

Pacific States Marine Fisheries Commission

Bonneville Smolt Monitoring Weekly Report, #24-11

Report Period: 5/11 – 5/17, 2024

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SECTION 1. River Flow and Sampling Results

WEEK 11

	Min	Max	Mean		
			Current	Last Week	2023
A. River Flow	176.6	241.2	206.8	164.9	357.2
B. Powerhouse 1	0.0	0.0	0.0	0.0	84.4
C. Powerhouse 2	34.0	79.4	53.6	36.2	108.5
D. Spill (kcfs)	130.2	154.5	145.8	121.2	157.0
% of River Flow	64.1	78.5	71.1	73.5	44.1
E. Water Temp *	55.2	57.6	56.4	53.9	56.3
F. % Saturation *					

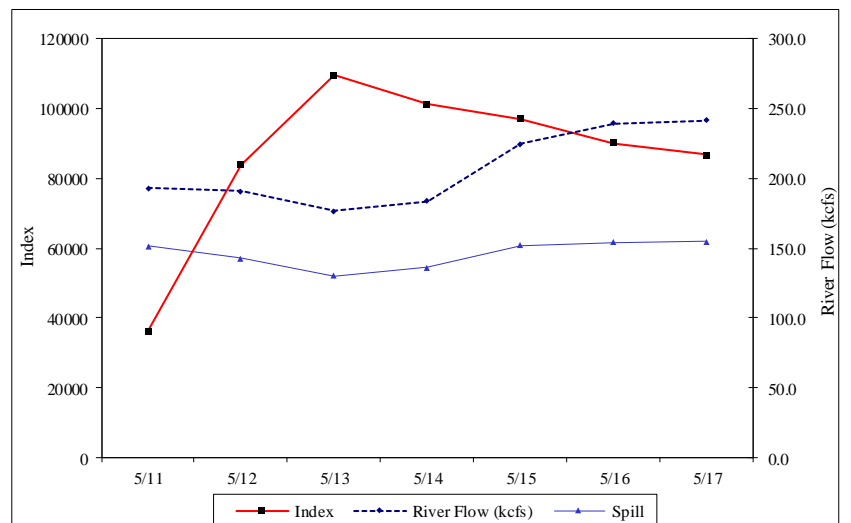
* In sampling facility.

% SAMPLE COMPOSITION	This Week Last Week	
YEARLING CHINOOK	67.3%	62.7%
SUBYEARLING CHINOOK	3.8%	1.2%
CHINOOK FRY	1.1%	0.4%
UNCLIPPED STEELHEAD	2.2%	1.4%
CLIPPED STEELHEAD	11.0%	10.9%
COHO	14.2%	23.2%
COHO FRY	0.0%	0.0%
SOCKEYE	0.4%	0.1%

YEARLING CHINOOK							SUBYEARLING CHINOOK					COHO				
End Date	Sample Rate	# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index
5/11	1.9%	70	4.3	1.4	3,750	20,438	11	0.0	0.0	600	3,270	21	0.0	0.0	1,100	5,995
5/12	2.8%	332	10.4	1.2	11,245	51,091	23	0.0	0.0	790	3,589	74	0.0	0.0	2,620	11,904
5/13	2.0%	297	3.4	1.0	14,850	64,426	9	0.0	0.0	450	1,952	74	2.8	2.7	3,700	16,052
5/14	1.2%	184	8.4	3.3	14,450	63,421	14	0.0	0.0	1,150	5,047	48	2.1	0.0	4,200	18,434
5/15	2.0%	428	5.8	3.3	19,810	66,308	32	0.0	0.0	2,155	7,213	88	1.2	2.3	5,190	17,372
5/16	1.5%	336	3.0	0.3	22,400	66,768	26	0.0	0.0	1,733	5,166	57	1.8	0.0	3,800	11,327
5/17	1.5%	313	1.6	0.0	20,866	61,468	30	0.0	0.0	2,000	5,892	50	0.0	0.0	3,334	9,821
Weekly		1,960	5.2	1.5	107,371	393,920	145	0.0	0.0	8,878	32,129	412	1.2	1.0	23,944	90,905
Season to date		11,847	2.6	0.6	455,534	1,944,795	9,637	0.0	1.8	79,819	166,691	2,021	1.0	0.6	98,970	420,670

End Date	Sample Rate	UNCLIPPED STEELHEAD					CLIPPED					SOCKEYE				
		# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index
5/11	1.9%	5	0.0	0.0	250	1,363	18	0.0	0.0	950	5,178	0	0.0	0.0	0	0
5/12	2.8%	10	0.0	0.0	410	1,863	76	1.3	0.0	3,305	15,016	2	0.0	0.0	100	454
5/13	2.0%	21	0.0	0.0	1,050	4,555	100	1.0	0.0	5,000	21,692	3	0.0	0.0	150	651
5/14	1.2%	4	0.0	0.0	300	1,317	35	2.9	0.0	2,950	12,948	0	0.0	0.0	0	0
5/15	2.0%	5	0.0	0.0	120	402	32	0.0	0.0	1,585	5,305	1	0.0	0.0	100	335
5/16	1.5%	7	0.0	0.0	467	1,392	25	0.0	0.0	1,667	4,969	2	0.0	0.0	133	396
5/17	1.5%	12	0.0	0.0	800	2,357	33	3.0	0.0	2,200	6,481	3	0.0	0.0	200	589
Weekly		64	0.0	0.0	3,397	13,248	319	1.3	0.0	17,657	71,588	11	0.0	0.0	683	2,425
Season to date		209	0.5	0.0	9,108	37,647	990	1.1	0.1	60,691	260,909	22	0.0	0.0	1,088	4,026

TOTAL						
End Date	Sample Rate	# Smpld	% Desc	% Mort	# Coll	Index
5/11	1.9%	125	2.4	0.8	6,650	36,243
5/12	2.8%	517	6.8	0.8	18,470	83,917
5/13	2.0%	504	2.6	1.0	25,200	109,329
5/14	1.2%	285	6.1	2.1	23,050	101,167
5/15	2.0%	586	4.4	2.7	28,960	96,936
5/16	1.5%	453	2.4	0.2	30,200	90,017
5/17	1.5%	441	1.4	0.0	29,400	86,608
Weekly		2,911	3.8	1.1	161,930	604,216
Season to date		24,726	1.4	1.0	705,210	2,834,739



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

Chum Sampling Results

Combined CHUMSMOLT and FRY*

End Date	Sample Rate	# Smpld	% Desc	% Mort	# Coll	Index
5/11	1.9%	0	0.0	0.0	0	0
5/12	2.8%	0	0.0	0.0	0	0
5/13	2.0%	0	0.0	0.0	0	0
5/14	1.2%	0	0.0	0.0	0	0
5/15	2.0%	0	0.0	0.0	0	0
5/16	1.5%	0	0.0	0.0	0	0
5/17	1.5%	0	0.0	0.0	0	0
Weekly		0	0.0	0.0	0	0
Season to date		247	0.0	0.8	1,690	3,094

*Sample totals to date include 245 Chum fry and 2 smolt.

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 11

Pacific Lamprey

Western Brook

Macrophthalmia

Ammocoetes

Ammocoetes

End Date	# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll
5/11	0	0.0	0	0	0.0	0	0	0	0
5/12	0	0.0	0	0	0.0	0	0	0	0
5/13	0	0.0	0	0	0.0	0	0	0	0
5/14	0	0.0	0	0	0.0	0	0	0	0
5/15	1	0.0	100	0	0.0	0	0	0	0
5/16	0	0.0	0	0	0.0	0	0	0	0
5/17	0	0.0	0	0	0.0	0	0	0	0
Weekly	1	0.0	100	0	0.0	0	0	0	0
Season to date	154	3.2	1,178	2	0.0	10	0	0	0

SECTION 3. Smolt and Juvenile Lamprey Condition Monitoring Summary

Smolt Condition

WEEK 11

		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 #		673	675	0	0	61	34	301	257	408	403	11	3
DESCALING	3-19%	10.7%	7.9%			4.9%	11.8%	8.6%	11.7%	6.9%	4.5%	9.1%	
	>20%	6.1%	6.4%					0.7%	1.2%	1.2%	1.0%		
	Pred. Desc.	0.1%						0.7%	0.4%		0.2%		
INJURY	BODY	1.9%	2.5%			3.3%		4.0%	4.7%	1.0%	1.2%	9.1%	
	EYE												
	HEAD							0.3%					
	OPERC.	2.4%	1.0%			5.9%		5.3%	5.4%	1.0%	0.5%		
	FIN	2.7%	1.5%			3.3%		1.3%	1.6%	1.2%	1.2%		
	POPEYE												
OTHER CONDITIONS	PINK FIN												
	Fin Discolor.												
	FIN HEM.	0.4%	0.3%										
DISEASE	Columnaris		0.1%					0.3%		0.2%	0.5%		
	FUNGUS												
	BKD												
	PARASITES	0.4%	0.1%					0.4%		0.5%			
	DEFORMITY												
	EYE HEM.	0.6%	0.6%					0.4%		0.5%			
PREDATION	BIRD	0.7%	0.4%					4.7%	4.3%	0.5%	0.2%	9.1%	
	FISH	0.4%	0.3%					0.7%	0.4%	0.2%	0.5%		
	LAMPREY							0.3%					
	OTHER												

end dates 5/17 5/10

Juvenile Lamprey Condition

Week 11			INJURY					DISEASE and OTHER CONDITIONS					PREDATION	
MP- Macrophthalmia	End Date	SAMPLE #	BODY	EYE	HEAD	FIN	POPEYE	FIN	HEM	Columnaris	FUNGUS	DEFORMITY	EYE	HEM.
This Week	5/17	1												
Last Week	5/10	2												
AP - Ammocoetes		SAMPLE #												
This Week	5/17	0												
Last Week	5/10	0												

SECTION 4. Incidental Summary

Week 11

	Bass Largemouth	Bass Smallmouth	Bluegill and Pumpkinseed	Bullhead	Carp	Catfish, Channel	Chiselmouth	Crappie species
This Week	0	1	0	0	0	0	0	0
Season to Date	0	9	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	1	3
Season to Date	0	0	0	0	0	4	13	70

	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	2	0	0	0

	Trout Bull	Trout Cutthroat	Trout Rainbow	Walleye	Whitefish Mountain	Siberian Prawn		Other/Not Listed
This Week	0	0	0	0	0	0	0	2
Season to Date	0	0	0	0	0	168	0	41

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

*Other/Not listed in Season-to-Date totals include: 34 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		31						33
2022	1		50						51
2023	419	1	330						750
2024	20,304	666	12,188	4	1				33,163
								5,482	5,482
Grand Total	20,726	667	12,600	4	1	0	1	5,482	39,481

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, 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: 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.

Fallbacks observed this week: 17 steelhead and three salmon.

SECTION 7. Research

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

SECTION 8. Sampling Pictures



Yearling Chinook (*O. tshawytscha*), with fungal infection, similar to one sampled at Bonneville Smolt Monitoring Facility on 7 May, 2024.