

The Dalles Dam Fishway Status Report

10/28/18

Inspection Period: Oct. 21st, - Oct. 27th, 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: 59.0 °F	Secchi: 5+ feet
NORTH FISHWAY						
Exit differential	0	≤ 0.5'			INTERMITTANT HIGH FOREBAY WATER ELEVATION > 160.0'	
Count station differential	0	≤ 0.3'				
Weir crest depth	0	1.0' ± 0.1'				
Entrance differential	0	1.0' - 2.0'	1.3			
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'				
153 Weir crest depth	0	1.1' ± 0.1'	periods of >1.2	10/20 am, pm		
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')	12.5			
Entrance weir E3	0	depth (≥ 8')	12.5			
Collection channel velocity	0	1.5 - 4 fps	2.32 fps	Range: FU2, 4.78fps to MU 20, 2.05 fps on 10/14/18		
Transportation channel velocity	0	1.5 - 4 fps	2.53 fps			
North channel velocity	0	1.5 - 4 fps	2.4 fps			
South channel velocity	0	1.5 - 4 fps	3.99 fps			
West entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir W1	0	depth (≥ 8')	8.3			
Entrance weir W2	3	depth (≥ 8')	8.3	LOW TAILWATER, W2 STICKY-CLOSE TO "BOTTOM OUT" FOR DEPTH		
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

Current Outages;

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

MU15 OOS transformer replacement. RTS 11/01/2018

MU16 OOS transformer replacement. RTS 6/29/2019

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

Maintenance

Dewatering schedule complete. East ladder dewater Dec4. North ladder dewater Jan 15. Schedule and task list provided to FPOM.

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

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

Planning 154 -157 rehab/weir wheel replace next 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 completed for the year by project fisheries. Samples provided to Portland State Univ. No mussels found to date.

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

AWS construction - Commissioning test complete.

PSMFC weekly sampling completed for the North Wasco County PUD's. New sample collection tank design in review. Installation planned for this winter.

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.

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.

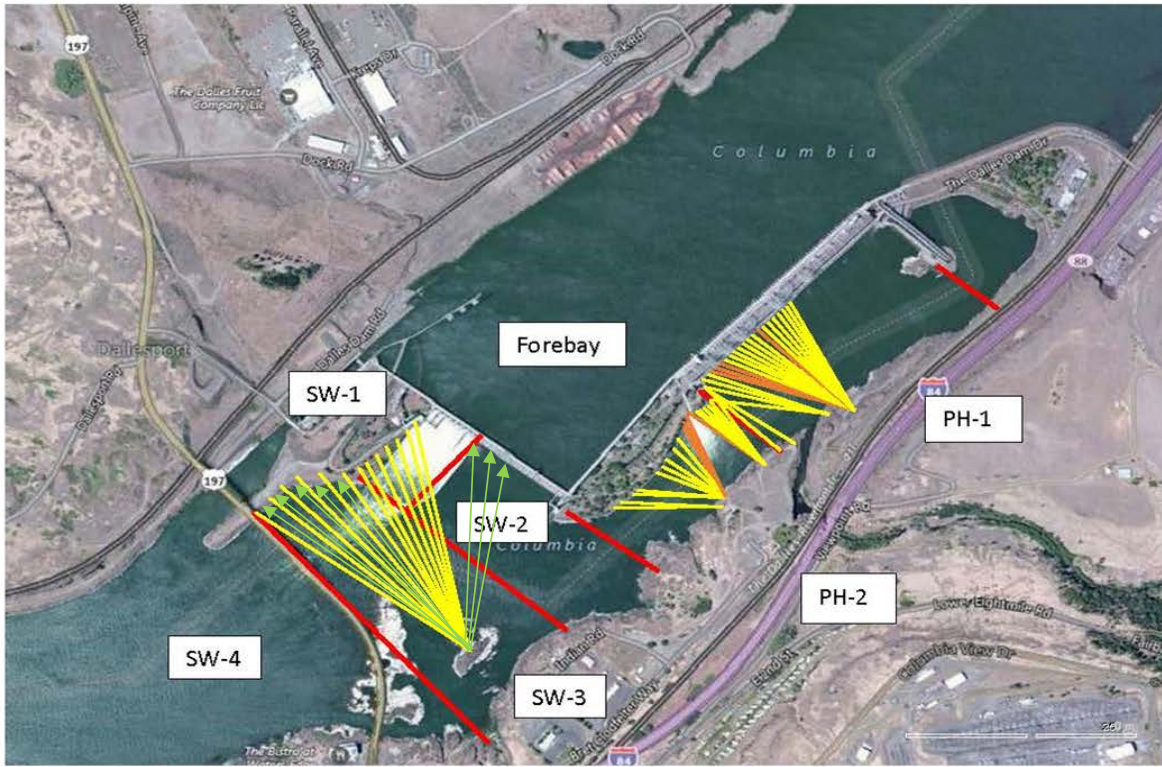
Fish unit breaker replace .- Prep work in progress. Installation 12/1/18 - 1/14/19.

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			
10/21	CEA	AM	FB	0	0	1	0	0	0	0	0	0	0	0	1	2	GBHE COME 1 COME, 2 GBHE	
			PH1	0	0	0	17	0	0	0	0	0	0	0	1	29		47
			PH2	10	0	0	0	0	0	0	0	0	0	0	0	0		10
			SW1	0	0	2	0	0	0	0	0	0	0	0	0	0		2
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW3	0	0	0	41	0	0	0	0	0	0	0	0	3		44
SW4	0	150	0	0	0	0	0	0	0	0	0	0	0	150				
10/22	JED	PM	FB	1	10	0	0	0	0	19	0	0	0	0	0	30	24 COME sunny, warm, calm 11 COME, 1 GBHE	
			PH1	1	0	1	27	0	0	0	0	0	0	1	23	53		
			PH2	1	0	2	0	0	0	0	0	0	0	0	0	3		
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW2	0	0	3	0	0	0	0	0	0	0	0	0	0		3
			SW3	0	0	1	40	0	0	0	0	0	0	0	0	0		41
SW4	0	180	0	0	0	0	0	0	0	0	0	11	1	192				
10/23	JWR	AM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	COME	
			PH1	0	0	1	16	0	0	0	0	0	0	0	0	3		20
			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	46	0	0	0	0	0	0	0	0	0		47
SW4	0	112	1	26	0	0	0	0	0	0	0	0	0	139				
10/24	JED	PM	FB	0	4	0	0	0	0	0	0	0	0	0	1	5	1 BAEA feeding on carcass 28 COME Calm, overcast, cool. 5 COME, 2GBHE NF	
			PH1	0	0	1	22	0	0	0	0	0	0	0	0	1		51
			PH2	0	0	1	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	1	0	0	0	0	0	0	0	0	0	0	0		1
			SW3	0	0	0	60	0	0	0	0	0	0	0	5	2		67
SW4	35	85	0	12	0	0	0	0	0	0	0	0	0	132				
10/25	JWR	AM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	COME	
			PH1	0	0	0	24	0	0	0	0	0	0	0	0	22		46
			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	1	1	0	0	0	0	0	0	0	0	0	0		2
			SW3	0	0	0	31	0	0	0	0	0	0	0	0	0		31
SW4	0	16	0	0	0	0	0	0	0	0	0	0	0	16				
10/26	JWR	PM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	COME	
			PH1	0	0	0	26	0	0	0	0	0	0	0	0	20		46
			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	52	0	0	0	0	0	0	0	0	0		52
SW4	0	73	0	3	0	0	0	0	0	0	0	0	0	76				
10/27	JWR	AM	FB	0	20	0	0	0	0	0	0	0	0	0	0	20	COME	
			PH1	0	0	0	4	0	0	0	0	0	0	0	0	23		27
			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	1	0	0	0	0	0	0	0	0	0	0		1
			SW3	0	0	0	36	0	0	0	0	0	0	0	0	0		36
SW4	0	12	0	5	0	0	0	0	0	0	0	0	0	17				

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

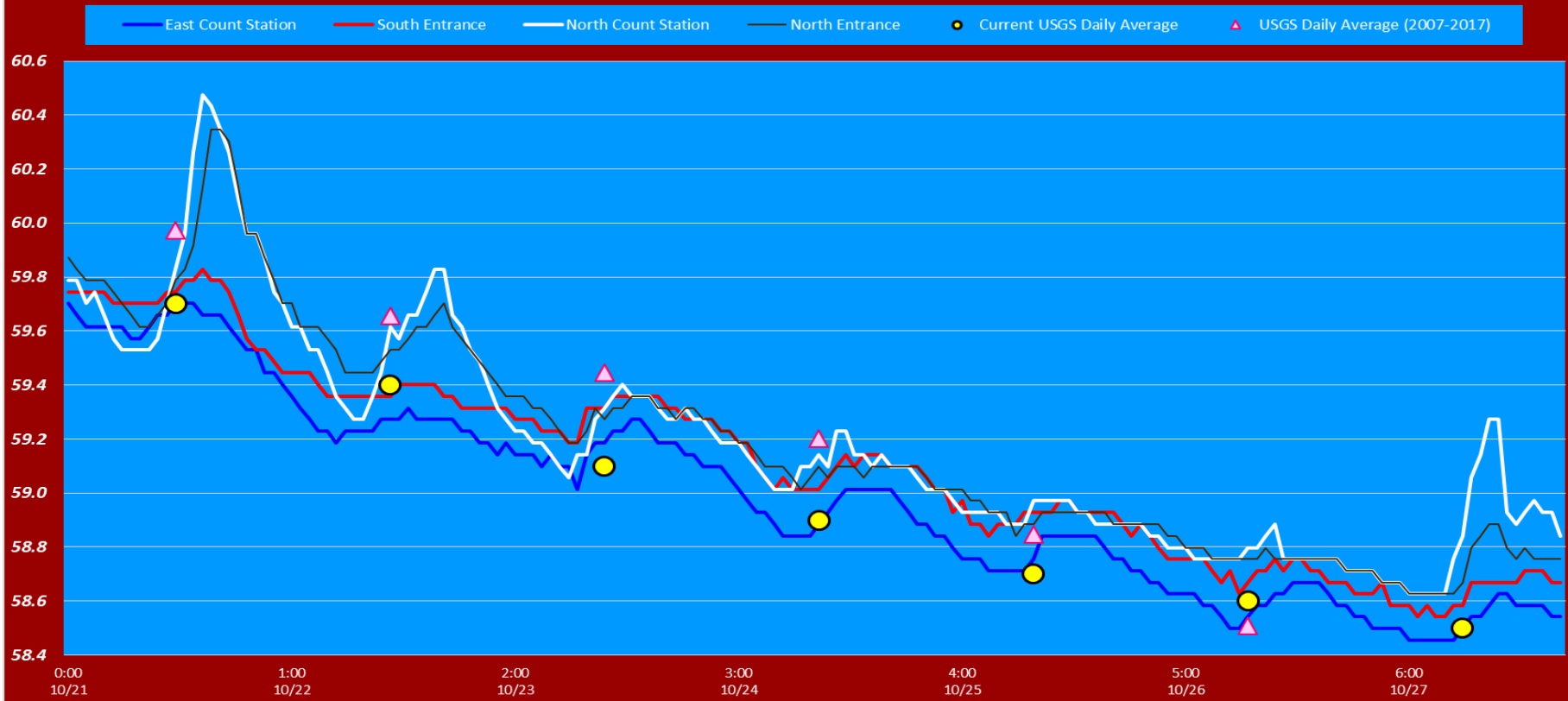
The Dalles East

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
10/21	378	298	80	184	128	56	121	101	20	0	0	0	0
10/22	251	196	55	196	124	72	66	61	5	0	0	0	0
10/23	531	479	52	120	66	54	63	58	5	0	0	0	0
10/24	211	173	38	116	74	42	50	43	7	0	0	0	0
10/25	260	234	26	123	70	53	39	34	5	0	0	0	0
10/26	324	269	55	114	65	49	33	26	7	0	0	0	0
10/27	138	112	26	102	61	41	54	47	7	0	0	0	0
total	2053	1511	542	1650	1120	530	469	409	60	0	0	0	0

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
10/21	48	40	8	18	13	5	23	18	5	0	0	0	0
10/22	49	38	11	20	14	6	18	18	0	0	0	0	0
10/23	62	54	8	20	13	7	8	7	1	0	0	0	0
10/24	58	52	6	33	22	11	18	18	0	0	0	0	0
10/25	74	66	8	27	16	11	2	1	1	0	0	0	0
10/26	102	91	11	18	13	5	11	10	1	0	0	0	0
10/27	67	53	14	31	18	13	13	12	1	0	0	0	0
total	51	46	5	30	20	10	22	17	5	0	0	0	0
% North	2.4	3.0	0.9	1.8	1.8	1.9	4.5	4.0	7.7	0.0	0.0	0.0	0.0

The Dalles Dam Adult Fish Ladder(s) River Temperature



USGS: USGS River Temps			
Secchi:		Temperatures	
10/21	5+	Sun	59.7
10/22	5+	Mon	59.4
10/23	5+	Tue	59.1
10/24	5+	Wed	58.9
10/25	5+	Thurs	58.7
10/26	5+	Fri	58.6
10/27	5+	Sat	58.5
	5+	AVG	59.0

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

SCADA INSPECTION
= Out of criteria

Date:	North Ladder			East Ladder										
	North Entrance		Differential	East Entrance				West Entrance			South Entrance			
	Differential	N1 Depth		E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth
10/21			1.5		11.4	11.4	7.7	1.5	8.3	7.4		1.4	8.2	8.3
	1.1	9.0	1.5		11.1	11.0	7.8	1.4	8.3	7.4		1.2	8.4	8.3
	1.1	8.8	1.6		11.5	11.5	7.7	1.5	8.3	7.4		1.3	8.3	8.4
10/22			1.4		12.0	12.0	9.7	1.4	8.7	8.7		1.4	8.3	8.3
	1.5	8.8	1.5		12.1	12.1	9.2	1.5	8.4	8.4		1.4	8.4	8.4
	1.4	8.9	1.5		11.9	11.9	9.0	1.5	8.5	8.5		1.3	8.4	8.4
10/23			1.5		12.0	12.0	8.9	1.5	8.4	8.4		1.4	8.3	8.3
	1.3	9.3	1.6		12.1	12.1	10.0	1.6	8.2	8.2		1.5	8.2	8.2
	1.5	9.1	1.7		12.5	12.5	11.0	1.6	8.4	8.4		1.5	8.3	8.3
10/24			1.5		12.5	12.5	10.5	1.4	8.3	8.3		1.4	8.4	8.4
	1.4	9.0	1.7		12.5	12.5	10.7	1.6	8.3	8.3		1.5	8.3	8.3
	1.4	9.0	1.5		13.0	13.0	11.1	1.5	8.3	8.3		1.5	8.3	8.4
10/25			1.3		13.0	13.0	10.4	1.5	8.3	8.3		1.4	8.3	8.3
	1.3	9.3	1.6		13.0	13.1	9.6	1.6	8.3	8.3		1.5	8.2	8.2
	1.4	9.2	1.5		13.1	13.1	9.3	1.5	8.4	8.3		1.5	8.2	8.2
10/26			1.8	13.0	13.1	9.9	1.5	8.3	8.3	1.3	8.5	8.5		
	1.4	9.3	1.5	13.1	13.0	10.1	1.5	8.2	8.6	1.5	8.3	8.2		
	1.3	9.3	1.5	13.1	13.1	10.1	1.6	8.1	8.7	1.4	8.4	8.4		
10/27			1.7	13.0	13.0	9.3	1.5	8.2	8.8	1.4	8.3	8.3		
	1.3	9.3	1.5	13.5	13.5	9.7	1.4	8.2	8.6	1.4	8.4	8.4		
	1.3	9.3	1.5	13.0	13.0	9.6	1.5	8.2	8.7	1.4	8.3	8.3		
AVG:	1.3	9.1	1.5	12.5	12.5	9.6	1.5	8.3	8.3	1.4	8.3	8.3		

Fishways are inspected twice daily plus one SCADA inspection.