



# Pacific States Marine Fisheries Commission

## Bonneville Smolt Monitoring Weekly Report, #24-18

Report Period: 6/29 – 7/5, 2024

Project Manager: Allan Martin

Prepared By: Dean Ballinger

### SECTION 1. River Flow and Sampling Results

#### WEEK 18

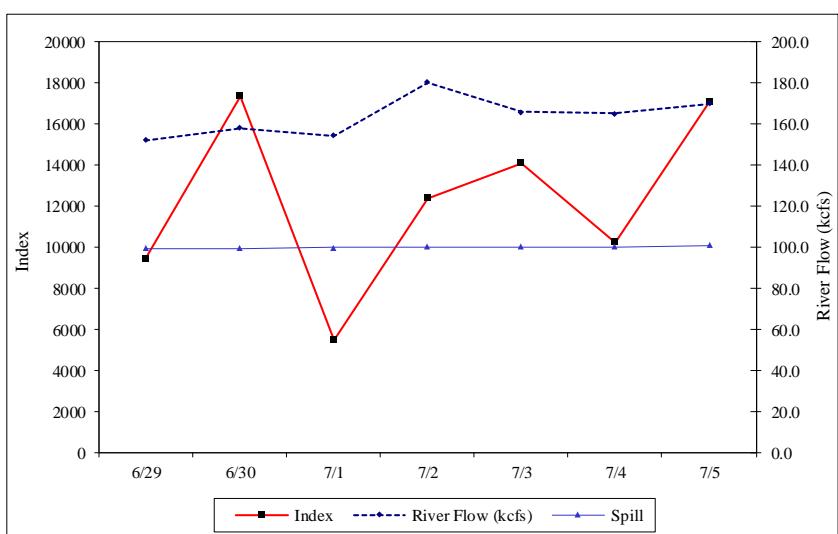
	Min	Max	Mean			% SAMPLE COMPOSITION	This Week	Last Week
			Current	Last Week	2023			
A. River Flow	151.8	179.8	163.2	171.1	146.5	YEARLING CHINOOK	0.4%	0.8%
B. Powerhouse 1	0.0	0.0	0.0	0.0	0.0	SUBYEARLING CHINOOK	98.6%	95.4%
C. Powerhouse 2	45.3	72.5	56.1	64.5	39.2	CHINOOK FRY	0.1%	0.1%
D. Spill (kcfcs)	99.1	100.4	99.7	99.3	99.9	UNCLIPPED STEELHEAD	0.0%	0.1%
% of River Flow	55.5	65.3	61.3	58.3	68.5	CLIPPED STEELHEAD	0.1%	0.6%
E. Water Temp *	64.3	66.3	65.3	63.6	67.0	COHO	0.3%	2.3%
F. % Saturation *						COHO FRY	0.0%	0.0%
						SOCKEYE	0.5%	0.6%

\* In sampling facility.

YEARLING CHINOOK							SUBYEARLING CHINOOK							COHO						
End Date	Sample Rate	# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index				
6/29	4.0%	2	0.0	0.0	50	159	115	2.8	7.0	2,875	9,164	1	0.0	0.0	25	80				
6/30	4.0%	0	0.0	0.0	0	0	234	1.7	0.4	5,850	17,251	0	0.0	0.0	0	0				
7/1	7.0%	0	0.0	0.0	0	0	122	4.1	0.8	1,741	5,446	0	0.0	0.0	0	0				
7/2	4.8%	1	0.0	0.0	20	48	243	1.2	0.4	5,093	12,104	1	0.0	0.0	20	48				
7/3	4.8%	1	0.0	0.0	50	136	243	3.8	2.1	5,020	13,634	1	0.0	0.0	4	11				
7/4	4.0%	2	0.0	0.0	50	137	146	0.7	2.7	3,650	10,009	0	0.0	0.0	0	0				
7/5	4.0%	0	0.0	0.0	0	0	258	0.0	0.4	6,450	16,963	1	0.0	0.0	25	66				
Weekly		6	0.0	0.0	170	480	1,361	1.9	1.5	30,679	84,572	4	0.0	0.0	74	204				
Season to date		14,436	2.6	0.6	614,954	2,468,461	17,851	1.1	1.6	319,673	890,564	3,010	1.1	0.5	138,690	553,313				

UNCLIPPED							STEELHEAD							CLIPPED							SOCKEYE						
End Date	Sample Rate	# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index						
6/29	4.0%	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0						
6/30	4.0%	0	0.0	0.0	0	0	0	0.0	0.0	0	0	1	0.0	0.0	25	74	0	0.0	0.0	0	0						
7/1	7.0%	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	3	0.0	0.0	104	282						
7/2	4.8%	0	0.0	0.0	0	0	1	0.0	0.0	20	48	2	0.0	0.0	40	95	0	0.0	0.0	0	0						
7/3	4.8%	0	0.0	0.0	0	0	0	0.0	0.0	0	0	1	0.0	0.0	25	69	0	0.0	0.0	0	0						
7/4	4.0%	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0						
7/5	4.0%	0	0.0	0.0	0	0	0	0.0	0.0	0	0	7	0.0	0.0	194	520	368	0.3	0.5	15,750	59,527						
Weekly		0	0.0	0.0	0	0	1	0.0	0.0	20	48	1,210	1.3	0.2	71,514	296,645	892	5.6	2.2	50,446	175,547						
Season to date		368	0.3	0.5	15,750	59,527	1,210	1.3	0.2	71,514	296,645	892	5.6	2.2	50,446	175,547											

TOTAL						
End Date	Sample Rate	# Smpld	% Desc	% Mort	# Coll	Index
6/29	4.0%	118	2.7	6.8	2,950	9,404
6/30	4.0%	235	1.7	0.4	5,875	17,325
7/1	7.0%	122	4.1	0.8	1,741	5,446
7/2	4.8%	248	1.2	0.4	5,193	12,341
7/3	4.8%	248	3.7	2.0	5,178	14,063
7/4	4.0%	149	0.7	2.7	3,725	10,215
7/5	4.0%	259	0.0	0.4	6,475	17,028
Weekly		1,379	1.8	1.5	31,137	85,823
Season to date		37,767	1.8	1.1	1,211,027	4,444,057



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 (Macroptalmia, 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:

Macrophthalmia			Ammocoetes			Western Brook Ammocoetes			
End Date	# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll
6/29	0	0.0	0	0	0.0	0	0	0	0
6/30	1	0.0	25	0	0.0	0	0	0	0
7/1	0	0.0	0	0	0.0	0	0	0	0
7/2	2	0.0	40	0	0.0	0	0	0	0
7/3	0	0.0	0	0	0.0	0	0	0	0
7/4	0	0.0	0	0	0.0	0	0	0	0
7/5	0	0.0	0	0	0.0	0	0	0	0
Weekly	3	0.0	65	0	0.0	0	0	0	0
Season to date	196	2.6	2,760	4	0.0	18	0	0	0

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

## Smolt Condition

## WEEK 18

Subyearling	DESCALING				INJURY					Other Conditions			
	SAMPLE #	3-19%	>20%	Pred. Desc.	BODY	EYE	HEAD	OP	FIN	POPEYE	PINK FIN	Fin Discolor.	FIN HEM
This Week	700	5.1%	2.1%	0.1%	3.7%			0.1%	1.7%				1.7%
Last Week	700	4.7%	4.1%		2.7%			1.0%	1.6%				1.1%

	DISEASE						PREDATION			
SAMPLE #	Columnaris	FUNGUS	BKD	PARASITES	DEFORMITY	EYE HEM	BIRD	FISH	LAMPREY	OTH
700		0.1%		1.3%	0.1%			1.6%		
700		0.1%		0.4%		0.1%	0.1%		1.3%	

## Juvenile Lamprey Condition

## SECTION 4. Incidental Summary

### **Week 18**

	Bass Largemouth	Bass Smallmouth	Bluegill and Pumpkinseed	Bullhead	Carp	Catfish, Channel	Chiselmouth	Crappie species
This Week	0	4	0	0	0	0	0	0
Season to Date	0	17	11	2	0	1	0	0
	Dace - Longnose	Dace - Speckled	Chinook Jack	Kokanee	Lamprey Adult	Northern Pikeminnow	Peamouth	Perch Yellow
This Week	0	0	1	0	0	2	27	2
Season to Date	0	0	1	0	2	16	49	82
	Redside Shiner	Sand Roller	Sculpin species	Stickleback 3 spine	Sucker species	Shad Adult	Shad Juvenile	Sturgeon White
This Week	0	0	6	0	2	32	2	0
Season to Date	0	0	20	49	4	45	10	0
	Trout Bull	Trout Cutthroat	Trout Rainbow	Walleye	Whitefish Mountain	Siberian Prawn		Other/Not Listed
This Week	0	0	0	0	0	1	0	9
Season to Date	0	0	0	0	0	182	0	53

\*Other/Not listed in this week's totals include: nine Banded killifish.

\*Season-to-Date totals include: 46 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		40				1		43
2022	4		100				2		106
2023	686	7	692						1,385
2024	36,509	3,242	18,760	2,386	7		5	5,951	60,909 5,951
Grand Total	37,201	3,249	19,593	2,386	7	0	9	5,951	68,396

## 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 was light consisting mostly of sticks and aquatic macrophytes. 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 subyearling Chinook were 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.

Non-salmonid GBT Monitoring was initiated at Bonneville on 19 June with the start of summer spill operations. This effort is paired in conjunction with salmonid GBT monitoring with the goal of examining up to 50 non-salmonids (native and non-native species) per session using the same procedures and protocols employed in the salmonid GBT Monitoring Program. Non-salmonid GBT exams only occur when TDG levels are above 110% and water temperatures are below 68°F. Results of this week's Non-salmonid Gas Bubble Trauma (GBT) examinations: two fish in total were examined with no GBT symptoms observed. Please follow this link [https://www.fpc.org/currentdaily/Summer\\_NS\\_gbtsumbybatchdate\\_realtime.pdf](https://www.fpc.org/currentdaily/Summer_NS_gbtsumbybatchdate_realtime.pdf) to the FPC web page for specific details.

Fallbacks observed this week: one steelhead.

## **SECTION 7. Research**

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

## **SECTION 8. Sampling Pictures**



Yearling Chinook (*Oncorhynchus tshawytscha*), approximately 140 mm fork length with operculum damage, similar to one sampled at Bonneville Smolt Monitoring Facility on May 23, 2024.