

PNNL Hydroacoustic Fish Passage Data for Foster Dam, 2013-2014

Total Project and Route-Specific Passage Estimates in Spring (March–May), Summer (June–September), Fall (October–November), and Winter (December–February) from 2013 to 2014 for Juvenile-Size Targets with ½ 95% Confidence Intervals (CIs).

		Pool Elevation	Passage Estimate ±½ 95% CI	Days Operated	Fish/Day ^(a)
Spring (Apr-May)	Total Project	Low/High	38,454 ± 561	61	630
	Turbine	Low/High	31,058 ± 484		
	Unit 1	Low/High	28,133 ± 463	60	468
	Unit 2	Low/High	2,925 ± 142	48	61
	Spill Bays 2 and 3	Low/High	4,681 ± 256	18 ^(b)	260
	Weir at 616 ft El.	Low	2,185 ± 119	21	104
	Weir at 635 ft El.	High	531 ± 28	11	50
Summer (June-Sept)	Total Project	High	9,852 ± 223	122	81
	Turbine	High	5,931 ± 188		
	Unit 1	High	5,380 ± 177	108	50
	Unit 2	High	550 ± 61	40	14
	Spill Bays 2 and 3	High	942 ± 101	4 ^(b)	224
	Weir at 616 ft El.	NA	NA	NA	NA
	Weir at 635 ft El.	High	2,980 ± 67	57	52
Fall (Oct-Nov)	Total Project	Low	36,346 ± 498	61	596
	Turbine	Low	31,120 ± 420		
	Unit 1	Low	26,549 ± 381	59	450
	Unit 2	Low	4,571 ± 176	51	89
	Spill Bays 2 and 3	Low	4,581 ± 261	26 ^(b)	178
	Weir at 616 ft El.	Low	644 ± 56	43	15
	Weir at 635 ft El.	NA	NA	NA	NA
Winter (Dec-Feb)	Total Project	Low	137,663 ± 1,177	90	1,530
	Turbine	Low	108,290 ± 771		
	Unit 1	Low	101,741 ± 743	86	1,180
	Unit 2	Low	6,549 ± 208	68	97
	Spill Bays 2 and 3	Low	28,699 ± 888	47 ^(b)	607
	Weir at 616 ft El.	Low	674 ± 56	42	16
	Weir at 635 ft El.	NA	NA	NA	NA
Spring 2014 (Mar-May)	Total Project	Low/High	100,175 ± 955	92	1,089
	Turbine	Low/High	76,777 ± 748		
	Unit 1	Low/High	63,862 ± 684	88	726
	Unit 2	Low/High	12,916 ± 302	85	152
	Spill Bays 2 and 3	Low/High	21,939 ± 591	54 ^(b)	406
	Weir at 616 ft El.	Low	831 ± 62	23	36
	Weir at 635 ft El.	High	627 ± 29	17	38

(a) The fish per day estimate assumes even distribution of fish passage over consecutive days; it does not account for large groups of fish passing at a particular time.

(b) Combined total number of days that Spill Bay 2 and Spill Bay 3 were open.

PNNL Preliminary Radio Telemetry Fish Passage Data for Foster Dam, Spring 2015

Preliminary Passage Proportions of Chinook Salmon Released above Foster and Passing the Dam in Spring 2015.

Location	Overall		Day		Night	
	n	Proportion	n	Proportion	n	Proportion
Low Pool – 613 ft	465		10 ^(b)	0.022	447 ^(b)	0.961
Dam - No Route ^(a)	8	0.017	-	-	-	-
Turbine Unit 1	149	0.320	4	0.027	145	0.973
Spill Bay 1-3	230	0.495	4	0.017	226	0.983
Fish Weir	78	0.168	2	0.026	76	0.974
High Pool – 635 ft	110		13 ^(b)	0.118	96 ^(b)	0.873
Dam - No Route ^(a)	1	0.009	-	-	-	-
Turbine Unit 1	2	0.018	1	0.500	1	0.500
Spill Bays 1-3	68	0.618	2	0.029	66	0.971
Fish Weir	39	0.355	10	0.256	29	0.744

(a) Dam – No Route, generally speaking, indicates either a fish whose tag life expired and then passed the dam and was detected downstream by the PIT arrays at Lebanon, Willamette Falls, or the estuary trawl, or whose route of assignment at the dam could not be verified.
(b) Day and night proportions do not include fish that passed the dam with no assigned route.

Preliminary Passage Proportions of Steelhead Released above Foster and Passing the Dam in Spring 2015.

Location	Overall		Day		Night	
	n	Proportion	n	Proportion	n	Proportion
Low Pool – 613 ft	112		17 ^(b)	0.152	91 ^(b)	0.813
Dam - No Route ^(a)	4	0.036	-	-	-	-
Turbine Unit 1	16	0.143	4	0.250	12	0.750
Spill Bays 1-3	46	0.411	9	0.196	37	0.804
Fish Weir	46	0.411	4	0.087	42	0.913
High Pool – 635 ft	173		62 ^(b)	0.358	109 ^(b)	0.630
Dam - No Route ^(a)	2	0.012	-	-	-	-
Turbine Unit 1	1	0.006	1	1.000	-	-
Spill Bay 3	4	0.023	-	-	4	1.000
Fish Weir	166	0.960	61	0.367	105	0.633

(a) Dam – No Route, generally speaking, indicates either a fish whose tag life expired and then passed the dam and was detected downstream by the PIT arrays at Lebanon, Willamette Falls, or the estuary trawl, or whose route of assignment at the dam could not be verified.
(b) Day and night proportions do not include fish that passed the dam with no assigned route.

Preliminary Spill Test Passage Proportions of Chinook Salmon and Steelhead Released above Foster and Passing the Dam in Spring 2015 at Low and High Pool Elevations.

Reservoir Elevation & Route		Chinook Salmon		Steelhead	
		n	Passage Proportion	n	Passage Proportion
Low Pool - 613 ft		333		97	
Turbine+Weir	Unit 1	82	0.532	13	0.295
	Fish Weir	72	0.468	31	0.705
Spill+Weir	Spill Bay 3	174	0.972	39	0.736
	Fish Weir	5	0.028	14	0.264
High Pool - 635 ft		103		135	
Turbine+Weir	Unit 1	1	0.059	1	0.018
	Fish Weir	16	0.941	55	0.982
Spill+Weir	Spill Bay 3	66	0.767	4	0.051
	Fish Weir	20	0.233	75	0.949