

Washington Department of Fish and Wildlife

Deep River Net Pens Annual Report

In partial fulfillment of requirements for environmental permitting
for juvenile salmon aquaculture production

September 1, 2024 to April 30, 2025

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

WASTE DISCHARGE PERMIT NO. WA0040053

Lower Deep River Net Pens

1. Name and contact

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Report prepared by Ann Leroux

2. Summary of fish during the season

Dates fish were added and released from pens.

Species	Net Pen #	# Received	Date received	# Planted	FPP*	Total LBS Planted	Date Planted	Total Food fed lbs	Total Mortality
Spring Chinook	2	131,008	Sep 30, 2024	103,290	13	7,959	11/8/2024	1761	1,000
Coho	1	473,267	Sep 30, 2024	727,579	16.3	44,637	4/29/2025	29,116	93,861
Coho	1	400,000	Oct 28, 2024						

* Average fish per pound

Coho Pen 1 Mortality Report

The elevated mortality observed in Coho Pen 1 is primarily attributed to the extended duration of Coho residence in the pen, from September through April. During this period, the fish are subject to high levels of predation. Predators including river otters, raccoons, herons, cormorants, mergansers, and other fish-eating birds are especially active in the area. In contrast, Spring Chinook stocks are held at DRNP for only a one-month acclimation period, significantly reducing their exposure to predation. There are no indications that fish health issues are contributing to the mortality in Coho Pen 1.

3. Feeding rates

2024

Date	Container	Manufacturer	Feed Type	Feed	Additive	Quantity
Oct 6, 2024	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	1068
Oct 6, 2024	Net Pen 2 Spring Chinook	EWOS	Grower/Fry	Pacific 2.0 mm	None	80
Oct 6, 2024	Net Pen 2 Spring Chinook	Rangen	Grower/Fry	Super Smolt 2.0 MM	None	160
Oct 13, 2024	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	1056
Oct 13, 2024	Net Pen 2 Spring Chinook	EWOS	Grower/Fry	Pacific 2.0 mm	None	66
Oct 13, 2024	Net Pen 2 Spring Chinook	Rangen	Grower/Fry	Super Smolt 2.0 MM	None	140
Oct 20, 2024	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	1188
Oct 20, 2024	Net Pen 2 Spring Chinook	EWOS	Grower/Fry	Pacific 2.0 mm	None	66
Oct 20, 2024	Net Pen 2 Spring Chinook	Rangen	Grower/Fry	Super Smolt 2.0 MM	None	225
Oct 27, 2024	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	1202
Oct 27, 2024	Net Pen 2 Spring Chinook	EWOS	Grower/Fry	Pacific 2.0 mm	None	104
Oct 27, 2024	Net Pen 2 Spring Chinook	Rangen	Grower/Fry	Super Smolt 2.0 MM	None	150
Nov 3, 2024	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	1056
Nov 3, 2024	Net Pen 2 Spring Chinook	EWOS	Grower/Fry	Pacific 2.0 mm	None	124
Nov 3, 2024	Net Pen 2 Spring Chinook	Rangen	Grower/Fry	Super Smolt 2.0 MM	None	260
Nov 10, 2024	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	1672
Nov 10, 2024	Net Pen 2 Spring Chinook	EWOS	Grower/Fry	Pacific 2.0 mm	None	138
Nov 10, 2024	Net Pen 2 Spring Chinook	Rangen	Grower/Fry	Super Smolt 2.0 MM	None	248
Nov 21, 2024	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	572
Dec 1, 2024	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	616
Dec 1, 2024	Net Pen 1 Coho	Rangen	Grower/Fry	Super Smolt 2.0 MM	None	50
Dec 8, 2024	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	484
Dec 15, 2024	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	704
Dec 22, 2024	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	660

2025

Date	Container	Manufacturer	Feed Type	Feed	Additive	Quantity
Jan 5, 2025	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	484
Jan 12, 2025	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	704
Jan 26, 2025	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	308
Feb 23, 2025	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	616
Mar 2, 2025	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	1100
Mar 9, 2025	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	2244
Mar 16, 2025	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	880
Mar 21, 2025	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	748
Mar 30, 2025	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	1144
Mar 31, 2025	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	924
Apr 2, 2025	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	1144
Apr 4, 2025	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	924
Apr 13, 2025	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	3740
Apr 20, 2025	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	2552
Apr 21, 2025	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	440
Apr 23, 2025	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	396
Apr 25, 2025	Net Pen 1 Coho	EWOS	Grower/Fry	Pacific 2.0 mm	None	440

4. Drug and pesticides

No drug or pesticide used during the season.

5) Sampling of Nutrients

			Up stream			Down stream		
Date			Turbidity	NTU DO mg/L	BOD mg/L	Turbidity	NT DO mg/L	BOD mg/L
2024	Sept	*						
	OCT	16	3.05	13.11	<2	4.56	13.95	<2
	NOV	27	2.66	13.4	<2	3.23	13.36	<2
	DEC	23	4.46	10.96	<2	4.8	11.18	<2
2025	JAN	22	3.73	13.76	<2	3.59	14.51	<2
	Feb	20	4.89	10.79	<2	3.9	10.69	<2
	Mar	24	2.87	10.8	<2	3.15	10.2	<2
	April	9	3.61	11.06	<2	3.61	11.14	<2
	May	*						

*There were no fish fed in the net pens June 2024 to September 2024. No fish on station in May 2025 or in the future. The Deep River net pens are scheduled to be dismantled.

No nutrient sampling is required for these months.

Nutrient Sampling requirement by Permit.

Parameter ^b	Units & Speciation	Minimum Sampling Frequency ^d	Sample Type
Turbidity (Upstream) ^{e, f}	NTU	Monthly ^c	Grab ^a
Turbidity (Downstream) ^{e, g}	NTU	Monthly ^c	Grab ^a
Dissolved Oxygen (Upstream) ^{e, f}	mg/L	Monthly ^c	Grab ^a
Dissolved Oxygen (Downstream) ^{e, g}	mg/L	Monthly ^c	Grab ^a
Biochemical Oxygen Demand (BOD ₅) (Upstream) ^{e, f}	mg/L	Monthly ^c	Grab ^a
BOD ₅ (Downstream) ^{e, g}	mg/L	Monthly ^c	Grab ^a

6. Documentation of Spill

No spills occurred at this location.

7. Documentation and use of Chemical

There were no antibiotic or chemical treatment during the season.

8. Corrective Actions

No corrective actions were necessary during the season.