

**NWW Juvenile Fish Passage Status Report (March 1 – November 1, 2024)**  
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This report summarizes juvenile fish passage, collection, and transport operations from March 1 through the end November 1, 2024. The attached Excel spreadsheet provides detailed data on daily collection, bypass, and transport numbers for all NWW projects.

**Dates for the Season** – Dates of operation for the Juvenile Bypass Systems (JBS), condition sampling, and transport operations at NWW projects in 2024 are summarized in Table 1. Bypass systems were watered up on 7 March at Little Goose Dam, 13 March at Lower Granite and McNary dams, and 21 March at Ice Harbor and Lower Monumental dams. Condition sampling began 25 March at Lower Monumental, Little Goose, and Lower Granite. Condition sampling occurred every day at Lower Granite, every other day at Little Goose, and every third day at Lower Monumental. Every other day sampling at Lower Monumental began 16 April. Condition sampling began 1 April at Ice Harbor and 3 April at McNary. Sampling occurs bi-weekly at Ice Harbor and every other day at McNary.

Daily fish collection for barge transport began 23 April at Lower Granite, Little Goose, and Lower Monumental dams with the first barge departing on 24 April. Every other day barge transport began after the barge trip on 16 May. Barging at Lower Monumental was discontinued on 5 May and resumed 18 May. The halt came from a request by regional fisher managers due to indications of adult fish passage delay. The delay was thought to be caused by the need to stop spill at Lower Monumental Dam when the fish barge transits the tailrace to reach the fish loading dock. These changes in spill caused flow fluctuations and the need for raised MOP at Ice Harbor Dam. Every other day barge transport changed to every four days at Lower Monumental on 1 June due to a ruling by RIOG over adult fish passage delay between Ice Harbor and Lower Monumental dams. The last barge trips were on 17 June for Lower Monumental Dam and 19 June for Little Goose and Lower Granite dams. Truck transport began on 1 August and conclude 1 November at Lower Granite and Little Goose dams. NOAA conducted the Seasonal Effects Transport study again this year with a research trip occurring on 18 April.

Table 1. JBS water-up date, condition sample period and transport operations at NWW projects, 2024.

Dam	JBS Operational	Condition Sampling	Barge Transport	Truck Transport
Lower Granite	3/13	3/25-11/1	4/24-6/19	8/1-11/1
Little Goose	3/7	3/25-11/1	4/24-6/19	8/1-11/1
Lower Monumental	3/21	3/25-10/1	4/24-6/17	NA
Ice Harbor	3/21	4/1-7/15 <sup>A</sup>	NA	NA
McNary	3/13	4/3-9/30 <sup>B</sup>	NA	NA

A. Last sample missed due to warm water temperatures.

B. First sample missed due to a drain. The facility was dewatered for repairs and the first sample was conducted on March 4th.

**Spring FOP** - The spring fish passage spill operation (Spring FOP) in 2024 was from 00:01 April 3rd to 23:59 June 20th at Snake River projects and from 00:01 April 10th to 23:59 June 15th at Columbia River projects. Average river flows during spring spill operations were 88% of the 10-year average at Snake River projects and 67% of the 10-year average at McNary Dam (Table 2). Average percent spill levels during spring spill operations were 148% of the 10-year average at the Snake River projects and 112% of the 10-year average at McNary.

Table 2. Average flow, spill, and percent spill during Spring FOP for 2023, 2024, and the 10-year average (2014-2023) at Walla Walla projects on the Snake and Columbia rivers.

Dam (Duration)	Flow (kcfs)			Spill (kcfs)			% Spill		
	2023	2024	10y avg.	2023	2024	10y avg.	2023	2024	10y avg.
Lower Granite (4/3-6/20)	95	80	94	51	65	40	58%	82%	46%
Little Goose (4/3-6/20)	91	76	90	46	50	40	52%	66%	45%
Lower Monumental (4/3-6/20)	91	76	91	51	62	44	59%	82%	51%
Ice Harbor (4/3-6/20)	93	78	94	75	65	65	81%	82%	68%
McNary (4/10-6/15)	244	183	272	177	124	164	63%	66%	59%

**Summer FOP** - The summer fish passage spill operation (Summer FOP) in 2024 was from 00:01 June 21<sup>st</sup> to 23:59 August 31<sup>st</sup> at Snake River projects and from 00:01 June 16<sup>th</sup> to 23:59 August 31<sup>st</sup> at Columbia River projects. Average river flows during summer spill operations were 90% of the 10-year average at Snake River projects and 79% of the 10-year average at McNary Dam (Table 3). Average percent spill levels during summer spill operations were 81% of the 10-year average at the Snake River projects and 86% of the 10-year average at McNary.

Table 3. Average flow, spill and percent spill during the Summer FOP in 2023, 2024 and the 10-year average (2014-2023) at Walla Walla projects on the Snake and Columbia rivers.

Dam (Duration)	Flow (kcfs)			Spill (kcfs)			% Spill		
	2023	2024	10y avg.	2023	2024	10y avg.	2023	2024	10y avg.
Lower Granite (6/21-8/31)	36	33	37	15	13	16	42%	38%	45%
Little Goose (6/21-8/31)	34	33	36	11	9	12	33%	28%	33%
Lower Monumental (6/21-8/31)	35	33	36	14	13	15	43%	39%	43%
Ice Harbor (6/21-8/31)	35	33	37	10	10	18	30%	31%	46%
McNary (6/16-8/31)	148	142	179	71	131	91	47%	43%	50%

**Juvenile Fish Collection** – Numbers of fish collected in 2024 were similar to those in 2021 (Figure 1). Overall collection numbers were 21% of the 10-year average (2014-2023) at Snake River transport projects in 2024 (March 26 – 1 November) (Table 4). Collection numbers at Lower Granite, Little Goose, and Lower Monumental were 18%, 33%, and 7% of the 10-year average, respectively. Increase in spill proportion to overall river flow is likely a contributing factor to lower collection numbers, since it increases the chances of spillway passage for fish. A total of 2,894 smolts were sampled at Ice Harbor Dam and 508,185 smolts were collected at McNary Dam. Smolts collected at Ice Harbor and McNary dams were bypassed. Median juvenile migration timing in 2024 was earlier than the 10-year average for yearling Chinook, steelhead and coho, while migration timing was later than the 10-year average for sockeye and subyearling Chinook (Table 5).

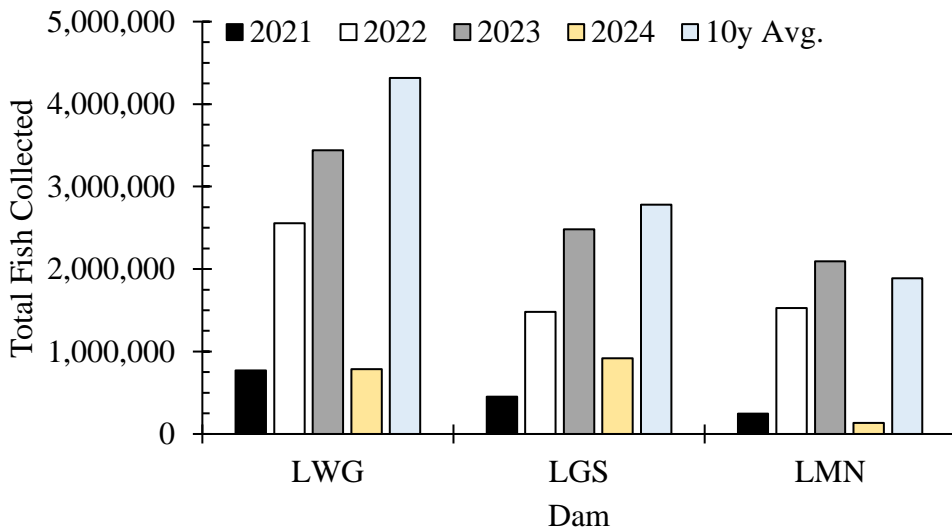


Figure 1. Total fish collected from 2021-2024 and the 10-year average (2014-2013) at Lower Granite (LWG), Little Goose (LGS) and Lower Monumental (LMN) from 26 March - 1 November.

Table 4. Number of smolts collected from 26 March – 1 November in 2024 and the 10-year average (2014-2023) at Lower Granite Dam (LWG), Little Goose Dam (LGS), Lower Monumental Dam (LMN)

Dam	26 Mar – 20 Jun		21 Jun – 1 Nov		26 March – 1 November		
	2024	10y avg.	2024	10y avg.	2024	10y avg.	2024 vs 10y avg.
LWG	618,792	4,161,461	165,744	155,381	784,536	4,316,843	18%
LGS	827,876	2,613,537	88,426	166,415	916,302	2,779,952	33%
LMN	140,436	1,888,888	18,773	49,485	159,209	1,887,007	8%
Overall	1,587,104	8,663,886	272,943	371,281	1,860,047	8,983,802	21%

\*Collection between March 26-31 did not occur at all locations every year.

Table 5. Median juvenile outmigration arrival timing at Lower Granite Dam in 2024 compared to the 10-year average (2014-2023) and the difference in days.

	2024 median	10y median	2024 vs 10y median (days)
Yearling Chinook	18-Apr	4-May	-16
Steelhead	23-Apr	2-May	-9
Sockeye	17-May	14-May	3
Coho	1-May	13-May	-12
Subyearling Chinook	25-Jun	6-Jun	19

**Juvenile Fish Transportation** - The number of smolts transported in 2024 was 16% of the 10-year average (Table 6). The cumulative smolt passage index at Lower Granite Dam when barging ended (19 June) was approximately 100% for yearling Chinook, steelhead, sockeye, 98% for coho and 39% for subyearling Chinook. The cumulative smolt passage index at Lower Granite Dam when trucking began (1 August) was approximately 93% for subyearling Chinook.

Bypass operations at transport facilities occurred from 20 June to 31 July as recommended by Technical Management Team (TMT). During this time, approximately 146,596 smolts were bypassed at Lower Granite Dam and 85,609 smolts were bypassed at Little Goose Dam. Collection for truck transport began on 1 August at Lower Granite and Little Goose dams (Table 6). No truck transport occurred at Lower Monumental Dam as recommended by TMT. The number of smolts transported by truck was 62% and 17% of the 10-year average at Lower Granite and Little Goose dams, respectively.

Table 6. Number of smolts transported in 2024 versus the 10-year average (2014-2023) at Lower Granite Dam (LWG), Little Goose Dam (LGS), Lower Monumental Dam (LMN) and overall.

Dam	<u>Barge Transport</u> <sup>1</sup>		<u>Truck Transport</u> <sup>2</sup>		<u>Overall Transport</u>		
	2024	10y avg.	2024	10y avg.	2024	10y avg.	2024 vs 10y avg.
LWG	271,814	2,432,229	20,395	33,150	292,209	2,737,924	11%
LGS	616,246	1,689,050	4,011	23,093	620,257	1,799,795	34%
LMN	84,238	1,414,225	0	546	84,238	1,643,177	5%
Overall	972,298	5,535,504	24,406	56,789	996,704	6,180,896	16%

<sup>1</sup> 10-year averages use numbers between 24 April and 19 June for all years. Before 2018, barge transport operations began 1 May and ended around 15 August. From 2018-2024, collection for barge transport began 23 April. Barge transport ended 15 August in 2018, 31 July in 2019, and 21 June in 2020. Numbers of smolts from research trips prior to normal transport are included in collection and transport totals.

<sup>2</sup> Truck transport did not occur in 2017 at Lower Granite Dam or in 2020-2023 at Lower Monumental Dam and therefore those years were excluded from the 10-year average.