

# Pacific States Marine Fisheries Commission

## Bonneville Smolt Monitoring Weekly Report, #24-14

Report Period: 6/1 – 6/7, 2024

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### SECTION 1. River Flow and Sampling Results

#### WEEK 14

	Min	Max	Mean		
			Current	Last Week	2023
A. River Flow	196.1	270.7	226.9	196.8	238.9
B. Powerhouse 1	0.0	7.1	1.5	0.0	2.8
C. Powerhouse 2	33.8	102.4	63.4	40.0	73.9
D. Spill (kcfs)	153.9	155.4	154.7	149.4	154.8
% of River Flow	56.9	79.0	69.0	76.0	65.1
E. Water Temp *	58.7	60.0	59.2	58.5	60.9
F. % Saturation *					

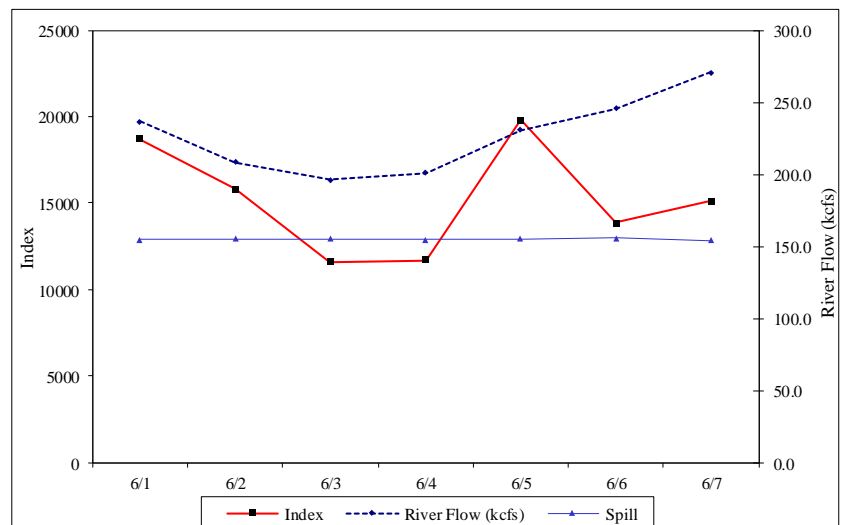
\* In sampling facility.

% SAMPLE COMPOSITION	This Week Last Week	
YEARLING CHINOOK	6.6%	23.4%
SUBYEARLING CHINOOK	64.3%	43.2%
CHINOOK FRY	2.6%	1.5%
UNCLIPPED STEELHEAD	2.1%	1.9%
CLIPPED STEELHEAD	1.1%	2.5%
COHO	15.9%	12.4%
COHO FRY	0.0%	0.0%
SOCKEYE	7.5%	15.2%

YEARLING CHINOOK							SUBYEARLING CHINOOK					COHO				
End Date	Sample Rate	# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index
6/1	5.0%	20	5.0	0.0	400	1,229	204	1.0	0.0	4,080	12,536	38	2.6	0.0	760	2,335
6/2	6.2%	23	0.0	0.0	230	1,006	150	2.0	0.7	2,624	11,474	36	0.0	0.0	558	2,440
6/3	5.0%	9	0.0	0.0	180	1,005	75	0.0	0.0	1,500	8,374	9	0.0	0.0	180	1,005
6/4	7.0%	9	0.0	0.0	128	635	127	0.0	5.5	1,814	9,000	18	5.6	0.0	257	1,275
6/5	6.4%	28	3.6	0.0	385	1,258	217	1.9	2.8	3,451	11,273	89	0.0	0.0	1,490	4,867
6/6	4.0%	4	25.0	0.0	100	299	136	2.2	0.0	3,400	10,174	27	0.0	0.0	675	2,020
6/7	4.0%	12	0.0	0.0	300	772	162	0.6	1.9	4,050	10,418	38	0.0	2.6	950	2,444
Weekly		105	2.9	0.0	1,723	6,203	1,071	1.2	1.6	20,919	73,248	255	0.8	0.4	4,870	16,386
Season to date		14,320	2.5	0.6	611,728	2,459,218	11,861	0.2	1.7	145,086	406,859	2,823	1.1	0.5	133,685	539,135

End Date	Sample Rate	UNCLIPPED STEELHEAD					CLIPPED STEELHEAD					SOCKEYE				
		# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index
6/1	5.0%	8	0.0	12.5	160	492	1	0.0	0.0	20	61	33	10.0	9.1	660	2,028
6/2	6.2%	4	0.0	0.0	62	271	3	0.0	0.0	12	52	8	25.0	0.0	124	542
6/3	5.0%	2	0.0	0.0	40	223	2	0.0	0.0	40	223	7	0.0	0.0	140	782
6/4	7.0%	1	0.0	0.0	14	69	1	0.0	0.0	14	69	9	0.0	11.1	129	640
6/5	6.4%	10	0.0	0.0	82	268	3	0.0	0.0	75	245	39	13.5	5.1	576	1,881
6/6	4.0%	4	0.0	0.0	100	299	4	0.0	0.0	100	299	10	0.0	0.0	250	748
6/7	4.0%	5	0.0	0.0	125	322	3	33.3	0.0	75	193	15	0.0	0.0	375	965
Weekly		34	0.0	2.9	583	1,944	17	5.9	0.0	336	1,144	121	8.7	5.0	2,254	7,586
Season to date		338	0.3	0.6	14,977	57,231	1,160	1.4	0.2	70,108	292,312	771	5.9	2.5	46,788	165,140

TOTAL						
End Date	Sample Rate	# Smpld	% Desc	% Mort	# Coll	Index
6/1	5.0%	304	2.3	1.3	6,080	18,681
6/2	6.2%	224	2.2	0.4	3,610	15,785
6/3	5.0%	104	0.0	0.0	2,080	11,612
6/4	7.0%	165	0.6	4.8	2,356	11,689
6/5	6.4%	386	2.6	2.1	6,059	19,792
6/6	4.0%	185	2.2	0.0	4,625	13,840
6/7	4.0%	235	0.9	1.7	5,875	15,112
Weekly		1,603	1.8	1.6	30,685	106,511
Season to date		31,273	1.6	1.0	1,022,372	3,919,895



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

## 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 14

#### Pacific Lamprey

#### Western Brook

End Date	Macrophthalmia			Ammocoetes			Ammocoetes		
	# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll
6/1	1	0.0	20	0	0.0	0	0	0	0
6/2	2	0.0	54	0	0.0	0	0	0	0
6/3	0	0.0	0	0	0.0	0	0	0	0
6/4	2	0.0	29	0	0.0	0	0	0	0
6/5	2	0.0	29	0	0.0	0	0	0	0
6/6	3	0.0	75	0	0.0	0	0	0	0
6/7	3	0.0	75	0	0.0	0	0	0	0
Weekly	13	0.0	282	0	0.0	0	0	0	0
Season to date	179	2.8	2,209	2	0.0	10	0	0	0

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

### Smolt Condition

#### WEEK 14

		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 #		105	272	571	0	33	32	17	45	254	189	115	264
DESCALING	3-19%	15.2%	9.9%	0.9%		3.0%	6.3%	17.6%	17.8%	7.1%	3.7%	20.9%	15.2%
	>20%	2.9%	2.9%	1.2%						0.8%	2.1%	8.7%	6.8%
	Pred. Desc.			0.2%				5.9%			1.1%		
INJURY	BODY	1.9%	4.0%	1.2%			3.1%		11.1%	0.4%	1.6%		1.9%
	EYE		0.4%								0.5%		0.4%
	HEAD												
	OPERC.	1.0%	4.0%	0.4%				5.9%		0.8%	1.1%	0.9%	2.7%
	FIN	3.8%	1.5%	1.2%		3.0%	3.1%			1.2%	3.2%	2.6%	2.7%
	POPEYE	1.0%											
OTHER CONDITIONS	PINK FIN												
	Fin Discolor.												
	FIN HEM.	1.0%		1.1%									
DISEASE	Columnaris												
	FUNGUS												
	BKD												
	PARASITES					3.0%				0.8%	2.1%		
	DEFORMITY		0.4%										
	EYE HEM.	1.0%	0.4%								1.1%		0.8%
PREDATION	BIRD			0.2%				11.8%	2.2%	0.4%	1.6%	0.9%	0.8%
	FISH	1.0%	0.7%	1.1%						0.4%	0.5%		0.4%
	LAMPREY												
	OTHER												

end dates 6/7 5/31

### Juvenile Lamprey Condition

#### Week 14

			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	6/7	13											23.1%	
Last Week	5/31	4						25.0%					50.0%	
AP - Ammocoetes	End Date	SAMPLE #												
This Week	6/7	0												
Last Week	5/31	0												

## SECTION 4. Incidental Summary

### Week 14

	Bass Largemouth	Bass Smallmouth	Bluegill and Pumpkinseed	Bullhead	Carp	Catfish, Channel	Chiselmouth	Crappie species
This Week	0	2	0	0	0	0	0	0
Season to Date	0	13	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	2	4	3	3
Season to Date	0	0	0	0	2	8	19	78

	Redside Shiner	Sand Roller	Sculpin species	Stickleback 3 spine	Sucker species	Shad Adult	Shad Juvenile	Sturgeon White
This Week	0	0	2	0	0	1	0	0
Season to Date	0	0	7	49	2	1	0	0

	Trout Bull	Trout Cutthroat	Trout Rainbow	Walleye	Whitefish Mountain	Siberian Prawn		Other/Not Listed
This Week	0	0	0	0	0	5	0	0
Season to Date	0	0	0	0	0	175	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		38						40
2022	1		84				1		86
2023	653	7	596						1,256
2024	32,434	2,495	17,458	2,333	5		4		54,729
								6,913	6,913
Grand Total	33,090	2,502	18,177	2,333	5	0	6	6,913	63,026

## 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, subyearling 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: three steelhead and one salmon.

## **SECTION 7. Research**

A total of 13 fin clips were obtained from Pacific Lamprey *macrophthalmia* for Columbia River Inter-Tribal Fish Commission's genetic studies.

## **SECTION 8. Sampling Pictures**



Clipped Yearling Chinook (*Oncorhynchus tshawytscha*), approximately 140mm fork length, exhibiting nearly entire-side descaling, sampled on 1 June 2024, at Bonneville Smolt Monitoring Facility.