

# The Dalles Dam Fishway Status Report

8/12/2018

Inspection Period: 08/05/2018-8/11/2018

## THE DALLES DAM



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:	21	Temperature:	72.2 °F
			Comments	conditions ok-Very warm, smokey		
			Secchi:	5.3 feet		
<b>NORTH FISHWAY</b>						
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')		10.8		
Entrance weir N2	0	Closed				
PUD Intake differential	0	≤ 0.5'		0		
<b>EAST FISHWAY</b>						
Exit differential	0	≤ 0.5'				
Removable weirs 154-157	0	Per forebay	Weir 156 is not deploying properly causing low weir crest heights at W159 and W158.			
Weir 158-159 differential	0	1.0' ± 0.1'				
Count station differential	0	≤ 0.3'				
153 Weir crest depth	0	1.0' ± 0.1'				
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')		12.7		
Entrance weir E3	0	depth (≥ 8')		12.7		
Collection channel velocity	0	1.5 - 4 fps	2.13 fps	Range: SS, 1.65 fps to FU 2, 2.53 fps		
Transportation channel velocity	0	1.5 - 4 fps	2.21 fps			
North channel velocity	0	1.5 - 4 fps	2.4 fps			
South channel velocity	0	1.5 - 4 fps	3.43fps			
West entrance differential	0	1.0' - 2.0'		1.4		
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')		8.5		
Entrance weir S2	0	depth (≥ 8')		8.5		
<b>JUVENILE PASSAGE</b>						
Sluicgate operation	0	Units 1, 21	1-1,1-2, 1-3,8-1,8-3, 18-2 and endgate open			
Turbine trashrack drawdown	0	<1.5', biwly	Small numbers of juvenile salmon and mature shad present in gatewells.			
Spill volume/pattern	0	None				
Turbine Unit Priority	0	per FPP				
Turbine 1% Efficiency	0	per FPP				

## OTHER ISSUES:

### **Birds and Sea lions:**

USDA avian hazing ended 7/31. Lighter numbers of pelicans and an increase in gulls w/ Juvenile gulls becoming the majority  
USDA site visit 7/19 for installation of additional spillway avian lines, date for installation being determined

### **Fishway operations**

North and east adult fishways in full operation  
Night flow reduction at east fishway entrances for lamprey research continues. 15 of 19 test nights completed.  
Sluiceway open with 6 sluiceway operation (1, 8 and 18)

### **Current Outages;**

MU5 forced OOS for gov oil problem. RTS 1/21/2018  
MU13 and MU14 OOS for line 5 outage relating to T8 transformer replace. RTS 8/30/19  
MU15 OOS transformer replacement. RTS 10/01/2018  
MU16 OOS transformer replacement. RTS 6/29/2019  
MU19 OOS for overhaul. RTS 9/7/2018  
MU20 OOS for annual. RTS 9/7/2018

### **Maintenance**

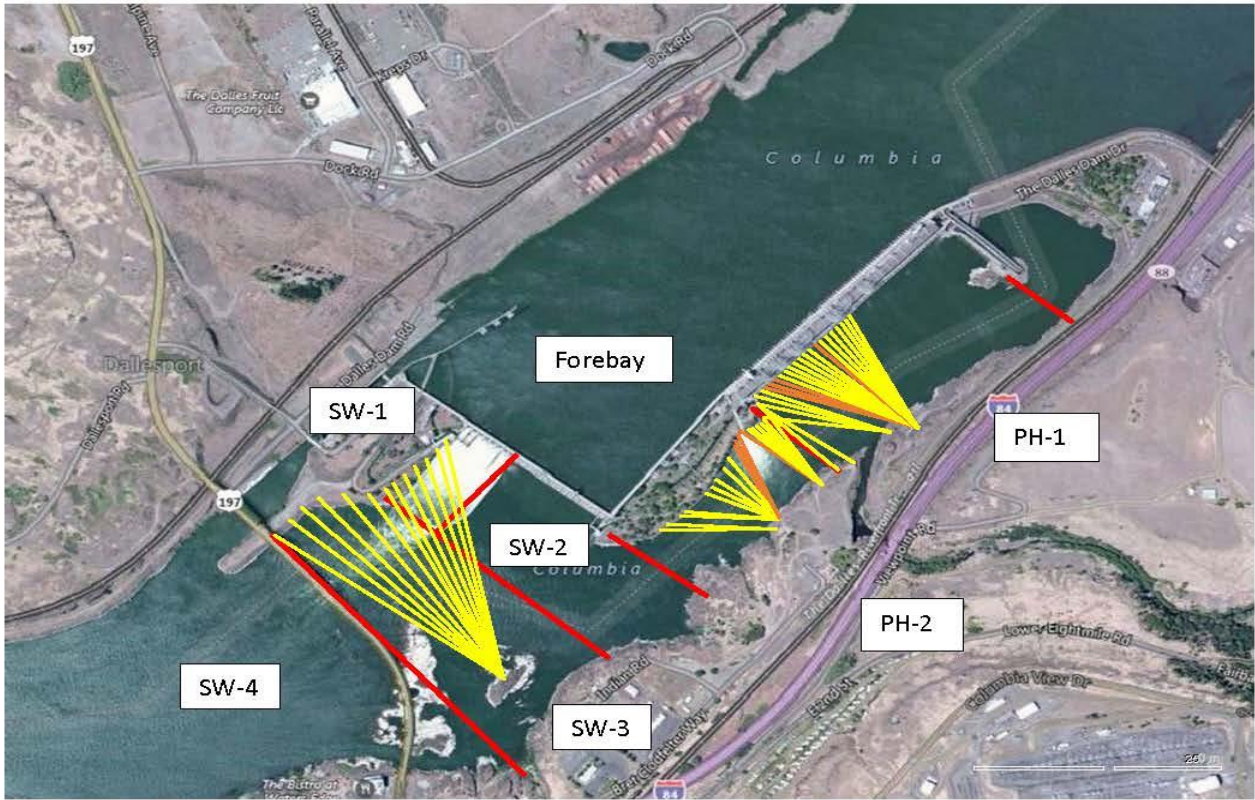
East count station brush out of service, TDE to repair. Hand brush in meantime  
ROV inspected north ladder entrance grating on 8/7-all grating found intact. See Pic2 and Pic3 tabs  
Rebuilding spare gearboxes for entrance and exit weirs.  
East exit oil boom Installed Aug 7. See Pic1 tab  
Collection channel dewatering pumps 3 and 4 rehab in progress. Pump 4 requires pump/motor replacement.  
Wheel replacement on N1 spare weir completed.  
Planning 154 -157 rehab/weir wheel replace next winter. Wheel material ordered.  
Diffuser valve rehab may be 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. Plan for comprehensive spillway assessment.

### **Research/Construction/Contractors:**

Lower Columbia River Forebay Temperature Monitoring – Underway  
*AWS construction* - Full flow test night of Aug 6. Commissioning test date TBD.  
PSMFC weekly sampling completed for the North Wasco County PUD's. No concerns. New sample collection tank design in review.  
PITAGS North and east fishladder data collection at count stations continues.  
*Fish Counters* - Ongoing.  
*Pikeminnow dam angling*- Week 31 7/23-7/29 58 caught, 1,511 YTD  
**Non native (bass and walleye) bycatch release by WDFW dam anglers. Remains FPOM agenda item for resolution.**  
ODFW monthly fishway inspections continue. No problems reported.  
*Lamprey minor mods* - Rounded entrance weir caps installed south, west, north entrances. Spare weir completed ~8/1. East weir complete next winter.  
Univ of Idaho lamprey radiotelemetry track underway. Night flow reduction done for research on improved lamprey passage.  
Lamprey trapping by tribes to continue at east count station within picket leads with low catch rates. Catch target 1056 lamprey per tribe.  
*Fish unit breaker replace* .- Prep work in progress. Installation delayed to next winter outage.  
*Fish unit rehab* - Development plan continues. Alternatives in review. Exploring potential use of AWS backup during construction period.  
*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

## 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			
8/5	JED	PM	FB	1	0	22	48	0	0	0	0	0	0	0	0	71	At 1630 hrs Calm, sunny, warm. East 1a	
			PH1	0	0	1	7	0	0	0	0	0	0	0	0	8		
			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	0	COME
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	0	0	7	8	0	0	0	0	0	0	6	6	27		
SW4	7	0	0	9	0	0	0	0	0	0	2	0	0	18				
8/6	JWR	AM	FB	0	16	5	28	0	0	0	0	0	0	0	0	49		
			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	0	0		
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW2	0	3	2	1	0	0	0	0	0	0	0	0	6		
			SW3	0	7	1	0	0	0	0	0	0	0	0	0	8		
SW4	0	0	0	0	0	0	0	0	0	0	0	0	0					
8/7	CEA	PM	FB	0	0	22	40	0	0	0	0	0	0	0	0	62	GBHE  sunny, calm, hot	
			PH1	0	0	1	6	0	0	0	0	0	0	0	1	8		
			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	13	0	0	0	0	0	0	0	0	0	13		
			SW3	0	0	0	0	0	0	0	0	0	0	0	0	0		
SW4	0	75	0	3	0	0	0	0	0	0	0	0	78					
8/8	JWR	PM	FB	0	0	6	24	0	0	0	0	0	0	0	0	30	COME	
			PH1	0	0	0	3	0	0	0	0	0	0	0	0	3		
			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	0	0	0	0	0	0	0	0	0	0	0		
SW4	0	0	0	0	0	0	0	0	0	0	0	7	7					
8/9	JED	PM	FB	0	38	5	63	0	0	0	0	0	0	0	1	107	osprey BLHE sunny, hot, smoky, 10mph W	
			PH1	0	0	0	0	0	0	0	0	0	0	0	2	2		
			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	0	osprey no pelicans at 1830
			SW2	0	0	2	0	0	0	0	0	0	0	0	3	5		
			SW3	0	5	0	2	0	0	0	0	0	0	0	0	7		
SW4	45	30	2	14	0	0	0	0	0	0	0	0	91					
8/10	JED	AM	FB	0	1	0	78	0	0	0	0	0	0	0	0	79	sunny, hot, smoky, 10mph W osprey	
			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	0	0		
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW2	0	0	4	1	0	0	0	0	0	0	0	1	6		
			SW3	0	0	0	0	0	0	0	0	0	0	0	0	0		
SW4	72	14	0	9	0	0	0	0	0	0	0	0	95					
8/11	JWR	PM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0		
			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	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	0	0	0	0	0	0	0	0	0	0	0		
SW4	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 East

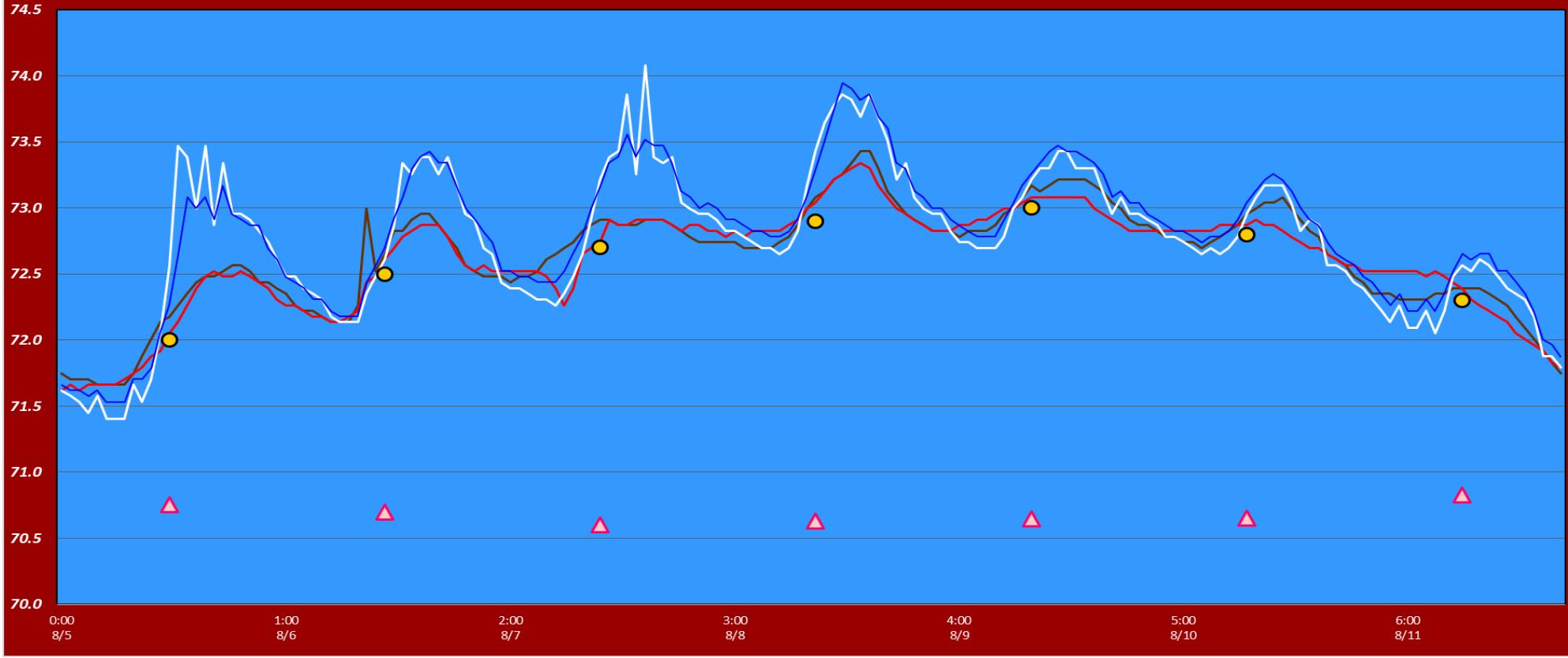
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
8/5/18	102	86	16	122	66	56	0	0	0	8	0	0	77
8/6/18	111	88	23	71	25	46	0	0	0	7	0	0	20
8/7/18	174	150	24	144	86	58	0	0	0	7	0	0	11
8/8/18	178	150	28	118	58	60	0	0	0	7	0	0	50
8/9/18	130	104	26	105	59	46	0	0	0	6	0	0	74
8/10/18	78	64	14	127	83	44	0	0	0	4	0	0	40
8/11/18	104	88	16	87	50	37	0	0	0	4	0	0	37
<b>total</b>	<b>877</b>	<b>730</b>	<b>147</b>	<b>774</b>	<b>427</b>	<b>347</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>43</b>	<b>0</b>	<b>0</b>	<b>309</b>

## 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
8/5/18	7	5	2	45	20	25	0	0	0	10	0	0	12
8/6/18	12	11	1	36	22	14	0	0	0	8	0	0	12
8/7/18	35	29	6	66	23	43	0	0	0	8	0	0	14
8/8/18	36	32	4	51	28	23	0	0	0	2	0	0	20
8/9/18	53	47	6	64	29	35	0	0	0	13	0	0	13
8/10/18	70	62	8	62	25	37	0	0	0	2	0	0	37
8/11/18	39	34	5	60	29	31	0	0	0	5	0	0	26
<b>total</b>	<b>252</b>	<b>220</b>	<b>32</b>	<b>384</b>	<b>176</b>	<b>208</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>48</b>	<b>0</b>	<b>0</b>	<b>134</b>
<b>% North</b>	<b>22.3</b>	<b>23.2</b>	<b>17.9</b>	<b>33.2</b>	<b>29.2</b>	<b>37.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>52.7</b>	<b>0.0</b>	<b>0.0</b>	<b>30.2</b>

Fish Count

# The Dalles Dam Adult Fish Ladder(s) River Temperatures



**USGS: [USGS river temp August](#)**

	Secchi:		Temperatures
8/5	5.0	Sun	72.0
8/6	5.0	Mon	72.5
8/7	5.0	Tue	72.7
8/8	5.0	Wed	72.9
8/9	5.0	Thurs	73.0
8/10	5.0	Fri	72.8
8/11	5.0	Sat	72.3
	5.0	AVG	72.6

Lamprey study= reduced velocity overnight

SCADA INSPECTION

= Out of criteria

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

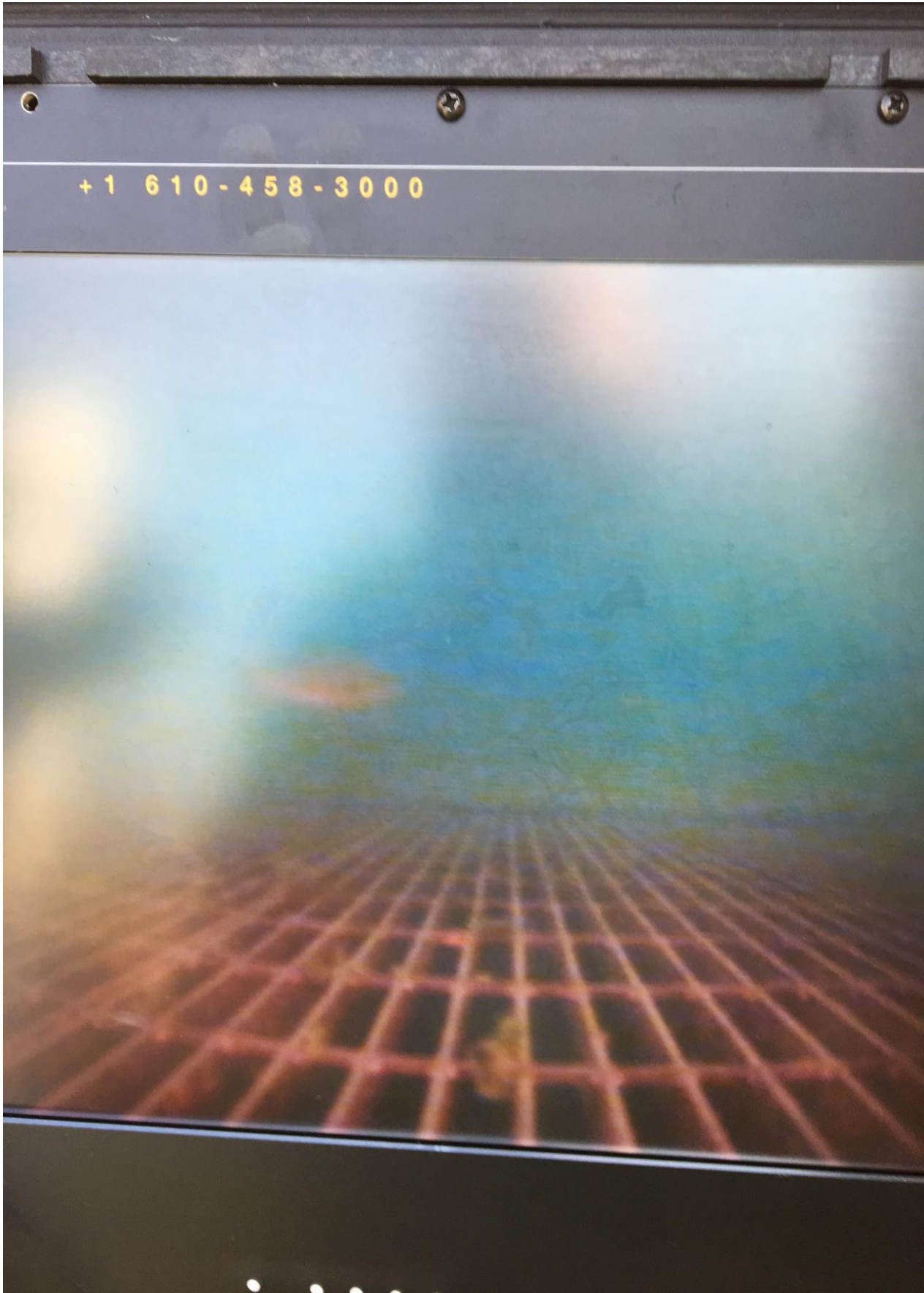
Date:	North Ladder			East Ladder										
	North Entrance		Differential	East Entrance			West Entrance			South Entrance				
	Differential	N1 Depth		E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth
8/5			1.4		13.0	13.0	11.3	1.5	8.4	8.4		1.4	8.3	8.3
	1.4	11.6	1.5		12.9	13.0	10.9	1.6	8.3	8.3		1.4	8.3	8.3
	1.2	10.9	1.5		12.9	13.0	10.2	1.4	8.4	8.4		1.5	8.3	8.2
8/6			1.7		12.9	12.9	9.2	1.4	8.4	8.4		1.4	8.4	8.4
	1.4	10.7	1.5		12.5	12.5	9.1	1.4	8.2	8.2		1.3	8.3	8.3
	1.4	10.7	1.4		12.4	12.4	9.2	1.4	8.3	8.3		1.4	8.3	8.2
8/7			AWS		AWS							AWS		
	1.3	10.8	ROV		ROV							ROV		
	1.3	10.7	1.4		12.6	12.5	9.7	1.4	8.4	8.4		1.3	8.5	8.5
8/8			1.6		12.4	12.5	9.1	1.3	8.6	8.6		1.3	8.3	8.3
	1.2	10.8	1.6		12.5	12.5	9.0	1.3	8.5	8.5		1.4	8.2	8.2
	1.4	10.9	1.7		12.6	12.6	10.8	1.3	8.7	8.7		1.4	8.3	8.3
8/9			0.7		13.0	13.0	10.2	0.7	9.7	9.7		0.6	10.9	10.9
	1.3	10.7	1.4		12.5	12.5	10.1	1.3	8.5	8.5		1.4	8.2	8.2
	1.4	10.6	1.5		12.5	12.6	11.6	1.5	8.5	8.5		1.4	8.5	8.5
8/10			1.5	13.0	13.0	11.9	1.5	8.5	8.5	1.4	8.4	8.4		
	1.3	11.2	1.5	13.1	13.1	12.2	1.5	8.5	8.5	1.5	8.4	8.4		
	1.4	10.6	1.6	13.0	13.0	12.5	1.5	8.6	8.6	1.4	8.3	8.3		
8/11			1.7	12.5	12.5	11.6	1.5	8.4	8.4	1.5	8.3	8.3		
	1.3	10.8	1.2	13.0	13.0	11.5	1.4	8.5	8.5	1.4	8.3	8.3		
	1.3	10.8	1.5	12.6	12.6	11.9	1.5	8.6	8.6	1.5	8.3	8.3		
<b>AVG:</b>	<b>1.3</b>	<b>10.8</b>	<b>1.5</b>	<b>12.7</b>	<b>12.7</b>	<b>10.6</b>	<b>1.4</b>	<b>8.5</b>	<b>8.5</b>	<b>1.4</b>	<b>8.5</b>	<b>8.5</b>		

*Fishways are inspected twice daily plus one SCADA inspection.*



Newly installed permanent boom forebay of east fishladder to protect from upstream oil spills.





West entrance grating



South entrance grating