

# Pacific States Marine Fisheries Commission

## Bonneville Smolt Monitoring Weekly Report, #24-5

Report Period: 3/30 – 4/5, 2024

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### SECTION 1. River Flow and Sampling Results

#### WEEK 5

	Min	Max	Mean		
			Current	Last Week	2023
A. River Flow	140.5	169.6	153.1	154.0	118.2
B. Powerhouse 1	9.5	10.8	10.0	9.7	23.0
C. Powerhouse 2	115.9	122.8	119.9	120.3	81.5
D. Spill (kcf/s)	1.4	24.8	10.8	11.6	6.4
% of River Flow	1.0	14.6	6.6	7.3	5.4
E. Water Temp *	47.9	49.8	49.0	47.0	44.5
F. % Saturation *					

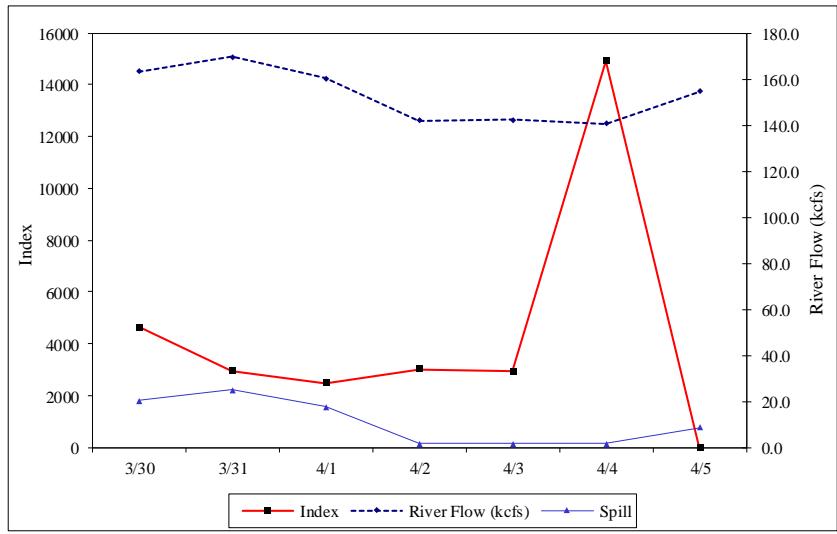
\* In sampling facility.

% SAMPLE COMPOSITION	This Week	Last Week
YEARLING CHINOOK	16.9%	11.0%
SUBYEARLING CHINOOK	12.2%	0.1%
CHINOOK FRY	69.5%	87.8%
UNCLIPPED STEELHEAD	0.7%	0.4%
CLIPPED STEELHEAD	0.0%	0.0%
COHO	0.2%	0.2%
COHO FRY	0.4%	0.4%
SOCKEYE	0.1%	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				
3/30	20.0%	117	0.0	0.0	585	728	620	0.0	1.5	3,100	3,858	2	0.0	0.0	10	12				
3/31	20.0%	114	0.0	0.0	570	730	336	0.0	2.4	1,680	2,152	5	0.0	0.0	25	32				
4/1	20.0%	111	0.0	0.0	555	680	285	0.0	2.1	1,425	1,745	3	0.0	0.0	15	18				
4/2	20.0%	103	0.0	0.0	515	565	439	0.0	1.6	2,195	2,407	2	0.0	0.0	10	11				
4/3	20.0%	97	1.0	1.0	485	533	422	0.0	2.1	2,110	2,317	4	0.0	0.0	20	22				
4/4	5.0%	26	0.0	3.8	520	575	645	0.0	2.9	12,900	14,258	2	0.0	0.0	40	44				
4/5	0.0%	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0				
Weekly		568	0.2	0.4	3,230	3,810	2,747	0.0	2.1	23,410	26,737	18	0.0	0.0	120	140				
Season to date		1,448	0.3	0.3	8,327	9,525	8,993	0.0	1.9	55,805	63,571	85	0.0	0.0	482	546				

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						
3/30	20.0%	3	0.0	0.0	15	19	0	0.0	0.0	0	0	1	0.0	0.0	5	6											
3/31	20.0%	2	0.0	0.0	10	13	0	0.0	0.0	0	0	1	0.0	0.0	5	6											
4/1	20.0%	5	0.0	0.0	25	31	0	0.0	0.0	0	0	0	0.0	0.0	0	0											
4/2	20.0%	4	0.0	0.0	20	22	0	0.0	0.0	0	0	1	0.0	0.0	5	5											
4/3	20.0%	7	0.0	0.0	35	38	0	0.0	0.0	0	0	0	0.0	0.0	0	0											
4/4	5.0%	2	0.0	0.0	40	44	0	0.0	0.0	0	0	0	0.0	0.0	0	0											
4/5	0.0%	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0											
Weekly		23	0.0	0.0	145	167	0	0.0	0.0	0	0	3	0.0	0.0	15	18											
Season to date		44	0.0	0.0	250	286	2	0.0	0.0	10	12	5	0.0	0.0	25	30											

TOTAL						
End Date	Sample Rate	# Smpld	% Desc	% Mort	# Coll	Index
3/30	20.0%	743	0.0	1.2	3,715	4,623
3/31	20.0%	458	0.0	1.7	2,290	2,934
4/1	20.0%	404	0.0	1.5	2,020	2,474
4/2	20.0%	549	0.0	1.3	2,745	3,010
4/3	20.0%	530	0.2	1.9	2,650	2,910
4/4	5.0%	675	0.0	3.0	13,500	14,921
4/5	0.0%	0	0.0	0.0	0	0
Weekly		3,359	0.0	1.8	26,920	30,872
Season to date		10,577	0.0	1.7	64,899	73,969



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
3/30	20.0%	22	0.0	0.0	110	137
3/31	20.0%	20	0.0	0.0	100	128
4/1	20.0%	12	0.0	0.0	60	73
4/2	20.0%	6	0.0	0.0	30	33
4/3	20.0%	14	0.0	7.1	70	77
4/4	5.0%	9	0.0	0.0	180	199
4/5	0.0%	0	0.0	0.0	0	0
Weekly		83	0.0	0.0	550	647
Season to date		241	0.0	0.8	1,340	1,535

## 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 5	Pacific Lamprey						Western Brook		
	Macrophthalmia			Ammocoetes			Ammocoetes		
End Date	# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll
3/30	8	0.0	40	0	0.0	0	0	0	0
3/31	5	0.0	25	0	0.0	0	0	0	0
4/1	3	0.0	15	0	0.0	0	0	0	0
4/2	4	0.0	20	0	0.0	0	0	0	0
4/3	0	0.0	0	0	0.0	0	0	0	0
4/4	2	0.0	40	0	0.0	0	0	0	0
4/5	0	0.0	0	0	0.0	0	0	0	0
Weekly	22	0.0	140	0	0.0	0	0	0	0
Season to date	145	3.4	775	2	0.0	10	0	0	0

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

### Smolt Condition

WEEK 5		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%	2.3%	2.2%		8.7% 9.1%	100.0%	
	>20%	0.2%	0.9%				100.0%
Pred. Desc.							
INJURY	BODY	2.7%	4.0%				
	EYE						
	HEAD						
	OPERC.	0.2%					
	FIN	2.3%	3.1%				
	POPEYE					16.7%	
OTHER CONDITIONS	PINK FIN						
	Fin Discolor.						
	FIN HEM.	0.4%					
DISEASE	Columnaris						
	FUNGUS	0.4%	0.3%				
	BKD	0.4%	0.6%				
	PARASITES	0.4%	0.3%				
	DEFORMITY	0.2%	0.9%				
	EYE HEM.	0.4%	0.6%				
PREDATION	BIRD	0.8%	1.2%				
	FISH	1.5%	0.3%				
	LAMPREY	0.2%					
	OTHER						
end dates		4/5	3/29				

## Juvenile Lamprey Condition

Week 5			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	4/5	22										9.1%	
AP - Ammocoetes	Last Week	3/29	19										5.3%	
			SAMPLE #											
This Week		4/5	0											
	Last Week	3/29	0											

## SECTION 4. Incidental Summary

Week 5		Bass Largemouth	Bass Smallmouth	Bluegill and Pumpkinseed	Bullhead	Carp	Catfish, Channel	Chiselmouth	Crappie species
This Week		0	2	0	1	0	0	0	0
Season to Date		0	5	5	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	11
Season to Date		0	0	0	0	0	3	10	61
		Redside Shiner	Sand Roller	Sculpin species	Stickleback 3 spine	Sucker species	Shad Adult	Shad Juvenile	Sturgeon White
This Week		0	0	1	15	0	0	0	0
Season to Date		0	0	5	43	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	17	0	4
Season to Date		0	0	0	0	0	164	0	36

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

Season-to-Date totals include: 29 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	1			6					7
2022	1			6					7
2023	13			36					49
2024	406			6					412
									0
								191	191
Grand Total	421	0	54	0	0	0	0	191	666

## **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.

The Bonneville Smolt Monitoring Facility was placed in Bypass mode at 0700 on 4 April. This action was taken in response to an emergency release of approximately 11 million Tule fall Chinook from Spring Creek NFH due to a disease outbreak at the hatchery. Due to the quantity of fish released and the proximity of the hatchery to the project, it was necessary to suspend sampling to prevent incursion of pathogens into the facility. Sampling will likely be suspended for 7-10 days, to allow the bulk of these fish to pass the project.

Fallbacks observed this week: 12 steelhead.

## **SECTION 7. Research**

A total of 22 fin clips were obtained from Pacific Lamprey macrourhalmia for Columbia River Inter-Tribal Fish Commission's genetic studies this week.

## **SECTION 8. Sampling Pictures**



Siberian prawn (*Exopalaemon modestus*), approx. 60 mm, similar to several sampled this week at Bonneville Smolt Monitoring Facility.