

The Dalles Dam Fishway Status Report

10/14/18

Inspection Period: Oct. 7 - Oct. 13th, 2018

THE DALLES DAM



US Army Corps
of Engineers
Portland District

The Dalles Project-Fisheries
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The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: Comments	Temperature: Secchi:
			21 Aquatic weeds abound on racks	62.4 °F 5.3 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'	1.3	
Entrance weir N1	0	depth (≥ 8')	9.2	
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	1.0' ± 0.1'	>1.1'	
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')	13.5	
Entrance weir E3	0	depth (≥ 8')	13.5	
Collection channel velocity	0	1.5 - 4 fps	2.32 fps	Range: MU2, 2.77 fps to MU 1, 1.43fps on 10/9/18
Transportation channel velocity	0	1.5 - 4 fps	2.42 fps	
North channel velocity	0	1.5 - 4 fps	2.52 fps	
South channel velocity	0	1.5 - 4 fps	3.35 fps	
West entrance differential	0	1.0' - 2.0'	1.5	
Entrance weir W1	0	depth (≥ 8')	8.5	
Entrance weir W2	0	depth (≥ 8')	8.5	
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	3-1,3-2, 3-3,8-1,8-3, 18-2 and endgate open	
Turbine trashrack drawdown	0	<1.5', biweekly		
Spill volume/pattern	0	None		
Turbine Unit Priority	0	per FPP		
Turbine 1% Efficiency	0	per FPP		

OTHER ISSUES:

Birds and Sea lions:

Few birds on project and foraging. No sea lion sightings this week.
Refer to avian count tab for bird activity.

Operation:

North and east adult fishways in full operation
Sluiceway open with 6 sluiceway operation (3, 8 & 18)

Current Outages;

MU1 OOS annual RTS 10/18/2018
MU2 OOS annual RTS 10/18/2018
MU5 forced OOS blade seals. RTS 1/21/2018
MU13 and MU14 OOS for line 5 outage relating to T8 transformer replace. RTS 9/10/2019
MU15 OOS transformer replacement. RTS 11/01/2018
MU16 OOS transformer replacement. RTS 6/29/2019
MU19 OOS transformer acetylene, RTS 10/25/18

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 rehab continues. Pump 4 requires pump/motor replacement. RTS by 12/1/18.
Planning 154 -157 rehab/weir wheel replace next winter. Wheel material ordered.
Diffuser valve rehab beyond project maintenance capability. Exploring options.
Fish related /non-fish funded items; Spillway assessment, spillway crane replace and spillgate 9. All awaiting funding.
All spillway items on Critical Infrastructure. Spillgate 9 on large cap list, projected for 2022. Comprehensive spillway assessment review underway.

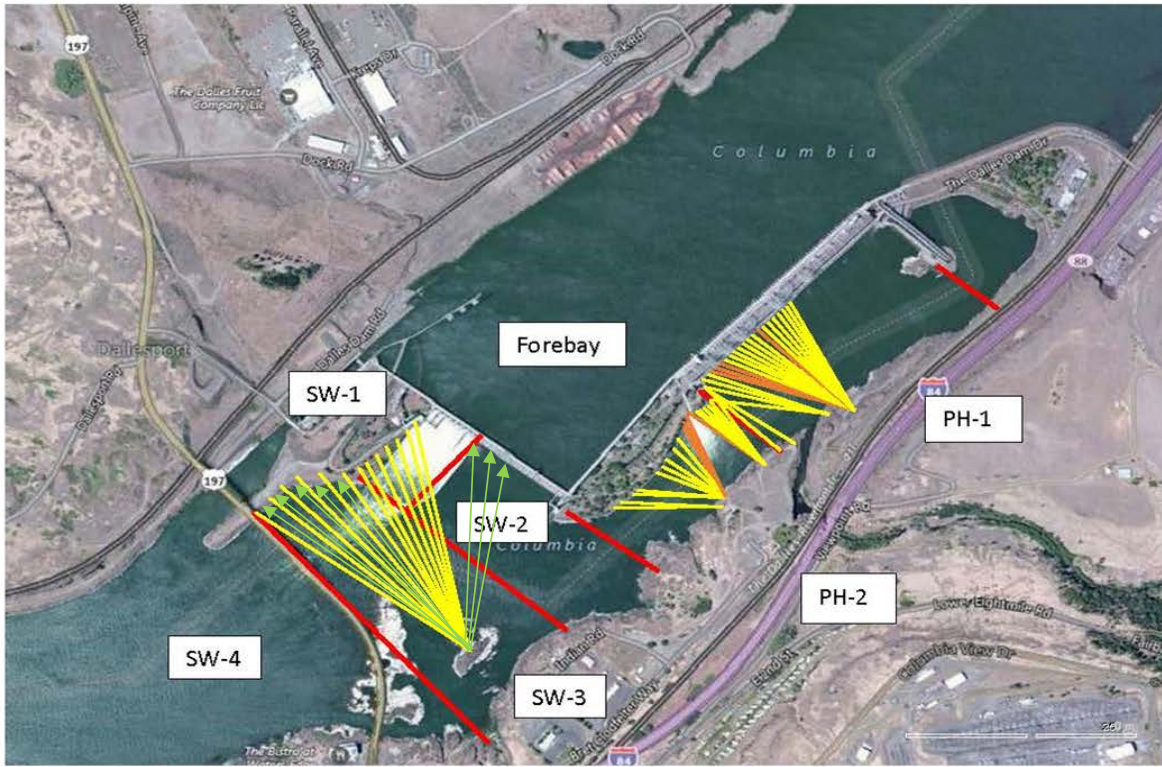
Zebra mussel veliger sampling completed for the year. Awaiting results.

Research/Construction/Contractors:

Lower Columbia River Forebay Temperature Monitoring – Done for season Equipment removal end of Oct.
AWS construction - Commissioning test complete.
PSMFC weekly sampling completed for the North Wasco County PUD's. New sample collection tank design in review.
PITAGS North and east fishladder data collection at count stations continues.
Fish Counters - Continues through Oct31.
Pikeminnow dam angling - Caught 1785 YTD . **Release of invasive bass/walleye bycatch** being discussed at FPOM
ODFW monthly fishway inspections continue. No problems reported.
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, 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: 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		
10/7	JWR	AM	FB	0	0	0	0	0	0	0	0	0	25	0	0	25	1 -pied-billed
			PH1	0	0	26	0	0	0	0	0	0	0	0	0	26	
			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	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	0	1	38	0	0	0	0	0	0	0	0	39	
10/8	JWR	PM	FB	0	0	0	0	0	0	14	0	0	0	0	0	14	
			PH1	0	0	1	8	0	0	0	0	0	0	0	0	9	
			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	0	0	1	0	0	0	0	0	0	0	0	0	1	
			SW3	0	0	2	25	0	0	0	0	0	0	0	0	27	
10/9	JWR	AM	FB	0	2	0	1	0	0	0	0	0	0	0	0	3	COME
			PH1	0	0	0	14	0	0	0	0	0	0	0	9	23	
			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	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	30	1	35	0	0	0	0	0	0	0	0	66	
10/10	JWR	PM	FB	0	0	0	0	0	0	0	62	0	0	1	0	63	BAEA COME
			PH1	0	0	0	19	0	0	0	0	0	0	0	9	28	
			PH2	2	0	0	0	0	0	0	0	0	0	0	0	2	
			SW1	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	
			SW3	0	7	0	40	0	0	0	0	0	0	0	0	47	
10/11	JWR	AM	FB	0	0	0	0	0	0	1	34	0	0	0	1	36	BAEA
			PH1	0	0	0	4	0	0	0	0	0	0	0	0	4	
			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	0	0	1	0	0	0	0	0	0	0	0	0	1	
			SW3	0	17	0	24	0	0	0	0	0	0	0	0	41	
10/12	JED	PM	FB	0	0	0	0	0	0	40	0	0	0	0	0	40	BAEA GBHE sunny, warm calm
			PH1	0	0	3	20	0	0	0	0	0	0	4	0	27	
			PH2	1	0	0	0	0	0	0	0	0	0	0	0	1	
			SW1	0	0	1	0	0	0	0	0	0	0	0	1	2	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	5	3	15	0	0	0	0	0	0	0	0	23	
10/13	JED	AM	FB	0	0	0	2	0	0	49	0	0	0	0	2	53	BAEA, GBHE COME sunny, warm calm GBHE
			PH1	0	0	2	14	0	0	0	0	0	0	0	7	23	
			PH2	1	0	0	0	0	0	0	0	0	0	0	0	1	
			SW1	0	0	0	2	0	0	0	0	0	0	0	0	2	
			SW2	1	0	0	0	0	0	0	0	0	0	0	0	1	
			SW3	0	0	0	45	0	0	0	0	0	0	0	1	46	

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

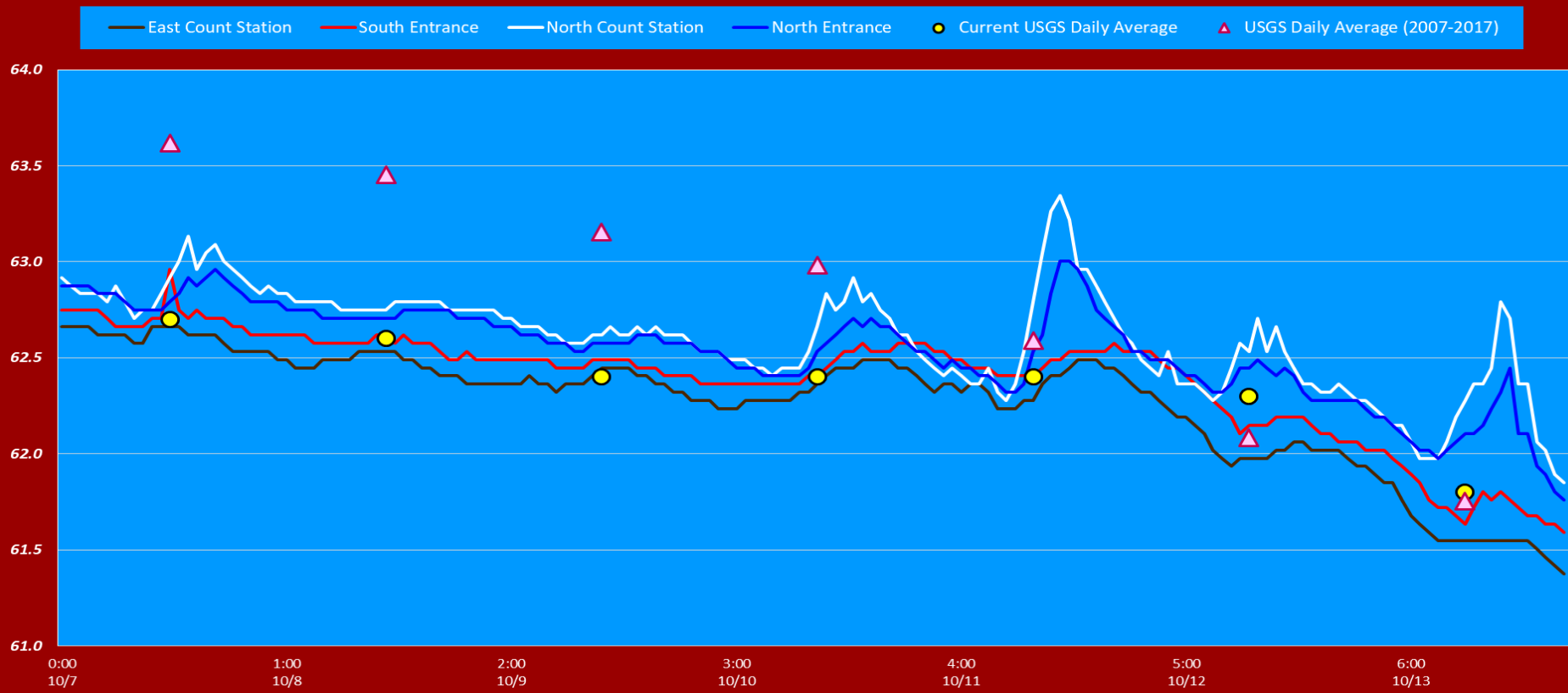
The Dalles East

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
10/7	1240	956	284	1309	895	414	322	298	24	0	0	0	0
10/8	1657	1319	338	1048	760	288	319	300	19	0	0	0	0
10/9	1249	983	266	482	342	140	124	108	16	0	0	0	0
10/10	842	644	198	659	456	203	308	290	18	1	0	0	0
10/11	892	713	179	640	413	227	186	176	10	0	0	0	1
10/12	620	446	174	508	368	140	122	102	20	0	0	0	1
10/13	264	176	88	333	251	82	52	44	8	0	0	0	0
total	6764	5237	1527	4979	3485	1494	1433	1318	115	1	0	0	2

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
10/7	638	500	138	603	422	181	136	74	62	0	0	0	0
10/8	672	539	133	795	541	254	248	180	68	0	0	0	0
10/9	1407	970	437	1017	712	305	259	233	26	0	0	0	0
10/10	841	709	132	613	425	188	226	221	5	0	0	0	0
10/11	750	494	256	566	392	174	153	137	16	0	0	0	0
10/12	512	442	70	467	304	163	143	142	1	0	0	0	0
10/13	428	310	118	448	300	148	119	100	19	0	0	0	1
total	5248	3964	1284	4509	3096	1413	1284	1087	197	0	0	0	1
% North	43.7	43.1	45.7	47.5	47.0	48.6	47.3	45.2	63.1	0.0	0.0	0.0	33.3

The Dalles Dam Adult fish Ladder(s) River Temperatures



	Secchi:		USGS: Temperatures
10/7	5.0	Sun	62.7
10/8	5.0	Mon	62.6
10/9	5.0	Tue	62.4
10/10	5.0	Wed	62.4
10/11	5.0	Thurs	62.4
10/12	6.0	Fri	62.3
10/13	6.0	Sat	61.8
	5.3	AVG	62.4

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
10/7			1.4		13.5	13.5	10.4	1.4	8.4	8.4		1.4	8.3	8.3
	1.3	9.2	1.5		13.5	13.5	10.4	1.5	8.4	8.4		1.4	8.3	8.3
	1.3	9.2	1.5		13.5	13.5	10.4	1.5	8.4	8.4		1.4	8.3	8.3
10/8			1.5		13.6	13.6	11.3	1.5	8.5	8.5		1.5	8.2	8.2
	1.3	9.2	1.5		13.5	13.5	11.2	1.6	8.4	8.4		1.4	8.3	8.3
	1.3	9.2	1.5		13.5	13.5	11.3	1.6	8.4	8.4		1.4	8.4	8.4
10/9			1.8		13.7	13.7	12.3	1.8	8.4	8.4		1.5	8.3	8.3
	1.3	9.2	1.5		13.4	13.4	12.2	1.5	9.0	9.0		1.5	8.2	8.2
	1.3	9.5	1.5		13.4	13.4	11.8	1.5	8.9	8.9		1.5	8.2	8.2
10/10			1.4		13.5	13.5	11.2	1.4	8.8	8.8		1.3	8.4	8.4
	1.2	9.6	1.4		13.5	13.5	11.0	1.4	8.8	8.8		1.4	8.4	8.4
	1.4	9.1	1.4		13.6	13.6	11.1	1.6	8.4	8.4		1.5	8.3	8.3
10/11			1.7		13.6	13.6	11.2	1.6	8.6	8.6		1.4	8.3	8.3
	1.4	9.2	1.4		13.6	13.6	11.1	1.6	8.4	8.4		1.5	8.3	8.3
	1.4	9.1	1.4		13.4	13.5	11.3	1.6	8.4	8.4		1.4	8.4	8.4
10/12			1.5	13.5	13.6	11.5	1.5	8.6	8.6	1.5	8.4	8.4		
	1.4	9.2	1.4	13.4	13.5	11.2	1.5	8.5	8.5	1.4	8.3	8.3		
	1.4	9.1	1.5	13.5	13.6	11.5	1.5	8.4	8.4	1.5	8.3	8.3		
10/13			1.3	13.5	13.5	10.9	1.5	8.5	8.5	1.4	8.2	8.2		
	1.3	9.2	1.5	13.5	13.5	10.7	1.6	8.4	8.4	1.4	8.3	8.3		
	1.4	8.9	1.4	13.6	13.6	10.8	1.5	8.4	8.4	1.5	8.2	8.2		
AVG:	1.3	9.2	1.5		13.5	13.5	11.2	1.5	8.5	8.5		1.4	8.3	8.3

Fishways are inspected twice daily plus one SCADA inspection.



Avian resting rocks below TDA. Investigating PIT scanning.