

# Pacific States Marine Fisheries Commission

## Bonneville Smolt Monitoring Weekly Report, #24-19

Report Period: 7/6 – 7/12, 2024

Project Manager: Allan Martin

Prepared By: Dean Ballinger



### SECTION 1. River Flow and Sampling Results

#### WEEK 19

	Min	Max	Mean		
			Current	Last Week	2023
A. River Flow	149.3	181.7	164.9	163.2	140.1
B. Powerhouse 1	0.0	0.0	0.0	0.0	1.2
C. Powerhouse 2	41.1	73.7	56.9	56.1	33.8
D. Spill (kcfs)	99.8	101.2	100.5	99.7	97.8
% of River Flow	55.4	67.5	61.3	61.3	69.9
E. Water Temp *	67.2	69.6	68.7	65.3	69.2
F. % Saturation *					

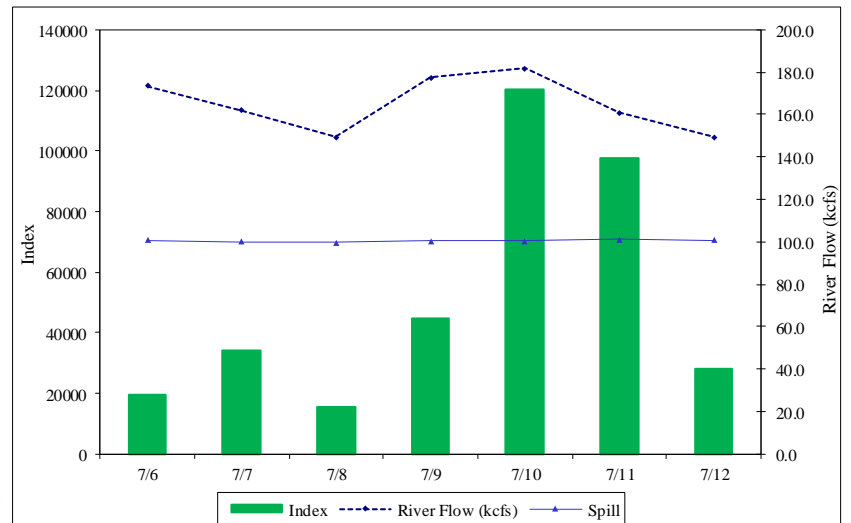
\* In sampling facility.

% SAMPLE COMPOSITION	This Week Last Week	
YEARLING CHINOOK	0.0%	0.4%
SUBYEARLING CHINOOK	99.7%	98.6%
CHINOOK FRY	0.1%	0.1%
UNCLIPPED STEELHEAD	0.0%	0.0%
CLIPPED STEELHEAD	0.0%	0.1%
COHO	0.1%	0.3%
COHO FRY	0.0%	0.0%
SOCKEYE	0.0%	0.5%

YEARLING CHINOOK							SUBYEARLING CHINOOK					COHO				
End Date	Sample Rate	# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index
7/6	4.0%	0	0.0	0.0	0	0	307	0.7	0.3	7,675	19,552	1	0.0	0.0	25	64
7/7	2.8%	0	0.0	0.0	0	0	337	0.0	0.9	12,001	34,124	0	0.0	0.0	0	0
7/8	2.0%	0	0.0	0.0	0	0	93	0.0	0.0	4,650	15,673	0	0.0	0.0	0	0
7/9	3.0%	1	0.0	0.0	33	81	549	0.2	0.7	18,300	44,660	1	0.0	0.0	33	81
7/10	1.4%	0	0.0	0.0	0	0	697	0.1	0.9	50,788	120,113	0	0.0	0.0	0	0
7/11	0.7%	0	0.0	0.0	0	0	232	0.0	0.0	33,143	97,397	0	0.0	0.0	0	0
7/12	0.7%	0	0.0	0.0	0	0	57	0.0	0.0	8,143	28,114	0	0.0	0.0	0	0
Weekly		1	0.0	0.0	33	81	2,272	0.2	0.6	134,700	359,635	2	0.0	0.0	58	144
Season to date		14,437	2.6	0.6	614,987	2,468,541	20,123	1.0	1.5	454,373	1,250,199	3,012	1.1	0.5	138,748	553,457

End Date	Sample Rate	UNCLIPPED STEELHEAD					CLIPPED					SOCKEYE				
		# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index
7/6	4.0%	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0
7/7	2.8%	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0
7/8	2.0%	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0
7/9	3.0%	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0
7/10	1.4%	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0
7/11	0.7%	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0
7/12	0.7%	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0
Weekly		0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0
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
7/6	4.0%	308	0.7	0.3	7,700	19,616
7/7	2.8%	337	0.0	0.9	12,001	34,124
7/8	2.0%	93	0.0	0.0	4,650	15,673
7/9	3.0%	551	0.2	0.7	18,366	44,821
7/10	1.4%	697	0.1	0.9	50,788	120,113
7/11	0.7%	232	0.0	0.0	33,143	97,397
7/12	0.7%	57	0.0	0.0	8,143	28,114
Weekly		2,275	0.2	0.6	134,791	359,860
Season to date		40,042	1.7	1.1	1,345,818	4,803,917



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

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:

## Pacific Lamprey

## Macrophthalmia

## Annmoetes

## Ammocoetes

End Date	First 3 columns			Next 3 columns			Final 3 columns		
	# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll
7/6	0	0.0	0	0	0.0	0	0	0	0
7/7	0	0.0	0	1	0.0	4	0	0	0
7/8	0	0.0	0	0	0.0	0	0	0	0
7/9	1	0.0	33	0	0.0	0	0	0	0
7/10	0	0.0	0	0	0.0	0	0	0	0
7/11	0	0.0	0	0	0.0	0	0	0	0
7/12	0	0.0	0	0	0.0	0	0	0	0
Weekly Season to date	1	0.0	33	1	0.0	4	0	0	0
	197	2.5	2,793	5	0.0	22	0	0	0

### Smolt Condition

## Subye arling

	DESCALING			INJURY						Other Conditions		
SAMPLE #	3-19%	>20%	Pred. Desc.	BODY	EYE	HEAD	OP	FIN	POPEYE	PINK FIN	Fin Discolor.	FIN HEM
<b>649</b>	0.8%			0.3%				0.8%				0.9%
<b>700</b>	5.1%	2.1%	0.1%	3.7%			0.1%	1.7%				1.7%

	DISEASE						PREDATION			
SAMPLE #	Columnaris	FUNGUS	BKD	PARASITES	DEFORMITY	EYE HEM	BIRD	FISH	LAMPREY	OTH
<b>649</b>				0.6%	0.2%			0.3%		
<b>700</b>		0.1%		1.3%	0.1%			1.6%		

### Juvenile Lamprey Condition

## INJURY

## DISEASE and OTHER CONDITIONS

PREDATION
-----------

[illegible]

## **SECTION 4. Incidental Summary**

### **Week 19**

	Bass Largemouth	Bass Smallmouth	Bluegill and Pumpkinseed	Bullhead	Carp	Catfish, Channel	Chiselmouth	Crappie species
This Week	0	6	0	0	0	0	0	0
Season to Date	0	23	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	38	0
Season to Date	0	0	1	0	2	16	87	82

	Redside Shiner	Sand Roller	Sculpin species	Stickleback 3 spine	Sucker species	Shad Adult	Shad Juvenile	Sturgeon White
This Week	0	0	2	0	0	26	1	0
Season to Date	0	0	22	49	4	71	11	0

	Trout Bull	Trout Cutthroat	Trout Rainbow	Walleye	Whitefish Mountain	Siberian Prawn		Other/Not Listed
This Week	0	0	0	0	0	1	0	3
Season to Date	0	0	0	0	0	183	0	56

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

\*Season-to-Date totals include: 49 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	5		102				2		109
2023	694	7	693						1,394
2024	37,061	3,247	18,770	2,386	7		5		61,476
								5,951	5,951
Grand Total	37,762	3,254	19,606	2,386	7	0	9	5,951	68,975

## **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.

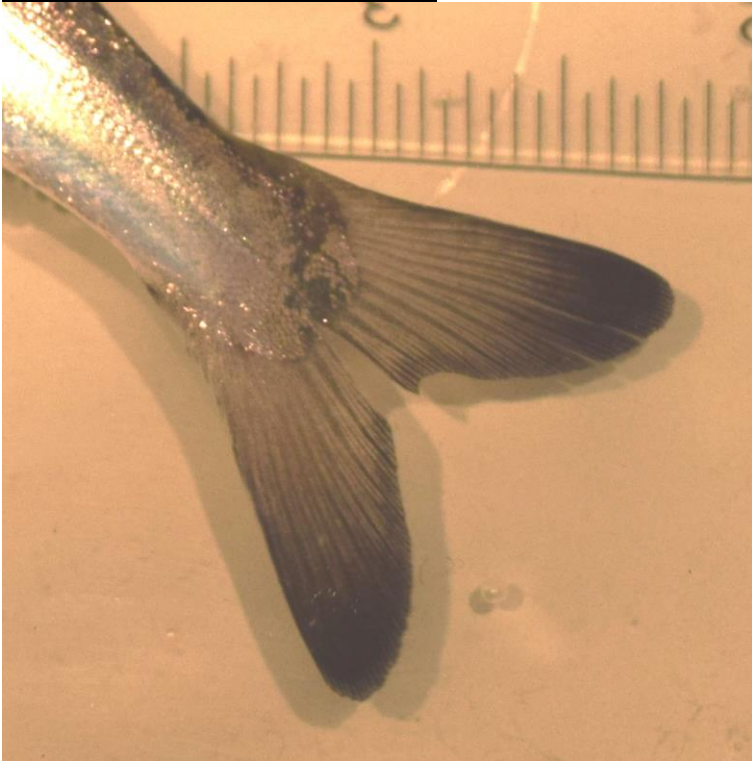
Non-salmonid GBT Monitoring was initiated at Bonneville on 19 June with the start of summer spill operations. This effort is paired in conjunction with salmonid GBT monitoring with the goal of examining up to 50 non-salmonids (native and non-native species) per session using the same procedures and protocols 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.

No fallbacks were observed this week.

## **SECTION 7. Research**

A total of one fin clip was obtained from Pacific Lamprey macrophthalmia and one from a Pacific Lamprey ammocoete for Columbia River Inter-Tribal Fish Commission's genetic studies.

## **SECTION 8. Sampling Pictures**



Example of the most common type of fin injury observed at Bonneville Smolt Monitoring Facility: Caudal fin ray split to the peduncle.