

The Dalles Dam Fishway Status Report

9/3/2016

Inspection Period: 08/28/2016-09/03/2016

THE DALLES DAM



US Army Corps
of Engineers
Portland District

The Dalles Project-Fisheries
P.O. Box 564
The Dalles, OR 97058-9998
Phone: 541-506-3800

Fishways are inspected twice daily plus one SCADA inspection

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: 21		Temperature: 71.1 °F	
			Comments		Secchi: 4.9 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'	1.4			
Entrance weir N1	0	depth (≥ 8')	9.8			
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'	158 manually adjusted as needed. New sensor purchased and being installed.			
Count station differential	0	≤ 0.3'	Picket leads raked as needed.			
Weir crest depth	0	1.0' ± 0.1'				
Junction pool weir JP6	0	depth (≥ 7')	12.0			
East entrance differential	0	1.0' - 2.0'	1.6			
Entrance weir E1	0	No criteria	8.2			
Entrance weir E2	0	depth (≥ 8')	13.0			
Entrance weir E3	0	depth (≥ 8')	13.0			
Collection channel velocity	0	1.5 - 4 fps	2.5			
Transportation channel velocity	0	1.5 - 4 fps	2.6			
North channel velocity	0	1.5 - 4 fps	2.4			
South channel velocity	0	1.5 - 4 fps	3.6			
West entrance differential	0	1.0' - 2.0'	1.5			
Entrance weir W1	0	depth (≥ 8')	8.3			
Entrance weir W2	0	depth (≥ 8')	8.3			
Entrance weir W3	0	No criteria	Closed			
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	Adjusted		
JUVENILE PASSAGE						
Sluiceway operation	0	Units 2, 8, 18	Unit 1 off for EAL testing 8/29			
Turbine trashrack drawdown	0	<1.5', wkly	range: 0.2-0.6'			
Spill volume	0	spill at 40%	Spillway off midnight 8/31			
Spill Pattern	0					
Turbine Unit Priority	0	per FPP				
Turbine 1% Efficiency	0	per FPP				

Birds/Sea lions:

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

District investigating possibility of limited lethal gull removal at project. To be discussed at future FPOM meetings.

Two of 13 spillway avian lines broke closest to bridge. Material on order. Replacement to occur after spillway closure.

Operations:

Calibration done 8/23, No discrepancies found

Gatewell drawdown 8/20 within criteria limits.

Current Outages:

T8 (MU15 & MU16) forced out due to transformer failure. Return unknown.

MU3 FOOS through 8/4/2016 due to loss of governor sump oil level, O/H and SCC upgrade

Maintenance:

South entrance dewater pump rehab complete and installed.

New east exit weir electrical panel FCQ7 panel installed in gallery. Design near complete. Electricians starting connection work.

Long Term repair maintained plans; 154 -157 weir wheel replace, collection channel diffusers decommission, repair failed diffusers - all awaiting funding

Fish related /non-fish funded items; Spillway crane rehab priority over spillgate 9, both awaiting funding.

Fish unit breaker replace, Fish unit rehab and transformer replace in planning.

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

Studies/Construction:

Environmental acceptable grease testing underway on unit 1. FPOM approved. Unit 2 priority during unit 1 outages.

North fishladder rehab/rock wall stabilizing. No new development.

East fishladder emergency backup construction this winter. Mobilization and prefab work underway on north side. Night work start in November.

Crane rail replacement on tailrace and intake for in water work period 2016/17.

Transformer replacement planning continues. Eliminate fish unit TA transformers and tie to T1 and T3. Install start 2017.

In process of updating N Wasco Co PUD Memo of Agreement. Final awaiting PUD comments.

Fish unit rehab project planning to restart late Oct, early Nov. Will increase reliability of fish units and potential redundancy.

Fish unit breaker replace planned for in water work period 2017/18

Research/Contractors:

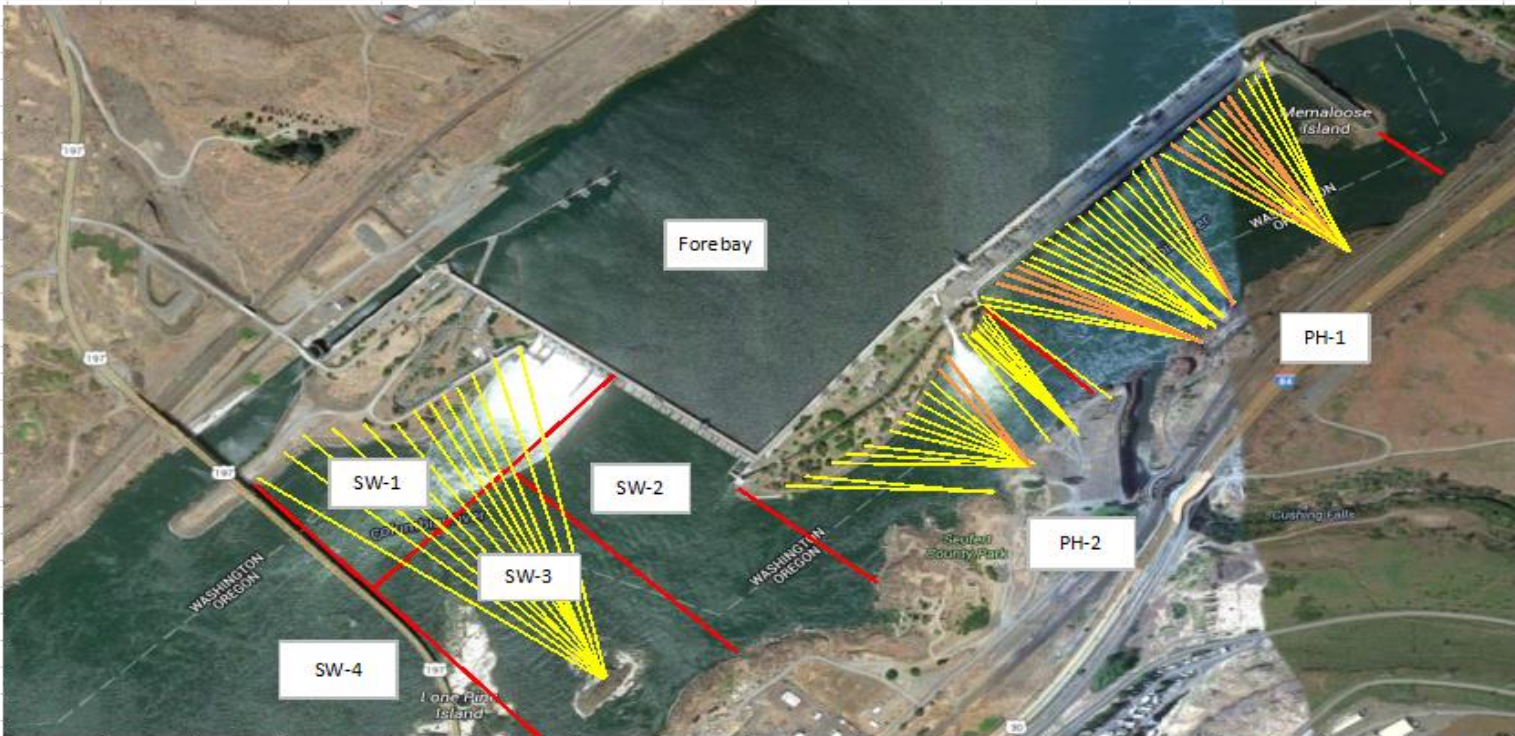
Northern Pikeminnow Management Program dam anglers did not fish this week at The Dalles. Cumulative total 3,064 through Sept 4.

Normandeau fish counters continue through Oct 30. No issues.

Tribal lamprey trapping continues at east count station. Trapping expected into October to meet quota.

Approved by: Ron Twiner

Operation Project Manager The Dalles Dam



Yellow lines= present avian lines

red lines= Barriers between observation zones

Orange lines= Missing or down avian lines

2016 Piscivorous Bird Counts

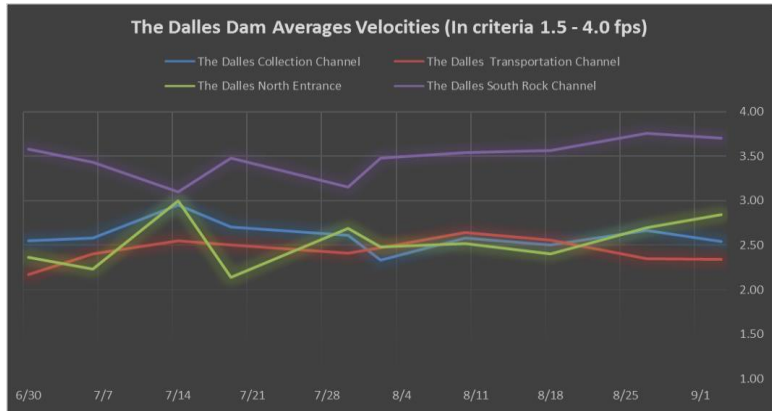
F=foraging, NF=non-foraging

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				
8/28/16	GJF	PM	FB	0	2	3	5	0	0	1	0	0	0	0	0	0	11		
			PH1	0	0	1	10	0	0	0	0	0	0	0	0	0	0	11	
			PH2	0	0	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	0	7	
			SW2	0	2	5	0	0	0	0	0	0	0	0	0	0	0	7	
			SW3	15	0	0	0	0	0	0	0	0	0	0	0	0	0	15	
			SW4	2	5	0	13	0	0	0	0	1	2	0	0	0	0	23	
			FB	0	0	0	74	0	0	0	0	0	0	0	0	0	0	74	
8/29/16	JWR	AM	PH1	0	0	0	1	0	0	0	0	0	0	0	0	0	1		
			PH2	0	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		
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW3	7	0	1	0	0	0	0	0	0	0	0	0	0	0	8	
			SW4	0	25	0	0	0	0	0	0	0	0	0	0	0	0	25	
			FB	0	0	1	13	0	0	0	0	0	0	0	0	0	0	14	
			PH1	0	0	0	7	0	0	0	0	0	0	0	0	0	0	7	
8/30/16	GJF	PM	PH2	0	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		
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
			SW3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	
			SW4	14	35	0	7	0	0	0	0	0	2	0	0	0	0	58	
			FB	0	0	0	122	0	0	0	0	0	0	0	0	0	0	122	
			PH1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
			PH2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
8/31/16	JWR	AM	SW1	0	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	0		
			SW3	6	0	0	0	0	0	0	0	0	0	0	0	0	0	10	
			SW4	0	70	0	0	0	0	0	0	0	0	0	0	0	0	70	
			FB	0	0	0	19	0	0	0	0	0	0	0	0	0	0	19	
			PH1	0	0	0	6	0	0	0	0	0	0	0	0	0	0	6	
			PH2	0	0	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	0	
9/1/16	GJF	PM	SW2	0	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	0		
			SW4	5	25	0	0	0	0	0	0	2	0	0	0	0	0	32	
			FB	0	0	0	27	0	0	0	0	0	0	0	0	0	0	27	
			PH1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	
			PH2	0	0	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	0	
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
9/2/16	JWR	AM	SW3	0	18	1	0	0	0	0	0	0	0	0	0	0	19		
			SW4	4	10	0	0	0	0	0	0	0	4	0	0	0	18		
			FB	0	0	0	67	0	0	0	0	0	0	0	0	0	0	67	
			PH1	0	0	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	0	0	
			SW1	0	0	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	0	0	
			SW3	0	0	0	15	0	0	0	0	0	0	0	0	0	0	15	
9/3/16	GJF	PM	SW4	0	64	0	0	0	0	0	0	2	0	0	0	0	66		
			FB	0	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	0		
			PH2	0	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		
			SW2	0	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	0		
			SW4	0	0	0	15	0	0	0	0	0	0	0	0	0	0	15	
Daily Averages				1	5	0	8	0	0	0	0	0	0	0	0	16			

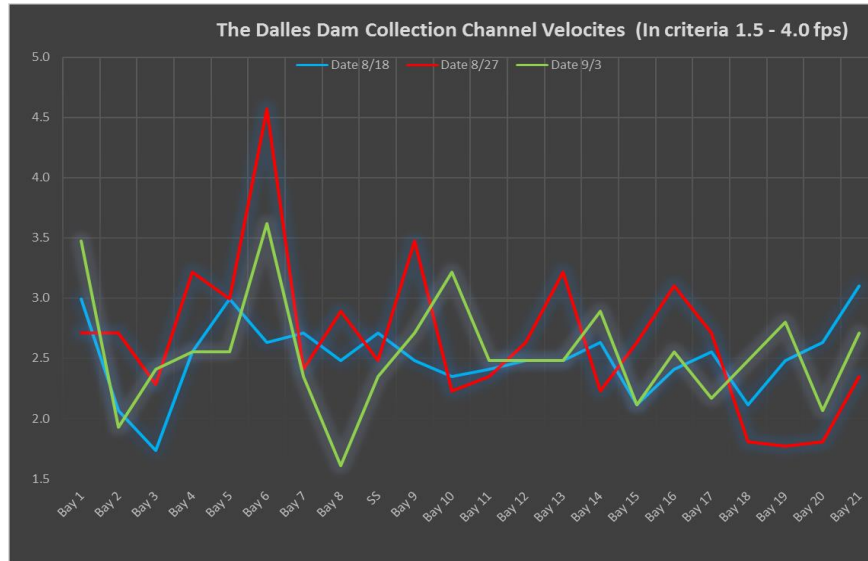
East fishladder emergency backup construction this winter. Mobilization and prefab work underway on north side. Weekly planning meetings continue.

The Dalles East													
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Uncipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
8/28	2207	2003	204	115	79	36	17	13	4	0	0	0	28
8/29	3563	2992	571	195	160	35	56	43	13	0	0	0	73
8/30	3558	2923	635	205	158	47	25	13	12	0	0	0	41
8/31	2264	1772	492	296	240	56	73	55	18	1	0	0	80
9/1	5307	4345	962	767	601	166	32	22	10	0	0	0	20
9/2	9505	8597	908	581	421	160	115	84	31	2	0	0	20
9/3	14232	12416	1816	1327	1026	301	143	109	34	5	0	0	35
total	40636	35048	5588	3486	2685	801	461	339	122	8	0	0	297
The Dalles North													
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Uncipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
8/28	1809	1616	193	110	78	32	51	41	10	2	0	0	88
8/29	2191	1939	252	246	191	55	37	26	11	4	0	0	40
8/30	1236	1015	221	161	121	40	9	8	1	2	0	0	31
8/31	528	385	143	158	122	36	4	4	0	0	0	0	32
9/1	235	198	37	75	59	16	1	1	0	0	0	0	84
9/2	711	652	59	22	17	5	5	4	1	0	0	0	14
9/3	274	239	35	60	53	7	9	8	1	0	0	0	10
total	6984	6044	940	832	641	191	116	92	24	8	0	0	299
% North W/ Spill	14.7	14.7	14.4	19.3	19.3	19.3	20.1	21.3	16.4	50.0	0.0	0.0	50.2
% North W/out Spill	4.0	4.1	3.4	5.5	5.9	4.3	4.9	5.7	2.6	0.0	0.0	0.0	59.0

ization and prefab work underway on north side. Weekly planning meetings continue.

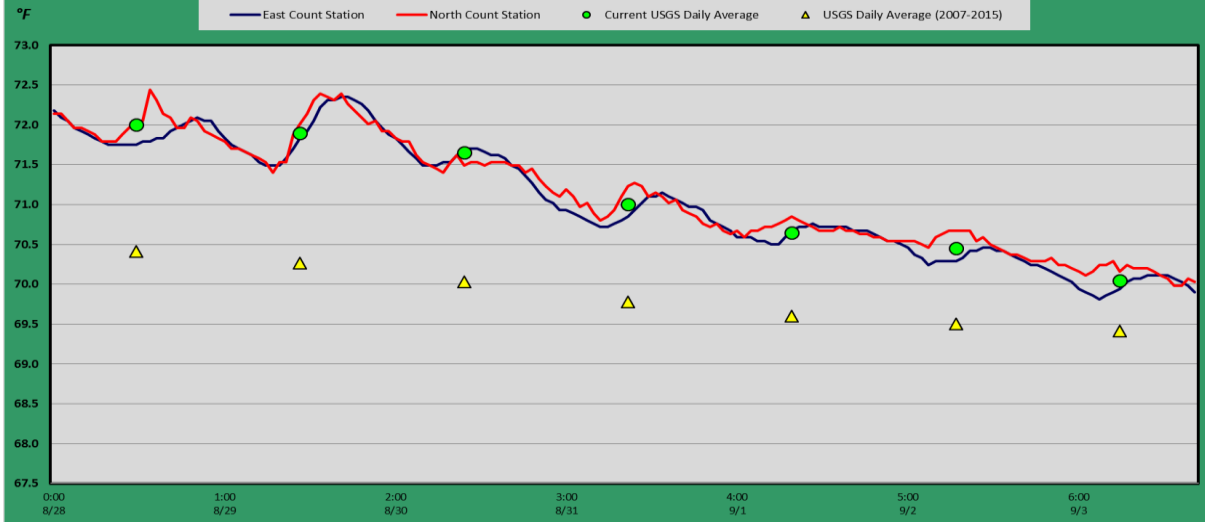


East fishladder emergency backup construction this winter. Mobilization and prefab work underway on north side. Weekly planning meetings continue.



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The Dalles Dam Adult Fish Ladder(s) River/Water Temperatures



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Secchi:		Temperatures
8/28	4.0	Sun 72.00
8/29	5.0	Mon 71.90
8/30	5.0	Tue 71.65
8/31	5.0	Wed 71.00
9/1	5.0	Thurs 70.65
9/2	5.0	Fri 70.45
9/3	5.0	Sat 70.05
	4.9	AVG 71.10

USGS: (Aug) <http://www.nwd-wc.usace.army.mil/tmi/documents/ops/temp/201608.icol.html>
 (Sept) <http://www.nwd-wc.usace.army.mil/tmi/documents/ops/temp/201609.icol.html>

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

= Out of criteria

North Ladder			East Ladder											% Spill	
North 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
8/28			1.6	4.0	13.1	13.0	11.3	1.5	8.4	8.4		1.4	8.3	8.3	40.2
	1.5	9.7	1.6	4.0	13.0	13.0	11.3	1.5	8.4	8.4		1.4	8.3	8.2	
	1.5	9.8	1.7	4.0	13.1	13.0	11.3	1.5	8.4	8.4		1.4	8.4	8.3	
8/29			1.8	4.0	13.0	13.0	12.1	1.5	8.4	8.4		1.5	8.3	8.3	39.9
	1.4	9.8	1.6	7.0	13.0	13.0	12.1	1.5	8.2	8.2		1.5	8.3	8.3	
	1.5	9.7	1.6	8.0	13.1	13.0	12.2	1.5	8.4	8.3		1.4	8.4	8.4	
8/30			1.5	10.0	13.0	13.0	11.9	1.5	8.3	8.3		1.4	8.3	8.3	39.9
	1.4	9.8	1.5	10.0	13.0	13.0	11.6	1.5	8.3	8.3		1.4	8.3	8.3	
	1.4	9.8	1.4	10.0	13.0	13.0	12.1	1.5	8.3	8.3		1.5	8.4	8.4	
8/31			1.4	9.9	13.0	13.0	11.7	1.4	8.3	8.3		1.3	8.4	8.4	40.0
	1.4	9.8	1.4	8.5	13.0	13.0	11.7	1.5	8.2	8.2		1.4	8.3	8.3	
	1.4	9.7	1.5	8.6	13.0	13.0	11.9	1.4	8.4	8.4		1.4	8.3	8.3	
9/1			1.7	8.6	13.0	13.0	12.0	1.5	8.3	8.3		1.4	8.4	8.4	S P I L L O F F
	1.3	9.8	1.5	10.1	13.0	13.0	12.0	1.4	8.3	8.3		1.4	8.4	8.4	
	1.4	9.7	1.5	10.0	13.0	13.0	12.4	1.5	8.3	8.3		1.5	8.2	8.2	
9/2			1.6	10.0	13.0	13.0	11.5	1.4	8.4	8.4		1.3	8.3	8.3	O F F
	1.3	9.8	1.4	9.0	12.9	12.9	11.8	1.5	8.1	8.1		1.5	8.2	8.2	
	1.5	9.7	1.6	8.9	13.0	13.0	12.1	1.5	8.3	8.3		1.4	8.3	8.3	
9/3			1.5	8.1	13.1	13.0	12.4	1.5	8.4	8.4		1.4	8.3	8.3	O F F
	1.3	9.7	1.7	8.0	13.0	13.0	12.5	1.5	8.3	8.3		1.5	8.2	8.2	
	1.3	9.8	1.6	8.0	13.0	13.1	12.5	1.6	8.3	8.3		1.5	8.2	8.2	
AVG:	1.4	9.8	1.6	8.2	13.0	13.0	12.0	1.5	8.3	8.3		1.4	8.3	8.3	40.0

Fishways are inspected twice daily plus one SCADA inspection.

Spill % http://www.nwd-wc.usace.army.mil/dd/nwdp/project_hourly/webexec/rep?r=tda&aqo=3



Mobilization and prefab work near navlock for start of EFL AWS construction this winter.

