

The Dalles Dam Fishway Status Report

January 20th, 2019

Inspection Period: Jan. 13 - Jan. 19, 2019

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: FU's off 12/1	12	Temperature: 41.1 °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'	1.3		
Entrance weir N1	0	depth (≥ 8')	10.3		
Entrance weir N2	0	Closed			
PUD Intake differential	0	≤ 0.5'			
EAST FISHWAY					
Exit differential		≤ 0.5'			
Removable weirs 154-157		Per forebay			
Weir 158-159 differential		1.0' ± 0.1'			
Count station differential		≤ 0.3'			
153 Weir crest depth		1.1' ± 0.1'			
Junction pool weir JP6		0.0	10.6		
East entrance differential		1.0' - 2.0'	1.5		
Entrance weir E1		No criteria			
Entrance weir E2		depth (≥ 8')	9.2		
Entrance weir E3		depth (≥ 8')	9.4		
Collection channel velocity		1.5 - 4 fps			
Transportation channel velocity		1.5 - 4 fps			
North channel velocity		1.5 - 4 fps			
South channel velocity		1.5 - 4 fps			
West entrance differential		1.0' - 2.0'			
Entrance weir W1		depth (≥ 8')			
Entrance weir W2		depth (≥ 8')			
Entrance weir W3		No criteria			
South entrance differential		1.0' - 2.0'			
Entrance weir S1		depth (≥ 8')			
Entrance weir S2		depth (≥ 8')			
JUVENILE PASSAGE					
Sluiceway operation	0	Units 1, 18	MU1 (1-1) & MU18 (18-3) endgate closed		
Turbine trashrack drawdown	0	<1.5', biweekly			
Spill volume/pattern	0	None			
Turbine Unit Priority	0	per FPP	Bus maintenance work		
Turbine 1% Efficiency	0	per FPP			

OTHER ISSUES:

Predators;

Eagle numbers increasing in westrick park.

No Sea Lion observations

Green laser bird deterrant tested with promising results on roosting gulls. Another tool for USDA to use next season, but not a complete solution.

Operation:

East fish ladder dewatered. RTS 1/15/19. AWS backup open 1/17/19

North ladder in service. To be dewatered 1/22/19

AWS opened 1/17 in lieu of fish units. Will remain in operation until fish units return to service from fish unit breaker contract work.

Current Outages;

FU1 and FU2 OOS for annual/overhaul maintenance and breaker replace. RTS 1/31/19. Schedule slipped from 1/9/19

MU1 and MU2 (T1 transformer) OOS for FU breaker replace. RTS 1/28/19 - Schedule slipped from 1/9/19

MU5 forced OOS blade seals and T3 transformer replace. RTS 3/21/2019

MU6 OOS annual and T3 transformer replace. RTS 3/21/2019

MU12 FOOS through 1700 1/31/2019 for Blade Seals

MU16 OOS exciter replacement. RTS 3/28/2019

MU19 and MU20 forced OOS transformer acetylene production. RTS 10/24/2019

Maintenance

Weir 157 cable failure causing some ladder flow criteria problems. Repair in coming weeks, requiring partial ladder dewatering.

Installed seals on weir 158 to improve overflow performance. Some noticeable improvement to overflow volume.

East and north count station electrical upgrade starting.

Collection channel dewatering pumps 5 and 6 removed for rehab.

Fishway automation equipment assembly starting. Install winter of 2019/20

East ladder exit weirs 156 and 157 installed with new wheels. Weirs 154 and 155 do be completed next winter.

Diffuser valve status evaluation ongoing. Planning underway for rehab. In FPOM review.

Vegetation removal from south channel rock walls complete. Goats to remove vegetation on top side. North ladder vegetation removal after 1/22/19

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:

Bathymetry of spillwall and spill basin completed. District dive/ROV personnel inspected spill basin w/ ROV unit (12/11), awaiting results

Zebra mussel veliger sampling resumes next spring.

Lower Columbia River Forebay Temperature Monitoring completed. Equipment removed. To resume next spring.

AWS construction - Commissioning test and operation with single fish unit test completed. Follow on construction items identified.

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

PITAGS North and east fishladder data collection at count stations continues. Will maintain equipment during dewatering.

Fish Counters - Likely start with video 4/1/19 until contractor issues resolved. Fish Field Unit to provide support.

Pikeminnow dam angling - Caught 1785 YTD. Fishing resumes next spring. Debate over bass and walleye catch and release continues.

ODFW monthly fishway inspections concluded 10/16. Awaiting annual report.

Lamprey minor mods - Rounded weir caps completed on all entrance weirs. Guide slot blocker added to reduce pinch mortalities.

Univ of Idaho lamprey radiotelemetry completed. New antenna mounts at east, west and south installed Jan 2. Lamprey passage test to resume in May.

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

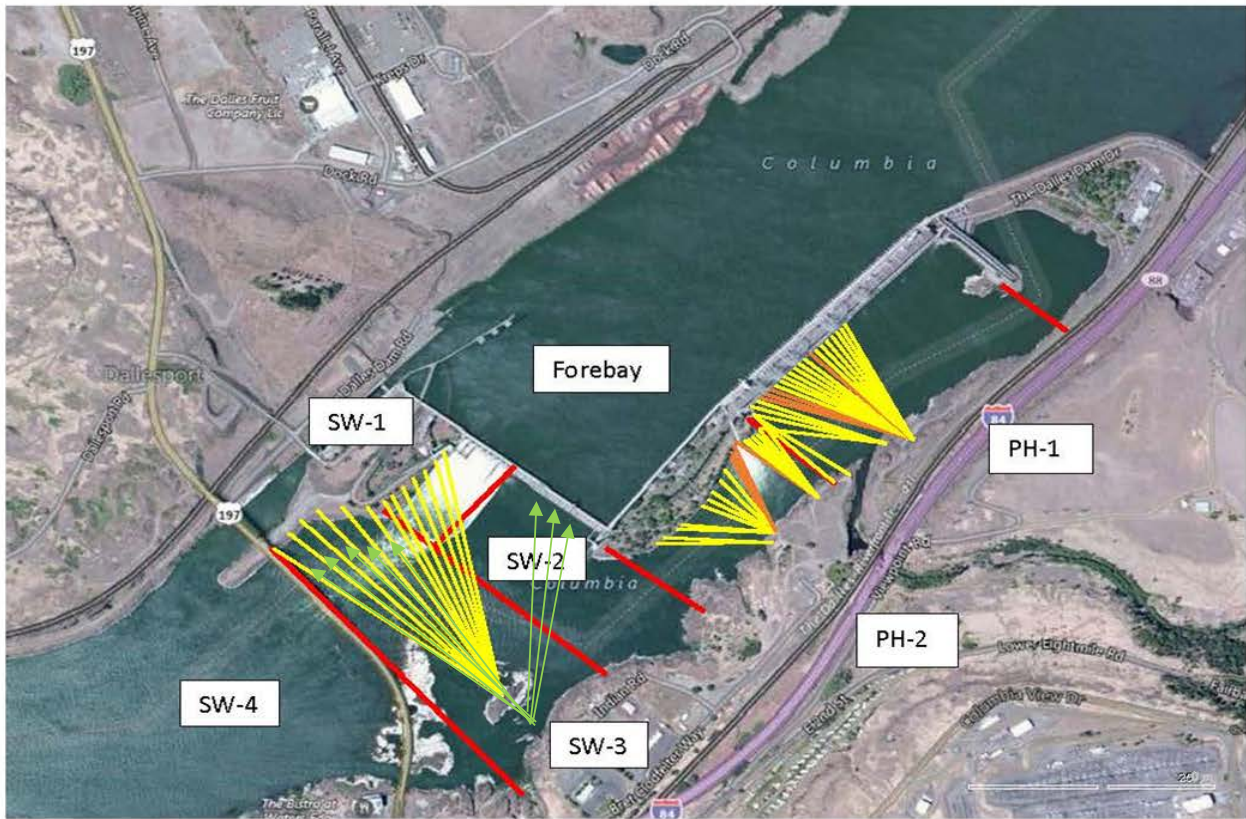
Fish unit breaker replace - Prep work in progress. Potential delay through Feb.

Fish unit rehab - Test of AWS backup with single fish unit complete. Will affect rehab alternative selection.

Transformer replacement - Install T3 underway (units 5 and 6). Sequence schedule modified from original

Approved by: Bryan Hert acting for Ron Twiner


Operation Project Manager The Dalles Dam



Red lines = avian zones

Yellow lines = current wires

Orange lines = down or missing wires

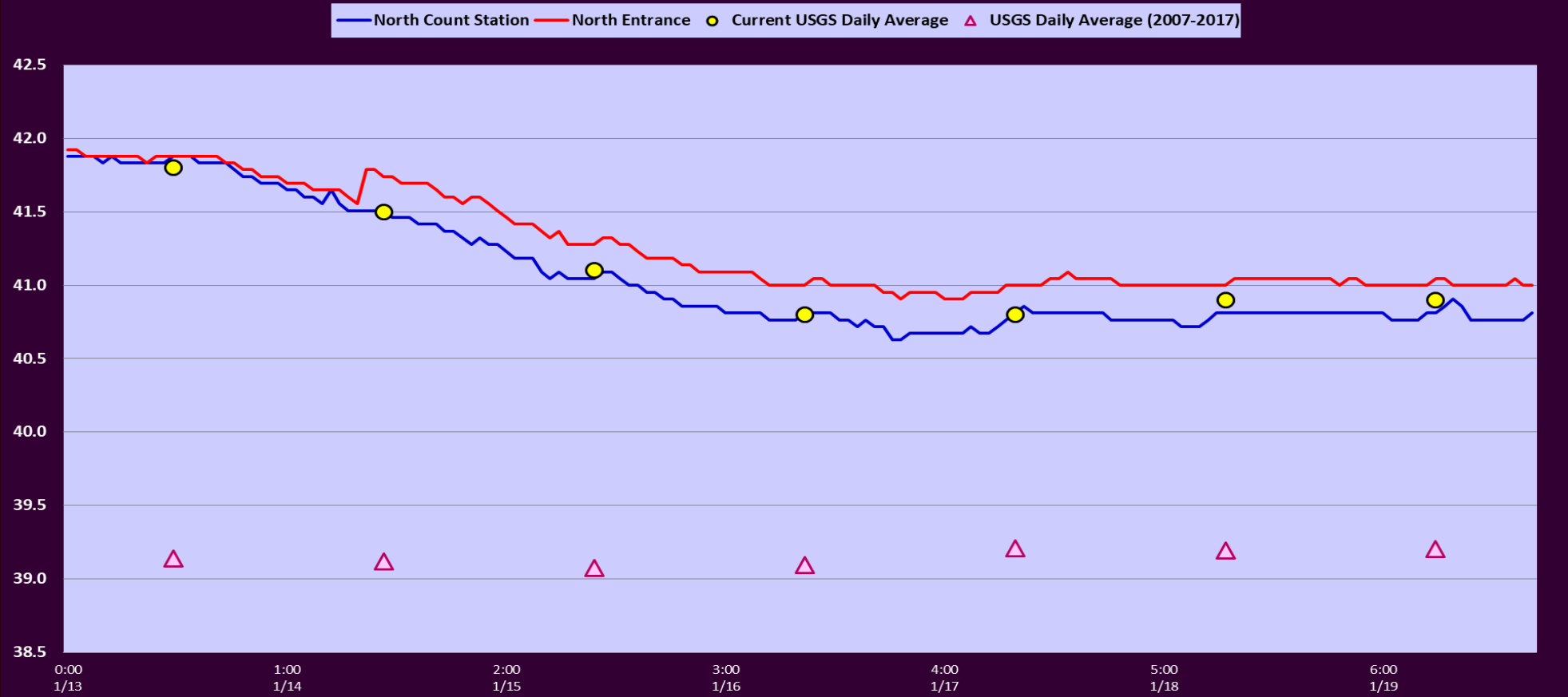

Additional avian lines installed 9/2018

2019 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			
1/13/19	CEA	PM	FB	0	3	10	0	0	0	4	0	0	0	0	3	20	Other = 2 BAEA, 1 GBHE	
			PH1	5	20	0	0	0	0	0	0	0	0	8	3	36	Other= 8 COME F, 2 BAEA NF, 1 COME NF	
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	31	29 BAEA, 2 GBHE	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	2	2	GBHE on spillwall
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	0	0	85	0	0	0	0	0	0	0	0	0	85	
1/14/19	JWR	PM	FB	0	1	6	0	0	0	0	0	0	0	1	5	13	BAEA	
			PH1	2	34	0	0	0	0	0	0	0	0	0	0	36		
			PH2	0	0	0	0	0	0	0	0	0	0	0	24	24	BAEA	
			SW1	0	0	1	0	0	0	0	0	0	0	0	5	6	BAEA	
			SW2	0	3	0	0	0	0	0	0	0	0	0	5	8	BAEA	
			SW3	0	0	0	49	0	0	0	0	0	0	0	0	49		
1/15/19	JWR	AM	FB	0	2	6	0	0	0	0	0	0	0	2	10	BAEA		
			PH1	9	15	0	0	0	0	0	0	0	0	3	27	BAEA		
			PH2	0	0	0	0	0	0	0	0	0	0	0	20	20	BAEA	
			SW1	0	0	0	0	0	0	0	0	0	0	0	6	6	BAEA	
			SW2	0	0	0	0	0	0	0	0	0	0	0	3	3	BAEA	
			SW3	0	0	0	26	0	0	0	0	0	0	0	0	26		
1/16/19	JED	PM	FB	0	83	4	0	0	0	0	0	0	0	1	2	90	BLHE, 2BAEA	
			PH1	1	0	0	0	0	0	0	0	0	0	0	0	1		
			PH2	1	0	1	0	0	0	0	0	0	0	1	23	26	1BAEA F, 22BAEA NF, 2BLHE NF	
			SW1	0	0	0	0	0	0	0	0	0	0	0	2	2	BLHE	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Calm, 36 F, overcast
			SW3	0	0	0	95	0	0	0	0	0	0	0	0	95		
1/17/19	JED	AM	FB	0	1	7	0	0	0	0	0	0	0	2	10	BAEA		
			PH1	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	31	31	29 BAEA	
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Overcast, calm, 34 F
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	0	1	0	110	0	0	0	0	0	0	0	1	112	112	BLHE
1/18/19	JED	PM	FB	0	0	3	3	0	0	0	0	0	0	0	6			
			PH1	0	0	0	0	0	0	0	0	0	0	0	0	0		
			PH2	0	0	0	0	0	0	0	0	0	0	3	29	32	28 BAEA NF, 1 BLHE NF, 3 BAEA F	
			SW1	0	0	0	0	0	0	0	0	0	0	0	3	3	BLHE	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	overcast, rain, 40 F no wind
			SW3	0	0	3	80	0	0	0	0	0	0	0	0	83	83	
1/19/19	JED	AM	FB	12	0	5	0	0	0	0	0	0	0	0	17			
			PH1	5	0	1	0	0	0	0	0	0	0	0	2	8	BAEA	
			PH2	0	0	0	0	0	0	0	0	0	0	8	24	32	5GBHE F, 3 BAEA F, 24 BAEA NF	
			SW1	0	0	0	0	0	0	0	0	0	0	0	3	3	2BAEA NF, 2GBHE NF	
			SW2	0	0	0	2	0	0	0	0	0	0	0	0	2	2	Overcast, calm, 40 F
			SW3	0	4	0	76	0	0	0	0	0	0	8	0	88	88	COME
SW4	0	0	0	0	0	0	0	0	0	0	0	0	0	0				

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

The Dalles Dam North Fish Ladder/River Temperatures



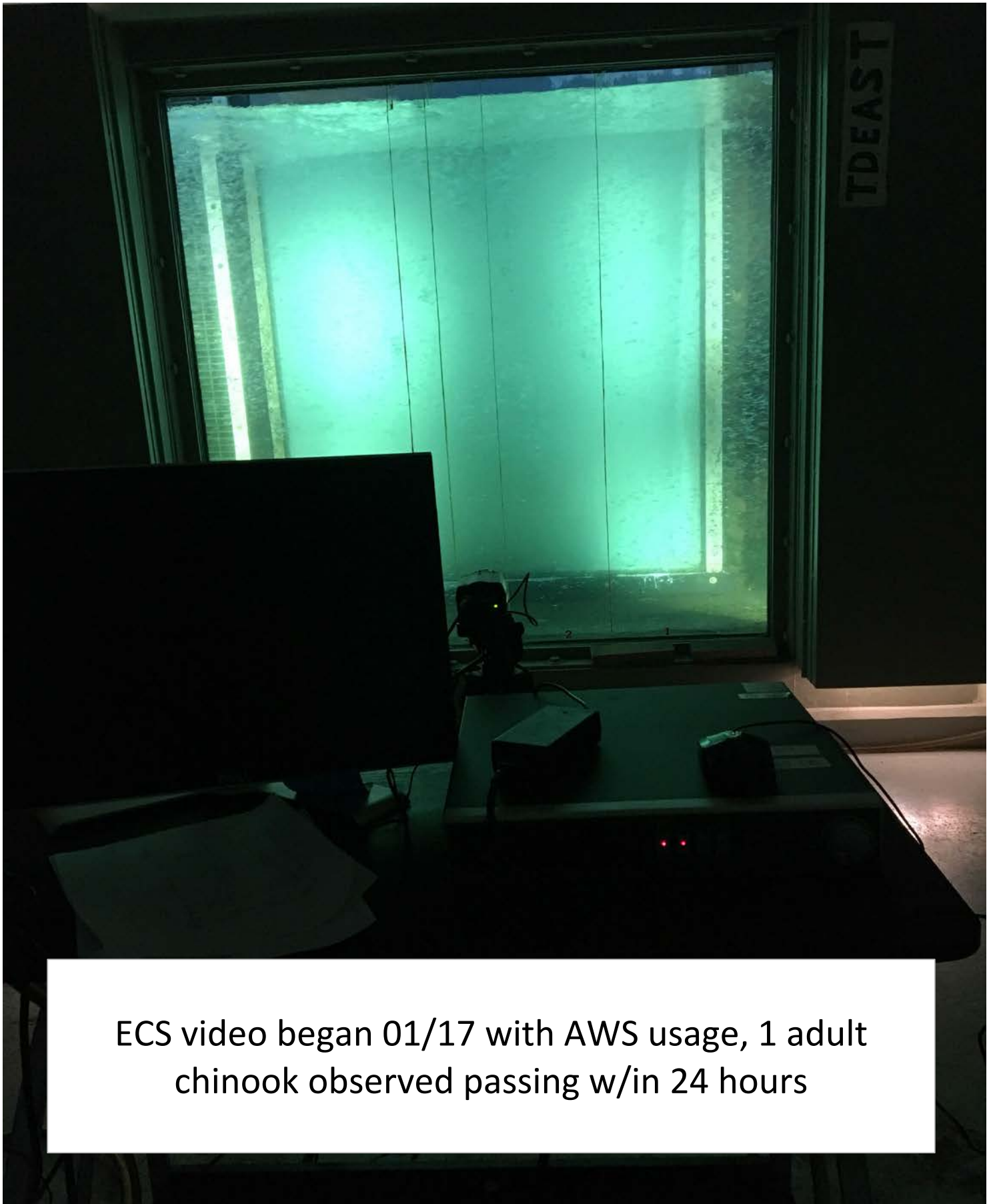
	Secchi:		USGS: Temperatures
1/13	5+	Sun	41.8
1/14	5+	Mon	41.5
1/15	5+	Tue	41.1
1/16	5+	Wed	40.8
1/17	5+	Thurs	40.8
1/18	5+	Fri	40.9
1/19	5+	Sat	40.9
	5+	AVG	41.1

**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		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
1/13	1.3	10.2	Ladder dewatered for maintainence											
1/14	1.2	10.3												
1/15	1.4	11.2												
1/16	1.4	10.1												
1/17	1.3	10.2												
	1.4	10.1	1.6		8.9	9.0	11.4							
1/18	1.4	10.1	1.6		9.3	9.5	10.9							
					9.1	9.6	10.6							
1/19			1.4		9.5	9.4	9.9							
	1.3	10.1	1.5		9.4	9.5	9.9							
			1.5		9.5	9.5	10.5							
AVG:	1.3	10.3	1.5		9.2	9.4	10.6							

Fishways are inspected twice daily plus one SCADA inspection.



ECS video began 01/17 with AWS usage, 1 adult chinook observed passing w/in 24 hours