

# Pacific States Marine Fisheries Commission

## Bonneville Smolt Monitoring Weekly Report, #24-12

Report Period: 5/18 – 5/24, 2024

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### SECTION 1. River Flow and Sampling Results

#### WEEK 12

	Min	Max	Mean		
			Current	Last Week	2023
A. River Flow	216.6	245.8	234.2	206.8	423.6
B. Powerhouse 1	0.0	0.8	0.1	0.0	98.9
C. Powerhouse 2	57.8	83.7	72.7	53.6	110.6
D. Spill (kcfs)	151.4	154.7	153.9	145.8	206.6
% of River Flow	62.9	69.9	65.8	71.1	48.8
E. Water Temp *	57.9	58.4	58.1	56.4	57.7
F. % Saturation *					

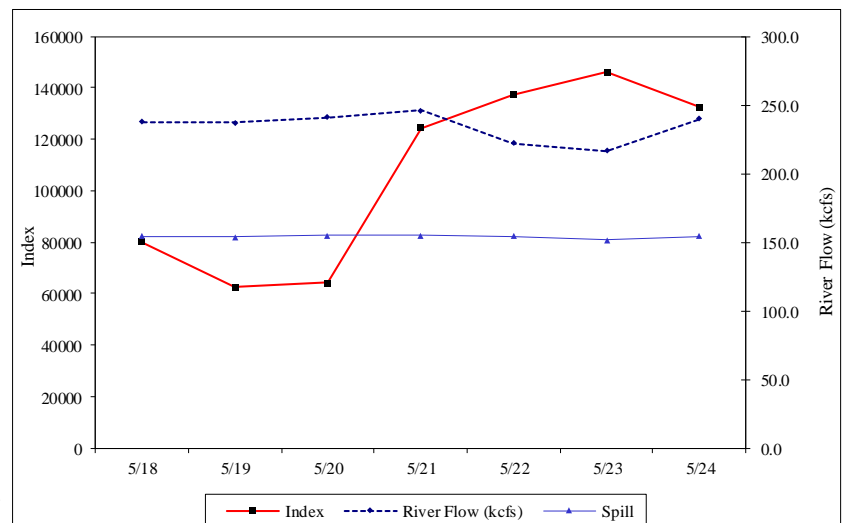
\* In sampling facility.

% SAMPLE COMPOSITION	This Week Last Week	
YEARLING CHINOOK	61.7%	67.3%
SUBYEARLING CHINOOK	10.5%	3.8%
CHINOOK FRY	0.8%	1.1%
UNCLIPPED STEELHEAD	2.0%	2.2%
CLIPPED STEELHEAD	3.4%	11.0%
COHO	10.3%	14.2%
COHO FRY	0.0%	0.0%
SOCKEYE	11.3%	0.4%

YEARLING CHINOOK							SUBYEARLING CHINOOK					COHO				
End Date	Sample Rate	# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index
5/18	1.5%	276	1.8	0.7	18,400	55,880	29	0.0	0.0	1,933	5,870	48	0.0	0.0	3,200	9,718
5/19	2.1%	318	2.9	0.9	14,320	43,376	46	0.0	0.0	2,415	7,315	43	2.3	0.0	2,305	6,982
5/20	1.5%	214	0.5	0.0	14,267	42,329	34	0.0	0.0	2,266	6,723	31	0.0	0.0	2,067	6,133
5/21	1.5%	420	1.0	0.0	28,000	79,751	74	0.0	1.4	4,933	14,051	69	1.5	1.4	4,600	13,102
5/22	1.3%	313	4.2	0.6	22,657	82,055	77	2.6	1.3	6,175	22,364	51	2.0	0.0	3,012	10,908
5/23	1.0%	203	2.5	0.5	20,300	73,473	42	2.4	2.4	4,200	15,201	42	0.0	0.0	4,200	15,201
5/24	1.0%	207	1.9	0.5	20,700	61,518	56	0.0	0.0	5,600	16,642	43	0.0	0.0	4,300	12,779
Weekly		1,951	2.1	0.5	138,644	438,382	358	0.8	0.8	27,522	88,166	327	0.9	0.3	23,684	74,823
Season to date		13,798	2.5	0.6	594,178	2,383,177	9,995	0.0	1.8	107,341	254,858	2,348	1.0	0.6	122,654	495,493

End Date	Sample Rate	UNCLIPPED STEELHEAD					CLIPPED STEELHEAD					SOCKEYE				
		# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index
5/18	1.5%	9	0.0	0.0	600	1,822	30	3.4	3.3	2,000	6,074	2	0.0	0.0	133	404
5/19	2.1%	7	0.0	0.0	320	969	18	11.1	0.0	850	2,575	5	0.0	0.0	405	1,227
5/20	1.5%	15	0.0	0.0	1,000	2,967	17	5.9	0.0	1,133	3,362	13	0.0	0.0	867	2,572
5/21	1.5%	8	0.0	0.0	533	1,518	14	0.0	0.0	933	2,657	69	1.5	1.4	4,600	13,102
5/22	1.3%	2	0.0	0.0	10	36	9	0.0	0.0	596	2,158	54	3.7	0.0	5,509	19,952
5/23	1.0%	10	0.0	0.0	1,000	3,619	7	0.0	0.0	700	2,534	99	8.2	1.0	9,900	35,832
5/24	1.0%	11	0.0	0.0	1,100	3,269	13	0.0	0.0	1,300	3,863	115	4.5	3.5	11,500	34,176
Weekly		62	0.0	0.0	4,563	14,201	108	3.7	0.9	7,512	23,223	357	4.6	1.7	32,914	107,265
Season to date		271	0.4	0.0	13,671	51,848	1,098	1.4	0.2	68,203	284,132	379	4.3	1.6	34,002	111,291

TOTAL						
End Date	Sample Rate	# Smpld	% Desc	% Mort	# Coll	Index
5/18	1.5%	394	1.5	0.8	26,266	79,768
5/19	2.1%	437	2.8	0.7	20,615	62,443
5/20	1.5%	324	0.6	0.0	21,600	64,085
5/21	1.5%	654	0.9	0.5	43,599	124,182
5/22	1.3%	506	3.6	0.6	37,959	137,473
5/23	1.0%	403	3.5	0.7	40,300	145,861
5/24	1.0%	445	2.0	1.1	44,500	132,248
Weekly		3,163	2.1	0.6	234,839	746,061
Season to date		27,889	1.5	1.0	940,049	3,580,799



Notes: Condition percentages are calculated from sample numbers.  
Subyearling chinook and coho include fry.

## Chum Sampling Results

Combined CHUM SMOLT and FRY

End Date	Sample Rate	# Smpld	% Desc	% Mort	# Coll	Index
5/18	1.5%	0	0.0	0.0	0	0
5/19	2.1%	0	0.0	0.0	0	0
5/20	1.5%	0	0.0	0.0	0	0
5/21	1.5%	0	0.0	0.0	0	0
5/22	1.3%	0	0.0	0.0	0	0
5/23	1.0%	0	0.0	0.0	0	0
5/24	1.0%	0	0.0	0.0	0	0
Weekly		0	0.0	0.0	0	0
Season to date		247	0.0	0.8	1,690	3,094

\*Sample totals to date include 245 Chum fry and 2 smolt.

## SECTION 2. Juvenile Lamprey Sampling Results

Juvenile lamprey are differentiated by species (Pacific or Western Brook lamprey) and by life stage (Macrophthalmia, the fully formed actively migrating juvenile, and Ammocoete, the blind, filter feeding larval stage). Weekly results and season to date totals are presented in the table below:

**WEEK 12**

**Pacific Lamprey**

**Western Brook**

End Date	Macrophthalmia			Ammocoetes			Ammocoetes		
	# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll
5/18	1	0.0	67	0	0.0	0	0	0	0
5/19	4	0.0	305	0	0.0	0	0	0	0
5/20	1	0.0	67	0	0.0	0	0	0	0
5/21	1	0.0	67	0	0.0	0	0	0	0
5/22	0	0.0	0	0	0.0	0	0	0	0
5/23	1	0.0	100	0	0.0	0	0	0	0
5/24	0	0.0	0	0	0.0	0	0	0	0
Weekly	8	0.0	606	0	0.0	0	0	0	0
Season to date	162	3.1	1,784	2	0.0	10	0	0	0

## SECTION 3. Smolt and Juvenile Lamprey Condition Monitoring Summary

### Smolt Condition

**WEEK 12**

		Yearling Chinook		Subyearling Chinook		Unclipped Steelhead		Clipped Steelhead		Coho		Sockeye	
		This Week	Last Week	This Week	Last Week	This Week	Last Week	This Week	Last Week	This Week	Last Week	This Week	Last Week
SAMPLE#		605	673	0	0	62	61	107	301	283	408	340	11
DESCALING	3-19%	7.9%	10.7%			3.2%	4.9%	10.3%	8.6%	5.7%	6.9%	12.4%	9.1%
	>20%	3.5%	6.1%					3.7%	0.7%	1.1%	1.2%	4.4%	
	Pred. Desc.		0.1%						0.7%				
INJURY	BODY	2.5%	1.9%			1.6%	3.3%	1.9%	4.0%	0.7%	1.0%		9.1%
	EYE							0.9%		0.4%		0.9%	
	HEAD								0.3%				
	OPERC.	1.0%	2.4%					4.7%	5.3%	1.4%	1.0%	2.4%	
	FIN	1.3%	2.7%			6.5%	3.3%	2.8%	1.3%	3.2%	1.2%	7.6%	
OTHER CONDITIONS	POPEYE												
	PINK FIN												
	Fin Discolor.												
DISEASE	FIN HEM.	0.7%	0.4%									0.3%	
	Columnaris								0.3%	0.4%	0.2%		
	FUNGUS												
	BKD												
	PARASITES	0.2%	0.4%			4.8%				0.7%	0.5%		
DEFORMITY	DEFORMITY												
	EYE HEM.	0.3%	0.6%								0.5%		
PREDATION	BIRD	0.8%	0.7%			1.6%		1.9%	4.7%	0.4%	0.5%		9.1%
	FISH	0.5%	0.4%					0.9%	0.7%		0.2%	0.3%	
	LAMPREY								0.3%				
	OTHER												

end dates 5/24 5/17

## Juvenile Lamprey Condition

Week 12			INJURY					DISEASE and OTHER CONDITIONS					PREDATION	
MP- Macrophthalmia	End Date	SAMPLE #	BODY	EYE	HEAD	FIN	POPEYE	FIN HEM	Columnaris	FUNGUS	DEFORMITY	EYE HEM.	BIRD	FISH
This Week	5/24	8						12.5%						
Last Week	5/17	1												
AP - Ammocoetes		SAMPLE #												
This Week	5/24	0												
Last Week	5/17	0												

## SECTION 4. Incidental Summary

### Week 12

	Bass Largemouth	Bass Smallmouth	Bluegill and Pumpkinseed	Bullhead	Carp	Catfish, Channel	Chiselmouth	Crappie species
This Week	0	1	0	0	0	0	0	0
Season to Date	0	10	11	2	0	1	0	0

	Dace - Longnose	Dace - Speckled	Chinook Jack	Kokanee	Lamprey Adult	Northern Pikeminnow	Peamouth	Perch Yellow
This Week	0	0	0	0	0	0	0	3
Season to Date	0	0	0	0	0	4	13	73

	Redside Shiner	Sand Roller	Sculpin species	Stickleback 3 spine	Sucker species	Shad Adult	Shad Juvenile	Sturgeon White
This Week	0	0	0	2	0	0	0	0
Season to Date	0	0	5	47	2	0	0	0

	Trout Bull	Trout Cutthroat	Trout Rainbow	Walleye	Whitefish Mountain	Siberian Prawn		Other/Not Listed
This Week	0	0	0	0	0	1	0	0
Season to Date	0	0	0	0	0	169	0	41

\*Other/Not listed in Season-to-Date totals include: 34 Banded killifish and seven Pink salmon fry.

## SECTION 5. PIT Tag Summary

### Bonneville season to date detections, 2024.

Migration Year	Chinook	Coho	Steelhead	Sockeye	Cutthroat	Pacific Lamprey	Other	Orphan/ Unknown	Grand Total
2020			1				1		2
2021	2		33						35
2022	1		69						70
2023	593	3	493						1,089
2024	29,853	1,573	15,144	2,083	1				48,654
								7,893	7,893
Grand Total	30,449	1,576	15,740	2,083	1	0	1	7,893	57,743

## **SECTION 6. Facility Operations**

Sample collections at the Smolt Monitoring Facility (SMF) began at 0700 on 2 March. Debris at the primary dewatering structure (PDS) and fish/debris separator ranged from light to moderate consisting mostly of aquatic macrophytes, sticks and other woody debris. The Outfall hydro-cannons are operating.

Gas Bubble Trauma (GBT) examinations began on 13 April and are typically performed two days per week through the end of spill. Results of this week's Gas Bubble Trauma (GBT) examinations: 200 combined yearling Chinook and steelhead examined: one fish (0.5%) was observed with GBT symptoms. Please follow this link <https://www.fpc.org/currentdaily/gbtsumbybatchdate.pdf> to the FPC web page for further details.

Fallbacks observed this week: eight steelhead and three salmon.

## **SECTION 7. Research**

A total of eight fin clips were obtained from Pacific Lamprey *macrophthalmia* for Columbia River Inter-Tribal Fish Commission's genetic studies.

## **SECTION 8. Sampling Pictures**



Coho (*Oncorhynchus kisutch*), approximately 140mm fork length, similar to one sampled on 23 May 2024, at Bonneville Smolt Monitoring Facility.