

Pacific States Marine Fisheries Commission

Bonneville Smolt Monitoring Weekly Report, #24-8

Report Period: 4/20 – 4/26, 2024

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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 (kcfs)	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 *					

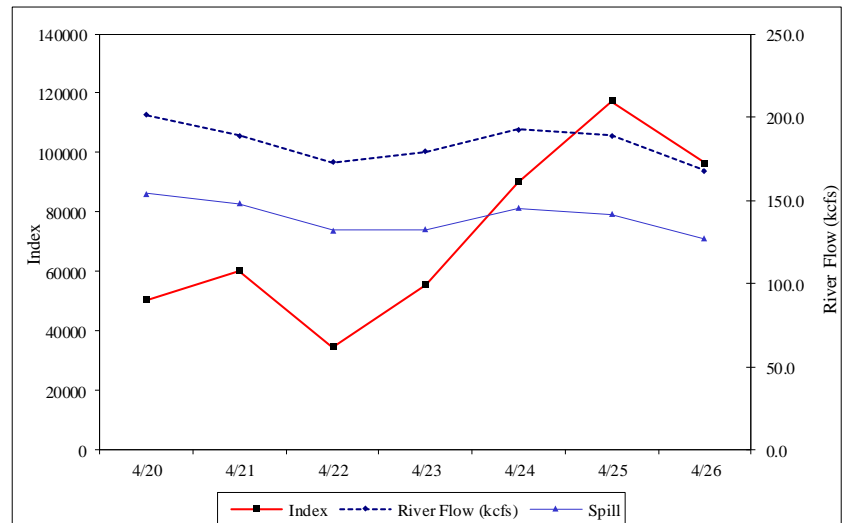
* In sampling facility.

% 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

End Date	Sample Rate	UNCLIPPED STEELHEAD					CLIPPED					SOCKEYE				
		# 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
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
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
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
4/24	4.0%	4	0.0	0.0	100	467	36	0.0	0.0	900	4,205	1	0.0	0.0	25	117
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
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
Weekly		22	0.0	0.0	675	3,156	122	1.6	0.0	4,882	22,981	1	0.0	0.0	25	117
Season to date		77	0.0	0.0	1,273	5,092	135	1.5	0.0	5,242	24,615	6	0.0	0.0	50	147

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

CHUMFry

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

Pacific Lamprey

Western Brook

Macrophthalmia

Ammocoetes

Ammocoetes

End Date	# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll
4/20	0	0.0	0	0	0.0	0	0	0	0
4/21	0	0.0	0	0	0.0	0	0	0	0
4/22	1	0.0	25	0	0.0	0	0	0	0
4/23	0	0.0	0	0	0.0	0	0	0	0
4/24	3	0.0	75	0	0.0	0	0	0	0
4/25	0	0.0	0	0	0.0	0	0	0	0
4/26	0	0.0	0	0	0.0	0	0	0	0
Weekly	4	0.0	100	0	0.0	0	0	0	0
Season to date	151	3.3	945	2	0.0	10	0	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	This Week	Last Week	This Week	Last Week
SAMPLE #		711	715	0	0	22	11	109	11	327	227	0	0
DESCALING	3-19%	2.3%	1.1%			9.1%	27.3%	12.8%	27.3%	3.1%	1.8%		
	>20%	1.8%	1.0%					0.9%		1.8%	0.4%		
	Pred. Desc.							0.9%					
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%			4.5%		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									0.3%			
	DEFORMITY												
	EYE HEM.	0.4%	0.6%							0.3%			
PREDATION	BIRD	0.3%	0.3%			4.5%		4.6%	9.1%	1.2%	1.3%		
	FISH	0.1%						0.9%		0.3%			
	LAMPREY												
	OTHER												

end dates

4/26

4/19

Juvenile Lamprey Condition

Week 8			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	4/26	4											25.0%	
Last Week	4/19	2											100.0%	
AP - Ammocoetes		SAMPLE #												
This Week	4/26	0												
Last Week	4/19	0												

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.

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/gbtsummarybatchdate.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 macrophthalmia 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.