The Dalles Dam Fishway Status Report

12/28/2014 Inspection Period: 12/21/2014 to 12/27/2014

THE DALLES DAM



The Dalles Project-Fisheries P.O. Box 564

The Dalles, OR 97058-9998 Phone: 541-506-3800

inspected once		

Fishways are inspected once per day during the winter maintenance period.												
The Dalles Dam	Inspections	Criteria Total Number of Inspections:				Temperature:	45.3	F				
The Danes Dani	Out of Criteria	Limit	Comments		Secchi: > 4.0 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'	Average	1.4								
Entrance weir N1	0	depth (≥ 8')	Average	9.2								
Entrance weir N2	0	Closed										
PUD Intake differential	0	≤ 0.5'										
			EAST F	ISHWAY								
Exit differential	NA	≤ 0.5'										
Removable weirs 154-157	NA	Per forebay	Auto adjusts 1' incr	rements.								
Weir 158-159 differential	NA	1.0' ± 0.1'										
Count station differential	NA	≤ 0.3'										
Weir crest depth	NA	1.0' ± 0.1'										
Junction pool weir JP6	NA	depth (≥ 7')	Average	N/A								
East entrance differential	NA	1.0' - 2.0'	Average	N/A								
Entrance weir E1	NA	No criteria	Average	N/A	Manually	adjusted as needed.						
Entrance weir E2	NA	depth (≥ 8')	Average	N/A								
Entrance weir E3	NA	depth (≥ 8')	Average	N/A								
Collection channel velocity	NA	1.5 - 4 fps	Average	N/A								
Transportation channel velocity	NA	1.5 - 4 fps	Average	N/A	Fishway velocities co	oncluded Dec 1 and will re	sume Mar 1,	2015 as per Fish				
North channel velocity	NA	1.5 - 4 fps	Average	N/A		Passage Plan.						
South channel velocity	NA	1.5 - 4 fps	Average	N/A								
West entrance differential	NA	1.0' - 2.0'	Average	N/A								
Entrance weir W1	NA	depth (≥ 8')	Average	N/A								
Entrance weir W2	NA	depth (≥ 8')	Average	N/A								
Entrance weir W3	NA	No criteria	Closed									
South entrance differential	NA	1.0' - 2.0'	Average	N/A								
Entrance weir S1	NA	depth (≥ 8')	Average	N/A								
Entrance weir S2	NA	depth (≥ 8')	Average	N/A								
			JUVENILE	PASSAG	Ε							
Sluicegate operation	0	1, & 18			tes 1-2,1-3, 18-1 &	18-2 are open.						
Turbine trashrack drawdown	NA	<1.5', wkly	Resume on Marc	ch 1								
Spill volume	NA	40% ±1%	Average	On seal.								
Spill Pattern	NA	per FPP	Spillbay	On seal.								
Turbine Unit Priority.	NA	per FPP	Fish passage sea									
Turbine 1% Efficiency	NA	per FPP	Fish passage sea	ason resui	mes March1			·				

OTHER ISSUES:

Birds/Sea lions:

Bird observation data collected once daily. Refer to Avian Zone Map.

Operations:

Gatewell drawdown completed for the season and will resume March 1, 2015.

Current Outages:

T8 (MU15 & MU16) de-rated to single unit full load ops through 2017.

East Fish Ladder out of service12/1/2014 through end of Jan for annual maintenance.

Fish unit F1 out of service 12/1/2014 to 1/29/2015 for overhaul maintenance.

Fish unit F2 out of service 12/1/2014 to 1/15/2015 for annual maintenance.

Maintenance:

Exit weir 158 fabrication final assembly complete. Installation underway.

Extensive weir guide damage found on west and east entrances. Repair underway. Likely only one weir guide complete this year.

Three weirs removed for wheel replacement with high density plastic. Work began Dec 23. Will complete half of entrance weir wheels.

Three of 4 collection channel dewatering pumps needing rehab were pulled on deck. Repair underway.

Permanent east fishway exit boom delivered. Contract underway for installation before March. Further assessment for oil spill protection continues.

Long term repair plans awaiting funding; Upgrade east exit weirs 154-157, north fishladder rock stabilization, remove collection channel diffusers, replace all entrance weir wheels with plastic composite wheels.

North fish ladder rock wall stabilization project assigned PM. Awaiting start.

Fish related but non-fish funded items; spillway evaluation, spillway crane rehab, spillgate 9 wire rope replacement, HDC update fish unit reliability assessment, planning upgrade fish unit breakers and fish unit transformer replacement.

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

Studies:

Investigating PIT tag 15 mile creek steelhead overshooting The Dalles. Possible need for some winter sluiceway operation. Discussed at Dec FPOM. FPOM MOC form being revised with sluiceway winter operation proposal and justification. To be reviewed in Jan.

Investigating de-icing alternatives and sensitive locations near fishways. SOP and sensative area map in progress.

Investigating north fish count station mods for visibility improvement and use of video to reduce fish counting cost. Demo prestented at Dec FPOM.

EFL Backup; Plans/Specs 60% review underway. Includes 10'pipe from forebay to AWS. A 1400cfs flow test planned in Feb. Product Development

PUD 'freedom' second turbine proposal underway. Field test proposal for summer 2015 being reviewed and presented at Dec FPOM.

Spill test for more fish passage to north fishladder completed. Results showed benefit. FPOM discussion continues for when to implement. District working on justification for spillgate 9 repair.

Research/Contractors:

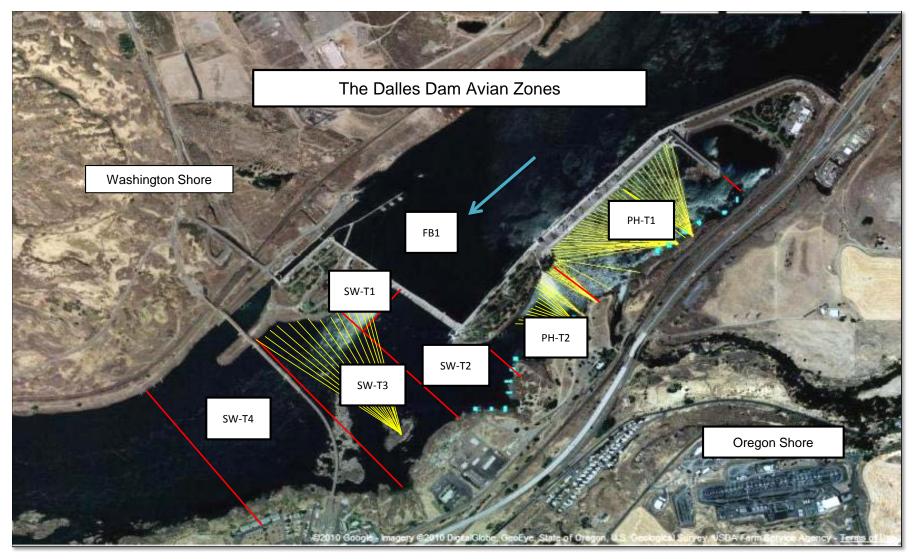
PSMFC PIT tag monitoring continues at north count station. Outage maitenance as needed for east count station antenna.

Normandeau fish counters to resume Apr1. East bathroom minor upgrades planned this winter.

University of Idaho maintaining antennas and continuing downloads for winter steelhead.

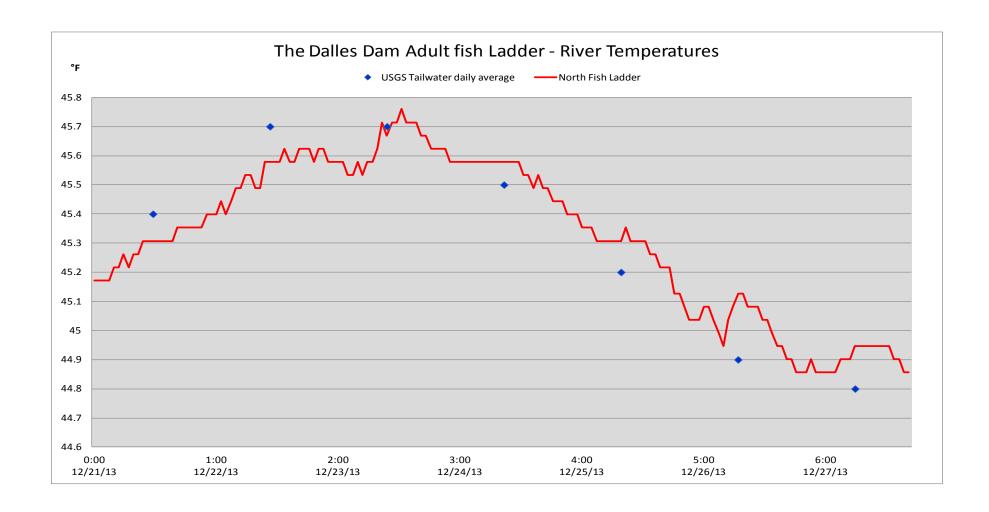
Approved by: Ron Twiner

Operation Project Manager The Dalles Dam



Avian lines in yellow, zones in red.

2014 Piscivorous Bird Counts													
F=foraging, NF=non-foraging													
		Time	Time _ Gull Cormorant Caspian tern Other				Caspian tern		Other		Total		
Date	Observer (24 hr) Zo		Zone	F	NF	F	NF	F	NF	F	NF	birds in zone	Notes
		10:09	FB	0	0	0	1	0	0	0	37	38	1 BAEA & 36 grebes
		9:47	PH1	0	0	0	23	0	0	0	21	44	21 mergansers
42/24	FUIZ	9:52	PH2	0	0	0	0	0	0	0	2	2	2 BAEA
12/21	EHK	10:24 9:54	SW1 SW2	0	0	0	0	0	0	0	0	0	
		9:56	SW3	0	0	0	46	0	0	0	0	46	
		10:27	SW4	0	11	0	0	0	0	0	1	12	1 BAEA
		9:32	FB	0	1	0	2	0	0	0	50	53	44 grebes, 3 mergansers, 3 BAEA
		8:32	PH1	0	0	0	3	0	0	0	16	19	16 mergansers
		8:39	PH2	0	0	4	0	0	0	0	22	26	18 BAEA, 4 GBH
12/22	EHK	9:19	SW1	0	22	0	0	0	0	0	2	24	2 mergansers, gulls on wing wall
		8:44	SW2	0	0	0	0	0	0	4	0	4	4 BAEA
		8:45	SW3	0	11	0	50	0	0	0	1	62	1 BAEA
		9:13	SW4 FB	0	0 2	0 5	0	0	0	0	1 38	2 45	1 BAEA
		13:38 12:26	PH1	3	1	16	37	0	0	0	12	69	2 BAEA, 36 grebe COME
		12:33	PH2	1	0	0	0	0	0	0	14	15	9 BAEA, 5 GBHE
12/23	/WR	13:35	SW1	0	8	0	0	0	0	0	0	8	3 Briefi, 3 GBITE
, -	,	12:39	SW2	0	0	0	0	0	0	0	0	0	
		13:17	SW3	0	1	0	64	0	0	0	1	66	BAEA
		13:20	SW4	0	24	0	5	0	0	0	0	29	
		9:44	FB	0	1	0	12	0	0	0	35	48	4 BAEA, 31 grebe
		9:07	PH1	0	0	1	4	0	0	0	11	16	10 COME, 1 GBHE
12/24	/WR	9:14 9:40	PH2 SW1	0	0	0	0	0	0	0	15 1	15 1	11 BAEA, 4 GBHE BAEA
12/24	JWK	9:40	SW2	0	0	0	0	0	0	0	0	0	DALA
		9:28	SW3	0	11	0	43	0	0	0	1	55	BAEA
		9:31	SW4	0	12	0	0	0	0	0	0	12	27.27.
		12:59	FB	0	0	6	0	0	0	0	52	58	grebe
		12:24	PH1	5	0	0	6	0	0	0	1	12	COME
		12:30	PH2	5	0	0	0	0	0	0	20	25	9 BAEA, 11 GBHE
12/25	JWR	12:54	SW1	0	63	0	0	0	0	0	0	63	
		12:34	SW2 SW3	0	3	0	0 45	0	0	0	0	0 48	
		12:48 12:50	SW4	0	9	0	16	0	0	0	0	25	
		11:04	FB	1	1	15	0	0	0	0	29	46	1 BAEA, 28 grebe
		10:16	PH1	2	0	0	2	0	0	0	5	9	COME
		10:16	PH2	0	0	0	0	0	0	0	14	14	12 BAEA, 2 GBHE
12/26	JWR.	11:00	SW1	0	0	0	0	0	0	0	3	3	BAEA
		10:32	SW2	0	0	0	0	0	0	0	0	0	
		10:54	SW3	0	12	0	71	0	0	0	1	84	GBHE
		10:57	SW4	0	44	0	12	0	0	0	0	56	
		12:57	FB	1	5	3	5	0	0	0	39	53	4 BAEA, 35 grebe
		12:25	PH1 PH2	<u>0</u> 5	0	0	7	0	0	0	2 16	9 21	COME
12/27	/WR	12:32 12:53	SW1	0	0	0	0	0	0	0	16	1	13 BAEA, 3 GBHE BAEA
14/41	,,,,,	12:44	SW2	0	0	0	0	0	0	0	0	0	DALA
		12:46	SW3	0	12	0	74	0	0	0	1	87	GBHE
		12:48	SW4	0	44	0	12	0	0	0	0	56	

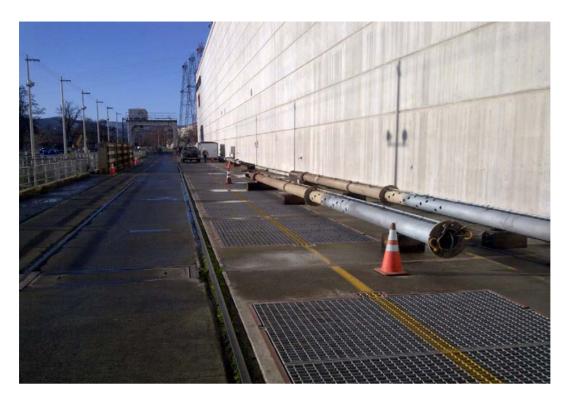


٦	Temperatures		Secchi:
	45.4		5.0
	45.7		5.0
	45.7		4.0
	45.5		4.0
	45.2		4.0
	44.9		3.0
	44.8		3.0
3:	45.3	AVG	4.0

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

= out of criteria

	North	Ladder	East Ladder											
	North E	Entrance		East	Entrance		West Entrance South Entrance							
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	Spill KCFS
	1.4	9.4												
21-Dec-14														
			<u> </u>											
	1.4	9.0												
22-Dec-14														
	4.4	0.0	<u> </u>											
23-Dec-14	1.4	9.2	ļ											
23-060-14														
	1.4	9.0	<u> </u> 											O n
24-Dec-14		0.0												
			†											S
	1.4	9.1												e a
25-Dec-14			Ī											1
]											
	1.3	9.3												
26-Dec-14			<u> </u>											
07.0 44	1.3	9.4												
27-Dec-14			1											
AVG:	1.4	9.2	N/A	N/A	N/A N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
AVG.	1.4	9.2	IN/A	IN/A	IN/A IN/A	IN/A	IN/A	IV/A	IN/A	IN/A	IN/A	IN/A	IN/A	



Collection channel pumps on tailrace deck for rehab.