

# The Dalles Dam Fishway Status Report

8/15/2015

Inspection Period: 8/9/2015 - 8/15/2015

## THE DALLES DAM



US Army Corps  
of Engineers  
Portland District

The Dalles Project-Fisheries  
P.O. Box 564  
The Dalles, OR 97058-9998  
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*Fishways are inspected twice daily plus one SCADA inspection*

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: 21		Temperature:	#DIV/0!	F
			Comments		Secchi:	5.0	feet
<b>NORTH FISHWAY</b>							
Exit differential	0	≤ 0.5'					
Count station differential	0	≤ 0.3'					
Weir crest depth	0	1.0' ± 0.1'					
Entrance differential	0	1.0' - 2.0'	Average	1.4			
Entrance weir N1	0	depth (≥ 8')	Average	9.4			
Entrance weir N2	0	Closed	Bulkhead installed.				
PUD Intake differential	0	≤ 0.5'	TDS raked PUD intake.				
<b>EAST FISHWAY</b>							
Exit differential	0	≤ 0.5'					
Removable weirs 154-157	0	Per forebay	Auto adjusts 1' increments.				
Weir 158-159 differential	0	1.0' ± 0.1'					
Count station differential	0	≤ 0.3'	Picket leads raked as needed.				
Weir crest depth	0	1.0' ± 0.1'					
Junction pool weir JP6	0	depth (≥ 7')	Average	11.8	Weir pulled to achieve criteria with low tailwater		
East entrance differential	0	1.0' - 2.0'	Average	1.5			
Entrance weir E1	0	No criteria	Average	No criteria; manually adjusted as needed.			
Entrance weir E2	0	depth (≥ 8')	Average	11.6			
Entrance weir E3	0	depth (≥ 8')	Average	11.7			
Collection channel velocity	0	1.5 - 4 fps	Average	2.9			
Transportation channel velocity	0	1.5 - 4 fps	Average	2.6			
North channel velocity	0	1.5 - 4 fps	Average	2.3			
South channel velocity	0	1.5 - 4 fps	Average	3.6			
West entrance differential	0	1.0' - 2.0'	Average	1.5			
Entrance weir W1	0	depth (≥ 8')	Average	10.7			
Entrance weir W2	0	depth (≥ 8')	Average	10.7			
Entrance weir W3	0	No criteria	Average	No criteria; manually adjusted as needed.			
South entrance differential	0	1.0' - 2.0'	Average	1.5			
Entrance weir S1	0	depth (≥ 8')	Average	8.4			
Entrance weir S2	0	depth (≥ 8')	Average	8.4			
<b>JUVENILE PASSAGE</b>							
Sluiceway operation	0	Units 1, 8, 18	Sluiceways 1-1,2,3, 8-1,2, and 18-2 open.				
Turbine trashrack drawdown	0	<1.5', wkly	Range: 0.3'- 0.6'.				
Spill volume	0	40%±1%	Average	39.9			
Spill Pattern	0	per FPP					
Turbine Unit Priority	1	per FPP					
Turbine 1% Efficiency	0	per FPP					

**OTHER ISSUES:****Birds/Sea lions:**

Bird observation data collected once daily. Refer to Avian Zone Map. No sea lions observations this week.  
USDA hazing ended July 30. Analysis of boat hazing effectiveness in boat haze tab.

**Operations:**

Turbine trashrack drawdown completed 8/15. The difference between forebay and gatewells in criteria.  
Fishway calibration completed 8/10, most values within criteria

**Current Outages:**

T8 (MU15 & MU16) de-rated to 85MW ops through 9/14/2017  
MU19 out of service 8/3/2015 to 9/17/2015 for overhaul and Turbine Integrity Testing  
T10 out of service 8/10/2015 to 8/20/2015 for Transformer testing

**Maintenance:**

Three failed collection channel dewatering pump being repaired.  
Two new water sensor units being purchased to replace east exit systems for improved reliability. Installation this winter.  
FCQ7 electrical panel for east exit upgrade funding in place and awaiting contracting approval. Installation planned for next outage season.  
Investigating cost for 154 -157 weir replacement in house.  
Preparing workload for upcoming winter maintenance period; entrance weir wheel replace, entrance weir guide repair, exit sensor upgrades.  
*Long Term repair plans*; removal/permanent closure of collection channel diffusers, repair north failed diffusers,  
*Fish related /non-fish funded items*; spillway evaluation, spillway crane rehab, spillgate 9 trunnion pin replace, sluiceway chaingate rehab (approx 50% complete), fish unit breaker replace (in planning), and transformer replace (in planning).  
All spillway items on Critical Infrastructure list and Unfunded Requirement list. Spill gate 9 repair planning by small projects team stopped.

**Studies:**

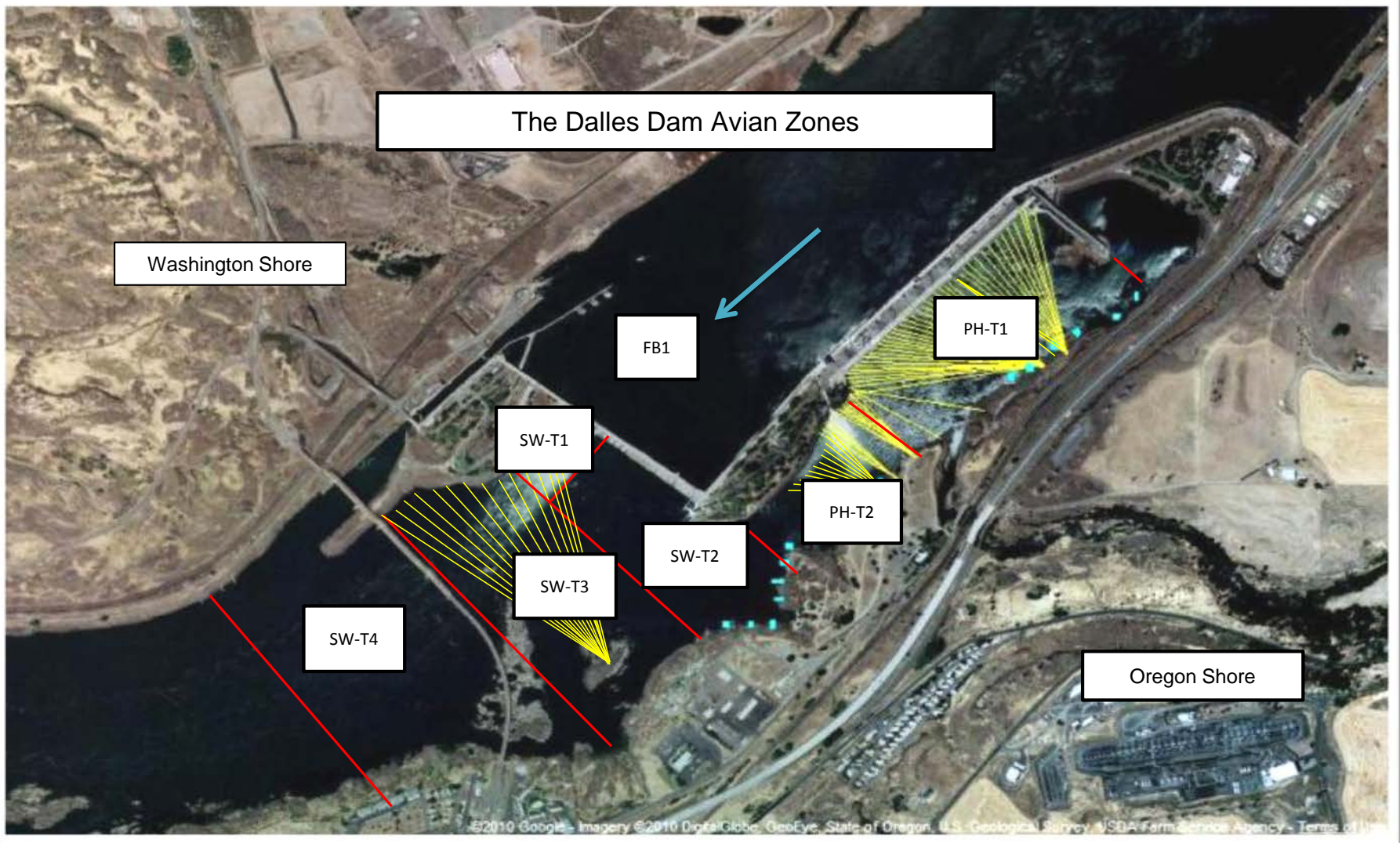
North fishladder rehab study for rock wall 90% DDR review. Construction dates to be determined. Alternatives to be reviewed by FPOM.  
Fish count video at north count station recording / testing underway. Results to be presented at FPOM.  
East fishladder backup system construction start this winter. No plan changes.  
Crane rail replacement on tailrace and intake 2016-2017. Various locations and timing being coordinated through FPOM.  
Transformer replacement planning underway. Plans to eliminate need for TA transformers with fish unit tie through T1 with redundancy.

**Research/Contractors:**

Columbia River Northern Pikeminnow Management Program dam angling continues.  
ODFW collecting biological data from harvested pikeminnow.  
Normandeau fish counters at east and north count stations 16 hr/day through 10/31.  
PSMFC Wasco County PUD weekly sampling; finished for season.  
Tribal lamprey trappers continue collecting lamprey daily from east count station;  
Yakama Nation lamprey collections done. Umatilla and Nez Perce near complete.  
USGS total dissolved gas monitoring continues.

Approved by: Ron Twiner

Operation Project Manager The Dalles Dam



Avian lines in yellow, zones in red, river flow in blue.

## 2015 Piscivorous E

*F=foraging, NF=non-*

Date	Observer	Time (24 hr)	Zone	Gull		Cormorant		Caspian tern	
				F	NF	F	NF	F	NF
8/9/15	jwr	9:22	FB	1	0	1	81	0	0
		8:55	PH1	0	0	0	0	0	0
		9:00	PH2	0	0	0	0	0	0
		9:26	SW1	26	107	0	0	0	0
		9:03	SW2	0	0	0	0	0	0
		9:18	SW3	6	0	0	0	0	0
		9:19	SW4	15	0	0	0	0	0
8/10/15	jwr	13:52	FB	0	0	2	38	0	0
		13:24	PH1	0	0	0	0	0	0
		13:29	PH2	0	0	0	0	0	0
		13:59	SW1	19	44	0	0	0	0
		13:34	SW2	0	0	0	0	0	0
		13:35	SW3	13	0	0	0	0	0
		13:36	SW4	45	7	0	12	0	0
8/11/15	jwr	9:56	FB	0	0	0	57	0	0
		9:17	PH1	0	0	0	0	0	0
		9:23	PH2	0	0	0	0	0	0
		9:54	SW1	23	140	0	0	0	0
		9:25	SW2	0	0	1	0	0	0
		9:26	SW3	4	0	0	0	0	0
		9:28	SW4	18	38	0	5	0	0
8/12/15	PSK	14:53	FB	0	0	0	15	0	0
		14:22	PH1	0	0	0	7	0	0
		14:46	PH2	0	0	0	0	0	0
		15:03	SW1	0	0	0	0	0	0
		14:50	SW2	0	1	0	0	0	0
		15:23	SW3	27	0	0	0	0	0
		15:27	SW4	62	22	0	0	0	0
8/13/15	jwr	9:43	FB	0	0	0	67	0	0
		9:17	PH1	0	0	0	0	0	0
		9:21	PH2	0	0	0	0	0	0
		9:41	SW1	27	138	0	0	0	0
		9:24	SW2	0	0	0	0	0	0
		9:36	SW3	4	0	0	0	0	0
		9:38	SW4	35	16	0	1	0	0
8/14/15	PSK	14:17	FB	0	0	0	19	0	0
		12:54	PH1	0	0	0	7	0	0
		13:05	PH2	0	0	0	0	0	0
		14:34	SW1	3	9	0	0	0	0
		13:14	SW2	0	0	0	0	0	0
		14:43	SW3	5	10	0	0	0	0
		14:47	SW4	64	0	0	0	0	0
8/15/15	EHK	8:51	FB	0	0	0	52	0	0
		8:10	PH1	0	0	0	0	0	0
		8:22	PH2	0	0	0	0	0	0
		8:52	SW1	3	50	0	0	0	0
		8:24	SW2	2	0	0	0	0	0
		9:12	SW3	10	4	0	0	0	0
		9:13	SW4	28	0	0	0	0	0



**USGS:** <http://www.nwd-wc.usace.army.mil/tmt/documents/ops/temp/201508.lcol.html>

Temperatures	Secchi:	
	Sun	5.0
	Mon	5.0
	Tue	5.0
	Wed	5.0
	Thurs	5.0
	Fri	5.0
	Sat	5.0
AVG:	#DIV/0!	AVG 5.0

**The Dalles Dam Daily Readings and Averages for  
Temperatures, Secchi, Entrances, and Spill**

**= Out of criteria**

Date:	<b>North Ladder</b>							<b>East Ladder</b>								% Spill
	North Entrance		East Entrance					West Entrance			South Entrance					
	Differential	N1 Depth	Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth		
8/9			1.6	2.0	12.6	13.3		1.4	11.5	11.5	closed	1.5	8.2	8.2	39.8	
	1.4	9.5	1.5	4.4	12.6	13.3	12.1	1.5	10.8	10.8		1.5	8.1	8.1		
	1.4	9.5	1.5	5.1	12.4	13.1	11.9	1.5	11.1	11.1		1.5	8.1	8.1		
8/10			1.9	5.0	10.8	11.5		1.2	10.9	10.9		1.5	8.2	8.2	40.0	
	1.4	9.2	1.4	12.8	10.8	10.8	10.8	1.7	9.4	9.4		1.5	8.2	8.2		
	1.5	9.3	1.5	11.6	11.2	11.2	11.2	1.6	9.6	9.6		1.4	8.3	8.3		
8/11			1.5	11.5	11.2	11.2		1.5	9.9	9.9		1.5	8.1	8.1	40.0	
	1.4	9.3	1.5	4.5	10.8	10.8	10.8	1.6	10.1	10.1		1.5	8.5	8.5		
	1.4	9.4	1.7	4.4	10.7	10.7	10.7	1.6	10.2	10.3		1.5	8.4	8.4		
8/12			1.7	4.5	11.0	11.0		1.6	10.3	10.3		1.5	8.5	8.5	40.0	
	1.4	9.3	1.5	5.5	11.3	11.3	11.3	1.5	10.5	10.5		1.5	8.5	8.5		
	1.5	9.3	1.4	5.6	11.8	11.8	11.8	1.5	10.5	10.5		1.5	8.6	8.5		
8/13			1.3	5.6	12.1	12.1		1.7	10.5	10.5		1.5	8.5	8.5	39.8	
	1.4	9.4	1.5	3.9	11.8	11.8	11.8	1.6	10.6	10.6		1.5	8.5	8.5		
	1.5	9.3	1.4	2.6	12.6	12.6	12.6	1.6	10.9	10.9		1.5	8.5	8.5		
8/14			1.5	2.5	11.7	11.7		1.5	10.9	10.9	1.6	8.4	8.4	39.9		
	1.5	9.3	1.6	2.4	11.6	11.6	11.6	1.6	11.0	11.0	1.6	8.5	8.3			
	1.4	9.4	1.3	12.5	13.1	13.1	13.1	1.7	10.9	11.0	1.5	8.5	8.5			
8/15			1.6	1.7	12.0	12.0		1.6	11.4	11.4	1.5	8.5	8.6	39.9		
	1.4	9.4	1.5	1.9	8.2	8.2	12.2	1.5	11.5	11.5	1.5	8.6	8.6			
	1.4	9.3	1.4	1.8	12.7	12.7	12.7	1.5	11.5	11.5	1.4	8.5	8.5			
AVG:	1.4	9.4	1.5	No criteria	11.6	11.7	11.8	1.5	10.7	10.7	closed	1.5	8.4	8.4	39.9	

*Fishways are inspected twice daily plus one SCADA inspection.*

2015 Adult Pass  
with

Date	Chinook				Jack Chinook				Steelhead				Wild Ste	
	Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder	
	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#
9-Aug-15	81.9	896	18.1	198	90.8	139	9.2	14	66.3	1086	33.7	553	61.9	421
10-Aug-15	91.2	1002	8.8	97	89.1	115	10.9	14	70.6	1104	29.4	460	69.9	521
11-Aug-15	83	874	17	179	88.3	98	11.7	13	60.1	587	39.9	389	54	216
12-Aug-15	75.1	839	24.9	278	76.7	66	23.3	20	54.1	841	45.9	713	54.2	410
13-Aug-15	69.8	584	30.2	253	81.2	82	18.8	19	56.7	831	43.3	634	51.2	304
14-Aug-15	78.5	898	21.5	246	87	67	13	10	70.1	1119	29.9	477	68.9	457
15-Aug-15	74.5	772	25.5	264	88.9	88	11.1	11	62.2	958	37.8	583	60	388
YTD	Left Ladder		Right		Left Ladder		Right		Left Ladder		Right		Left Ladder	
	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#
	79.5	5865	20.5	1515	86.6	655	13.4	101	63.1	6526	36.9	3809	60.6	2717
Date	Chinook				Jack Chinook				Steelhead				Wild Ste	

Notes:

1. Last possible Data Date included is 08/15/2015.
2. Data Courtesy of U.S. Army Corps of Engineers.
3. USACE Data Disclaimer: These data are furnished with the understanding that the U.S. Army Corps of Engineers ma

**DART Data Citation**

Columbia River DART, Columbia Basin Research, University of Washington. (2015). Adult Passage Daily La

**Generated**

[16 Aug 2015 09:42:54 PDT. Columbia River DART \(Data Access in Real Time\) www.cbr.washington.edu/dart.](http://www.cbr.washington.edu/dart)

Columbia River DART

**Age Daily Ladder Counts at The Dalles**

**Spill Percent and Outflow**

8/9/2015 - 8/15/2015

Steelhead		Sockeye				Coho				Jack Coho				Lam	
Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder	
Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#
38.1	259	75.5	77	24.5	25		0		0		0		0	44	44
30.1	224	71.8	74	28.2	29		0		0		0		0	75.2	112
46	184	39.4	28	60.6	43		0		0		0		0	50	38
45.8	347	65.8	48	34.2	25		0		0		0		0	55.2	53
48.8	290	48.3	29	51.7	31		1		0		0		0	45	50
31.1	206	79	49	21	13		0		0		0		0	75.9	82
40	259	85.4	35	14.6	6		0		0		0		0	40.3	25
Right		Left Ladder		Right		Left Ladder		Right		Left Ladder		Right		Left Ladder	
Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#
39.4	1769	66.4	340	33.6	172		1		0		0		0	57.5	404
Steelhead		Sockeye				Coho				Jack Coho				Lam	

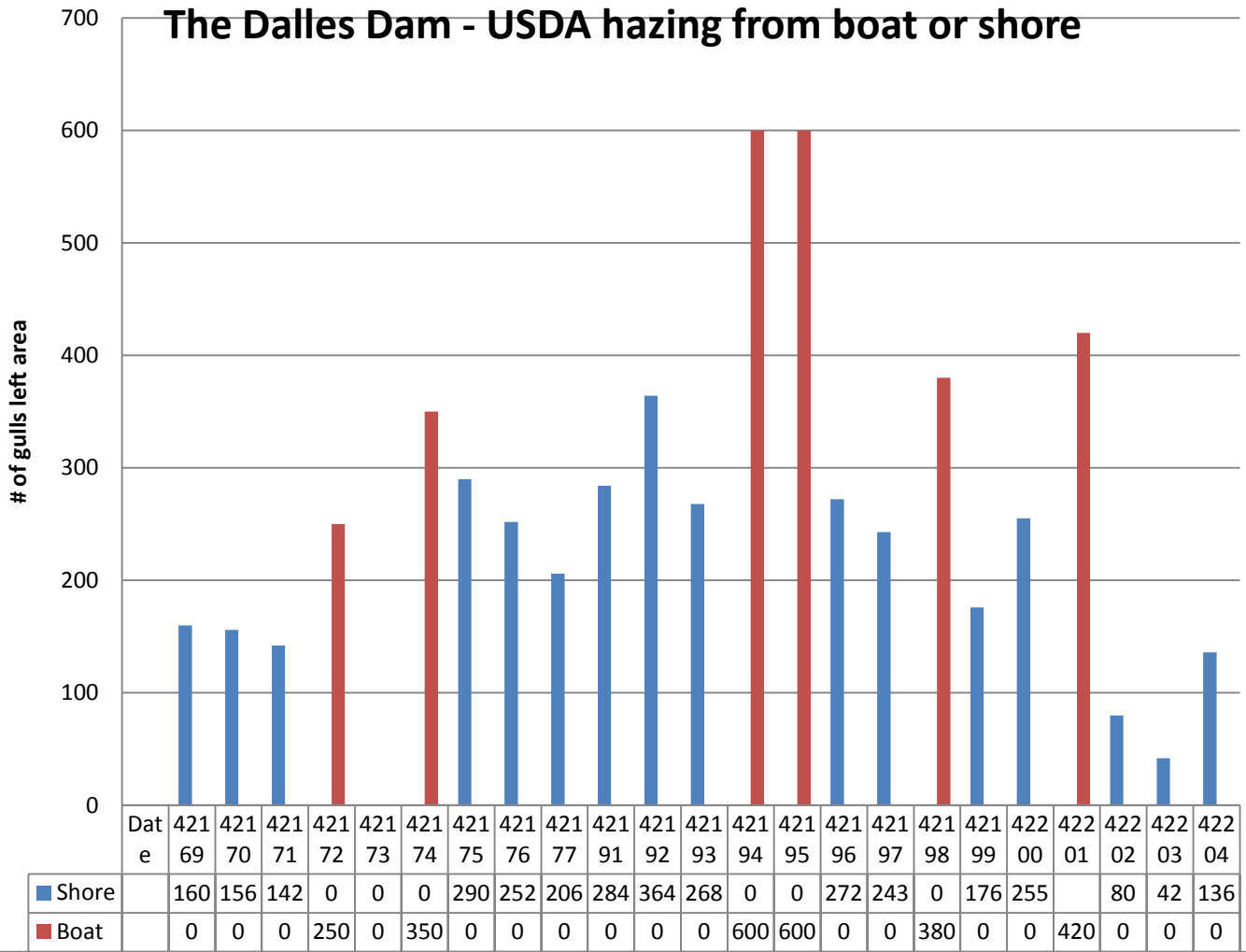
Does not make any warranties concerning the accuracy, reliability, or suitability of this data for any particular purpose.

Ladder Counts. Available from [http://www.cbr.washington.edu/dart/query/adult\\_ladder\\_sum](http://www.cbr.washington.edu/dart/query/adult_ladder_sum)



prey		Outfl (kcfs)
Right Ladder		
Pct	#	
56	56	44.1
24.8	37	49.3
50	38	45.1
44.8	43	45.6
55	61	50.6
24.1	26	48
59.7	37	51.3
Right		
Pct	#	
42.5	298	
prey		Outfl

# The Dalles Dam - USDA hazing from boat or shore



Boat hazing shows some improved effectiveness on gulls hazed.