

# The Dalles Dam Fishway Status Report

6/17/2018

Inspection Period: 06/10/2018-06/16/2018

## THE DALLES DAM



US Army Corps  
of Engineers  
Portland District

The Dalles Project-Fisheries  
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The Dalles Dam	Inspections	Criteria	Total Number of Inspections:		Temperature:
	Out of Criteria	Limit	Comments	Tailwater levels normal	59.7 °F
Secchi: 3.1 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'	1.4		
Entrance weir N1	0	depth (≥ 8')	9.9		
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 158-159 differential	0	1.0' ± 0.1'	Weir 158 is currently at its lower limit. Maintenance adjusted limit.		
Count station differential	0	≤ 0.3'			
153 Weir crest depth	0	1.3' ± 0.1'	Water depth over ladder weirs		
Junction pool weir JP6	0	0.0			
East entrance differential	0	1.0' - 2.0'	1.4		
Entrance weir E1	0	No criteria			
Entrance weir E2	0	depth (≥ 8')	13.9		
Entrance weir E3	0	depth (≥ 8')	13.9		
Collection channel velocity	0	1.5 - 4 fps	2.13 fps	<b>Range: Bay MU 13, 1.72 fps to MU 21/2, 2.53 fps</b>	
Transportation channel velocity	0	1.5 - 4 fps	1.93 fps		
North channel velocity	0	1.5 - 4 fps	2.17 fps		
South channel velocity	0	1.5 - 4 fps	2.68 fps		
West entrance differential	0	1.0' - 2.0'	1.4		
Entrance weir W1	0	depth (≥ 8')	9.3		
Entrance weir W2	0	depth (≥ 8')	9.3		
Entrance weir W3	0	No criteria			
South entrance differential	0	1.0' - 2.0'	1.4		
Entrance weir S1	0	depth (≥ 8')	8.8		
Entrance weir S2	0	depth (≥ 8')	8.8		
<b>JUVENILE PASSAGE</b>					
Sluiceway 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', wkly			
Spill volume/pattern	0	None			
Turbine Unit Priority	0	per FPP			
Turbine 1% Efficiency	0	per FPP			

## OTHER ISSUES:

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

USDA boat and shore hazing continues. No sea lion sightings this week.

### **Operations**

Spillway open for juvenile fish passage. Refer to spill tab.

North and east adult fishways in full operation. East ladder adjusted to 1.3' for shad passage.

Night flow reduction at east fishway entrances for lamprey research continues. Fish unit flow reduced from 2500cfs to 2000cfs. Four 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 6/21/2018

MU15 forced OOS transformer replacement. RTS 8/6/2018

MU16 forced OOS transformer replacement. RTS 6/29/2018,

### **Maintenance**

Rebuilding spare gearboxes for entrance and exit weirs.

East exit oil boom - Install Aug7. Low forebay requested.

Collection channel dewatering pumps 3 and 4 rehab in progress. Pump 4 requires pump/motor replacement. Plan to cycle through 2 pumps per year.

Wheel replacement on N1 spare weir in progress.

Planning 154 -157 rehab/weir wheel replace next winter.

Planning start of diffuser valve rehab next winter. Multiple year job.

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 – Phase 1 on 5/22, Phase 2 boat work upcoming 6/19

*AWS construction* - Commissioning full flow test night of Aug6/7, FPOM approved.

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 23: June 4, 2018 thru June 10, 2018 11 caught, 108 YTD

**Non native (bass and walleye) bycatch released by WDFW continues. Discussions continue.**

ODFW resumed monthly fishway inspections. No problems reported.

*Lamprey minor mods* - Rounded entrance weir caps installed south, west, north entrances. Spare weir to be completed this FY. East weir complete next winter.

Univ of Idaho lamprey radiotelemetry track underway. Night flow reduction done on 6/4 and 6/5 as part of research for improved lamprey passage.

Lamprey trapping by tribes to continue at east count station within picket leads end of June. Catch target 1056 lamprey per tribe.

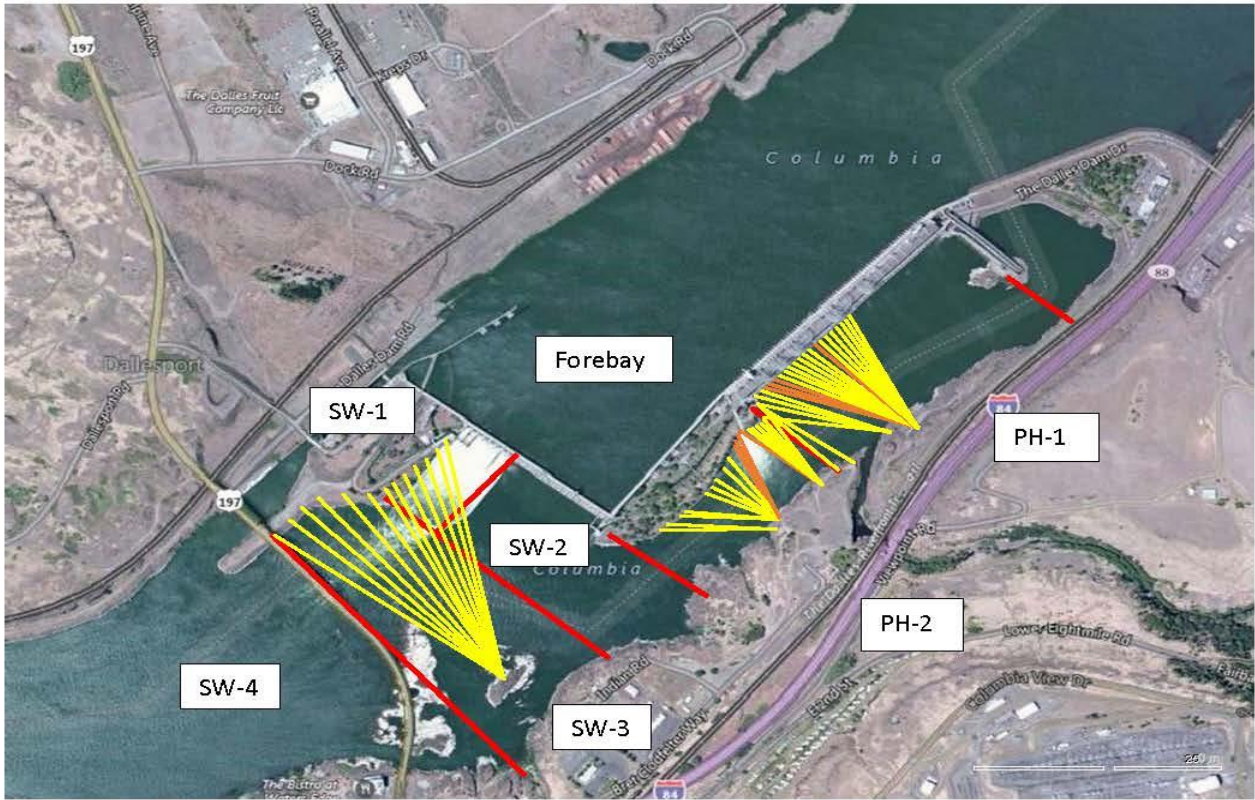
*Fish unit breaker replace* - Prep work in progress. Installation delayed to next winter outage.

*Fish unit rehab* - Development plan continues. Alternatives reviewed. Likely selection of increased flow Kaplan units.

*Transformer replacement* - Install T8 underway (units 15 and 16). Sequence schedule modified,

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**

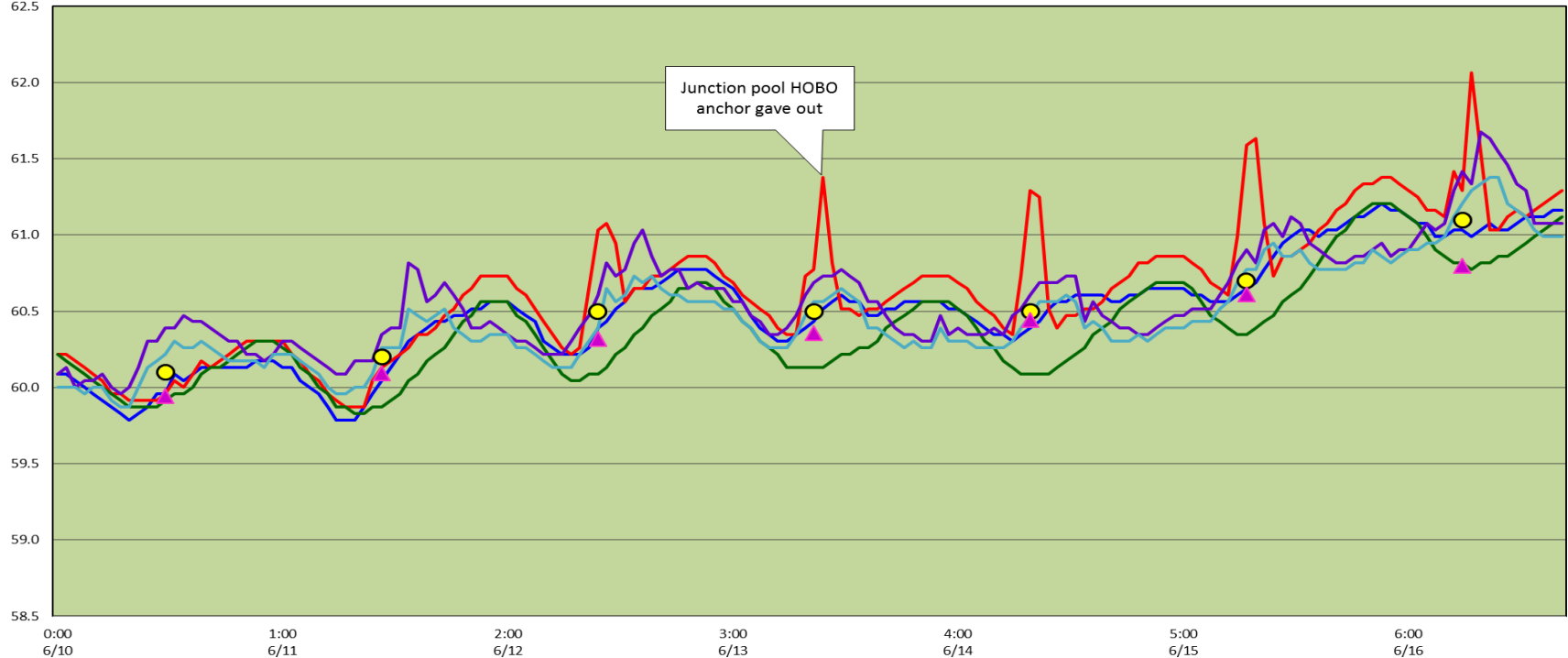
F=foraging, NF=non-foraging																		
Date	Observer	AM/PM	Zone	Gull		Cormorant		Caspian tern		Grebe		Pelican		Other		Total birds in zone	Notes	
				F	NF	F	NF	F	NF	F	NF	F	NF	F	NF			
6/10	CEA	PM	FB	0	0	3	37	0	0	0	0	0	0	0	0	0	40	cloudy/rainy, windy
			PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			PH2	3	0	0	0	0	0	0	0	0	0	0	0	0	3	
			SW1	4	0	0	0	0	0	0	0	0	0	0	0	0	4	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			SW3	30	0	0	0	0	0	0	0	0	0	0	0	0	30	
6/11	JWR	AM	FB	0	0	4	43	0	0	0	1	0	0	0	0	0	48	
			PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			PH2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	
			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	25	11	0	0	0	0	0	0	0	0	0	0	0	36	
6/12	JED	PM	FB	0	0	1	44	0	0	0	0	0	0	0	0	0	45	3 BLHE, 1 Kingfisher calm, sunny
			PH1	0	0	1	0	0	0	0	0	0	0	4	0	5		
			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	1	34	2	0	0	0	0	0	0	0	0	0	0	37	
6/13	JED	AM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	east windy sunny
			PH1	0	0	5	0	0	0	0	0	0	0	0	0	0	5	
			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	2	0	0	0	0	0	0	0	0	0	0	0	0	2	
			SW3	10	24	0	0	0	0	0	0	0	0	0	0	0	34	
6/14	JED	PM	FB	0	0	0	115	0	0	0	0	0	0	0	0	0	115	BLHE SUNNY, COOL, WINDY 2130 HRS
			PH1	0	0	1	0	0	0	0	0	0	0	1	0	2		
			PH2	2	0	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	
			SW2	2	0	1	0	0	0	0	0	0	0	0	0	0	3	
			SW3	10	0	0	0	0	0	0	0	0	0	0	0	0	10	
6/15	JWR	AM	FB	0	0	2	24	0	0	0	0	0	0	0	0	0	26	
			PH1	0	0	1	2	0	0	0	0	0	0	0	0	0	3	
			PH2	3	0	1	0	0	0	0	0	0	0	0	0	0	4	
			SW1	3	0	0	0	0	0	0	0	0	0	0	0	0	3	
			SW2	1	0	1	0	0	0	0	0	0	0	0	0	0	2	
			SW3	16	0	0	0	0	0	0	0	0	0	0	0	0	16	
6/16	JWR	PM	FB	0	0	5	37	0	0	0	1	0	0	0	0	43		
			PH1	0	0	2	2	0	0	0	0	1	0	0	0	0		5
			PH2	1	0	0	0	0	0	0	0	0	0	0	0	0		1
			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	24	0	0	0	0	0	0	0	6	0	0	0	0		30
SW4	16	0	0	0	0	0	0	8	11	0	0	0	0	35				

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



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

— East Count Station — Junction Pool — South Entrance — North Count Station — North Entrance ● Current USGS Daily Average ▲ USGS Daily Average (2007-2017)



		USGS:	
Secchi:		Temperatures	
6/10	3.5	Sun	60.1
6/11	3.0	Mon	60.2
6/12	3.5	Tue	60.5
6/13	3.5	Wed	60.5
6/14	3.5	Thurs	60.5
6/15	3.5	Fri	60.7
6/16	3.5	Sat	61.1
	3.4	AVG	60.5

**USGS river temp June**

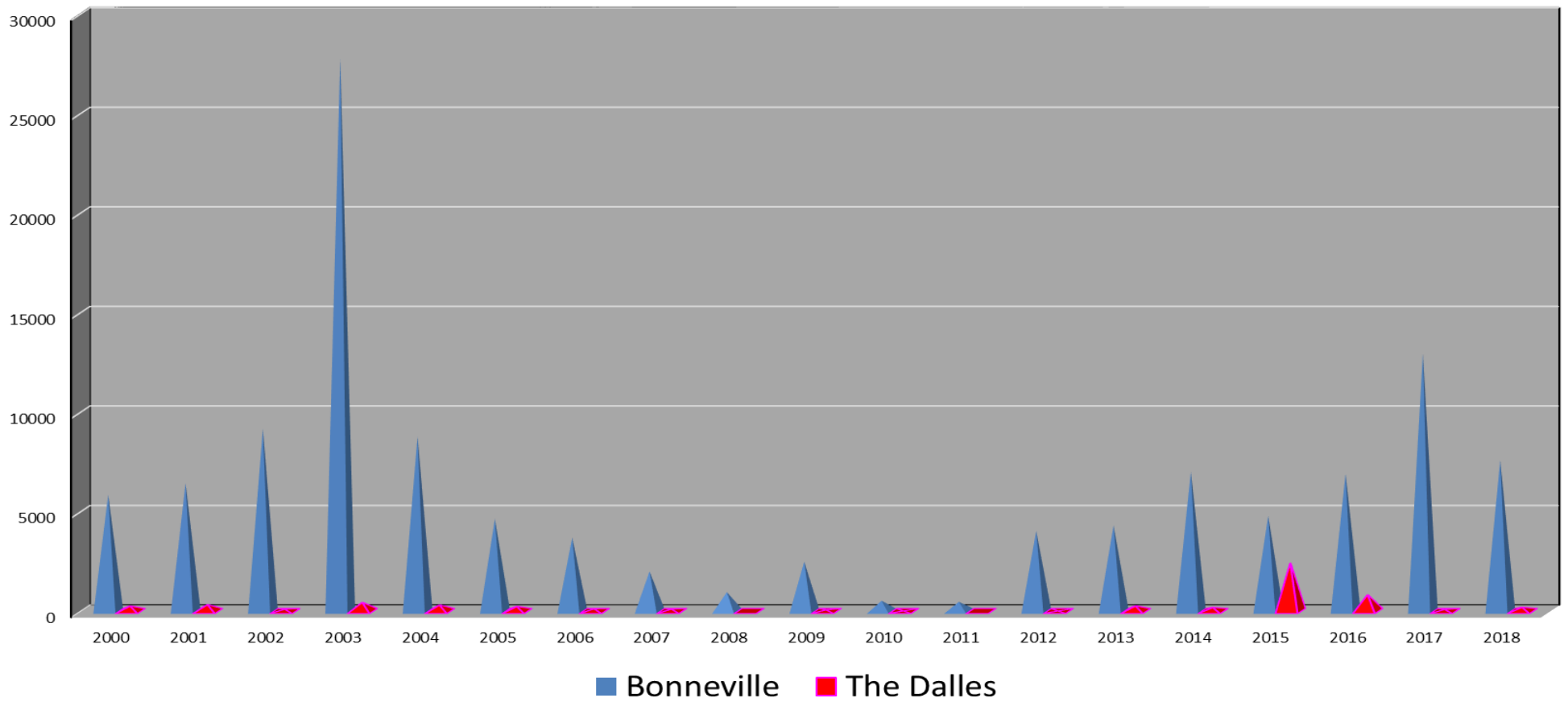
Lamprey study= reduced velocity overnight  
 SCADA INSPECTION  
 = Out of criteria

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
6/10			1.5		13.5	13.5	15.2	1.5	9.6	9.6		1.5	8.4	8.5
	1.4	9.9	1.5		13.5	13.4	14.7	1.5	9.4	9.4		1.5	8.4	8.4
	1.4	9.9	1.5		13.4	13.4	14.3	1.4	9.6	9.6		1.5	8.5	8.4
6/11			1.5		13.5	13.5	15.5	1.5	9.6	9.6		1.5	8.5	8.5
	1.4	9.9	1.6		13.5	13.5	15.5	1.5	9.5	9.5		1.5	8.5	8.5
	1.4	10.0	1.4		13.7	13.7	15.3	1.5	9.6	9.6		1.5	8.5	8.5
6/12			1.0		14.0	14.1	15.3	0.6	12.1	12.1		0.7	12.0	12.0
	1.5	9.7	1.4		13.9	14.0	15.2	1.6	9.4	9.4		1.5	8.3	8.3
	1.5	9.8	1.4		14.1	14.0	15.6	1.5	9.6	9.6		1.4	8.6	8.5
6/13			1.3		14.0	14.0	13.7	1.3	9.5	9.5		1.3	8.5	8.6
	1.4	9.9	1.4		14.1	14.0	13.4	1.4	8.8	8.8		1.4	8.5	8.4
	1.4	9.8	1.5		14.0	14.0	13.5	1.3	9.5	9.5		1.4	8.4	8.4
6/14			1.2		14.0	14.0	12.0	1.4	8.5	8.5		1.4	8.5	8.5
	1.4	9.9	1.4		13.9	13.9	11.9	1.4	8.5	8.5		1.4	8.5	8.5
	1.4	10.0	1.6		14.1	14.1	12.1	1.5	8.5	8.5		1.3	8.9	8.9
6/15			0.6	13.8	13.8	10.5	0.2	10.4	10.4	0.4	11.9	11.9		
	1.3	9.8	1.5	14.0	14.0	10.7	1.5	8.5	8.5	1.3	8.3	8.3		
	1.4	9.9	1.6	14.1	14.1	13.3	1.6	8.6	8.6	1.6	8.3	8.4		
6/16			1.2	14.0	14.0	11.7	1.4	8.4	8.4	1.4	8.4	8.4		
	1.2	10.0	1.4	13.9	13.9	11.4	1.5	8.4	8.4	1.4	8.5	8.5		
	1.4	10.0	1.5	14.0	14.0	11.8	1.4	8.6	8.6	1.5	8.3	8.3		
<b>AVG:</b>	<b>1.4</b>	<b>9.9</b>	<b>1.4</b>	<b>13.9</b>	<b>13.9</b>	<b>13.5</b>	<b>1.4</b>	<b>9.3</b>	<b>9.3</b>	<b>1.4</b>	<b>8.8</b>	<b>8.8</b>		

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

Bonneville and The Dalles Lamprey Passage 5/1 - 6/15







High numbers of Pelicans suddenly showed up by spillway,

