

Pacific States Marine Fisheries Commission

Bonneville Smolt Monitoring Weekly Report, #24-2

Report Period: 3/9 – 3/15, 2024

Project Manager: Allan Martin

Prepared By: Dean Ballinger



SECTION 1. River Flow and Sampling Results

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

WEEK 2

	Min	Max	Mean		
			Current	Last Week	2023
A. River Flow	122.4	133.5	129.2	131.4	110.9
B. Powerhouse 1	8.9	9.7	9.4	9.8	23.9
C. Powerhouse 2	103.0	113.5	109.4	111.7	77.4
D. Spill (kcfs)	1.3	1.5	1.4	1.8	6.1
% of River Flow	1.0	1.1	1.1	1.3	5.5
E. Water Temp *	43.4	44.6	43.9	43.1	39.7
F. % Saturation *					

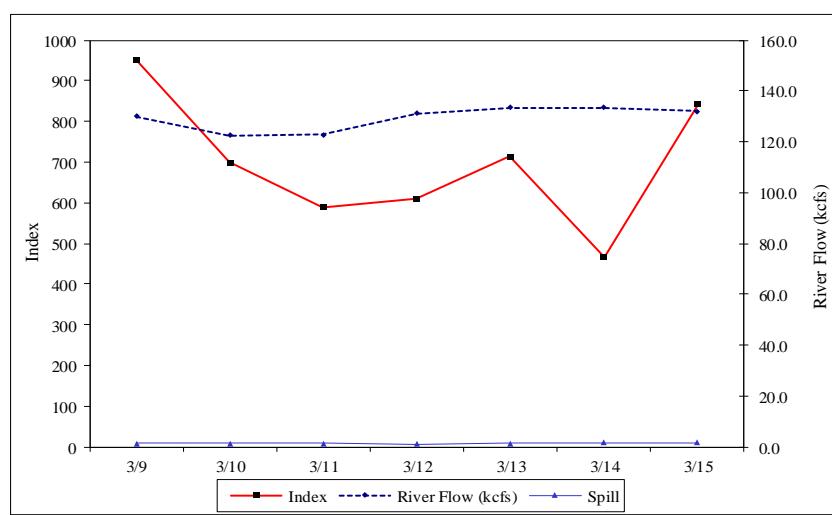
* In sampling facility.

% SAMPLE COMPOSITION	This Week	Last Week
YEARLING CHINOOK	7.6%	37.4%
SUBYEARLING CHINOOK	0.0%	0.0%
CHINOOK FRY	89.7%	61.5%
UNCLIPPED STEELHEAD	0.3%	0.2%
CLIPPED STEELHEAD	0.0%	0.0%
COHO	0.5%	0.2%
COHO FRY	1.9%	0.8%
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	
3/9	20.0%	19	0.0	0.0	95	104	147	0.0	2.0	735	803	8	0.0	0.0	40	44	
3/10	20.0%	8	0.0	0.0	40	44	113	0.0	1.8	565	622	6	0.0	0.0	30	33	
3/11	20.0%	6	0.0	0.0	30	33	101	0.0	0.0	505	556	0	0.0	0.0	0	0	
3/12	20.0%	13	0.0	0.0	65	71	96	0.0	0.0	480	527	1	0.0	0.0	5	5	
3/13	20.0%	11	0.0	0.0	55	60	117	0.0	1.7	585	642	2	0.0	0.0	10	11	
3/14	20.0%	4	0.0	0.0	20	22	78	0.0	1.3	390	429	2	0.0	0.0	10	11	
3/15	20.0%	6	0.0	16.7	30	33	144	0.0	0.7	720	791	2	0.0	0.0	10	11	
Weekly		67	0.0	1.5	335	368	796	0.0	1.1	3,980	4,371	21	0.0	0.0	105	115	
Season to date		488	0.0	0.2	3,137	3,455	1,488	0.0	0.7	8,605	9,473	32	0.0	0.0	187	206	

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		
3/9	20.0%	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0		
3/10	20.0%	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0		
3/11	20.0%	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0		
3/12	20.0%	1	0.0	0.0	5	5	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0		
3/13	20.0%	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0		
3/14	20.0%	1	0.0	0.0	5	5	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0		
3/15	20.0%	1	0.0	0.0	5	5	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0		
Weekly		3	0.0	0.0	15	16	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0		
Season to date		5	0.0	0.0	25	27	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0		

TOTAL						
End Date	Sample Rate	# Smpld	% Desc	% Mort	# Coll	Index
3/9	20.0%	174	0.0	1.7	870	950
3/10	20.0%	127	0.0	1.6	635	699
3/11	20.0%	107	0.0	0.0	535	590
3/12	20.0%	111	0.0	0.0	555	609
3/13	20.0%	130	0.0	1.5	650	714
3/14	20.0%	85	0.0	1.2	425	467
3/15	20.0%	153	0.0	1.3	765	841
Weekly		887	0.0	1.1	4,435	4,870
Season to date		2,013	0.0	0.5	11,954	13,162



Chum Fry Sampling Results

CHUM FRY						
End Date	Sample Rate	# Smpld	% Desc	% Mort	# Coll	Index
3/9	20.0%	5	0.0	0.0	25	27
3/10	20.0%	6	0.0	0.0	30	33
3/11	20.0%	3	0.0	0.0	15	17
3/12	20.0%	6	0.0	0.0	30	33
3/13	20.0%	16	0.0	0.0	80	88
3/14	20.0%	9	0.0	0.0	45	49
3/15	20.0%	2	0.0	0.0	10	11
Weekly		47	0.0	0.0	235	258
Season to date		51	0.0	0.0	255	280

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 2	Pacific Lamprey						Western Brook					
	Macrophthalmia			Ammocoetes			Ammocoetes			Ammocoetes		
End Date	# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll	# Smpld	% Mort	# Coll
3/9	2	0.0	10	0	0.0	0	0	0	0	0	0	0
3/10	5	0.0	25	1	0.0	5	0	0	0	0	0	0
3/11	7	14.3	35	0	0.0	0	0	0	0	0	0	0
3/12	5	0.0	25	0	0.0	0	0	0	0	0	0	0
3/13	2	0.0	10	0	0.0	0	0	0	0	0	0	0
3/14	3	0.0	15	0	0.0	0	0	0	0	0	0	0
3/15	11	9.1	55	0	0.0	0	0	0	0	0	0	0
Weekly	35	5.7	175	1	0.0	5	0	0	0	0	0	0
Season to date	50	6.0	270	1	0.0	5	0	0	0	0	0	0

SECTION 3. Smolt and Juvenile Lamprey Condition Monitoring Summary

Smolt Condition

WEEK 2		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.	1.2%		33.3%		50.0%	
INJURY	BODY EYE HEAD OPERC. FIN POPEYE	1.5% 1.5%	0.9% 3.6%				
OTHER CONDITIONS	PINK FIN Fin Discolor. FIN HEM.						
DISEASE	Columnaris FUNGUS BKD PARASITES DEFORMITY EYE HEM.	10.6%	0.9%				
PREDATION	BIRD FISH LAMPREY OTHER	0.3%					

end dates 3/15 3/8

Juvenile Lamprey Condition

Week 2			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	3/15	33	3.0%				3.0%		3.0%			9.1%	
AP - Ammocoetes	Last Week	3/8	14		7.1%								14.3%	
			SAMPLE #											
This Week	3/15	1												
	Last Week	3/8	0											

SECTION 4. Incidental Summary

Week 2		Bass Largemouth	Bass Smallmouth	Bluegill and Pumpkinseed	Bullhead	Carp	Catfish, Channel	Chiselmouth	Crappie species
This Week		0	0	2	0	0	1	0	0
Season to Date		0	0	3	1	0	1	0	0
This Week		Dace - Longnose	Dace - Speckled	Chinook Jack	Kokanee	Lamprey Adult	Northern Pikeminnow	Peamouth	Perch Yellow
This Week		0	0	0	0	0	0	4	12
Season to Date		0	0	0	0	0	0	5	20
This Week		Redside Shiner	Sand Roller	Sculpin species	Stickleback 3 spine	Sucker species	Shad Adult	Shad Juvenile	Sturgeon White
This Week		0	0	1	4	1	0	0	0
Season to Date		0	0	2	12	1	0	0	0
This Week		Trout Bull	Trout Cutthroat	Trout Rainbow	Walleye	Whitefish Mountain	Siberian Prawn		Other/Not Listed
This Week		0	0	0	0	0	36	0	4
Season to Date		0	0	0	0	0	51	0	7

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

Season-to-Date totals include: Six Banded killifish and one 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						2
2022	1								1
2023	1		8						9
2024	199								199
								0	0
Grand Total	201	0	10	0	0	0	0	1	212

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 moderate to heavy consisting mostly of sticks. The Outfall hydro-cannons are operating.

Fallbacks observed this week: one steelhead.

SECTION 7. Research

A total of 30 fin clips were obtained from Pacific Lamprey *macrophthalmia* and one from a Pacific Lamprey ammocoete for Columbia River Inter-Tribal Fish Commission's genetic studies this week.

SECTION 8. Sampling Pictures



Chum fry (*Oncorhynchus keta*), approximately 40 mm, similar to many found in our samples at Bonneville Smolt Monitoring Facility this week.