The Dalles Dam Fishway Status Report

3/15/2015

Inspection Period: 3/8/2015 to 3/14/2015

THE DALLES DAM



The Dalles Project-Fisheries P.O. Box 564

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

PUD Intake differential	Fishways are inspected twice daily plus one SCADA inspection											
Count station differential 0 ≤ 0.5" NORTH FISHWAY	The Dalles Dam	-			Inspections:	14				F		
Exit differential	The Balles Balli	Out of Criteria	Limit				Secchi:	4.3	feet			
Count station differential O												
Weir crest depth		-										
Entrance differential 0 1.0' - 2.0' Daily differentials and weir depths, see AVGS tab. Entrance weir N1 0 depth (≥ 8) Average 9.2 Entrance weir N2 0 Closed Bulkhead installed. PUD Intake differential 0 ≤ 0.5' EAST FISHWAY Exit differential 0 ≤ 0.5' Removable weirs 154-157 2 Per forebay Auto adjusts 1' increments. Weir 156 off by 0.2'. Maintenance notified. Weir 158-159 differential 2 1.0' ± 0.1' Count station differential 0 ≤ 0.3' Weir crest depth 0 1.0' ± 0.1' Junction pool weir JP6 0 depth (≥ 7) Average 11.2 East entrance differential 0 1.0' - 2.0' Average 1.4 Entrance weir E1 0 No criteria Average 5.4 Manually adjusted as needed. Entrance weir E2 0 depth (≥ 8) Average 12.1 Entrance weir E3 0 depth (≥ 8) Average 12.2 Collection channel velocity 0 1.5 - 4 fps Average 2.9 Transportation channel velocity 0 1.5 - 4 fps Average 3.0 North channel velocity 0 1.5 - 4 fps Average 3.5 West entrance differential 0 1.0' - 2.0' Average 3.5 West entrance differential 0 1.0' - 2.0' Average 3.5 South channel velocity 0 1.5 - 4 fps Average 3.5 South channel velocity 0 1.5 - 4 fps Average 3.5 Entrance weir W1 0 depth (≥ 8') Average 3.5 Entrance weir W1 0 depth (≥ 8') Average 3.5 Entrance weir W3 0 No criteria Average 8.7 Entrance weir W3 0 Average 8.7 Entrance weir W3 0 No criteria Average No criteria Manually adjusted as needed. South entrance differential 0 1.0' - 2.0' Average 1.6 Entrance weir S2 0 depth (≥ 8') Average 8.9 out at 6.7' Manually lowered into criteria Entrance weir S2 0 depth (≥ 8') Average 8.9 out at 6.7' Manually lowered into criteria Entrance weir S2 0 depth (≥ 8') Average 8.9 Sluicegate operation 0 Units 1, 18 Sluicegates 1-2,1-3,18-1, &18-2 are open		_										
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Entrance weir N2		0				ferentials and	d weir dept	hs, see A\	/GS tab.			
EAST FISHWAY	Entrance weir N1	0			9.2							
EAST FISHWAY	Entrance weir N2	0		Bulkhead installed.								
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	Sluicegate operation	0	Units 1, 18			open						
Turbine trastifiach drawdowiff U T.D., while Intalige. U-0.1	Turbine trashrack drawdown	0	<1.5', wkly	Range: 0-0.7'		•						
Spill volume On Seel	Spill volume	00	· a a l									
Un Saal	Spill Pattern	on S	eai.									
	Turbine Unit Priority.	0	per FPP	West to east block p	riority starts Ap	r 1						
	Turbine 1% Efficiency	0		<u>'</u>	, ,							

OTHER ISSUES:

Birds/Sea lions:

Bird observation data collected once daily. Refer to Avian Zone Map. Sea lion observed near west entrance, no discernible brand observed. see picture.

Operations:

Calibration performed on 3/11, East exit weir found OOC, E2,E3, South differential and tail water numbers out of calibration, TDE corrected South entrance weirs auto failure. Operating in manual mode.

Gatewell drawdown completed on 3/13. All values were within criteria.

SCADA computer is out of service and return of service is unknown.

ROV inspection of MU4 and MU15 trash racks 3/10; trashracks clean except for a few sticks. See picture.

Current Outages:

T8 (MU15 & MU16) de-rated to 85MW ops through Sept 2017.

MU8 out of service 2/2/2015 to 3/26/2015 for overhaul.

Navigation out of service for annual maintenance 3/7 - 3/21/2015. Upstream gate area dewatered. No fish found

Maintenance:

Entrance weir wheel and guide work to resume next winter outage.

Three collection channel dewatering pumps on deck for rehab, repair delayed due to lack of funding. Two of 6 collection channel pumps remain stuck.

FCQ7 electrical panel for east exit upgrade prep work completed. Planning and parts purchase underway pending funding. Installation next outage season.

Future repair plans; Upgrade east exit weirs 154-157, removal/permanent closure of collection channel diffusers, repair north failed diffusers,

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:

North fishladder rock stabilization project. No new development.

North fish count station mods completed for visibility improvement. March video recording underway. Evaluation to follow.

The Dalles EFL AWS (auxiliary water system) plans and specifications are being prepared. Additional measurements include a hydroacoustic survey of the forebay wall at the construction location for the intake structure and additional wall measurements.

PUD 'freedom' second turbine; Field test proposal summer 2015 out for review.

Research/Contractors:

University of Idaho maintaining antennas. Continuing downloads of winter steelhead.

Research approval letters forwarded for; ODFW forbay Northern Pikeminnow Management Program, PSMFC sampling at PUD intake structure, University of Idaho monitoring fallback movements of steelhead outfitted with radio tags and adult Pacific Lamprey outfitted with half-duplex PIT tags, PSMFC for monitoring and maintaining thin walled PIT tag antennas and computer equipment and USGS total dissolved gas monitoring.

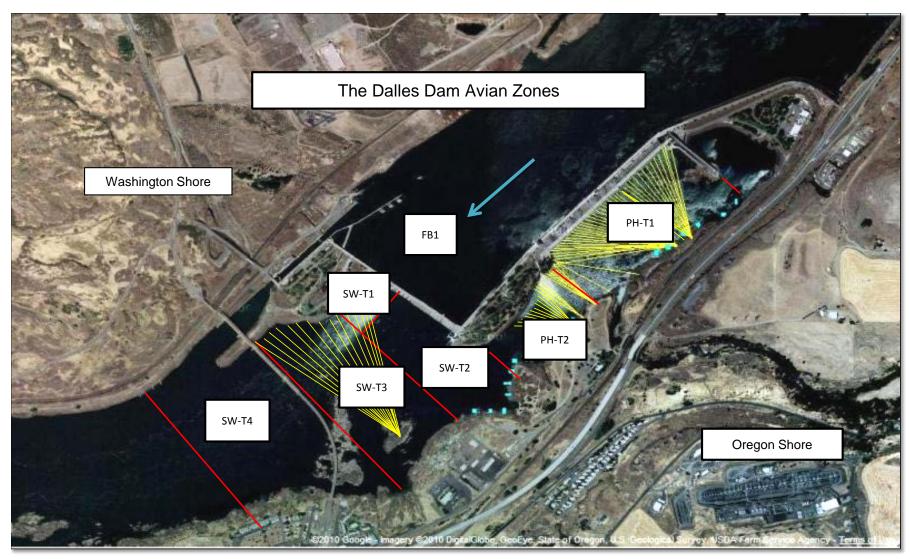
USGS planning to install the TDG equipment next Wednesday, March 18.

Normandea fish counters to start Apr 1. Pre-season meeting to occur Mar 24.

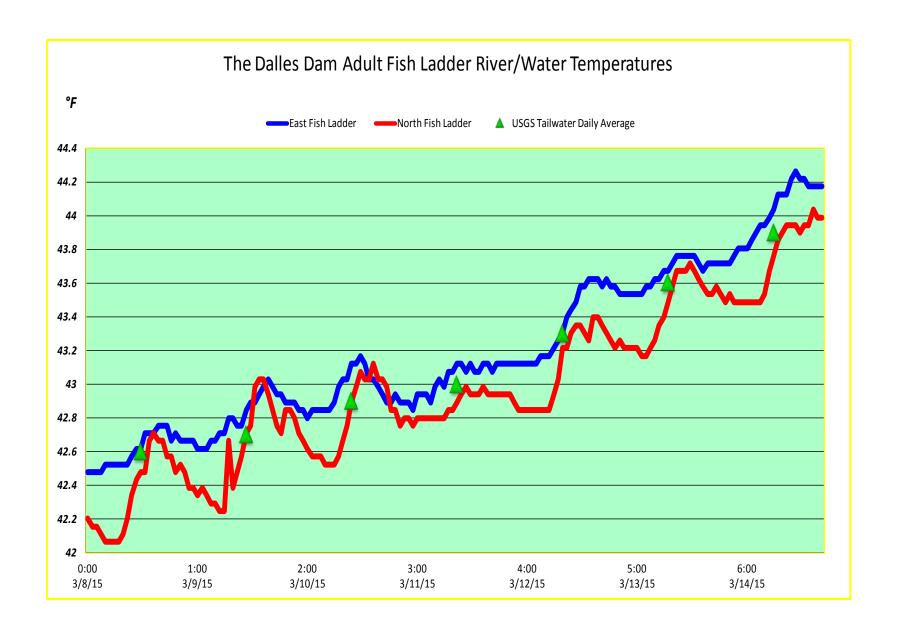
Approved by: Ron Twiner

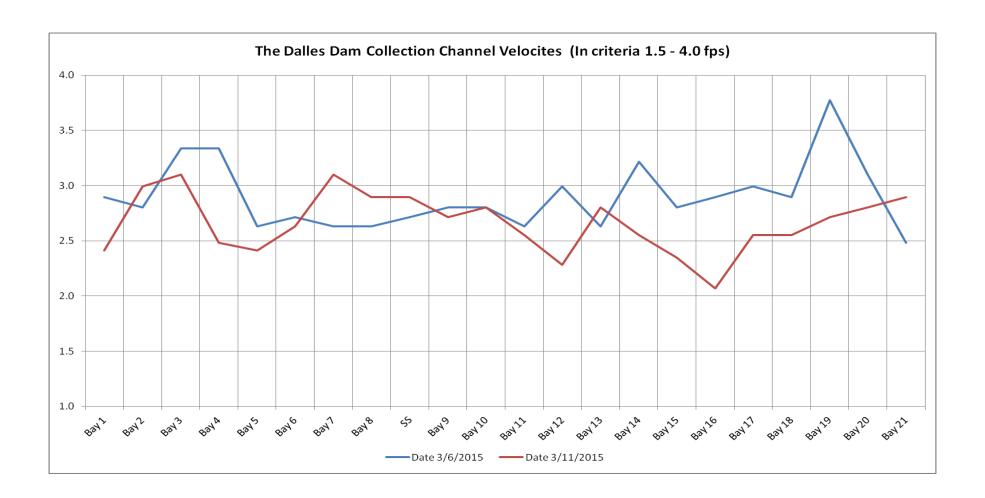
Operation Project Manager The Dalles Dam

2015 Piscivorous Bird Counts													
F=foraging, NF=non-foraging Common Time Total Not													
Date	Observer	Time	Zone	F G	ull NF	F	norant NF	Caspi F	an tern NF	F O	ther NF	Total	Notes
		(24 hr) 10:50	FB	0	0	0	0	0	0	0	0	birds in	
		9:45	PH1	0	0	0	0	0	0	0	0	0	
		9:55	PH2	0	0	0	0	0	0	0	0	0	
3/8/15	PSK	11:07	SW1	0	0	0	0	0	0	0	0	0	
3/0/13	FJK	10:00	SW2	0	0	0	0	0	0	0	0	0	
		10:04	SW3	0	1	0	8	0	0	0	0	9	
		11:16	SW4	0	0	0	0	0	0	0	0	0	
		9:11	FB	0	0	0	0	0	0	0	0	0	
		8:52	PH1	0	0	0	0	0	0	0	0	0	
		8:57	PH2	0	0	0	0	0	0	0	0	0	
3/9/15	JWR			0	0	0	0	0	0	0	0	0	
3/3/13	JWIC	9:08	SW1	0	0		0	0	0	0	0		
		8:59 9:00	SW2	0	0	0	22	0	0	0	0	0 22	
			SW3										
		9:00	SW4	0	0	0	0	0	0	0	0	0	
		15:04	FB	0		0	0	0	0	_		0	
		13:47	PH1	0	0	0	0	0	0	0	0	0	
3/10/15	DCIA	13:54	PH2	0	0	0	0	0	0	0	0	0	
3/10/15	PSK	15:10	SW1	0	0	0	0	0	0	0	0	0	
		14:03	SW2	0	0	0	0	0	0	0	0	0	
		14:05	SW3	0	0	0	19	0	0	0	0	19	
		15:21	SW4	0	0	0	0	0	0	0	0	0	
		9:16	FB	0	0	0	0	0	0	0	0	0	
		8:31	PH1	0	0	0	0	0	0	0	0	0	
2/44/45	IVA/D	8:44	PH2	0	0	0	0	0	0	0	0	0	
3/11/15	JWR	9:11	SW1	0	0	0	0	0	0	0	0	0	
		8:47	SW2	0	0	0	0	0	0	0	0	0	
		8:48	SW3	0	0	0	12	0	0	0	0	12	
		8:49	SW4	0	0	0	0	0	0	0	0	0	
		15:27	FB	0	0	0	0	0	0	0	0	0	
		14:24	PH1	0	0	0	1	0	0	0	0	1	
0/40/45		14:40	PH2	0	0	0	0	0	0	0	0	0	
3/12/15	PSK	15:40	SW1	0	0	0	0	0	0	0	0	0	
		14:40	SW2	0	0	0	1	0	0	0	0	1	
		14:42	SW3	0	0	0	9	0	0	0	0	9	
		15:50	SW4	0	0	0	0	0	0	0	0	0	
		10:29	FB	0	0	1	41	0	0	0	0	42	
		9:45	PH1	0	0	0	0	0	0	0	0	0	
		9:53	PH2	0	0	0	0	0	0	0	0	0	
3/13/15	JWR	10:24	SW1	0	0	0	0	0	0	0	0	0	
		9:56	SW2	0	0	0	0	0	0	0	0	0	
		9:58	SW3	0	0	0	3	0	0	0	0	3	
		10:00	SW4	0	0	0	0	0	0	0	0	0	
		15:14	FB	0	0	0	0	0	0	0	0	0	
		14:45	PH1	0	0	0	2	0	0	0	2	4	gbh
		14:56	PH2	0	0	0	0	0	0	0	0	0	
3/14/15	EHK	15:18	SW1	0	0	0	0	0	0	0	0	0	
		14:59	SW2	0	0	0	0	0	0	0	0	0	
		15:00	SW3	0	0	0	15	0	0	0	0	15	
		15:01	SW4	0	0	0	0	0	0	0	0	0	



Avian lines in yellow, zones in red, river flow in blue.





Т	emperature	s	Secchi:		
	42.6	Sun	5.0		
	42.7	Mon	4.0		
	42.9	Tue	3.5		
	43.0	Wed	4.0		
	43.3	Thurs	4.0		
	43.6	Fri	4.5		
	43.9	Sat	5.0		
AVG:	43.1	AVG	4.3		

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

= Out of criteria

	North I	Ladder	East Ladder												
	North E	ntrance	East Entrance West Entrance South Entrance							ce					
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	9.5	1.4	5.9	12.0	11.9	12.0	1.4	11.5	11.5		1.7	8.2	10.9	
3/8/15	1.3	9.6	1.3	5.9	11.8	11.9	9.8	1.2	11.4	11.4		1.7	6.7	10.9	
	1.4	9.4	1.4	6.0	12.1	12.0	12.0	1.4	11.6	11.6		1.6	8.9	8.9	
3/9/15	1.4	9.5	1.6	12.4	12.4	8.7	11.7	1.7	10.2	10.1		1.7	9.0	9.1	
			1.3	7.9	12.0	12.0	14.2	1.6	10.4	10.5		1.7	9.2	9.4	
	1.5	9.3	1.5	5.0	12.0	12.0	11.4	1.5	10.6	10.5		1.5	9.1	9.8	
3/10/15															
															0
	1.5	9.3	1.6	5.1	12.0	12.1	12.0	1.7	10.6	10.6		1.5	10.0	10.5	n
3/11/15	1.4	9.4	1.5	4.9	12.0	11.9	11.4	1.6	10.5	10.5		1.5	9.4	9.5	s
															e
	1.5	9.4	1.4	6.5	12.6	13.2	11.3	1.6	10.5	10.4		1.5	8.4	8.3	а
3/12/15	1.2	9.3	1.5	5.0	12.0	12.0	10.9	1.5	10.6	10.6		1.6	8.9	9.4	ı
	1.5	9.2	1.3	5.6	11.9	12.0	10.3	1.5	10.5	10.5		1.8	8.0	8.0	
3/13/15	1.5	9.1	1.2	5.4	11.9	12.0	9.6	1.6	10.4	10.3		1.4	9.5	9.5	
	1.5	9.1	1.2	4.5	11.9	12.0	9.2	1.4	10.4	10.4		1.3	9.5	9.6	
3/14/15	1.3	9.3	1.2	4.4	12.0	12.0	9.1	1.4	10.5	10.4		1.2	9.5	9.6	
AVG:	1.5	9.2	1.4	5.4	12.1	12.2	11.2	1.5	10.8	8.7	No criteria	1.6	8.9	9.5	

Fishways are inspected twice daily plus one SCADA inspection; SCADA OOS, TDE working on repair. South entrance weirs auto failure, operating in manual mode.



Sealion is still in the Bonneville pool. Hunts at the west entrance.



ROV inspection of MU4, MU15 trash racks 3/10; trashracks clean except for a few sticks.