

**Lower Columbia River Sturgeon Population Status and Management**  
**(Briefing)**

**TABLE OF CONTENTS**

	<b>Page</b>
Summary Sheet.....	1 of 22
Lower Columbia River White Sturgeon Stock Assessment .....	5 of 15
Policy C-3608 .....	21 of 22



## Summary Sheet

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<b>Meeting dates:</b>	February 8-9, 2019
<b>Agenda item:</b>	Lower Columbia River Sturgeon Population Status and Management Annual Review - (Briefing)
<b>Presenter(s):</b>	Laura Heironimus, CRMU Sturgeon/Smelt/Lamprey Unit Lead (Fish Program)

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### **Background summary:**

The purpose of the Lower Columbia Sturgeon Management Policy (C-3001) “is to provide guidelines for management of the Lower Columbia River white sturgeon population and fisheries” and the intent “to provide consistent management guidelines that promote a healthy population and provide sustainable fisheries.”

The Commission has adopted a precautionary approach to management based on uncertainties around several factors affecting the population. The policy calls for an annual review for the Commission, as an essential component of this precautionary approach, to include updated information on:

- stock status;
- available information on pinniped predation;
- review of in-season management actions;
- summary of catch data, including handling of sturgeon in non-target fisheries, when available;
- recommended management changes; and
- other pertinent information.

Detailed information regarding stock status, predation, harvest, and by-catch is summarized in Attachment 1: “Lower Columbia River White Sturgeon – Stock Assessment and Fishery Management – 2018 Update”

### Stock Status

Since 2010, setlines have been used to capture and tag sturgeon and, based on the number of recaptured tagged sturgeon, population estimates were calculated using the Petersen mark-recapture model. We currently use the Petersen model two ways, the whole-population approach or the segmented-population approach. The whole population approach estimates the abundance of fish 20–200 inches fork length based on the setline catch rates and gear vulnerability, both of which vary with fork length. The segmented population approach is an alternative method to calculate and compare abundance estimates. The segmented population approach only estimates the abundance of “legal-size” fish, those ranging 38–54 inches fork length, based on the setline catch rates and vulnerability of that size fish.

Based on the whole population approach, abundance of legal-size fish declined from 2006 through 2012, but increased annually from a low of 72,200 fish in 2012 to 223,960 fish in 2016. The projected abundance for 2018 was 153,540 legal-size fish (segmented approach) and 198,331 legal-size fish (whole-population approach), based on data collected through 2017. The harvest guidance in 2018 was determined using the lowest available projection.

The mark-recapture estimate using the whole-population approach for 2018 is 162,182 legal-size fish, which was similar to the abundance estimate using the segmented population approach of 169,257 legal-size fish. CPUE for legal-sized fish continued to increase for the eighth consecutive year and produced the highest estimate at 235,600 legal-size fish.

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Based on the whole-population mark-recapture data, the estimated number of adult White Sturgeon, fish larger than 65 inches FL, has generally trended upwards from 3,039 fish (95% CI: 1,810-4,268) in 2016 to 6,108 fish (95% CI: 3,518-8,698) in 2017. This is a particularly difficult metric to monitor since sturgeon over 65 inch FL are not easily caught with stock assessment gear. This means that only a few fish are handled annually and a single fish can make a large difference in the point estimate for a given year. The three-year average adult abundance is used to better assess increases or decreases in abundance trends through time. The three-year average adult abundance continued to increase from 6,470 in 2017 to 7,493 in 2018. In 2016, this estimate moved the adult status above the conservation threshold specified in Oregon's Lower Columbia River and Oregon Coast White Sturgeon Conservation Plan for the first time and we are continuing to see a positive trend in abundance towards the desired level in 2018.

The continued low relative abundance of juvenile sturgeon indicates that there may still be prolonged productivity issues within the system. The annual sub-yearling production index in the mainstem Columbia River (0.43 catch-per-net) was down from the 2017 catch but higher than the 2015 and 2016 catch. However, catch within the Willamette River (3.96 catch-per-net) was the highest ever recorded.

### Pinniped Predation

Steller sea lion predation of White Sturgeon began around the mid-2000's in the gorge below Bonneville Dam. Numbers of Steller sea lions present in the tailrace immediately below the dam remain at high levels. Observed consumption of White Sturgeon at Bonneville Dam during the past five years has decreased annually, to less than 5% of the peak level reached 2011, indicating few sturgeon remain in the area when sea lions are present. The predation estimates are provided by the Corps of Engineers, who observe the mile-long stretch of river below Bonneville Dam. Predation throughout the remaining 145 miles of the lower Columbia River and in tributaries of the river are unknown at this time.

### In-season Management/Harvest

#### *Sport Fisheries*

In 2018, a short-duration retention sturgeon fishery opened for the second time since 2013. This fishery and harvest guidelines were set similarly to the 2017 fishery, targeting a 3.5-4.5% harvest rate. There were positive responses from anglers that participated in the fishery. While participation was still lower than pre-closure levels, overall angler trips (both retention and catch-and-release) increased when compared to the catch-and-release only seasons.

In the Estuary (below Wauna), the fishery was open for 11 retention days (May 14-June 8) with a 2pm closure, 2,960 fish guideline, and size limit of 44-50" fork length. Sport anglers harvested 2,412 fish from approximately 18,300 angler trips. Upstream of Wauna to Bonneville Dam, the fishery was open for two retention days (September 15 and 22) with a 1,230 fish guideline and the same size limit. Sport anglers harvested 1,049 fish from approximately 11,000 angler trips.

#### *Commercial Fisheries*

The retention of sturgeon in commercial fisheries was opened again in 2018, for the second time since 2013. In the mainstem, commercial fisheries were only opened for sturgeon retention in Late-August and harvested a reported 413 White Sturgeon. In the select area, commercial fisheries were divided between spring/summer and fall fisheries. Summer fisheries harvested 296 White Sturgeon and Fall fisheries harvested 117 fish.

### Summary of catch data

#### *Commercial Fisheries*

The 2018 white sturgeon commercial fisheries had a total guideline of 1230 fish and total catch of 826 fish (67% of the guideline).

The mainstem commercial fisheries harvested 413 fish in the late August and the select area commercial fisheries harvested 296 fish in the spring/summer fishery and 117 in the fall fishery.

### *Sport Fisheries*

The 2018 white sturgeon sport fisheries had a total guideline of 4,930 fish and a total catch of 3,461 fish (86% of the guideline).

Sport anglers fishing in the estuary (below Wauna) had 11 days of retention in May-June and captured 2,412 fish. Anglers fishing from Wauna to Bonneville had 2 days of retention in September and captured 1,049 fish. The Willamette River was not opened to retention sturgeon fishing in 2018.

### Sturgeon harvest in areas outside of the lower Columbia River

Since 2014, retention of White Sturgeon has been prohibited in recreational and non-Indian commercial fisheries on the Oregon and Washington coasts, Puget Sound, and their tributaries. This continued in 2018.

### By-Catch

The 2018 commercial fisheries were monitored at a minimal level by WDFW staff. Total sturgeon bycatch in 2018 is unknown.

During the recreational sturgeon fishery, an estimated 20,103 white sturgeon (12,131 sublegal-size, 1,496 legal-size, and 6,476 over-size) were caught and released. This represents 3.5% of the estimated 569,000 fish greater than 40 cm FL.

### Recommended Management Changes

Staff will work with Oregon Department of Fish and Wildlife to develop another short-duration sport retention fishery, similar to 2017 and 2018. Legal-size fish are still up from pre-closure levels, though estimates have declined from the high in 2016. Adult sturgeon, those spawning and contributing most to the population growth, has seen a positive increase in both the annual abundance estimate and three-year average abundance estimate. Additionally, the sub-yearling production index for the lower Columbia River continued to indicate some reproduction, though the estimate was lower than 2017, and the lower Willamette River was the highest ever recorded. However, the current status of the overall population, which includes both the adult and juvenile segments, is not as robust as in the early 2000's. Uncertainty exists regarding future trends in legal and adult abundance, production of juvenile fish, and recruitment of juvenile fish to the legal-size segment (see Table 1 in Attachment 1).

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### **Policy issue(s) you are bringing to the Commission for consideration:**

Briefing only. The current policy, C-3001 (Attachment 2), was adopted January 25, 2018.

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### **Fiscal impacts of agency implementation:**

A 2019 sport retention fishery, similar to 2018, would require WDFW to sample the fishery and impacts to the agency would include employee time and salary for fish management staff and enforcement officers. The amount of fiscal impact would be affected by the length of time a fishery is open, the time-period in which it is open (i.e., weekday or weekend), and the intensity of the fishery (how many anglers are present).

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### **Public involvement process used and what you learned:**

Staff met with the Columbia River Recreational advisor group on January 15, 2019, and through email communication with the Columbia River Commercial advisor group, provided updates on the status of the LCR White Sturgeon population. Staff generally received support from

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recreational advisors to open another retention fishery in 2019, similar to the fishery in 2018. No comments were received from commercial advisors after the policy process.

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**Action requested:**

Briefing only.

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**Draft motion language:**

N/A

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**Justification for Commission action:**

N/A

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**Post decision communications plan:**

N/A

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*Form revised 9/13/17*






# **Lower Columbia River White Sturgeon Stock Assessment and Fishery Management 2018 Update**

**Summary Prepared by**

**Joint Columbia River Management Staff  
*Washington Department of Fish and Wildlife  
Oregon Department of Fish and Wildlife***

**January 16, 2019**

**Table 1.** Dashboard of key status indicators for lower Columbia River White Sturgeon in 2018. Arrow color indicates status relative to Conservation Plan metrics; direction indicates current trend.

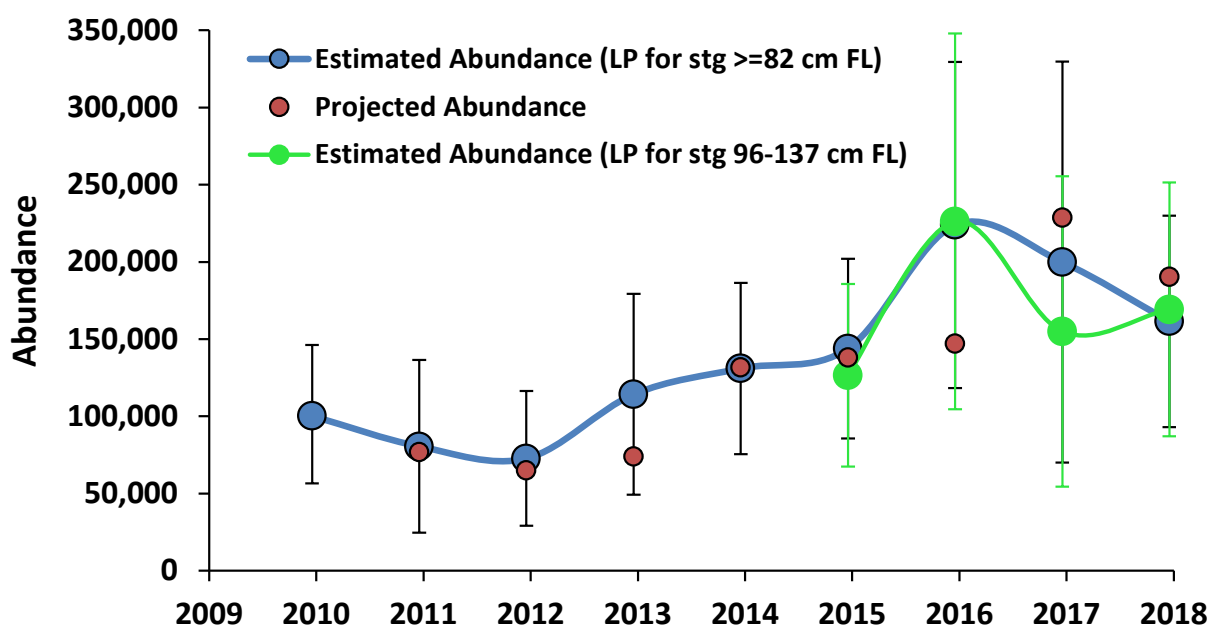
Metric	N	Interpretation	Brief Summary
Abundance Trends 38" – 54" FL	162,182		Decrease of 19% from 2017, and 28% less than peak in 2016. However, increasing trend in CPUE setline tagging fisheries continues.
Adult (>65" FL)	2018: 6,108 3-yr avg.: 7,493		
Population Structure	~63% juvenile		Low relative abundance of juvenile and sub-legal sized fish indicates population productivity issues;
Recruitment Index (CPN)	LCR: 0.43 WR: 3.96		Mixed results. Return to CPNs of <1 after strong 2017 in LCR; but highest (by far) in LWR since monitoring began in 2010).
Fisheries	Estuary: 18,735 angler trips Total: 31,923 angler trips		Participation still down from pre-closure levels, but much higher (>7x) Catch-and-release only fisheries.



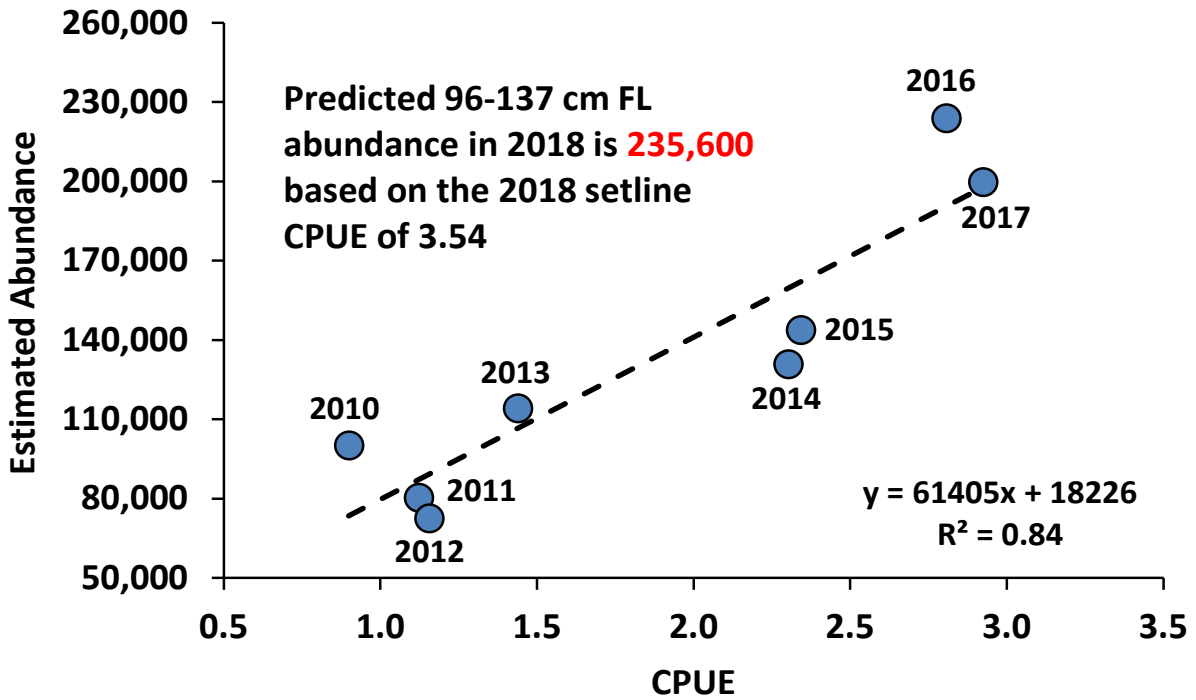
## Abundance and CPUE Trends

**Table 2.** Estimated and projected abundance of 38–54 inch FL (96–137 cm) white sturgeon in the LCR from 2008–2018 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.

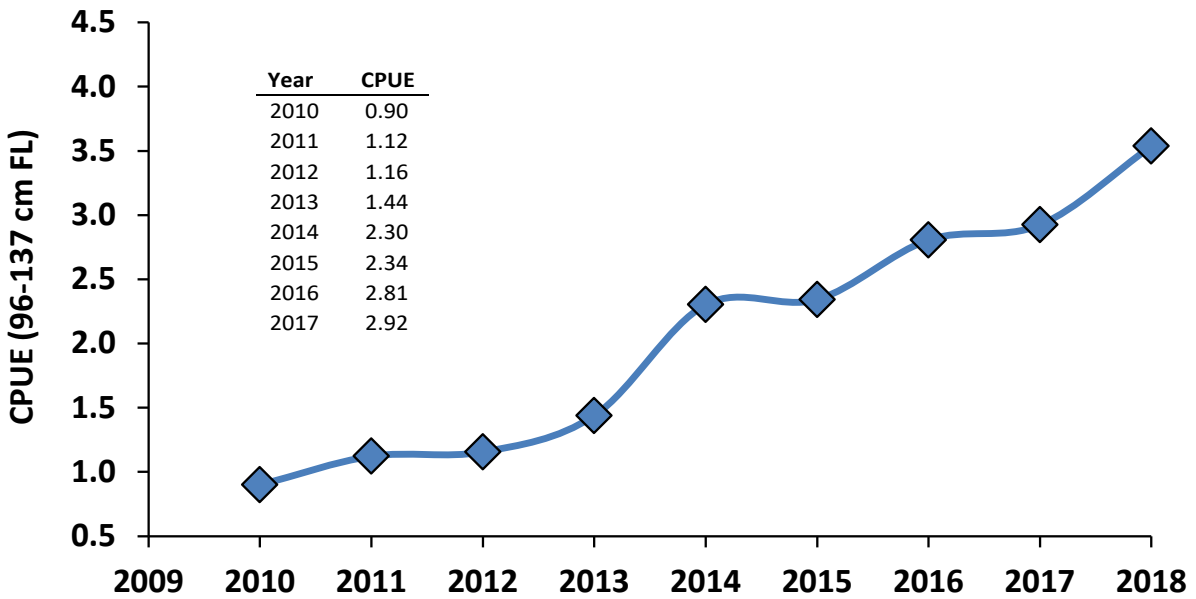
Year	Historic method estimate	Setline method		Harvest guideline
		Estimate (95% C.I.)	Projection	
2008	101,200	--	--	40,000
2009	95,000	--	--	40,000
2010	65,300	100,200	--	24,000
2011	72,800	80,500	77,000	17,000
2012	83,400	72,700	65,000	10,400
2013	--	114,200	74,300	10,105
2014	--	130,990 (75,500 – 186,480)	131,700	--
2015	--	143,890 (85,700 – 202,100)	138,200	--
2016	--	223,960 (118,300 – 329,600)	147,100	--
2017	--	199,830 (69,900 – 329,700)	237,900	6,235
2018	--	162,180 (93,400 – 230,950)	198,300	6,160
2019	--		<i>164,100</i>	TBD



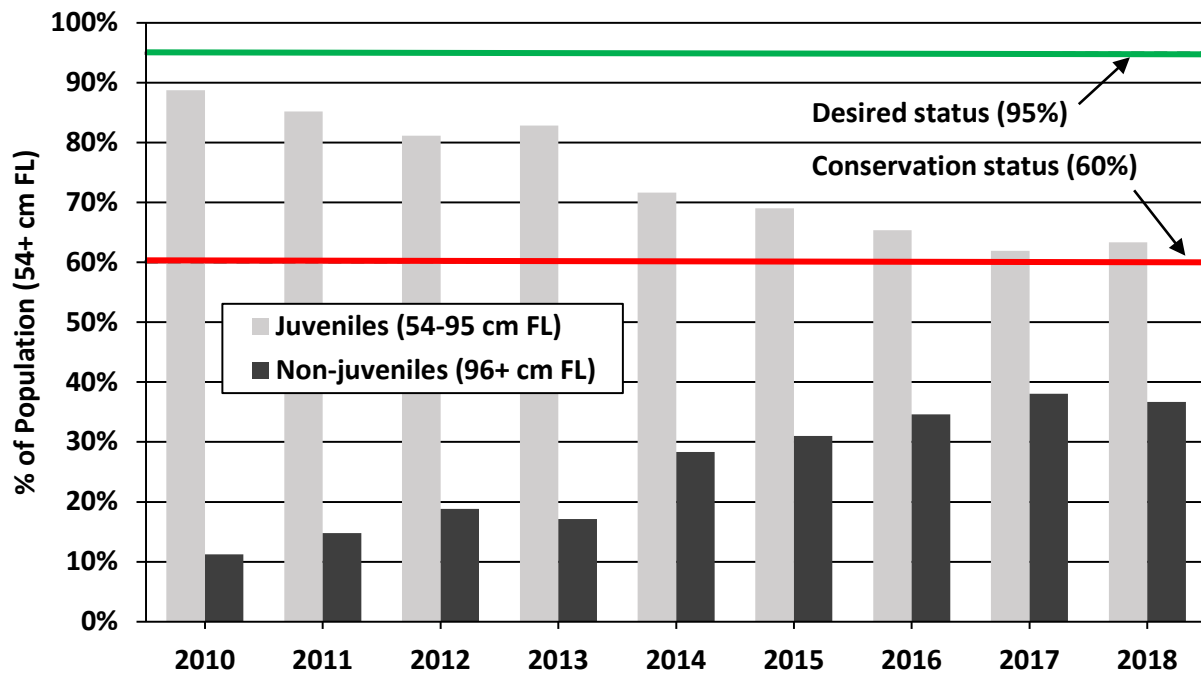
**Figure 1.** Estimated and projected abundance for 96–137 cm FL white sturgeon from the LCR, 2010–2018 (based on the proportion 96–137 cm FL fish within the total abundance estimate for fish ≥40 cm FL). Error bars represent 95% C.I.'s for the estimated abundance. Green data points represent the Petersen estimate for 96–137 cm FL white sturgeon only.



**Figure 2.** Relationship between estimated abundance and catch-per-set (CPUE) for 96–137 cm FL white sturgeon in the LCR, 2010–2017.

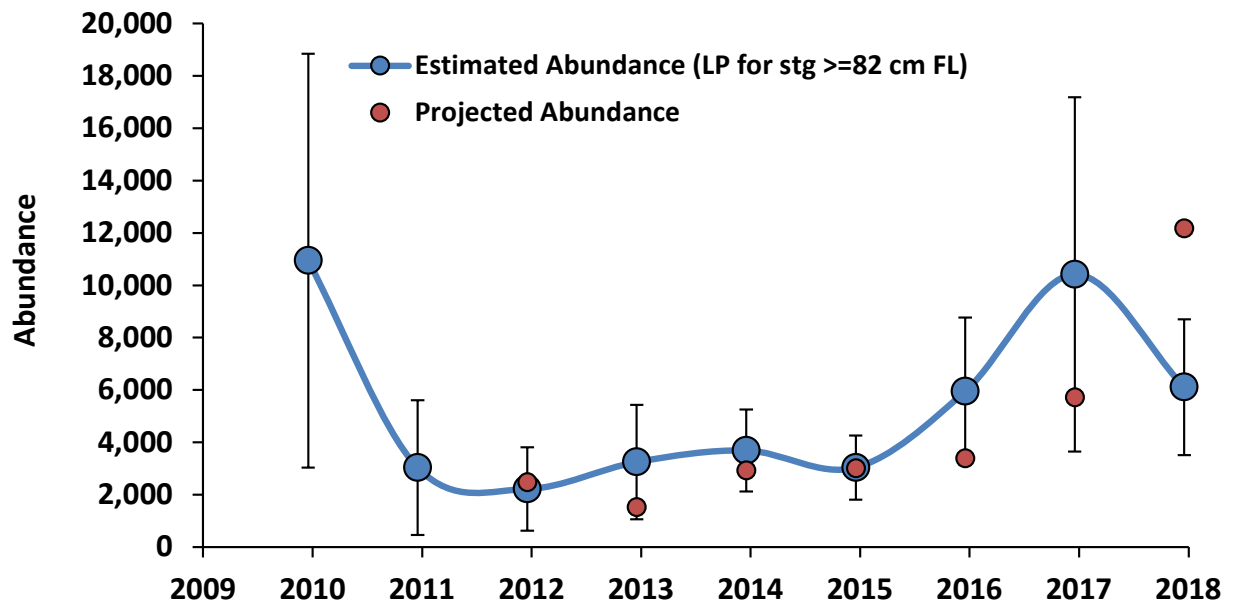


**Figure 3.** CPUE of 96–137 cm FL white sturgeon caught with setlines in the LCR, 2010–2018.

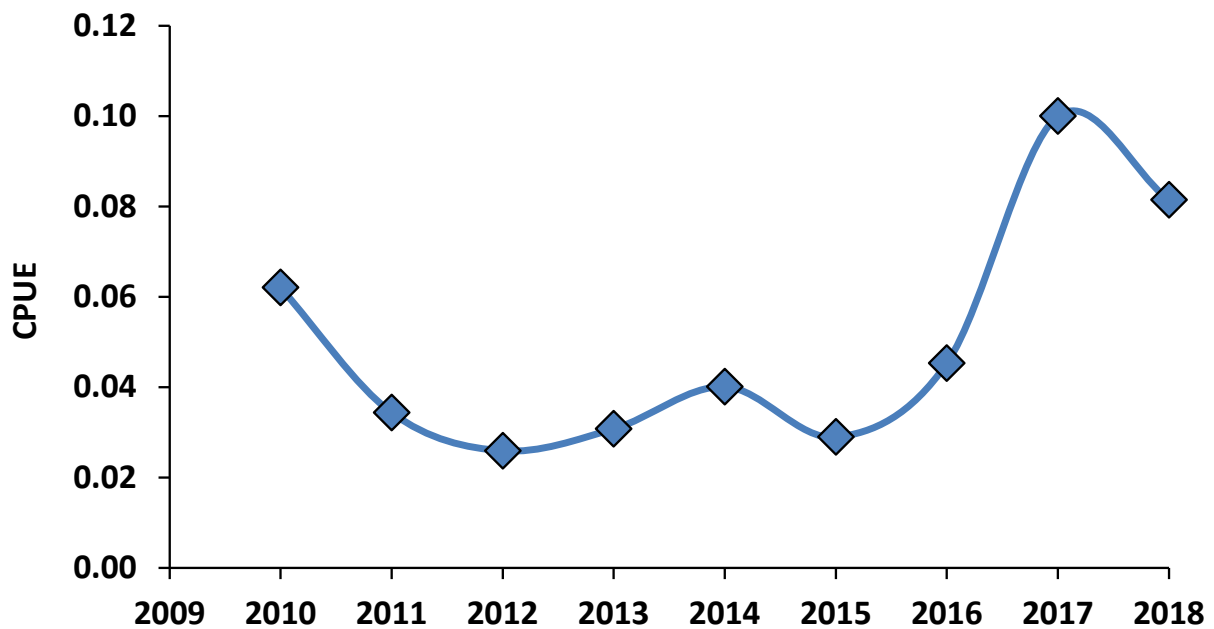


**Figure 4.** Annual proportion of juvenile and non-juvenile (sub-adults + adults) white sturgeon in the lower Columbia River, 2010–2018. Red horizontal line represents conservation status green horizontal line represents desired status.

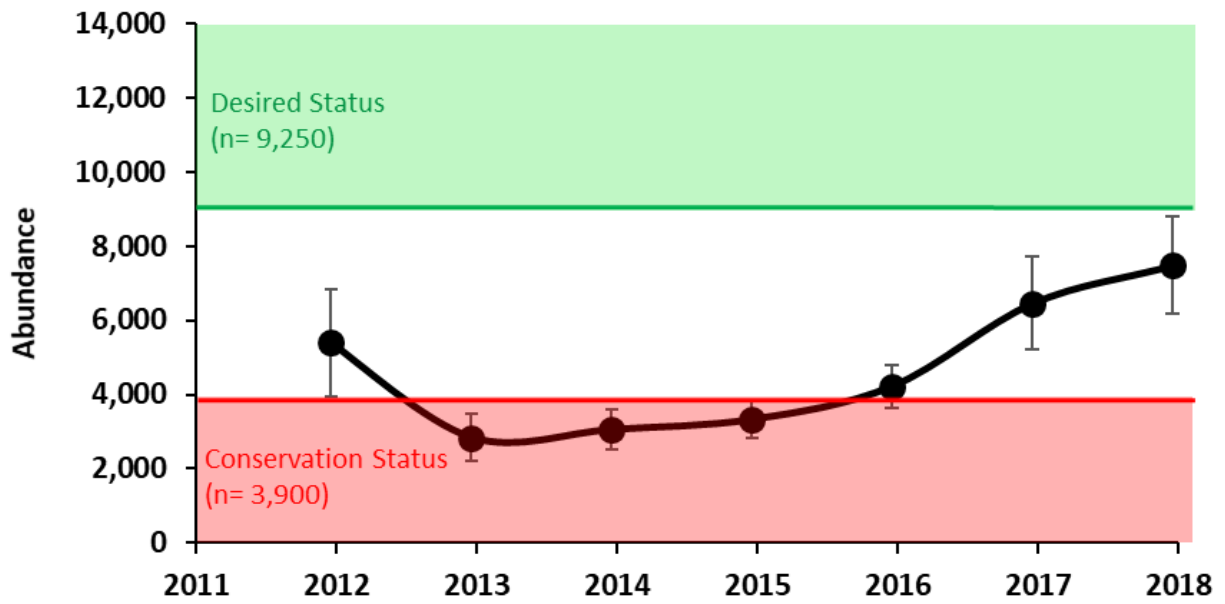
## Adult Abundance and CPUE Trends



**Figure 5.** 2010–2018 estimated adult white sturgeon abundance (fish  $\geq 167$ cm FL) during LCR sturgeon stock assessments.

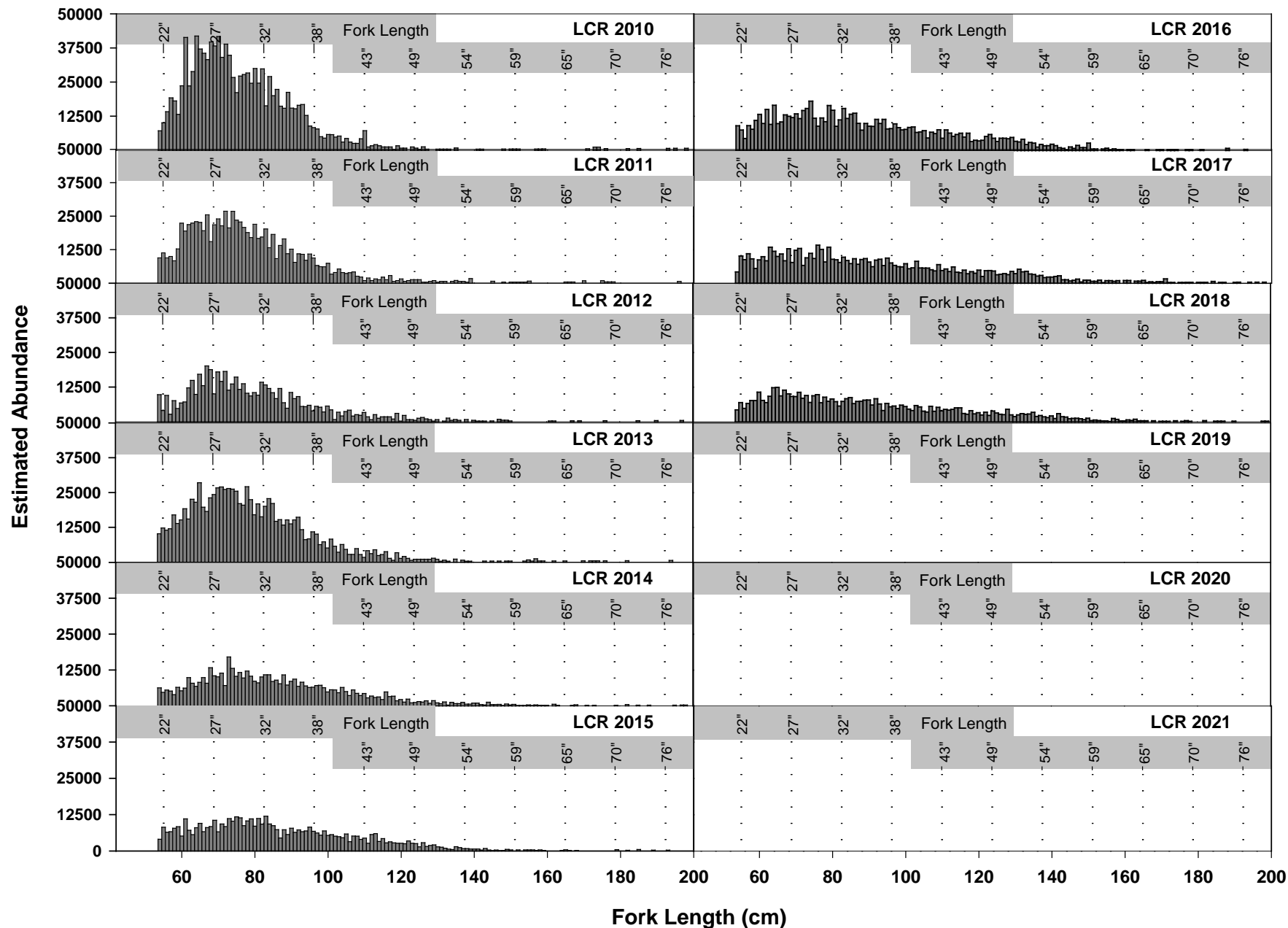


**Figure 6.** 2010–2018 estimated adult white sturgeon CPUE (fish  $\geq 167$ cm FL) during LCR sturgeon stock assessments.



**Figure 7.** Three-year average estimated abundance for adult ( $\geq 167$  cm FL) white sturgeon from the LCR, 2012–2018. Less than 3 years of data were available for 2010 and 2011 so no averages were calculated. Error bars represent 95% CI's for the estimated abundance.

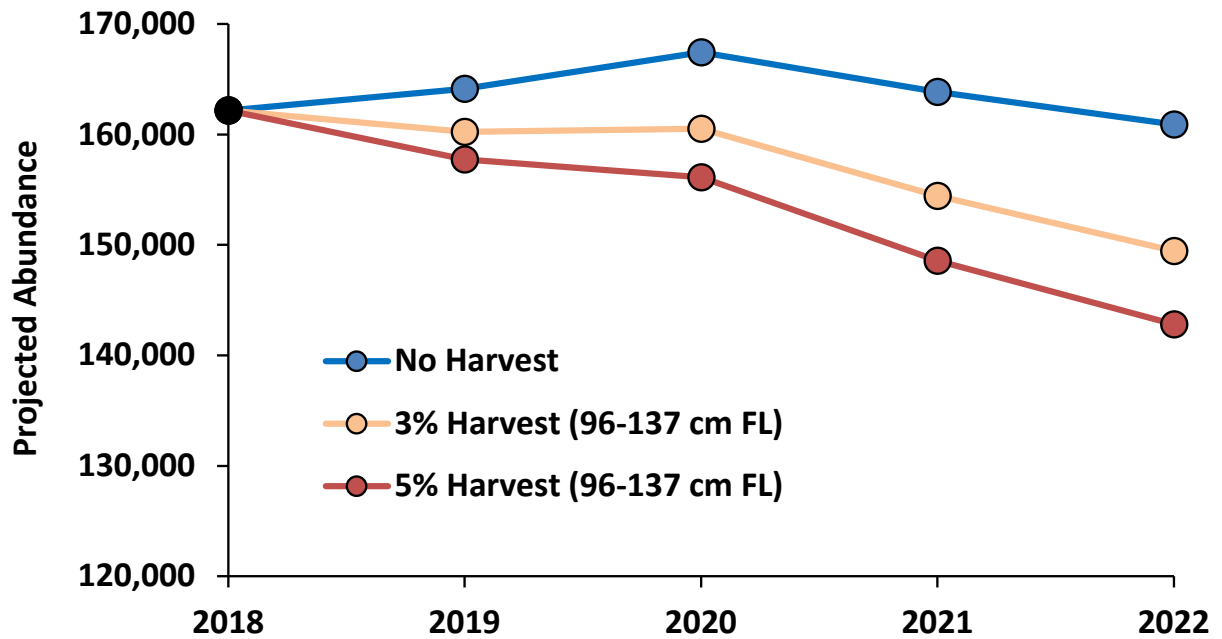
## Length Frequency Trend



**Figure 8.** Frequency (percent) by 1 cm size intervals of white sturgeon captured in the LCR using research setlines, 2010–2018. Preliminary data for 2018.

## Legal-size Abundance Forecasts

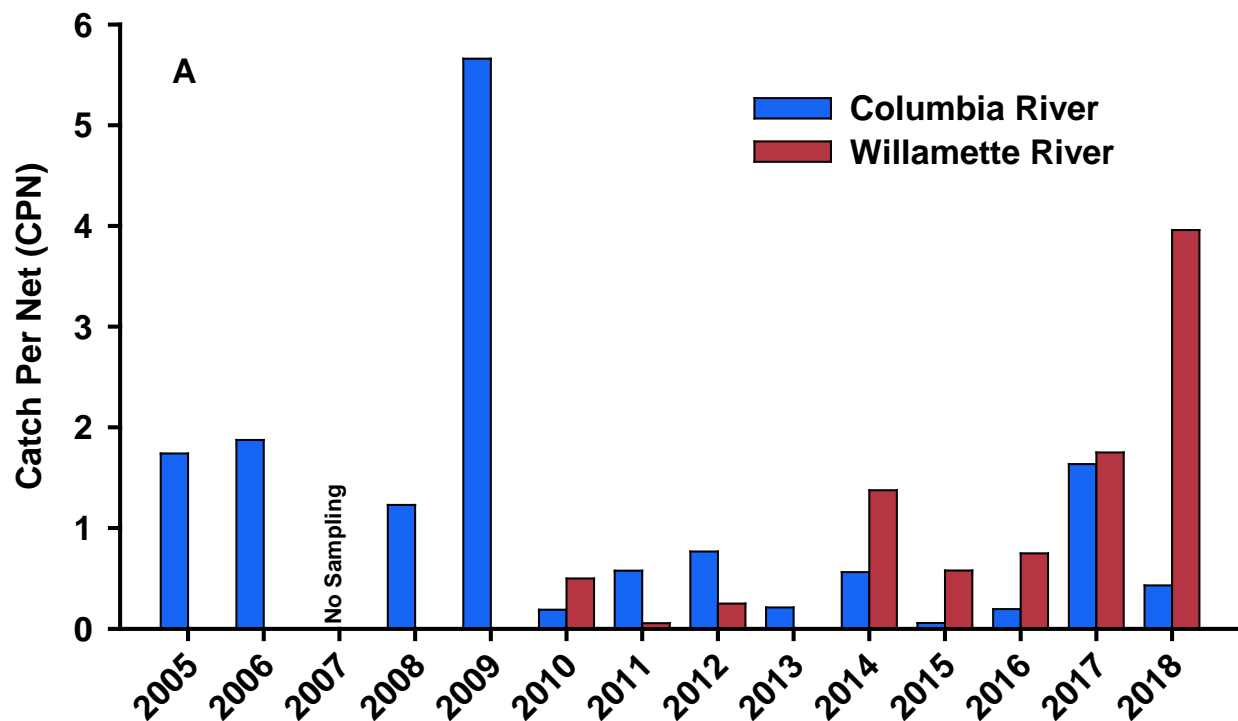
**Figure 9 and Table 3.** Projected abundance of 96–137cm FL white sturgeon in the LCR under various harvest rate scenarios.



Year	No Harvest	3% Harvest	5% Harvest
2018	162,182	162,182	162,182
2019	164,117	160,250	157,728
2020	167,443	160,528	156,127
2021	163,839	154,445	148,553
2022	160,884	149,464	142,816

## Sub-yearling (Age-0) Production

**Figure 10 and Table 4.** Catch-per-net (and annual recruitment index (Ep) in Table 4) for age-0 white sturgeon from the lower Columbia and Willamette rivers, 2005–2018.



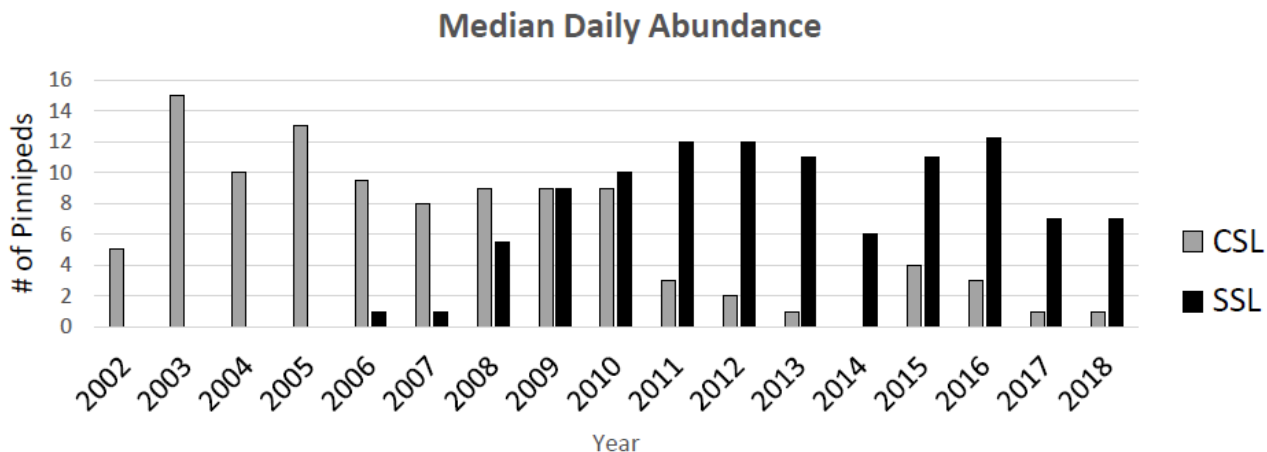
Year	Lower Columbia River		Willamette River	
	CPUE	Ep	CPUE	Ep
2005	1.74	0.49		
2006	1.88	0.52		
2007	--	--		
2008	1.23	0.45		
2009	5.66	0.78		
2010	0.19	0.18	0.43	0.24
2011	0.58	0.34	0.06	0.06
2012	0.77	0.35	0.22	0.22
2013 <sup>1</sup>	0.21	0.12	--	--
2014 <sup>2</sup>	0.56	0.31	1.38	0.38
2015 <sup>2</sup>	0.06	0.05	0.58	0.26
2016 <sup>2</sup>	0.20	0.14	0.75	0.50
2017 <sup>2</sup>	1.64	0.58	1.75	0.46
2018	0.43	0.27	3.96	0.83

<sup>1</sup> Incomplete sampling year in both LCR and Willamette rivers.

<sup>2</sup> Preliminary assessments based on length frequency examinations.



## Sea Lion Abundance and Predation



**Figure 11.** Abundance of California sea lions (CSL) and Steller sea lions (SSL) present at Bonneville Dam between January and the end of May 2002–2018. Figure from U.S. Army Corps of Engineers (USACE) 2018 draft report.

**Table 5.** Consumption of white sturgeon by CSL and SSL observed during USACE monitoring of the Bonneville Dam tailrace, 2005-2018. Monitoring is for the spring timeframe except as noted for 2017. Adjusted estimates include a proportion of the total unidentified catch. Data from USACE 2018 draft report.

Year	Total hours observed	Observed sturgeon catch	Sturgeon catch per hour observed	Adjusted sturgeon catch estimate
2005	1,109	1	0.001	--
2006	3,650	265	0.073	413
2007	4,433	360	0.081	664
2008	5,131	606	0.118	1,139
2009	3,455	758	0.219	1,710
2010	3,609	1,100	0.305	2,172
2011	3,315	1,353	0.408	3,003
2012	3,404	1,342	0.394	2,498
2013	3,247	314	0.097	635
2014	2,947	79	0.027	146
2015	2,995	24	0.008	44
2016	1,974	30	0.015	90
2017	1,142	6	0.005	24
Fall 2017 <sup>1</sup>	--	--	--	238
2018	1,410	46	0.033	148

<sup>1</sup> Fall 2017 only includes fish predation monitoring data from the Powerhouse 2 tailrace during August 15–December 31. Total predation is estimated to be higher due to predation in other tailraces.

# Appendix

## Historic Abundance, Harvest and Monitoring Data

**Appendix Table 1.** Annual recreational catch of white sturgeon in the LCR and comparisons to catch guidelines, 1994–2018<sup>1</sup>.

Year	Below Wauna <sup>1</sup>		Above Wauna <sup>1</sup>		Combined		
	Kept Catch	Guideline <sup>2</sup>	Kept Catch	Guideline <sup>3</sup>	Sum	Guideline	Percent
1994	15,578	N/A	17,893	N/A	33,500	N/A	
1995	29,714	N/A	15,423	N/A	45,100	N/A	
1996	27,694	N/A	15,068	N/A	42,800	N/A	
1997	24,511	N/A	13,646	N/A	38,200	53,840	71%
1998	30,303	N/A	11,293	N/A	41,600	53,840	77%
1999	29,238	N/A	10,561	N/A	39,800	40,000	100%
2000	24,267	N/A	16,238	N/A	40,500	40,000	101%
2001	21,619	N/A	19,597	N/A	41,200	39,500	104%
2002	26,234	N/A	12,045	N/A	38,300	38,300	100%
2003	18,367	19,200	13,565	12,800	31,932	32,000	100%
2004	15,050	16,000	10,519	12,800	25,569	28,800	89%
2005	17,911	17,783	11,891	11,560	29,802	29,343	102%
2006	15,726	16,000	8,545	12,800	24,271	28,800	84%
2007	19,131	16,274	10,675	13,852	29,806	30,126	99%
2008	13,614	13,143	7,959	12,387	21,573	25,530	85%
2009	13,109	15,529	4,599	11,430	17,708	26,959	66%
2010	6,491	9,600	4,831	4,835	11,322	14,435	78%
2011	6,117	6,800	2,908	3,410	9,025	10,210	88%
2012	4,466	4,160	1,859	2,080	6,325	6,240	101%
2013	4,559	4,042	1,942	2,021	6,501	6,240	107%
2014-16	0	0	0	0	0	0	N/A
2017	3,235	3,000	430	1,245	3,665	4,245	86%
2018	2,412	2,960	1,049	1,230	3,461	4,190	81%

<sup>1</sup> Recreational catch estimates for 1993-2002 are above and below the western tip of Puget Island (RM 38).

<sup>2</sup> The switch to a 45-inch min. (TL) size limit in 2004 required a 17% reduction in the base guideline.

<sup>3</sup> Actual in-season guidelines were different than represented here. Beginning in 2010, the guideline for the area above Wauna excludes the separate Willamette guideline.

**Appendix Table 2.** Annual recreational catch of white sturgeon in the lower Willamette River and comparisons to catch guidelines, 2003–2018.

Year	Estimated annual kept catch <sup>1</sup>	Baseline <sup>2</sup>	Catch in excess of baseline <sup>3</sup>	Guideline <sup>3</sup>	Percent of Guideline
2003	1,142	1,225	0	N/A	
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%
2014-16	0	0	0	0	N/A
2017 <sup>3</sup>	0	0	0	745	0%
2018 <sup>3</sup>	0	0	0	740	0%

<sup>1</sup> Harvest estimates revised November 2011 based on updated punch card and existing creel information.

<sup>2</sup> Baseline harvest levels for the lower Willamette River were based on average harvest during 1986-1996 (1,225 fish). The lower Willamette River baseline was decreased to 735 fish in 2010 and 520 fish in 2011 consistent with reductions in the overall harvest guideline. The baseline concept was eliminated in 2017.

<sup>3</sup> A retention fishery was considered but did not occur in the lower Willamette River in 2017–2018.

<sup>3</sup> 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.

**Appendix Table 3.** Commercial catch of white sturgeon in the LCR by season, and comparisons to catch guidelines, 1993-2018.

Year <sup>1</sup>	Mainstem							Select Area			Grand Total	Guide-line	%
	Winter Sturgeon <sup>2</sup>	Winter Salmon	Summer	Early August	Late August	Late Fall	Total	Spring/Summer	Fall	Total			
1993	990			0	0	7,010	8,000	30	20	50	8,050	6,000	134%
1994	2,990			0	0	3,380	6,370	30	0	30	6,400	6,000	107%
1995	0			0	0	5,980	5,980	110	70	180	6,160	8,000	77%
1996	800			0	330	6,580	7,710	580	110	690	8,400	8,000	105%
1997	2,710			1,740	140	7,790	12,380	350	100	450	12,830	13,460	95%
1998	2,680			2,540	90	8,060	13,370	360	170	530	13,900	13,460	103%
1999	1,780			2,770	60	4,180	8,790	520	190	710	9,500	10,000	95%
2000	2,260			2,490	300	5,130	10,180	540	160	690	10,870	10,000	109%
2001	3,060			4,720	1,020	0	8,800	490	20	510	9,310	9,100	102%
2002	2,720			1,340	380	4,200	8,640	650	330	980	9,620	9,800	98%
2003	1,490	27		2,170	410	3,430	7,527	250	170	420	7,947	8,000	99%
2004	1,696	174	9	1,550	917	3,219	7,565	184	117	301	7,866	8,000	98%
2005	473	70	1,369	1,129	965	3,793	7,799	279	74	353	8,152	8,200	99%
2006	288	1,651	544	1,548	363	3,492	7,886	317	109	426	8,312	8,000	104%
2007	1,424	47	414	2,646	91	2,734	7,356	257	148	405	7,761	7,850	99%
2008	869	17	523	2,706	103	3,170	7,388	337	134	471	7,859	7,927	99%
2009	1,697	21	624	2,213	756	2,001	7,312	311	114	425	7,737	8,000	97%
2010	518	28	289	1,578	297	1,348	4,058	211	116	327	4,385	4,800	91%
2011	50	125	504	967	353	1,187	3,186	201	0	201	3,387	3,400	100%
2012	40	14	281	592	410	344	1,681	225	0	225	1,906	2,080	92%
2013	15	274	326	0	719	324	1,658	254	100	354	2,102	2,021	100%
2014	0	0	0	0	0	0	0	0	0	0	0	0	N/A
2015	0	0	0	0	0	0	0	0	0	0	0	0	N/A
2016	0	0	0	0	0	0	0	0	0	0	0	0	N/A
2017	0	0	0	0	485	239	724	266	237	503	1,227	1,245	99%
2018	0	0	0	0	413	0	413	296	117	413	826	1,230	67%

<sup>1</sup> Data since 2003 preliminary.

<sup>2</sup> Prior to 2003, values reflect all winter fisheries.

Lower Columbia River commercial landings, 2018

<i>Winter/Spring/Summer</i>											
<small>(FINAL — ORWA Fish Tickets — December 21, 2018)</small>											
Season	CHINOOK		Z 1-3 Spring Chinook		SOCKEYE		SHAD		WHITE STURGEON <sup>1</sup>		
	Mainstem	Numbers	Pounds	Adults	Juvs	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds
Winter (no season during 2018)		0	0	—	—	0	0	0	0	No Retention	—
Spring (no season during 2018)		0	0	0	0	0	0	0	0	No Retention	—
Summer (no season during 2018)		0	0	—	—	0	0	0	0	No Retention	—
Shad (Area 25)		—	—	—	—	—	—	2,112	5,701	No Retention	—
<b>Mainstem Totals</b>		<b>0</b>	<b>0</b>	<b>—</b>	<b>—</b>	<b>0</b>	<b>0</b>	<b>2,112</b>	<b>5,701</b>	<b>0</b>	<b>0</b>
<i>Select Areas</i>											
Youngs Bay Winter		737	9,287			0	0	0	0	No Retention	—
Youngs Bay Spring		4,796	55,993			0	0	0	0	52	1,568
Youngs Bay Summer		1,400	16,945			6	17	0	0	14	418
Tongue Point Winter		177	2,299			0	0	0	0	No Retention	—
Tongue Point Spring		1,327	16,931			0	0	0	0	81	2,297
Tongue Point Summer		380	5,060			0	0	0	0	94	3,106
Blind & Knappa Sloughs Winter		175	2,290			0	0	0	0	No Retention	—
Blind & Knappa Sloughs Spring		1,532	19,420			0	0	0	0	43	1,269
Blind & Knappa Sloughs Summer		457	5,898			0	0	0	0	12	376
Deep River Winter (no season during 2018)		0	0			0	0	0	0	No Retention	—
Deep River Spring (no season during 2018)		0	0			0	0	0	0	No Retention	—
<b>Select Area Totals</b>		<b>10,981</b>	<b>134,123</b>			<b>6</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>296</b>	<b>9,034</b>
<b>Lower Columbia River Commercial GRAND TOTALS Winter/Spring/Summer 2018</b>		<b>10,981</b>	<b>134,123</b>			<b>6</b>	<b>17</b>	<b>2,112</b>	<b>5,701</b>	<b>296</b>	<b>9,034</b>

<i>Fall</i>											
<small>(FINAL — ORWA Fish Tickets — December 21, 2018)</small>											
Season	CHINOOK		COHO		PINK		CHUM		WHITE STURGEON <sup>1</sup>		
	Mainstem	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds
August (Zone 4-5; 9-9 3/4 inch gillnet)		8,320	128,317	380	2,811	0	0	No Retention		413	13,927
August Subtotals		8,320	128,317	380	2,811	0	0	No Retention		413	13,927
Late-Fall (no season during 2018)		0	0	0	0	0	0	No Retention		0	0
Late-Fall Subtotals		0	0	0	0	0	0	No Retention		0	0
<b>Fall Mainstem Totals</b>		<b>8,320</b>	<b>128,317</b>	<b>380</b>	<b>2,811</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>413</b>	<b>13,927</b>
<i>Select Areas</i>											
Youngs Bay		2,945	31,926	4,229	33,769	0	0	No Retention		52	1,634
Tongue Point		1,035	11,970	3,682	24,679	1	4	No Retention		32	932
Blind Slough & Knappa Slough		1,401	17,609	1,477	10,422	0	0	No Retention		23	741
Deep River		1,223	13,199	2,723	20,398	1	2	No Retention		10	281
<b>Fall Select Area Totals</b>		<b>6,604</b>	<b>74,704</b>	<b>12,111</b>	<b>89,268</b>	<b>2</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>117</b>	<b>3,588</b>
<b>Lower Columbia River Commercial GRAND TOTALS Fall 2018</b>		<b>14,924</b>	<b>203,021</b>	<b>12,491</b>	<b>92,079</b>	<b>2</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>530</b>	<b>17,515</b>

<b>FINAL GRAND TOTALS 2018</b>	<b>CHINOOK</b>	<b>COHO</b>	<b>PINK</b>	<b>CHUM</b>	<b>WHITE STURGEON<sup>1</sup></b>
	Numbers Pounds	Numbers Pounds	Numbers Pounds	Numbers Pounds	Numbers Pounds
	25,905 337,144	12,491 92,079	2 6	No Retention	826 26,549
<b>for Lower Columbia R. Commercial Fisheries</b>	<b>SOCKEYE</b>	<b>SHAD</b>	<b>SMELT (Mainstem)</b>	<b>GREEN STURGEON</b>	
	Numbers Pounds	Numbers Pounds	Numbers Pounds	Numbers Pounds	
	6 17	2,112 5,701	110	No Retention	

<sup>1</sup> The sale of White Sturgeon was allowed during August mainstem commercial seasons below Bonneville Dam; White Sturgeon were also allowed to be sold during Select Area spring, summer, and fall seasons from April 19 through October 31.

## POLICY DECISION

POLICY TITLE: **Lower Columbia Sturgeon Management**

POLICY NUMBER: **C-3001**

Supersedes: 2014-2018 Lower Columbia Sturgeon Management C-3001

See Also: [C-3608](#)

Effective Date: January 12, 2019

Termination Date:

Approved by: /s/ Larry Carpenter  
Fish and Wildlife Commission Chair

DOWNLOAD: [Signed copy of POL-C3001 \(PDF\)](#)

### Purpose

The purpose of this policy is to provide guidelines for management of the Lower Columbia River White Sturgeon population and fisheries.

### Definition and Intent

The Lower Columbia River White Sturgeon population inhabits the waters of the Columbia River and tributaries downstream of Bonneville Dam and migrates into ocean and coastal estuaries. The intent of the policy is to provide consistent management guidelines that promote a healthy population and provide sustainable fisheries.

### General Policy Statement

Manage the Lower Columbia River White Sturgeon population with conservation and fishery management objectives that are consistent with a healthy population.

### Policy Guidelines

#### Conservation Objectives:

- Provide regulatory protection to increase the abundance of the spawning population.
- Manage with a precautionary approach due to uncertainties in population parameters.
- Manage for an annual combined sport and commercial harvest of White Sturgeon to provide measurable population growth to achieve the goals of: (1) fully seeded habitats and (2) full representation of each size class within the population.
- Population Monitoring (within available resources):
  - Index young-of-the-year (YOY) to track spawning and recruitment success.
  - Estimate population abundance of all size classes.
  - Evaluate methods to improve accuracy of abundance estimates.
  - Monitor sea lion predation for incorporation into stock status evaluations.
- Advocate for Columbia River flow regimes that promote successful spawning, incubation, and early rearing.

#### Fishery Management Objectives:

- Provide sufficient sturgeon spawning sanctuaries or other protective measures where and when appropriate.
- Quantify impacts of commercial and recreational fisheries on sublegal, legal, and over-size (including spawning adult) abundances.

#### When Retention Fisheries are Allowed:

- Manage Lower Columbia River sturgeon fisheries through an agreement with Oregon.
- Maintain concurrent Washington and Oregon regulations in the Columbia River.
- Manage fisheries in a manner that considers projected recruitment, with the objectives of increasing abundance of the legal size segment and increasing escapement into the spawning segment of the population. Management should consider all mortality sources, including both recreational and commercial fisheries and pinniped predation.
- Manage fisheries using an 80/20 sport/commercial harvest allocation.
- Strive for viable and diverse recreational and commercial fishing opportunities.
- Develop sport fishery regulations consistent with the following objectives:
  - Stay within approved harvest guidelines.

- Balance catch between estuary and non-estuary fisheries.
- Maintain fishery monitoring and management capabilities.
- Develop commercial fishery regulations consistent with the following objectives:
  - Optimize economic value (adjust to market needs).
  - Spread harvest opportunity throughout the year.
- Consideration of fisheries outside the Lower Columbia River must take into account the ability to monitor and manage those fisheries and be consistent with Lower Columbia River sturgeon conservation objectives.
- Maintain prohibition of Green Sturgeon retention until delisting occurs and retention can be re-evaluated.

### **Annual Review**

Given the degree of uncertainty about various population parameters (e.g., recruitment success, pinniped predation, and size-class structure) of the Columbia River White Sturgeon, the Commission is adopting a precautionary approach to management. The Director will provide an annual review of the population status and fisheries for the Commission, as an essential component of this precautionary approach, to include updated information on:

- stock status;
- available information on pinniped predation;
- review of in-season management actions;
- summary of catch data, including handling of sturgeon in non-target fisheries, when available;
- recommended management changes; and
- other pertinent information.

This policy may be updated as part of any Lower Columbia sturgeon stock status review. The Director will provide the Commission a review of this Policy at least every five years.

### **Delegation of Authority**

The Commission delegates the authority to the Director to develop and negotiate Lower Columbia Sturgeon Management Accords with Oregon Department of Fish and Wildlife that are consistent with these policies and objectives. The Director will consult with appropriate recreational and commercial advisory bodies during this process. Additionally, the Commission delegates the authority to the Director, through the Columbia River Compact, to set seasons for recreational and commercial fisheries in the Columbia River, and to adopt permanent and emergency regulations to implement these fisheries. The Director shall work with the Oregon Department of Fish and Wildlife to achieve implementation of this Commission action in a manner that results in concurrent regulations between the two states. The Director shall consult with the Commission Chair if it becomes necessary to deviate from the Commission's policy to achieve concurrent regulations with Oregon.