



Pacific States Marine Fisheries Commission

Bonneville Smolt Monitoring Weekly Report, #24-23

Report Period: 8/3 – 8/9, 2024

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SECTION 1. River Flow and Sampling Results

WEEK 23

	Min	Max	Mean		
			Current	Last Week	2023
A. River Flow	116.6	139.1	130.2	130.7	131.7
B. Powerhouse 1	0.1	3.4	2.2	0.4	0.0
C. Powerhouse 2	54.3	75.5	66.4	38.5	31.5
D. Spill (kcfs)	54.1	55.8	54.7	84.3	92.8
% of River Flow	38.9	47.0	42.2	64.6	70.4
E. Water Temp *	70.7	72.1	71.6	70.4	71.3
F. % Saturation *					

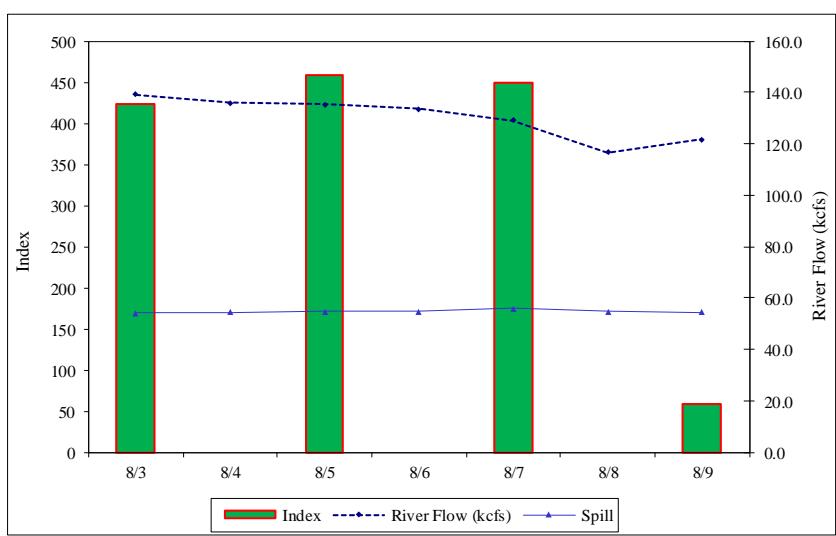
* In sampling facility.

% SAMPLE COMPOSITION	This Week	Last Week
YEARLING CHINOOK	0.0%	0.0%
SUBYEARLING CHINOOK	100.0%	100.0%
CHINOOK FRY	0.0%	0.0%
UNCLIPPED STEELHEAD	0.0%	0.0%
CLIPPED STEELHEAD	0.0%	0.0%
COHO	0.0%	0.0%
COHO FRY	0.0%	0.0%
SOCKEYE	0.0%	0.0%

YEARLING CHINOOK							SUBYEARLING CHINOOK							COHO						
End Date	Sample Rate	# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index				
8/3	7.0%	0	0.0	0.0	0	0	17	0.0	5.9	243	424	0	0.0	0.0	0	0				
8/4	0.0%	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0				
8/5	7.8%	0	0.0	0.0	0	0	20	0.0	0.0	255	459	0	0.0	0.0	0	0				
8/6	0.0%	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0				
8/7	10.0%	0	0.0	0.0	0	0	24	0.0	0.0	240	449	0	0.0	0.0	0	0				
8/8	0.0%	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0				
8/9	10.0%	0	0.0	0.0	0	0	3	0.0	0.0	30	59	0	0.0	0.0	0	0				
Weekly		0	0.0	0.0	0	0	64	0.0	1.6	768	1,390	0	0.0	0.0	0	0				
Season to date		14,438	2.6	0.6	615,007	2,468,601	22,996	0.9	1.5	622,342	1,744,115	3,012	1.1	0.5	138,748	553,457				

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						
8/3	7.0%	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						
8/4	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	0						
8/5	7.8%	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						
8/6	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	0						
8/7	10.0%	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						
8/8	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	0						
8/9	10.0%	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						
Weekly		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						
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
8/3	7.0%	17	0.0	5.9	243	424
8/4	0.0%	0	0.0	0.0	0	0
8/5	7.8%	20	0.0	0.0	255	459
8/6	0.0%	0	0.0	0.0	0	0
8/7	10.0%	24	0.0	0.0	240	449
8/8	0.0%	0	0.0	0.0	0	0
8/9	10.0%	3	0.0	0.0	30	59
Weekly		64	0.0	1.6	768	1,390
Season to date		42,916	1.6	1.1	1,513,807	5,297,892



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:

Macrophthalmia			Ammocoetes			Western Brook Ammocoetes			
End Date	# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll
8/3	0	0.0	0	1	0.0	14	0	0	0
8/4	0	0.0	0	0	0.0	0	0	0	0
8/5	0	0.0	0	0	0.0	0	0	0	0
8/6	0	0.0	0	0	0.0	0	0	0	0
8/7	0	0.0	0	0	0.0	0	0	0	0
8/8	0	0.0	0	0	0.0	0	0	0	0
8/9	1	0.0	10	0	0.0	0	0	0	0
Weekly	1	0.0	10	1	0.0	14	0	0	0
Season to date	201	2.5	3,036	6	0.0	36	0	0	0

SECTION 3. Smolt and Juvenile Lamprey Condition Monitoring Summary

Smolt Condition

WEEK 23

Subyearling	DESCALING				INJURY					Other Conditions			
Chinook	SAMPLE #	3-19%	>20%	Pred. Desc.	BODY	EYE	HEAD	OP	FIN	POPEYE	PINK FIN	Fin Discolor.	FIN HEM
This Week	63	1.6%					1.6%		4.8%	1.6%			1.6%
Last Week	64									1.6%			

Juvenile Lamprey Condition

SECTION 4. Incidental Summary

Week 23

	Bass Largemouth	Bass Smallmouth	Bluegill and Pumpkinseed	Bullhead	Carp	Catfish, Channel	Chiselmouth	Crappie species
This Week	0	2	0	0	1	0	0	0
Season to Date	0	58	11	2	3	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	81	0
Season to Date	0	0	1	0	2	16	1,001	82
	Redside Shiner	Sand Roller	Sculpin species	Stickleback 3 spine	Sucker species	Shad Adult	Shad Juvenile	Sturgeon White
This Week	0	0	7	0	0	51	76,910	0
Season to Date	0	0	37	50	4	226	102,699	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	187	0	59

*Other/Not Listed Season-to-Date totals include: 52 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			2				1		3
2021	3		41				1		45
2022	5		102	1			2		110
2023	697	7	697						1,401
2024	40,338	3,350	19,241	2,408	7		6	5,218	65,350 5,218 5,218
Grand Total	41,043	3,357	20,083	2,409	7	0	10	5,218	72,127

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 aquatic macrophytes, a few sticks and dead adult American shad. The Outfall hydro-cannons are operating.

Higher temperature sampling protocols continued throughout the week as daily average river temperatures remained above 70°F. Modified sampling during higher temperatures means Index/Condition sampling will take place every other day until the daily average descends to 69.5°F. Sample and bypass mode will occur on alternating 24-hour periods (0700-0700).

Gas Bubble Trauma (GBT) examinations began on 13 April and are typically performed two days per week through the end of spill. However, due to current higher river temperatures, GBT monitoring was reduced to once per week. Results of this week's Gas Bubble Trauma (GBT) examinations: three Subyearling Chinook were examined with no GBT symptoms observed. 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. No GBT exams were performed on non-salmonids this week as river temperatures exceeded the 68°F threshold. Please follow this link

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

One fin clip was obtained from Pacific Lamprey *macrophthalmia* for Columbia River Inter-Tribal Fish Commission's genetic studies.

SECTION 8. Sampling Pictures



Juvenile American shad (*Alosa sapidissima*), approximately 70mm fork length with eye hemorrhage, sampled at Bonneville Smolt Monitoring Facility this week.