

Pacific States Marine Fisheries Commission

Bonneville Smolt Monitoring Weekly Report, #24-4

Report Period: 3/23 – 3/29, 2024

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SECTION 1. River Flow and Sampling Results

Please note: Our report week encompasses 0700 Saturday through 0700 Friday. Also, please note that almost all subyearling Chinook on this report are fry.

WEEK 4

	Min	Max	Mean		
			Current	Last Week	2023
A. River Flow	143.5	165.8	154.0	139.3	114.3
B. Powerhouse 1	9.4	10.2	9.7	10.1	34.7
C. Powerhouse 2	117.2	124.0	120.3	117.3	68.4
D. Spill (kcfs)	1.4	20.6	11.6	1.9	6.4
% of River Flow	1.0	12.6	7.3	1.3	5.6
E. Water Temp *	46.6	47.5	47.0	45.7	43.4
F. % Saturation *					

* In sampling facility.

% SAMPLE COMPOSITION	This Week	Last Week
YEARLING CHINOOK	11.0%	3.1%
SUBYEARLING CHINOOK	0.1%	0.0%
CHINOOK FRY	87.8%	95.9%
UNCLIPPED STEELHEAD	0.4%	0.2%
CLIPPED STEELHEAD	0.0%	0.0%
COHO	0.2%	0.1%
COHO FRY	0.4%	0.7%
SOCKEYE	0.0%	0.0%

YEARLING CHINOOK

End Date	Sample Rate	# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index	# Smpld	% Desc	% Mort	# Coll	Index
3/23	20.0%	31	3.2	0.0	155	190	688	0.0	0.6	3,440	4,225	5	0.0	0.0	25	31
3/24	20.0%	26	3.8	0.0	130	163	424	0.0	1.7	2,120	2,654	3	0.0	0.0	15	19
3/25	20.0%	29	0.0	0.0	145	179	297	0.0	6.4	1,485	1,837	1	0.0	0.0	5	6
3/26	20.0%	46	0.0	0.0	230	256	265	0.0	2.6	1,325	1,472	1	0.0	0.0	5	6
3/27	20.0%	60	0.0	1.7	300	327	277	0.0	4.0	1,385	1,512	3	0.0	0.0	15	16
3/28	20.0%	52	1.9	0.0	260	294	285	0.0	2.8	1,425	1,610	1	0.0	0.0	5	6
3/29	20.0%	78	0.0	0.0	390	464	334	0.0	2.1	1,670	1,986	4	0.0	0.0	20	24
Weekly		322	0.9	0.3	1,610	1,873	2,570	0.0	2.5	12,850	15,296	18	0.0	0.0	90	107
Season to date		880	0.3	0.3	5,097	5,715	6,246	0.0	1.8	32,395	36,834	67	0.0	0.0	362	406

SUBYEARLING CHINOOK

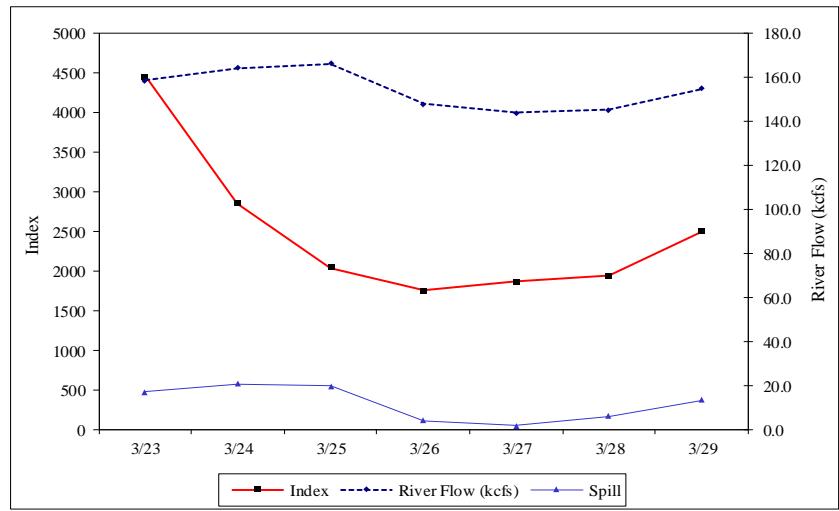
End Date	Sample Rate	# Smpld	% Desc	% Mort	# Coll	Index
3/23	20.0%	0	0.0	0.0	0	0
3/24	20.0%	1	0.0	0.0	5	6
3/25	20.0%	2	0.0	0.0	10	12
3/26	20.0%	2	0.0	0.0	10	11
3/27	20.0%	0	0.0	0.0	0	0
3/28	20.0%	3	0.0	0.0	15	17
3/29	20.0%	3	0.0	0.0	15	18
Weekly		11	0.0	0.0	55	65
Season to date		21	0.0	0.0	105	119

COHO

End Date	Sample Rate	# Smpld	% Desc	% Mort	# Coll	Index
3/23	20.0%	0	0.0	0.0	0	0
3/24	20.0%	1	0.0	0.0	5	6
3/25	20.0%	0	0.0	0.0	0	0
3/26	20.0%	0	0.0	0.0	0	0
3/27	20.0%	0	0.0	0.0	0	0
3/28	20.0%	0	0.0	0.0	0	0
3/29	20.0%	0	0.0	0.0	0	0
Weekly		1	0.0	0.0	5	6
Season to date		2	0.0	0.0	10	12

TOTAL

End Date	Sample Rate	# Smpld	% Desc	% Mort	# Coll	Index
3/23	20.0%	724	0.1	0.6	3,620	4,446
3/24	20.0%	455	0.2	1.5	2,275	2,848
3/25	20.0%	329	0.0	5.8	1,645	2,035
3/26	20.0%	314	0.0	2.2	1,570	1,744
3/27	20.0%	340	0.0	3.5	1,700	1,856
3/28	20.0%	341	0.3	2.3	1,705	1,926
3/29	20.0%	420	0.0	1.7	2,100	2,497
Weekly		2,923	0.1	2.2	14,615	17,353
Season to date		7,218	0.0	1.6	37,979	43,098



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
3/23	20.0%	14	0.0	0.0	70	86
3/24	20.0%	8	0.0	0.0	40	50
3/25	20.0%	1	0.0	0.0	5	6
3/26	20.0%	6	0.0	0.0	30	33
3/27	20.0%	13	0.0	0.0	65	71
3/28	20.0%	4	0.0	0.0	20	23
3/29	20.0%	6	0.0	0.0	30	36
Weekly		52	0.0	0.0	260	305
Season to date		158	0.0	0.6	790	888

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 4	Pacific Lamprey						Western Brook					
	Macrophthalmia			Ammocoetes			Ammocoetes			Ammocoetes		
End Date	# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll
3/23	6	0.0	30	0	0.0	0	0	0	0	0	0	0
3/24	3	0.0	15	0	0.0	0	0	0	0	0	0	0
3/25	3	0.0	15	0	0.0	0	0	0	0	0	0	0
3/26	3	0.0	15	0	0.0	0	0	0	0	0	0	0
3/27	3	33.3	15	0	0.0	0	0	0	0	0	0	0
3/28	1	0.0	5	0	0.0	0	0	0	0	0	0	0
3/29	1	0.0	5	0	0.0	0	0	0	0	0	0	0
Weekly	20	5.0	100	0	0.0	0	0	0	0	0	0	0
Season to date	123	4.1	635	2	0.0	10	0	0	0	0	0	0

SECTION 3. Smolt and Juvenile Lamprey Condition Monitoring Summary

Smolt Condition

WEEK 4		Yearling Chinook	Subyearling Chinook	Unclipped Steelhead	Clipped Steelhead	Coho	Sockeye
SAMPLE #		This Week	Last Week	This Week	Last Week	This Week	Last Week
DESCALING	3-19% >20% Pred. Desc.	2.2% 0.9%	7.2%		9.1%		
INJURY	BODY EYE HEAD OPERC. FIN POPEYE	4.0% 3.1%	7.2% 2.9%				
OTHER CONDITIONS	PINK FIN Fin Discolor. FIN HEM.						
DISEASE	Columnaris FUNGUS BKD PARASITES DEFORMITY EYE HEM.	0.3% 0.6% 0.3% 0.9% 0.6%	8.7%				
PREDATION	BIRD FISH LAMPREY OTHER	1.2% 0.3% 0.3%	1.4%		9.1%		
end dates		3/29	3/22				

Juvenile Lamprey Condition

Week 4			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	3/29	19										5.3%	
	Last Week	3/22	52					1.9%		3.8%			3.8%	
AP - Ammocoetes	SAMPLE #													
	This Week	3/29	0											
	Last Week	3/22	1											

SECTION 4. Incidental Summary

Week 4		Bass Largemouth	Bass Smallmouth	Bluegill and Pumpkinseed	Bullhead	Carp	Catfish, Channel	Chiselmouth	Crappie species
This Week		0	1	2	0	0	0	0	0
Season to Date		0	3	5	1	0	1	0	0
This Week	Dace - Longnose	Dace - Speckled	Chinook Jack	Kokanee	Lamprey Adult	Northern Pikeminnow	Peamouth	Perch Yellow	
	0	0	0	0	0	0	3	12	
Season to Date	0	0	0	0	0	2	9	50	
This Week	Redside Shiner	Sand Roller	Sculpin species	Stickleback 3 spine	Sucker species	Shad Adult	Shad Juvenile	Sturgeon White	
	0	0	1	6	0	0	0	0	
Season to Date	0	0	4	28	1	0	0	0	
This Week	Trout Bull	Trout Cutthroat	Trout Rainbow	Walleye	Whitefish Mountain	Siberian Prawn		Other/Not Listed	
	0	0	0	0	0	48	0	8	
Season to Date	0	0	0	0	0	147	0	32	

*Other/Not listed in this week's totals include: five Banded killifish and three Pink salmon fry.

Season-to-Date totals include: 27 Banded killifish and five 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			5						5
2022	1		2						3
2023	9		25						34
2024	279		4					8	283
Grand Total	289	0	36	0	0	0	0	8	333

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 ranged from light to moderate consisting mostly of sticks and other woody debris. The Outfall hydro-cannons are operating.

Fallbacks observed this week: eight steelhead.

SECTION 7. Research

A total of 19 fin clips were obtained from Pacific Lamprey *macrophthalmia* for Columbia River Inter-Tribal Fish Commission's genetic studies this week.

SECTION 8. Sampling Pictures



Coho salmon fry (*O. kisutch*), approximately 45 mm, sampled at Bonneville Smolt Monitoring Facility this report week.