



# Pacific States Marine Fisheries Commission

## Bonneville Smolt Monitoring Weekly Report, #24-8

Report Period: 4/20 – 4/26, 2024

Project Manager: Allan Martin

Prepared By: Dean Ballinger

### SECTION 1. River Flow and Sampling Results

#### WEEK 8

	Min	Max	Mean		
			Current	Last Week	2023
A. River Flow	167.6	201.4	184.4	185.2	148.5
B. Powerhouse 1	0.0	0.0	0.0	0.0	0.0
C. Powerhouse 2	33.3	40.0	36.9	37.5	31.9
D. Spill (kcf)	126.8	153.9	140.1	140.3	109.2
% of River Flow	74.0	78.4	75.9	75.8	73.5
E. Water Temp *	51.8	52.9	52.6	50.9	49.0
F. % Saturation *					

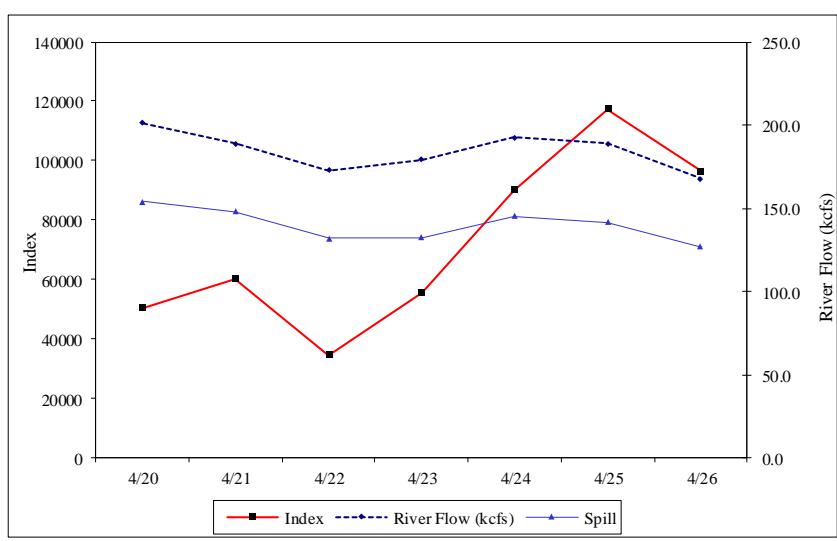
\* In sampling facility.

% SAMPLE COMPOSITION	This Week	Last Week
YEARLING CHINOOK	82.8%	78.3%
SUBYEARLING CHINOOK	2.1%	5.7%
CHINOOK FRY	0.8%	6.7%
UNCLIPPED STEELHEAD	0.6%	0.4%
CLIPPED STEELHEAD	3.4%	0.4%
COHO	10.2%	8.5%
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				
4/20	4.0%	333	0.9	0.3	8,325	40,355	24	0.0	4.2	600	2,909	52	0.0	1.9	1,300	6,302				
4/21	3.7%	352	0.9	0.3	9,458	51,522	27	0.0	0.0	568	3,094	32	0.0	0.0	1,002	5,458				
4/22	4.0%	209	1.9	0.0	5,225	25,937	23	0.0	0.0	575	2,854	26	0.0	3.8	650	3,227				
4/23	4.0%	428	1.4	0.5	10,700	46,932	14	0.0	0.0	350	1,535	48	2.1	0.0	1,200	5,263				
4/24	4.0%	633	1.4	0.3	15,825	73,930	4	0.0	0.0	100	467	94	2.1	0.0	2,350	10,979				
4/25	3.8%	823	2.7	0.4	20,174	92,596	7	0.0	0.0	258	1,184	106	1.9	0.9	3,460	15,881				
4/26	1.1%	198	0.5	0.0	17,150	82,258	5	0.0	0.0	400	1,919	10	20.0	0.0	850	4,077				
Weekly		2,976	1.6	0.3	86,857	413,531	104	0.0	1.0	2,851	13,962	368	1.9	0.8	10,812	51,187				
Season to date		6,550	0.9	0.2	151,230	690,123	9,432	0.0	1.8	67,263	118,416	684	1.2	1.0	17,522	81,416				

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						
4/20	4.0%	0	0.0	0.0	0	0	7	14.3	0.0	175	848	0	0.0	0.0	0	0	0	0.0	0.0	0	0						
4/21	3.7%	0	0.0	0.0	0	0	1	0.0	0.0	50	272	0	0.0	0.0	0	0	0	0.0	0.0	0	0						
4/22	4.0%	8	0.0	0.0	200	993	13	0.0	0.0	325	1,613	0	0.0	0.0	0	0	0	0.0	0.0	0	0						
4/23	4.0%	5	0.0	0.0	125	548	12	0.0	0.0	300	1,316	0	0.0	0.0	0	0	1	0.0	0.0	25	117						
4/24	4.0%	4	0.0	0.0	100	467	36	0.0	0.0	900	4,205	36	0.0	0.0	0	0	0	0.0	0.0	0	0						
4/25	3.8%	5	0.0	0.0	250	1,147	36	0.0	0.0	1,432	6,573	0	0.0	0.0	0	0	0	0.0	0.0	0	0						
4/26	1.1%	0	0.0	0.0	0	0	17	5.9	0.0	1,700	8,154	0	0.0	0.0	0	0	1	0.0	0.0	25	117						
Weekly		22	0.0	0.0	675	3,156	122	1.6	0.0	4,882	22,981	6	0.0	0.0	0	0	6	0.0	0.0	50	147						
Season to date		77	0.0	0.0	1,273	5,092	135	1.5	0.0	5,242	24,615																

TOTAL						
End Date	Sample Rate	# Smpld	% Desc	% Mort	# Coll	Index
4/20	4.0%	416	1.0	0.7	10,400	50,414
4/21	3.7%	412	0.7	0.2	11,078	60,347
4/22	4.0%	279	1.4	0.4	6,975	34,624
4/23	4.0%	507	1.4	0.4	12,675	55,595
4/24	4.0%	772	1.4	0.3	19,300	90,164
4/25	3.8%	977	2.5	0.4	25,574	117,381
4/26	1.1%	230	1.7	0.0	20,100	96,408
Weekly		3,593	1.6	0.4	106,102	504,933
Season to date		16,884	0.4	1.2	242,580	919,810



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

## Chum Fry Sampling Results

CHUM FRY						
End Date	Sample Rate	# Smpld	% Desc	% Mort	# Coll	Index
4/20	4.0%	0	0.0	0.0	0	0
4/21	3.7%	0	0.0	0.0	0	0
4/22	4.0%	0	0.0	0.0	0	0
4/23	4.0%	0	0.0	0.0	0	0
4/24	4.0%	0	0.0	0.0	0	0
4/25	3.8%	0	0.0	0.0	0	0
4/26	1.1%	0	0.0	0.0	0	0
Weekly		0	0.0	0.0	0	0
Season to date		245	0.0	0.8	1,490	2,257

## 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 8**

End Date	Pacific Lamprey			Western Brook				
	Macrophthalmia		Ammocoetes		Ammocoetes			
# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll
4/20	0	0.0	0	0	0.0	0	0	0
4/21	0	0.0	0	0	0.0	0	0	0
4/22	1	0.0	25	0	0.0	0	0	0
4/23	0	0.0	0	0	0.0	0	0	0
4/24	3	0.0	75	0	0.0	0	0	0
4/25	0	0.0	0	0	0.0	0	0	0
4/26	0	0.0	0	0	0.0	0	0	0
Weekly	4	0.0	100	0	0.0	0	0	0
Season to date	151	3.3	945	2	0.0	10	0	0

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

### Smolt Condition

WEEK 8	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
SAMPLE #	711	715	0	0	22	11	109	11
DESCALING	3-19%	2.3%	1.1%		9.1%	27.3%	12.8%	27.3%
	>20%	1.8%	1.0%				0.9%	1.8%
Pred. Desc.							0.9%	0.4%
INJURY	BODY	1.1%	0.3%		18.2%	4.6%	0.9%	1.3%
	EYE	0.1%						1.3%
	HEAD							
	OPERC.		0.3%			4.6%	1.2%	0.4%
	FIN	1.5%	1.4%			2.8%	2.1%	3.5%
	POPEYE		0.1%					
OTHER CONDITIONS	PINK FIN							
	Fin Discolor.							
	FIN HEM.	0.4%	0.1%					
DISEASE	Columnaris							
	FUNGUS	0.3%					0.9%	4.8%
	BKD							
	PARASITES							
	DEFORMITY							
	EYE HEM.	0.4%	0.6%					
PREDATION	BIRD	0.3%	0.3%		4.5%	4.6%	1.2%	1.3%
	FISH	0.1%				9.1%	0.9%	
	LAMPREY							
	OTHER							
end dates	4/26	4/19						

### Juvenile Lamprey Condition

## **SECTION 4. Incidental Summary**

Week 8	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	8	9	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	1	1	2
Season to Date	0	0	0	0	0	4	11	66

	Redside Shiner	Sand Roller	Sculpin species	Stickleback 3 spine	Sucker species	Shad Adult	Shad Juvenile	Sturgeon White
This Week	0	0	0	0	0	0	0	0
Season to Date	0	0	5	45	1	0	0	0

	Trout Bull	Trout Cutthroat	Trout Rainbow	Walleye	Whitefish Mountain	Siberian Prawn		Other/Not Listed
This Week	0	0	0	0	0	2	0	0
Season to Date	0	0	0	0	0	168	0	39

\*Other/Not listed in Season-to-Date totals include: 32 Banded killifish and seven Pink salmon fry.

## SECTION 5. PIT Tag Summary

### Bonneville season to date detections, 2024.

Donovan Lake Season-to-Date Detections, 2021-2024									
Migration Year	Chinook	Coho	Steelhead	Sockeye	Cutthroat	Pacific Lamprey	Other	Orphan/Unknown	Grand Total
2021	2		16						18
2022	1		16						17
2023	35		72						107
2024	7,251	34	1,190						8,475
								2,335	2,335
Grand Total	7,289	34	1,294	0	0	0	0	2,335	10,952

## **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 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: two fish (1.0%) were 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: two steelhead and one salmon.

## **SECTION 7. Research**

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

## **SECTION 8. Sampling Pictures**



Three-spine stickleback (*Gasterosteus aculeatus*), similar to one sampled on 14 April, 2024 at Bonneville Smolt Monitoring Facility. Please note the first dorsal fin, composed of three distinct spines when displayed, is retracted against the dorsal mid-line.