

The Dalles Dam Fishway Status Report

7/27/2015

Inspection Period: 7/19/2015 - 7/25/2015

THE DALLES DAM



US Army Corps
of Engineers
Portland District

The Dalles Project-Fisheries
P.O. Box 564
The Dalles, OR 97058-9998
Phone: 541-506-3800

Fishways are inspected twice daily plus one SCADA inspection

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: 21		Temperature: 72.2 F
			Comments		Secchi: 5.1 feet
NORTH FISHWAY					
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	1.5	
Entrance weir N1	0	depth (≥ 8')	Average	9.3	
Entrance weir N2	0	Closed	Bulkhead installed.		
PUD Intake differential	2	≤ 0.5'	TDS raked PUD intake.		
EAST FISHWAY					
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'	Currently at 1.3' for shad passage		
Junction pool weir JP6	0	depth (≥ 7')	Average	11.0	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	11.9	
Entrance weir E3	0	depth (≥ 8')	Average	11.9	
Collection channel velocity	0	1.5 - 4 fps	Average	2.8	
Transportation channel velocity	0	1.5 - 4 fps	Average	2.5	
North channel velocity	0	1.5 - 4 fps	Average	2.6	
South channel velocity	0	1.5 - 4 fps	Average	3.4	
West entrance differential	0	1.0' - 2.0'	Average	1.5	
Entrance weir W1	0	depth (≥ 8')	Average	10.0	
Entrance weir W2	0	depth (≥ 8')	Average	10.0	
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	8.2	
Entrance weir S2	0	depth (≥ 8')	Average	8.2	
JUVENILE PASSAGE					
Sluiceway operation		Units 1, 8, 18	Sluiceways 1-1,2,3, 8-1,2, and 18-2 open.		
Turbine trashrack drawdown	0	<1.5', wkly	Range: 0.1'- 0.5'.		
Spill volume	0	40%+-1%	Average	40.0	
Spill Pattern	0	per FPP			
Turbine Unit Priority.	1	per FPP	Scheduled MU18 outage.		
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.

Gull predation upstream and downstream of bridge and within avian lines. Periodically using boat hazing crew from John Day. see avian zone map.

Operations:

All fishways are in full operation as specified in the Fish Passage Plan. All automation systems are working successfully.

Turbine trashrack drawdown completed 7/19. The difference between forebay and gatewells in criteria.

The Dalles Fishwater Generating Units F1 & F2 Forced Out-Of-Service at 1545 on 24 July 2015 Due to BPA Big Eddy Substation 115KV Main Bus Inadvertent Trip. RTS ~ 10 minutes later.

The Dalles Main Units MU1, MU2, MU3 and MU4 Forced Out-Of-Service at 1545 on 24 July 2015 Due to BPA Big Eddy Substation 115KV Main Bus Inadvertent Trip. RTS ~ 10 minutes later.

Misc Info:

Checked numerous dead salmon on shore of Celilo park. No obvious signs of cause. Expected due to extremely warm river temperatures.

Project fisheries and rangers attended CTITFC Columbia River Indian Fishers Expo in Hood River 7/24.

Current Outages:

T8 (MU15 & MU16) de-rated to 85MW ops through 9/14/2017.

Maintenance:

Preparing workload list for upcoming winter maintenance period; entrance weir wheel replace, entrance weir guide repair, exit sensor upgrades.

Three collection channel dewatering pumps on deck for rehab, repair delayed due to lack of funding. Two of 6 collection channel pumps remain stuck.

FCQ7 electrical panel for east exit upgrade funding in place and awaiting contracting approval. Installation next outage season pending funding.

Future repair plans; Upgrade east exit weirs 154-157, 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, fish unit breaker and transformer replace.

All spillway items on Critical Infrastructure list and Unfunded Requirement list. Spill gate 9 repair planning underway through small projects team.

TDM fixed north ladder diffuser valve 7/25.

End of year Fisheries fund available in District. Working on shopping list to spend. Possible items; new sensors for east and north exits, new sensors for entrance weirs.

Studies:

North fishladder rehab study for rock wall 60% DDR review. Construction dates to be determined. Alternatives to be presented to FPOM.

Fish count video at north count station recording / testing underway.

East fishladder backup system construction start this winter. No plan changes.

Crane rail replacement on tailrace and intake decks winter of 2016-2017. No plan changes.

Transformer replacement planning underway. Plans include elimination of TA transformers with fish unit tie through T1 with another tie for backup.

Research/Contractors:

USDA hazer's will be on site through end of July. Gull numbers steadily decreasing downstream of spillway. The need of continued boat support for hazing will be assessed daily.

Columbia River Northern Pikeminnow Management Program dam angling 7/19; NPM \geq 230mm 98, YTD NPM \geq 230mm 3,719.

ODFW collecting biological data from harvested pikeminnow.

Normandeau fish counters at east and north count stations 16 hr/day.

PSMFC Wasco County PUD weekly sampling.

Tribal lamprey trappers continue collecting lamprey daily from east count station. Trapping expected through July or until quota is met.

CTUIR lamprey collections; tribal collection allocations 450, 239 remaining to be collected.

USGS total dissolved gas monitoring continues.

Approved by: Ron Twiner

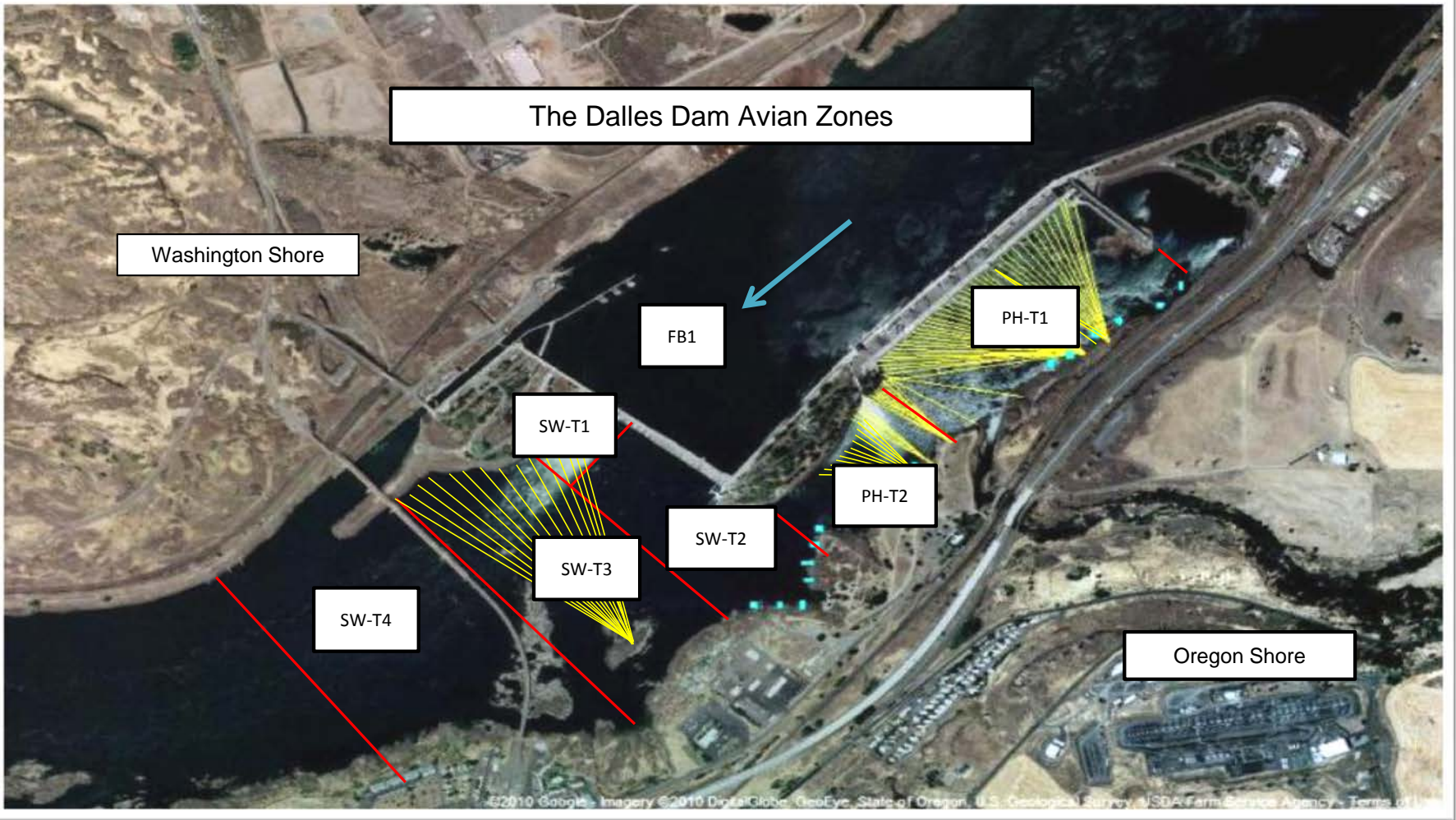
Operation Project Manager The Dalles Dam

Columbia River DART

2015 Adult Passage Daily Ladder Counts at The Dalles

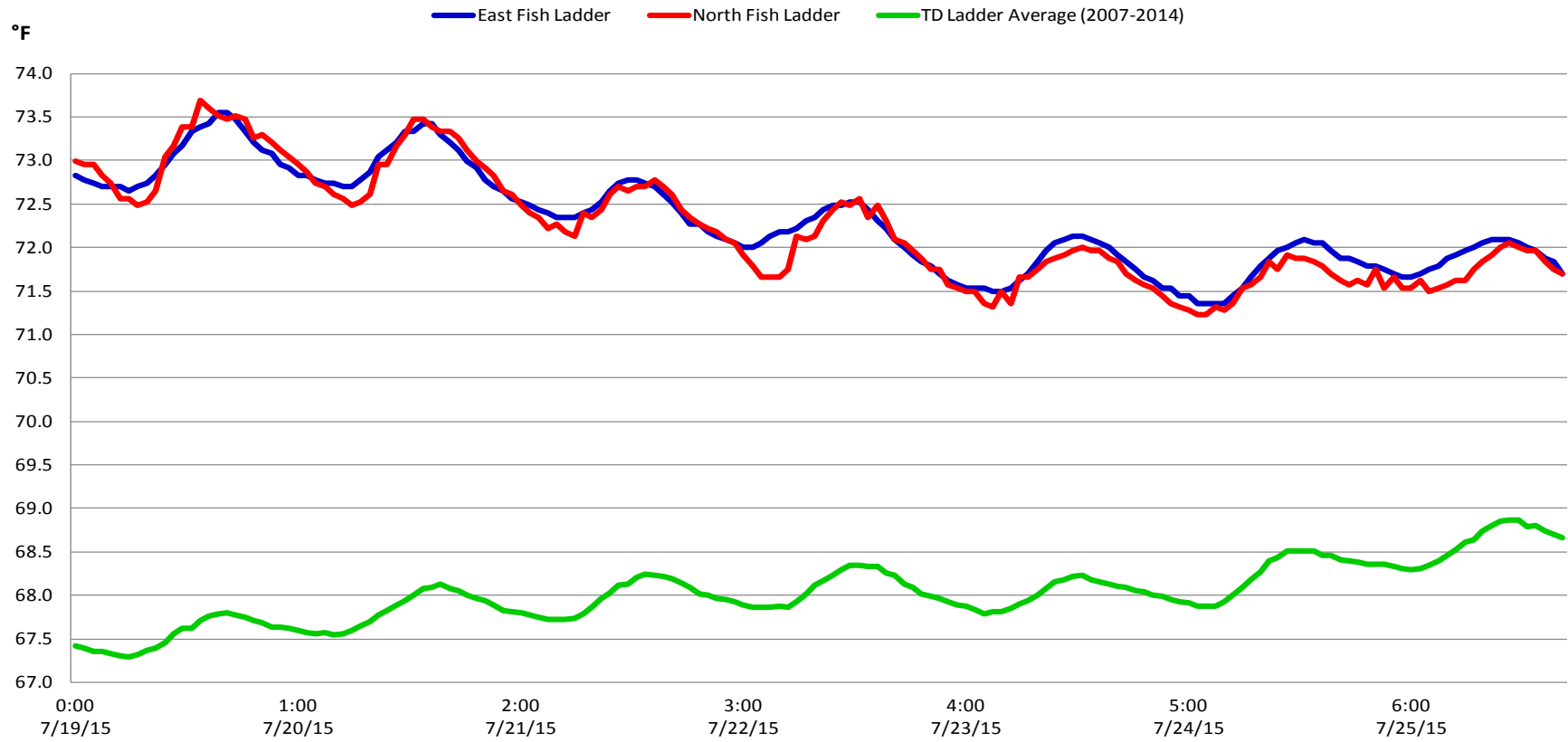
7/19/2015 - 7/25/2015

Date	Chinook				Jack Chinook				Steelhead				Wild Steelhead				Sockeye				Coho				Jack Coho				Lamprey				Bull Trout				Outflow (kcfs)				
	Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder										
	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#					
19-Jul-15	73.8	812	26.2	288	75.0	120	25.0	40	72.7	568	27.3	213	69.3	316	30.7	140	62.2	1512	37.8	919		0		0		0		0		0		0	63.6	77	36.4	44		0		0	48.5
20-Jul-15	78.0	923	22.0	260	86.6	116	13.4	18	74.0	485	26.0	170	76.1	347	23.9	109	64.3	1400	35.7	776		0		0		0		0	66.7	134	33.3	67		0		0	50.7				
21-Jul-15	78.7	763	21.3	206	85.6	137	14.4	23	71.8	370	28.2	145	68.7	224	31.3	102	61.6	790	38.4	493		0		0		0		0	31.1	60	68.9	133		0		0	50.1				
22-Jul-15	71.9	596	28.1	233	72.6	61	27.4	23	68.1	498	31.9	233	67.2	318	32.8	155	64.1	800	35.9	449		0		0		0		0	41.9	26	58.1	36		0		0	38.3				
23-Jul-15	77.0	684	23.0	204	85.6	101	14.4	17	73.0	656	27.0	243	71.1	379	28.9	154	55.0	718	45.0	588		0		0		0		0	29.3	29	70.7	70		0		0	41.5				
24-Jul-15	80.0	763	20.0	191	72.4	92	27.6	35	73.0	735	27.0	272	71.5	451	28.5	180	57.6	913	42.4	671		0		0		0		0	54.4	37	45.6	31		0		0	45.7				
25-Jul-15	70.5	664	29.5	278	72.6	90	27.4	34	55.7	542	44.3	431	55.2	346	44.8	281	48.3	770	51.7	824		0		0		0		0	18.5	10	81.5	44		0		0	46.8				
YTD	Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder		Left Ladder		Right Ladder										
	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#	Pct	#					
	75.8	5205	24.2	1660	79.1	717	20.9	190	69.3	3854	30.7	1707	68.0	2381	32.0	1121	59.4	6903	40.6	4720		0		0		0		0	46.7	373	53.3	425.0		0		0					
Date	Chinook				Jack Chinook				Steelhead				Wild Steelhead				Sockeye				Coho				Jack Coho				Lamprey				Bull Trout				Outflow				

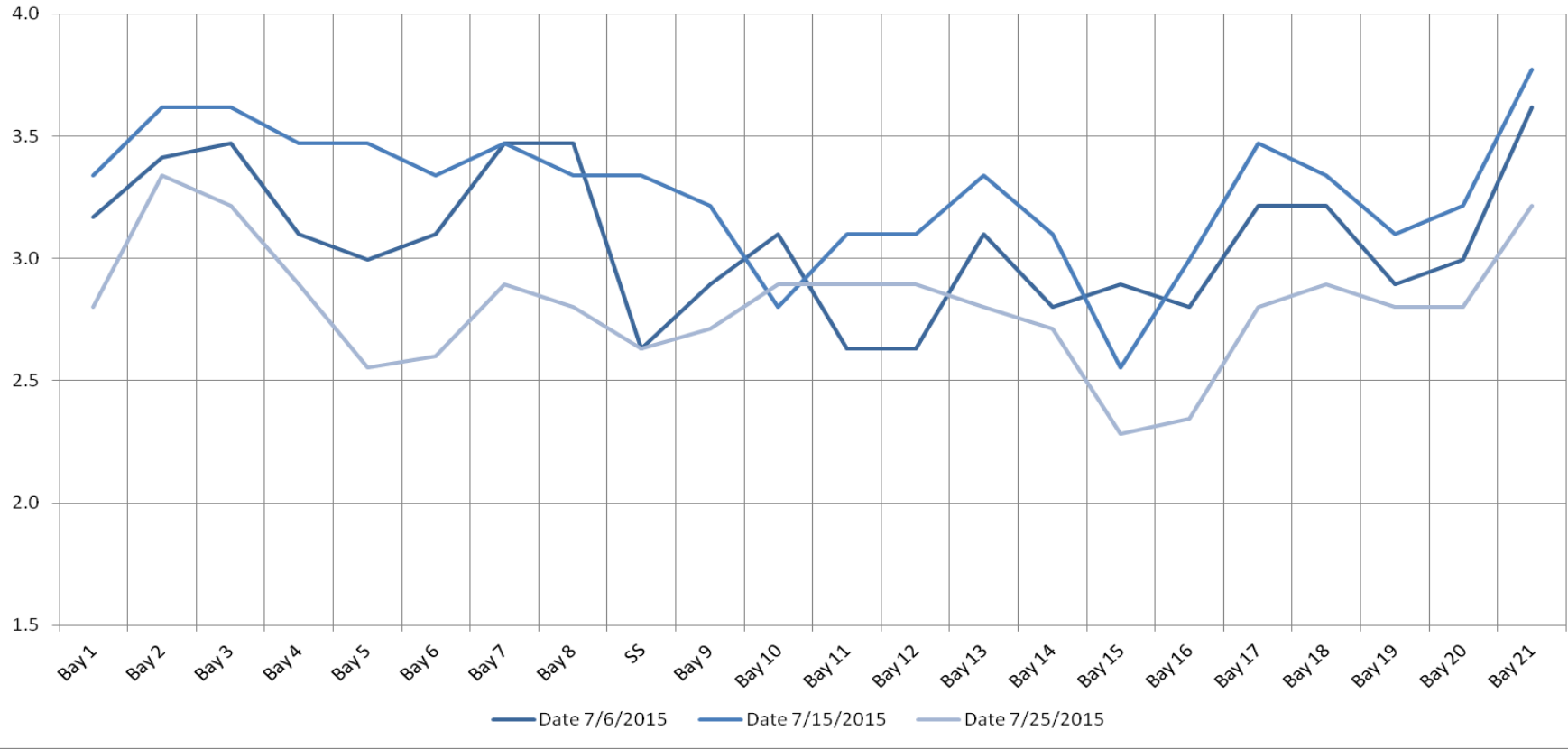


Avian lines in yellow, zones in red, river flow in blue.

The Dalles Dam Adult Fish Ladder(s) River/Water Temperatures



The Dalles Dam Collection Channel Velocites (In criteria 1.5 - 4.0 fps)



USGS:	http://www.nwd-wc.usace.army.mil/tmt/documents/ops/temp/201507.lcol.html	
Temperatures		Secchi:
73.1	Sun	5.0
73.0	Mon	5.0
72.5	Tue	5.0
72.1	Wed	5.0
71.7	Thurs	5.0
71.6	Fri	5.0
71.8	Sat	5.5
AVG: 72.2	AVG	5.1

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

= Out of criteria

North Ladder			East Ladder												
North Entrance			East Entrance					West Entrance			South Entrance			% Spill	
Date:	Differential	N1 Depth	Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth	W3 Depth	Differential	S1 Depth		S2 Depth
7/19			1.6	8.0	11.1	11.1		1.5	9.9	9.9	closed	1.5	8.2	8.2	40.1
	1.3	9.1	1.5	8.1	11.6	11.6	10.6	1.5	9.9	9.9		1.5	8.2	8.2	
	1.5	9.2	1.5	8.1	11.6	11.6	10.6	1.5	9.9	9.7		1.4	8.3	8.2	
7/20			1.4	8.0	12.1	12.1		1.6	10.0	10.0		1.4	8.3	8.3	39.9
	1.4	9.3	1.7	8.4	10.8	10.8	9.8	1.5	9.4	9.4		1.4	8.3	8.3	
	1.5	9.2	1.6	6.5	12.3	12.3	11.3	1.6	10.1	10.1		1.4	8.3	8.3	
7/21			1.6	6.6	11.8	11.8		1.6	9.9	9.9		1.5	8.1	8.1	40.0
	1.5	9.2	1.6	6.5	12.0	12.0	11.0	1.5	10.1	10.1		1.5	8.3	8.3	
	1.5	9.3	1.5	5.5	12.7	12.7	11.7	1.6	10.1	10.1		1.5	8.1	8.1	
7/22			1.6	5.4	12.3	12.3		1.5	10.3	10.3		1.5	8.2	8.2	40.1
	1.5	9.3	1.3	0.2	12.7	12.7	11.7	1.6	10.2	10.2		1.5	8.2	8.2	
	1.4	9.3	1.5	5.5	12.6	12.6	11.6	1.5	10.3	10.3		1.5	8.1	8.1	
7/23			1.7	6.8	11.3	11.3		1.4	10.4	10.4		1.5	8.3	8.3	39.9
	1.5	9.3	1.5	8.1	12.0	12.0	11.0	1.5	10.0	10.0		1.4	8.3	8.3	
	1.5	9.2	1.6	8.0	11.6	11.6	10.6	1.5	10.0	10.0		1.5	8.1	8.1	
7/24			1.6	7.9	11.3	11.3		1.5	9.9	9.9	1.5	8.1	8.1	40.1	
	1.5	9.3	1.5	9.0	11.4	11.4	10.4	1.5	9.8	9.8	1.4	8.3	8.3		
	1.4	9.2	1.5	8.5	11.8	11.8	10.8	1.5	9.8	9.8	1.4	8.3	8.3		
7/25			1.4	8.5	12.4	12.4		1.6	9.8	9.8	1.5	8.2	8.2	40.2	
	1.5	9.3	1.3	8.6	12.5	12.5	11.5	1.6	9.7	9.7	1.5	8.1	8.1		
	1.5	9.3	1.3	8.6	12.5	12.5	11.5	1.6	9.7	9.7	1.5	8.2	8.2		
AVG:	1.5	9.3	1.5	No criteria	11.9	11.9	11.0	1.5	10.0	10.0	closed	1.5	8.2	8.2	40.0

Fishways are inspected twice daily plus one SCADA inspection.



Ice/Trash sluiceway skimmer gate 1-3 refurbished and installed; used for juvenile passage.