

The Dalles Dam Fishway Status Report

11/04/18

Inspection Period: Oct. 28th, - Nov. 3rd, 2018

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

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: Comments	21	Temperature: 57.8 °F	Secchi: 5+ 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')	9.4			
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'				
153 Weir crest depth	0	1.1' ± 0.1'				
Junction pool weir JP6	0	0.0				
East entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir E1	0	No criteria				
Entrance weir E2	0	depth (≥ 8')	12.6			
Entrance weir E3	0	depth (≥ 8')	12.6			
Collection channel velocity	0	1.5 - 4 fps	2.48 fps	Range: MU4, 2.92fps to SS, 1.72 fps on 10/29/18		
Transportation channel velocity	0	1.5 - 4 fps	2.59 fps			
North channel velocity	0	1.5 - 4 fps	2.69 fps			
South channel velocity	0	1.5 - 4 fps	3.79 fps			
West entrance differential	0	1.0' - 2.0'	1.4			
Entrance weir W1	0	depth (≥ 8')	8.4			
Entrance weir W2	0	depth (≥ 8')	8.4			
Entrance weir W3	0	No criteria				
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, 21	MU1 (1-1,1-2, 1-3) MU8 (8-1,8-3) & MU18 (18-2) and endgate open			
Turbine trashrack drawdown	0	<1.5', biwklly				
Spill volume/pattern	0	None				
Turbine Unit Priority	0	per FPP				
Turbine 1% Efficiency	0	per FPP				

OTHER ISSUES:

Predators;

Sea lion briefly observed in tailrace midpowerhouse. Not able to be identified. No predation events observed.

Eagle, Gull and Merganser numbers increasing as expected per seasonal trend

Awaiting NWD determination of using lethal means to support gull hazing next season.

Release of invasive bass/walleye bycatch by WDFW dam anglers continued through this angling season. Lethal removal being discussed at FPOM.

Operation:

East and north fishway in full operation.

Sluiceway open with 6 sluiceway operation (3, 8 & 18). Unit 3 gates return to unit 1 on Oct 22

Fish unit F2 forced out of service 11/4 0623-0848 due to low bearing oil pressure

Current Outages;

MU5 forced OOS blade seals. RTS 1/21/2018

MU7 and MU8 OOS annual and dole 11/5/2018. RTS 11/15/2018

MU15 OOS transformer replacement. RTS 11/5/2018

MU16 OOS transformer replacement. RTS 3/28/2019

MU19 & MU20 FOOS 1700 10/24/2019 due to T10 Acetylene Production

Maintenance

Dewatering schedule; East ladder dewater Dec3 (previously Dec4). North ladder dewater Jan 15. Schedule and task list provided to FPOM.

East count station brush out of service, TDE awaiting parts.

Collection channel dewatering pumps 3 and 4 out for rehab. Pump 4 requires pump/motor replacement. RTS by 12/1/18.

Planning near complete for fishway automation replacement. Planning some work this winter.

Planning 154 -157 rehab/weir wheel replace this winter. Wheels being machined.

Diffuser valve rehab beyond project maintenance capability. Exploring options. Diffuser valve long term plan in FPOM review.

Fish related /non-fish funded items; Spillway assessment underway. Spillway crane replace and spillgate 9 repair included.

All spillway items on Critical Infrastructure. Spillgate 9 on large cap list, projected for 2022. Comprehensive spillway assessment review underway.

Research/Construction/Contractors:

Zebra mussel velliger sampling resumes next spring.

Lower Columbia River Forebay Temperature Monitoring – Done for season Equipment removal 10/29/18.

AWS construction - Commissioning test complete. AWS operation with single fish unit to be tested Nov28.

PSMFC weekly sampling completed for the North Wasco County PUD's. New sample collection tank design in review. Installation postponed to winter 2019/20.

PITAGS North and east fishladder data collection at count stations continues.

Fish Counters - Continues through Oct31.

Pikeminnow dam angling - Caught 1785 YTD .

ODFW monthly fishway inspections concluded 10/16

Lamprey minor mods - Rounded entrance weir caps installed south, west, north entrances. East weir to be complete December, 2018.

Univ of Idaho lamprey radiotelemetry track underway through November. Coordinating antenna maintenance this winter.

Lamprey trapping by tribes completed for season. Awaiting final numbers. Project to construct lift hoist mechanism for next trapping season.

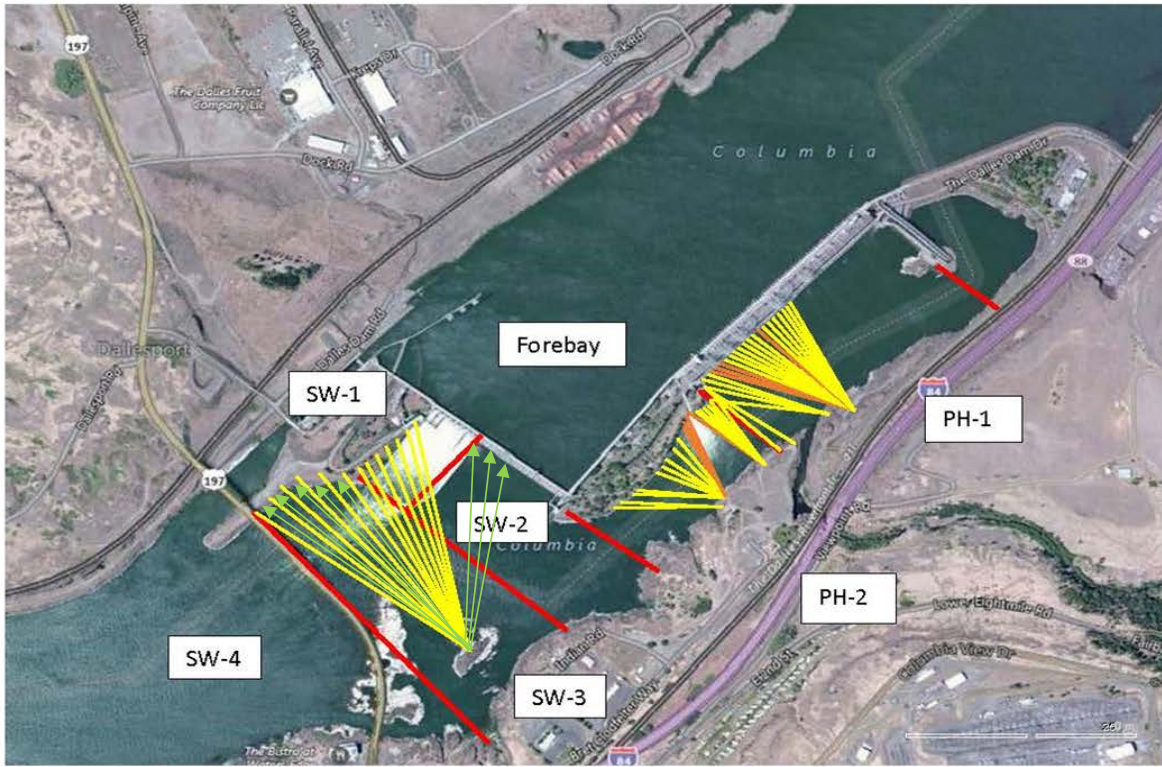
Fish unit breaker replace - Prep work in progress. Installation 12/1/18 - 1/14/19.

Fish unit rehab - Development plan continues. Alternatives in review. Test of AWS backup with single fish unit Nov28. FPOM approved.

Transformer replacement - Install T8 underway (units 15 and 16). Sequence schedule modified from original

Approved by: Mike Colesar acting for Ron Twiner

Operation Project Manager The Dalles Dam



Red lines = avian zones

Yellow lines = current wires

Orange lines = down or missing wires



Additional avian lines installed 9/2018

2018 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			
10/28	JWR	PM	FB	0	17	0	0	0	0	0	0	0	0	0	0	0	17	COME
			PH1	0	0	1	24	0	0	0	0	0	0	0	0	12	37	
			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	19	0	0	0	0	0	0	0	0	0	19	
10/29	JWR	AM	FB	0	26	0	0	0	0	0	0	0	0	0	0	0	26	
			PH1	0	0	0	26	0	0	0	0	0	0	0	0	22	48	
			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	66	0	0	0	0	0	0	0	0	0	66	
10/30	CEA	PM	FB	4	0	0	0	0	0	0	0	0	0	0	1	5	GBHE COME	
			PH1	0	0	0	15	0	0	0	0	0	0	0	35	2		52
			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	1	2	45	0	0	0	0	0	0	0	3	1		52
10/31	JWR	PM	FB	0	4	0	0	0	0	0	0	0	0	0	0	0	4	PEOPLE WORKING=NO BIRDS
			PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			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	2	0	4	55	0	0	0	0	0	0	0	0	0	61	
11/1	JED	PM	FB	0	28	0	0	0	0	0	0	0	0	0	0	0	28	Nav wall COME
			PH1	0	0	2	18	0	0	0	0	0	0	0	31	6	57	
			PH2	14	0	0	0	0	0	0	0	0	0	0	0	0	14	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW2	6	0	1	0	0	0	0	0	0	0	0	0	0	7	
			SW3	0	0	10	75	0	0	0	0	0	0	0	0	0	85	
11/2	JED	AM	FB	6	0	0	1	0	0	0	0	0	0	1	30	38	1 BAEA F, 30 COME NF COME Sunny, warm, 30mph W 70 gulls feed W Navchan.	
			PH1	0	0	1	8	0	0	0	0	0	0	14	35	58		
			PH2	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		
			SW2	1	0	0	1	0	0	0	0	0	0	0	0	0		2
			SW3	0	0	4	67	0	0	0	0	0	0	0	0	1		72
11/3	JED	PM	FB	10	0	2	0	0	0	0	0	0	0	0	0	12	Overcast, windy, cool	
			PH1	0	0	1	0	0	0	0	0	0	0	0	0	1		
			PH2	30	0	6	0	0	0	0	0	0	0	0	0	36		
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW2	20	0	2	0	0	0	0	0	0	0	0	0	22		
			SW3	10	45	10	110	0	0	0	0	0	0	0	1	176		
			SW4	10	305	2	24	0	0	0	0	0	0	1	342			

Key: BAEA = Bald Eagle; GBHE = Great Blue Heron; COME = Common Merganser

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
10/28	278	232	46	120	79	41	70	59	11	0	0	0	0
10/29	174	142	32	147	85	62	217	180	37	0	0	0	0
10/30	331	307	24	110	62	48	181	176	5	0	0	0	0
10/31	347	307	40	116	58	58	128	116	12	0	0	0	0

END FISH COUNTS

total	1130	988	142	493	284	209	596	531	65	0	0	0	0
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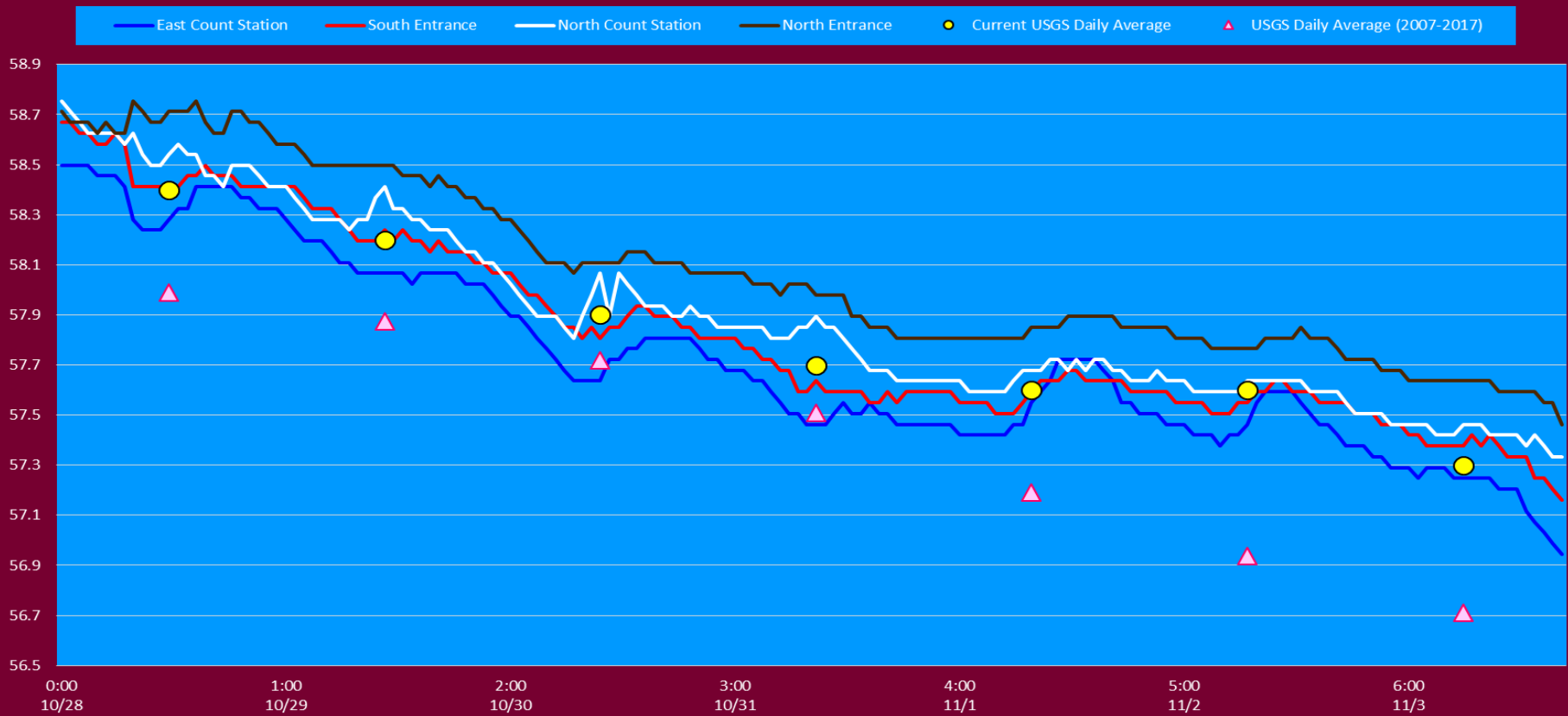
The Dalles North

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
10/28	87	77	10	22	14	8	22	16	6	0	0	0	0
10/29	12	10	2	9	8	1	17	13	4	0	0	0	0
10/30	25	23	2	27	17	10	20	18	2	0	0	0	0
10/31	32	24	8	17	10	7	18	18	0	0	0	0	0

total	51	46	5	30	20	10	22	17	5	0	0	0	0
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% North	4.3	4.4	3.4	5.7	6.6	4.6	3.6	3.1	7.1	0.0	0.0	0.0	0.0
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The Dalles Dam Adult Fish Ladder(s) River Temperatures



			USGS:
Secchi:			Temperatures
10/28	5+	Sun	58.4
10/29	5+	Mon	58.2
10/30	5+	Tue	57.9
10/31	5+	Wed	57.7
11/1	5+	Thurs	57.6
11/2	5+	Fri	57.6
11/3	5+	Sat	57.3
	5+	AVG	57.8

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

SCADA INSPECTION
= Out of criteria
WEST ENTRANCE OOC DUE TO LOW TAILWATER

Date:	North Ladder			East Ladder										
	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
10/28			1.4	2.5	13.0	13.0	9.7	1.4	8.5	8.5	0.0	1.4	8.3	8.3
	1.5	9.2	1.4	2.4	13.1	12.9	9.8	1.4	8.4	8.4	0.0	1.5	8.1	8.1
	1.4	9.2	1.3	2.5	13.1	13.0	9.9	1.5	8.4	8.4	0.0	1.4	8.2	8.2
10/29			1.4	2.5	13.0	13.0	9.7	1.4	8.5	8.5	0.0	1.4	8.3	8.3
	1.5	9.1	1.5	1.0	13.1	13.0	10.9	1.6	8.4	8.4	0.0	1.5	8.3	8.3
	1.6	9.3	1.6	3.6	12.1	12.1	11.6	1.5	8.7	8.7	0.0	1.5	8.4	8.4
10/30			1.3	3.6	13.2	13.2	9.9	1.3	8.7	8.7	0.0	1.4	8.4	8.4
	1.3	9.7	1.4	0.5	13.1	13.1	9.9	1.4	8.3	8.3	0.0	1.4	8.3	8.3
	1.4	9.5	1.5	0.5	13.0	13.0	9.8	1.4	8.3	8.3	0.0	1.4	8.4	8.4
10/31			1.9	1.1	13.0	11.8	8.0	1.4	7.8	7.8	0.0	1.4	8.2	8.2
	1.3	9.2	1.6	2.0	12.0	12.0	8.0	1.5	8.4	8.4	0.0	1.2	8.3	8.3
	1.4	9.5	1.5	1.0	12.5	12.5	9.8	1.4	8.4	8.4	0.0	1.4	8.3	8.3
11/1			1.2	4.0	12.5	12.5	9.6	1.3	8.4	8.4	0.0	1.4	8.3	8.3
	1.4	9.3	1.3	2.0	12.5	12.5	9.6	1.4	8.2	8.2	0.0	1.4	8.2	8.2
	1.4	9.5	1.5	2.0	12.5	12.5	9.3	1.5	8.3	8.3	0.0	1.4	8.3	8.3
11/2			1.5	4.0	12.4	12.5	10.7	1.5	8.3	8.3	0.0	1.5	8.2	8.2
	1.5	9.5	1.5	4.0	12.7	12.6	10.8	1.5	8.4	8.4	0.0	1.4	8.4	8.4
	1.4	9.6	1.6	4.0	12.5	12.5	11.2	1.6	8.3	8.3	0.0	1.4	8.5	8.5
11/3			1.1	6.0	12.4	12.4	10.0	1.4	8.3	8.3	0.0	1.4	8.3	8.3
	1.4	9.8	1.6	4.0	11.9	11.9	9.9	1.4	8.3	8.3	0.0	1.4	8.3	8.3
	1.4	9.8	1.6	6.0	12.0	12.0	10.8	1.5	8.4	8.4	0.0	1.5	8.4	8.4
AVG:	1.4	9.4	1.5		12.6	12.6	9.9	1.4	8.4	8.4		1.4	8.3	8.3

Fishways are inspected twice daily plus one SCADA inspection.