

The Dalles Dam Fishway Status Report

10/8/2016

Inspection Period: 10/02/2016 - 10/08/2016

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: 63.2 °F
			Comments: Fall like conditions on project		Secchi: 5.0 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'	1.4		
Entrance weir N1	0	depth (≥ 8')	9.1		
Entrance weir N2	0	Closed			
PUD Intake differential	0	≤ 0.5'			
EAST FISHWAY					
Exit differential	0	≤ 0.5'			
Removable weirs 154-157	0	Per forebay			
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')	10.5		
East entrance differential	0	1.0' - 2.0'	1.5		
Entrance weir E1	0	No criteria	2.8		
Entrance weir E2	0	depth (≥ 8')	13.0		
Entrance weir E3	0	depth (≥ 8')	13.0		
Collection channel velocity	0	1.5 - 4 fps	2.75		
Transportation channel velocity	0	1.5 - 4 fps	2.38		
North channel velocity	0	1.5 - 4 fps	3.06		
South channel velocity	0	1.5 - 4 fps	3.08		
West entrance differential	0	1.0' - 2.0'	1.5		
Entrance weir W1	0	depth (≥ 8')	9.4		
Entrance weir W2	0	depth (≥ 8')	9.4		
Entrance weir W3	0	No criteria	Closed		
South entrance differential	0	1.0' - 2.0'	1.4		
Entrance weir S1	0	depth (≥ 8')	8.3		
Entrance weir S2	0	depth (≥ 8')	8.3		
JUVENILE PASSAGE					
Sluiceway operation	0	Units 1, 8, 18			
Turbine trashrack drawdown	0				
spill off					
Turbine Unit Priority	0	per FPP			
Turbine 1% Efficiency	0	per FPP			

Birds/Sea lions:

No sea lions observed. Primarily cormorants on site.

Bird observation data collected once daily. Refer to Avian Zone map and bird count.

Two of 13 spillway avian lines broke closest to bridge. New wire procured. Installation Oct 12.

Operations:

Calibration 10/01, all readings within criteria

Gatewell drawdown completed 10/01, all readings within criteria

Current Outages:

T8 (MU15 & MU16) forced out due to transformer failure. Return unknown.

MU3 forced out of service through 8/4/2016 due to loss of governor sump oil level

MU21 OOS for exciter failure RTS unknown

Maintenance:

New east exit weir electrical panel FCQ7 installation ~50% complete. On hold for FY17 funding.

Planning underway for winter dewater season, East ladder out Dec 1 through end Feb for AWS backup construction. North ladder out 2 weeks mid Jan.

Long Term repair maintenance plans; 154 -157 weir wheel replace, collection channel diffusers decommission, repair failed diffusers - all awaiting funding

Fish related /non-fish funded items; Spillway crane rehab priority over spillgate 9, both awaiting funding.

All spillway items on Critical Infrastructure list and Unfunded Requirement list.

Studies/Construction:

Environmental acceptable grease testing in progress.

North fishladder rehab/rock wall stabilizing - No new development.

East fishladder emergency backup - Mobilization and prefab continues. Night work start in November. Day work start December.

Crane rail replacement - Start in water work period 2016/17.

Transformer replacement - Install start Oct 2017.

N Wasco Co PUD Memo of Agreement - Meeting 9/14. PUD comments to be incorporated.

Fish unit rehab - No new development.

Fish unit breaker replacement - Start in water work period 2017/18

Research/Contractors:

Normandeau fish counters continue through Oct 30. No issues.

Approved by: Ron Twiner

Operation Project Manager The Dalles Dam



Yellow lines= present avian lines

red lines= Barriers between observation zones

Orange lines= Missing or down avian lines

2016 Piscivorous Bird Counts

F=foraging, NF=non-foraging

Date	Observer	AM/PM	Zone	Gull		Cormorant		Caspian tern		Grebe		Pelican		Other		Total birds in zone	Notes	
				F	NF	F	NF	F	NF	F	NF	F	NF	F	NF			
10/2/16	JWR	AM	FB	0	0	1	35	0	0	1	9	0	0	0	0	0	46	GBHE
			PH1	0	0	1	0	0	0	0	0	0	0	0	0	1	2	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10/3/16	JWR	PM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	COME
			PH1	0	0	0	6	0	0	0	0	0	0	0	0	1	7	
			PH2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	0	0	46	0	0	0	0	0	0	0	0	0	46	
			SW4	0	0	2	1	0	0	0	0	0	0	0	0	0	3	
10/4/16	JWR	AM	FB	3	0	0	55	0	0	0	54	0	0	0	0	0	112	
			PH1	0	0	1	7	0	0	0	0	0	0	0	0	0	8	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	0	1	34	0	0	0	0	0	0	0	0	0	35	
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10/5/16	JWR	PM	FB	0	0	0	1	0	0	0	2	0	0	0	0	0	3	1 GBHE 1 COME
			PH1	0	1	0	15	0	0	0	0	0	0	0	0	2	18	
			PH2	3	0	0	0	0	0	0	0	0	0	0	0	0	3	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	0	6	64	0	0	0	0	0	0	0	0	0	70	
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10/6/16	JWR	AM	FB	0	0	0	0	0	0	0	59	0	0	0	0	0	59	
			PH1	0	0	5	1	0	0	0	0	0	0	0	0	0	6	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	0	1	42	0	0	0	0	0	0	0	0	0	43	
			SW4	0	38	0	0	0	0	0	0	0	0	1	0	0	39	
10/7/16	GJF	PM	FB	0	0	0	3	0	0	0	0	0	0	0	0	0	3	
			PH1	0	0	6	19	0	0	0	0	0	0	0	0	0	25	
			PH2	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
			SW1	0	0	2	0	0	0	0	0	0	0	0	0	0	2	
			SW2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	
			SW3	0	0	1	64	0	0	0	0	0	0	0	0	0	65	
			SW4	0	7	0	13	0	0	0	0	0	0	1	0	0	21	
10/8/16	GJF	AM	FB	0	0	0	24	0	0	0	0	0	0	0	0	24		
			PH1	0	2	4	10	0	0	0	0	0	0	0	0	0		16
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW3	0	0	0	34	0	0	0	0	0	0	0	0	0		34
			SW4	0	0	0	6	0	0	0	0	0	0	1	0	0		7
<i>daily averages</i>				0.14	1.0	0.71	9.8	0.0	0.0	0.0	2.5	0.0	0.1	0.00	0.1	14.3		

The Dalles East

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
10/2	1930	1578	352	1668	1244	424	121	107	14	1	0	0	2
10/3	1902	1469	433	1639	1237	402	129	125	4	0	0	0	0
10/4	978	809	169	1101	833	268	75	70	5	0	0	0	0
10/5	1370	1147	223	910	672	238	64	59	5	0	0	0	0
10/6	1356	1153	203	1324	965	359	238	234	4	0	0	0	4
10/7	1414	1234	180	1621	1136	485	667	643	24	0	0	0	0
10/8	1591	1265	326	1609	1105	504	425	397	28	0	0	0	1
Total	10541	8655	1886	9872	7192	2680	1719	1635	84	1	0	0	7

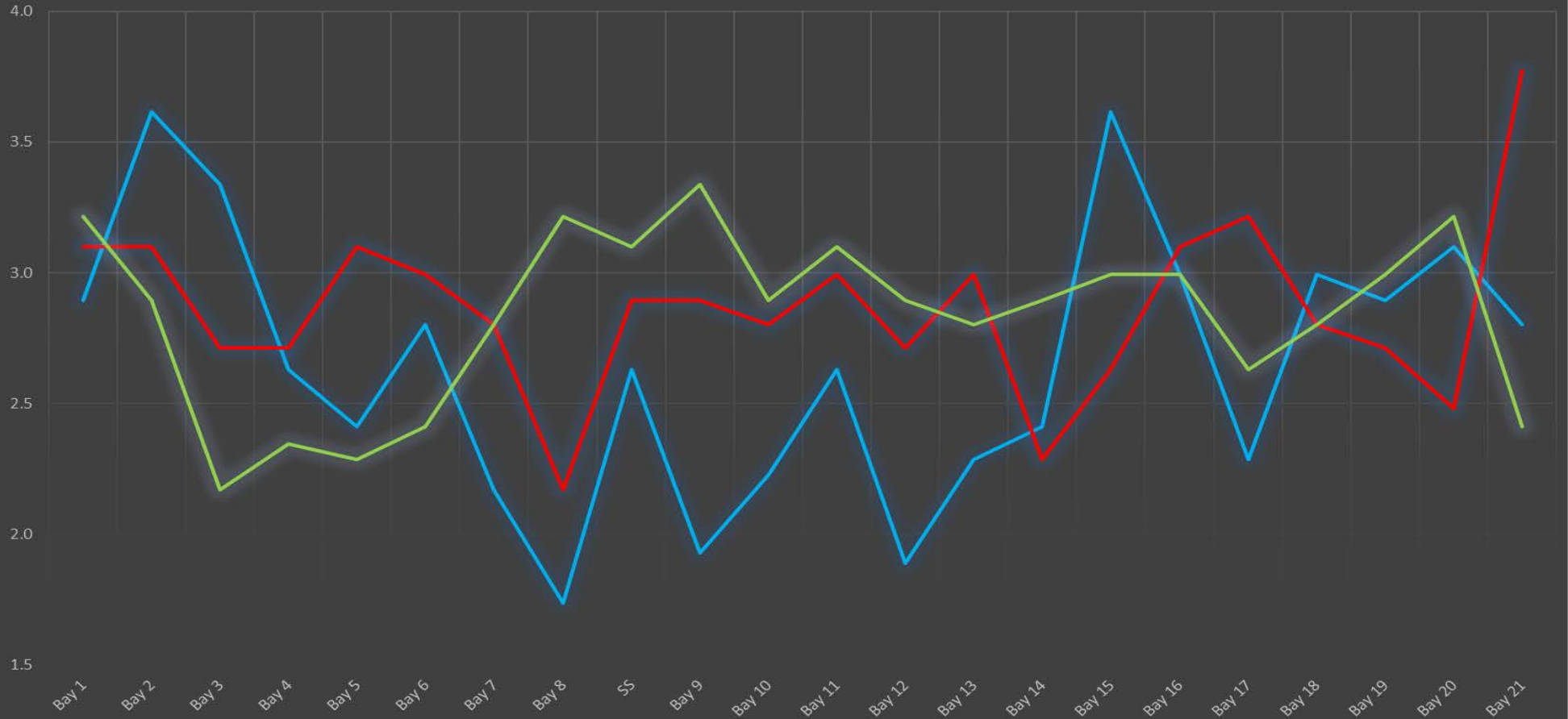
The Dalles North

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
10/2	78	59	19	162	120	42	7	6	1	0	0	0	0
10/3	54	41	13	184	138	46	8	8	0	0	0	0	1
10/4	53	36	17	118	82	36	9	8	1	0	0	0	0
10/5	14	10	4	56	42	14	0	0	0	0	0	0	0
10/6	23	17	6	90	74	16	19	19	0	0	0	0	0
10/7	21	16	5	177	127	50	20	16	4	0	0	0	0
10/8	13	8	5	106	88	18	8	8	0	0	0	0	1
Total	256	187	69	893	671	222	71	65	6	0	0	0	2
<i>% North</i>	2.4	2.1	3.5	8.3	8.5	7.6	4.0	3.8	6.7	0.0	0.0	0.0	22.2

<http://www.nwp.usace.army.mil/Missions/Environment/Fish/Counts/>

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

— Date 9/24 — Date 9/25 — Date 10/8



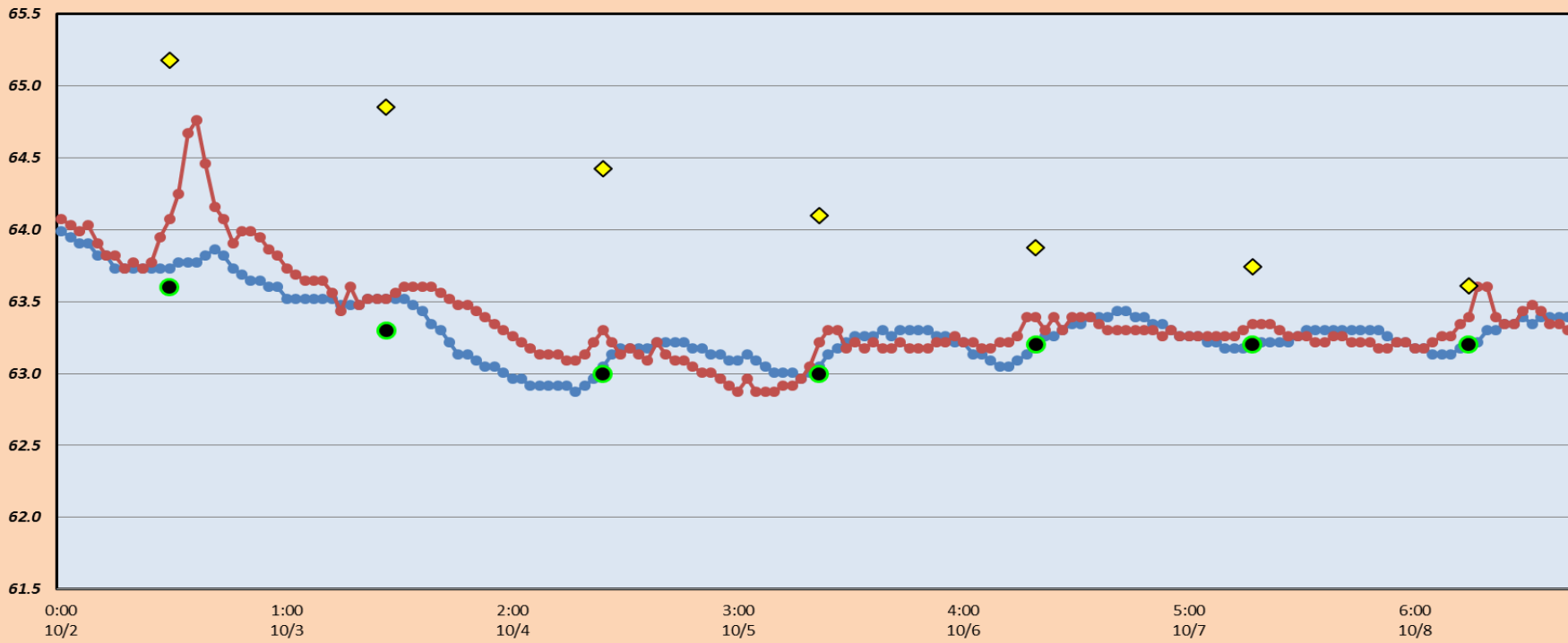
The Dalles Dam Averages Velocities (In criteria 1.5 - 4.0 fps)

The Dalles Collection Channel The Dalles Transportation Channel The Dalles North Entrance The Dalles South Rock Channel



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

East Count Station North Count Station Current USGS Daily Average USGS Daily Average (2007-2015)



		USGS:	(Oct) http://www.nwd-wc.usace.army.mil/html/documents/ops/temp/201610_lcol.html
Secchi:		Temperatures	
10/2	5.0	Sun	63.6
10/3	5.0	Mon	63.3
10/4	5.0	Tue	63.0
10/5	5.0	Wed	63.0
10/6	5.0	Thurs	63.2
10/7	5.0	Fri	63.2
10/8	5.0	Sat	63.2
	5.0	AVG	63.2

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

= Out of criteria

Date:	North Ladder							East Ladder							S P I L L O F F
	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	
10/2			1.2	6.1	13.0	13.0	10.2	1.1	10.1	10.1		1.3	8.3	8.3	
	1.3	9.1	1.5	1.9	13.0	13.0	9.8	1.3	9.5	9.5		1.4	8.2	8.2	
	1.4	9.2	1.5	2.1	13.0	13.0	9.8	1.5	9.0	9.0		1.3	8.3	8.3	
10/3			1.5	0.6	13.0	13.0	9.8	1.6	9.0	9.0		1.3	8.3	8.3	
	1.3	9.2	1.5	0.5	13.0	13.0	10.0	1.6	9.0	9.0		1.4	8.2	8.2	
	1.4	9.1	1.6	0.5	12.9	12.9	9.7	1.7	8.9	8.9		1.4	8.2	8.3	
10/4			1.5	0.5	13.1	13.0	9.7	1.5	9.4	9.4		1.4	8.2	8.3	
	1.3	9.3	1.5	0.5	12.9	13.0	9.9	1.4	9.5	9.5		1.3	8.4	8.3	
	1.4	9.1	1.6	0.4	13.1	13.1	10.1	1.6	9.6	9.6		1.4	8.4	8.3	
10/5			1.6	0.5	13.0	13.1	10.4	1.7	9.5	9.5		1.3	8.5	8.4	
	1.4	9.1	1.6	4.1	13.0	13.1	11.4	1.7	9.5	9.5		1.5	8.2	8.3	
	1.4	9.2	1.5	4.1	13.1	13.0	10.9	1.6	9.4	9.4		1.4	8.2	8.2	
10/6			1.5	3.9	13.1	13.0	11.1	1.6	9.6	9.6		1.4	8.3	8.3	
	1.4	9.1	1.6	3.9	13.0	13.0	10.8	1.6	9.5	9.5		1.4	8.3	8.3	
	1.4	9.2	1.5	1.5	13.0	13.0	10.9	1.6	9.5	9.5		1.4	8.3	8.0	
10/7			1.4	2.0	13.1	13.1	10.5	1.4	9.6	9.6		1.3	8.4	8.4	
	1.5	9.1	1.5	5.1	13.0	13.0	11.2	1.6	9.5	9.5		1.3	8.3	8.3	
	1.5	9.1	1.3	4.9	12.9	12.9	10.5	1.4	9.5	9.5		1.3	8.3	8.4	
10/8			1.2	5.2	13.1	13.1	10.5	1.4	9.6	9.6		1.3	8.3	8.3	
	1.4	9.2	1.3	5.1	13.1	13.1	11.3	1.4	9.6	9.5		1.3	8.3	8.3	
	1.5	9.0	1.5	5.0	13.0	13.0	11.4	1.6	9.5	9.5		1.3	8.4	8.4	
AVG:	1.4	9.1	1.5	2.8	13.0	13.0	10.5	1.5	9.4	9.4		1.4	8.3	8.3	

Fishways are inspected twice daily plus one SCADA inspection.