/a	2,686	n/a
	Umatilla River ***	2,500	2,502	n/a
	Yakima River ***	5,500	2,670	2,400
Summer Chinook	Upper Columbia	85,400	54,722	53,000
Sockeye	Total Sockeye	234,500	329,040	401,700
	Wenatchee	44,300	146,875	97,000
	Okanogan	187,400	179,655	288,700
	Yakima	100	443	12,100
	Deschutes	100	68	100
	Snake River	2,600	1,999	3,800

† All forecasts are rounded to the nearest 100s place.

* Upriver totals are developed by TAC for use in management of *U.S. v. OR* fisheries. Wild components are included in the stock total. Area-specific estimates for upriver tributaries detailed here are provided by other agencies/entities and may not sum to TAC's upriver abundance estimates.

** 2023 return is based on current TAC run reconstruction methodology.

*** Return to tributary mouth.

12/12/2023