

The Dalles Dam Fishway Status Report

1/7/2018

Inspection Period: 12/31/2017-01/06/2018

THE DALLES DAM



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: Comments	Temperature: Secchi:
NORTH FISHWAY				
Exit differential	0	≤ 0.5'		40.7 °F
Count station differential	0	≤ 0.3'		5.0 feet
Weir crest depth	0	1.0' ± 0.1'		
Entrance differential	0	1.0' - 2.0'	1.4	
Entrance weir N1	0	depth (≥ 8')	9.0	
Entrance weir N2	0	Closed		
PUD Intake differential	0	≤ 0.5'		
EAST FISHWAY Out of service Dec1				
Exit differential	0	≤ 0.5'		
Removable weirs 154-157	0	Per forebay	Gearbox rehab start on 155 and 156	
Weir 158-159 differential	0	1.0' ± 0.1'	Gearbox rehab start on 158	
Count station differential	0	≤ 0.3'		
Weir crest depth	0	1.0' ± 0.1'		
Junction pool weir JP6	0	0.0		
East entrance differential	0	1.0' - 2.0'		
Entrance weir E1	0	No criteria		
Entrance weir E2	0	depth (≥ 8')		
Entrance weir E3	0	depth (≥ 8')		
Collection channel velocity	0	1.5 - 4 fps		
Transportation channel velocity	0	1.5 - 4 fps		
North channel velocity	0	1.5 - 4 fps		
South channel velocity	0	1.5 - 4 fps		
West entrance differential	0	1.0' - 2.0'		
Entrance weir W1	0	depth (≥ 8')	Weir removed for caps and rehab	
Entrance weir W2	0	depth (≥ 8')	Weir removed for caps and rehab	
Entrance weir W3	0	No criteria	Weir removed for caps and rehab	
South entrance differential	0	1.0' - 2.0'		
Entrance weir S1	0	depth (≥ 8')		
Entrance weir S2	0	depth (≥ 8')		
JUVENILE PASSAGE				
Sluiceway operation	0	Units 1, 8, 18		
Turbine trashrack drawdown	0	<1.5', wkly	range: 0.1-0.8'	
Spill volume/pattern	0			Spillway closed midnight Aug31
Turbine Unit Priority	0	per FPP	MU 13-16 oos 13 RTS 12/20	
Turbine 1% Efficiency	0	per FPP		

OTHER ISSUES:

Birds and Sea lions:

No sea lion sightings this week. Numerous eagles on project, primarily at westrick park. ~70 cormorant rest in SW3.
Gull numbers <20 near dam. Approx 500 seen near The Dalles Marina

Operations

North fishway in full operation. Tailwater sensor failed, but PUD repaired within 1 day. Entrance flow appeared to remain in criteria.
Sluiceway endgate closed Dec18. Sluiceways open at unit 1 and 18 to equalize with forebay.

Current Outages;

T8 (MU15 & MU16) out for transformer failure. Transformer replacement 6/28/18.
MU17 out for overhaul. Return 3/8/18.
Fish unit 1 and 2 out Dec 1 for annual fishway outage. East fishladder dewatered Dec 1.
Main unit 18 out Jan8 for overhaul & Headcover Upgrade

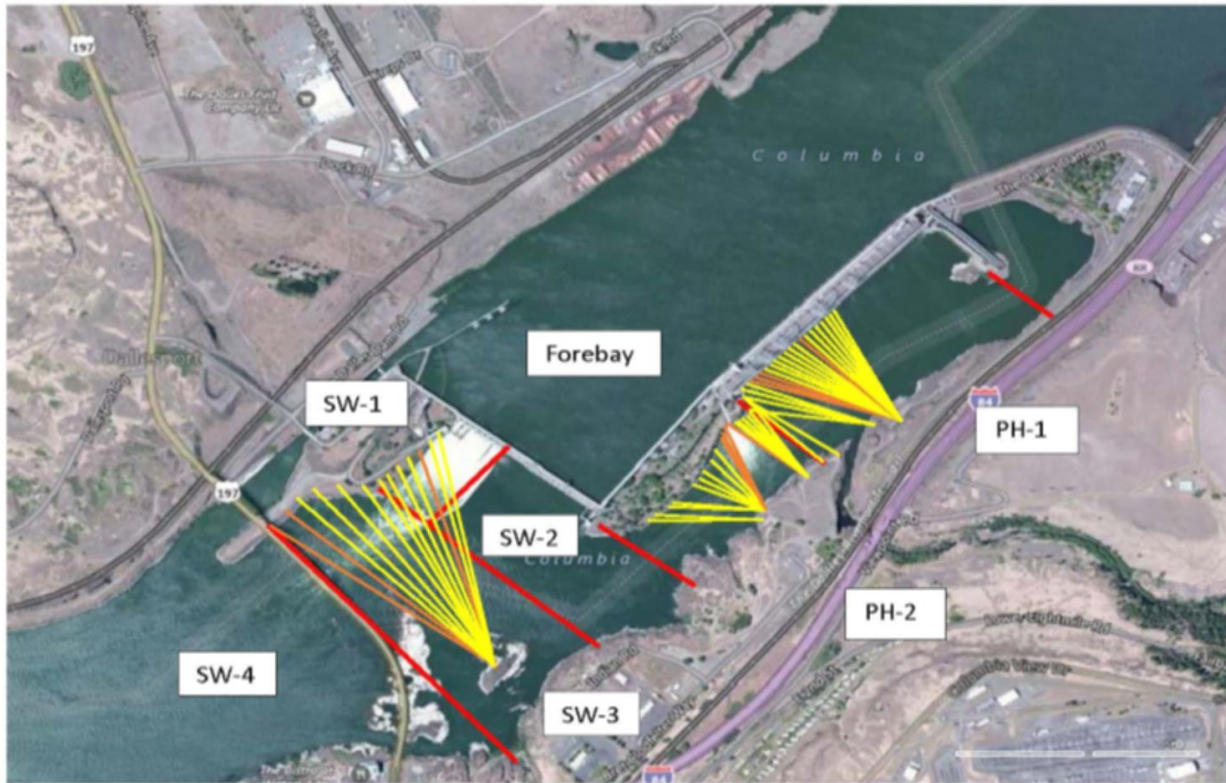
Maintenance;

East exit weir electrical panel FCQ7 partially installed. Further install awaiting final design drawings Installation expected to continue in Feb.
West entrance weirs removed and weir caps installed. South weir caps underway.
East exit oil boom installation by AWS contract this winter. Scope reviewed.
Fish lock upper and lower bulkhead replacement with concrete for improved isolation and fishladder protection. Scope in review.
East exit 155, 156, 158 weir gearboxes removed for rehab.
Work starting on a collection diffuser valve rehab for scoping purposes on remaining valves
Collection channel removal of stuck dewater pump starting.
Long term repair items; 154 -157 rehab/weir wheel replace, diffuser valve overhaul (rehab and decommission).
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. Charter in place for comprehensive spillway assessment.

Research/Construction/Contractors:

Fish Counters - Normandau video review counting through the winter.
Pikeminnow dam angling - Done for season with a total catch at 1776. Highest invasive walleye by-catches do date being released. Concern brought to FPOM.
AWS construction - Construction progress continues. Commissioning testing Mar 31.
Lamprey minor mods - Rounded entrance weir caps on sight. Working on attaching to west weirs. South and north to follow.
Railroad track removal - Tailrace deck rail removal approx half completed.
Fish unit breaker replace - Work in progress. Completion Feb18, 2018. Two weeks commission testing required.
Fish unit rehab - Phase 1A report Jan 2018. Award 2020. Completion 2022.
Transformer replacement - Install start May 2018.

Approved by: Ron Twiner
Operation Project Manager The Dalles Dam



Red lines = avian zones

Yellow lines = current wires

Orange lines = down or missing wires

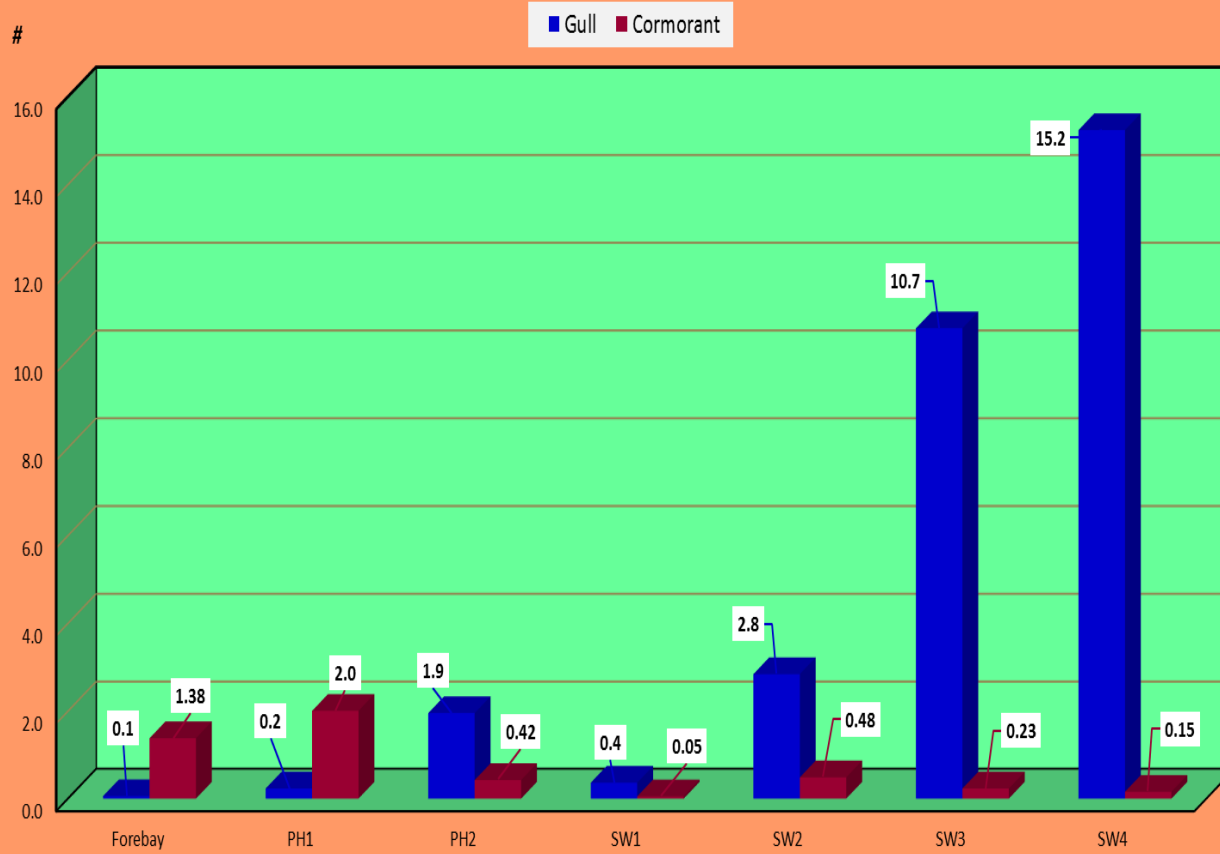
2017 Piscivorous Bird Counts

F=foraging, NF=non-foraging

Date	observer	time	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				
12/31		AM	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	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	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	0	0	
1/1	JWR	PM	FB	0	0	2	0	0	0	0	5	0	0	0	3	10		BAEA	
			PH1	3	0	0	0	0	0	0	0	0	0	0	0	3		BAEA	
			PH2	0	0	0	0	0	0	0	0	0	0	1	21	22			
			SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			SW2	6	0	2	46	0	0	0	0	0	0	0	0	0	54		
			SW3	0	0	0	51	0	0	0	0	0	0	0	0	5	56		
			SW4	0	34	0	0	0	0	0	0	0	0	0	0	0	34		
1/2	bc	AM	FB	0	0	11	2	0	0	0	6	0	0	0	3	22			
			PH1	3	0	0	0	0	0	0	0	0	0	0	0	3			
			PH2	0	0	0	0	0	0	0	0	0	0	0	43	43		BAEA	
			SW1	0	0	2	0	0	0	0	0	0	0	0	0	2			
			SW2	6	0	2	46	0	0	0	0	0	0	0	0	54			
			SW3	0	0	0	29	0	0	0	0	0	0	0	0	5	34		
			SW4	0	25	0	2	0	0	0	0	0	0	0	0	0	27		
1/3	JWR	PM	FB	0	0	13	0	0	0	3	0	0	0	5	21		BAEA		
			PH1	0	0	0	4	0	0	0	0	0	0	0	4				
			PH2	0	0	0	0	0	0	0	0	0	0	0	28	28		BAEA	
			SW1	0	0	0	0	0	0	0	0	0	0	0	3	3		BAEA	
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	1			
			SW3	0	0	1	77	0	0	0	0	0	0	0	0	78			
			SW4	0	30	0	6	0	0	0	0	0	0	0	0	36			
1/4	JWR	AM	FB	0	0	4	0	0	0	3	0	0	1	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		BAEA	
			SW1	0	0	0	0	0	0	0	0	0	0	0	1	1		BAEA	
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0			
			SW3	0	5	1	74	0	0	0	0	0	0	0	0	80			
			SW4	0	8	0	0	0	0	0	0	0	0	0	0	8			
1/5	JWR	PM	FB	0	0	3	0	0	0	3	0	0	0	2	8		BAEA		
			PH1	0	0	1	2	0	0	0	0	0	0	0	3				
			PH2	0	0	0	0	0	0	0	0	0	0	0	25	25		BAEA	
			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	2	48	0	0	0	0	0	0	0	0	50			
			SW4	0	34	0	0	0	0	0	0	0	0	0	0	34			
1/6	JWR	AM	FB	0	0	0	0	0	0	0	0	0	0	6	6		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	26	26		BAEA	
			SW1	0	0	0	0	0	0	0	0	0	0	0	3	3		BAEA	
			SW2	0	15	0	0	0	0	0	0	0	0	0	0	15			
			SW3	0	0	2	45	0	0	0	0	0	0	0	0	47			
			SW4	0	12	0	1	0	0	0	0	0	0	0	0	13			

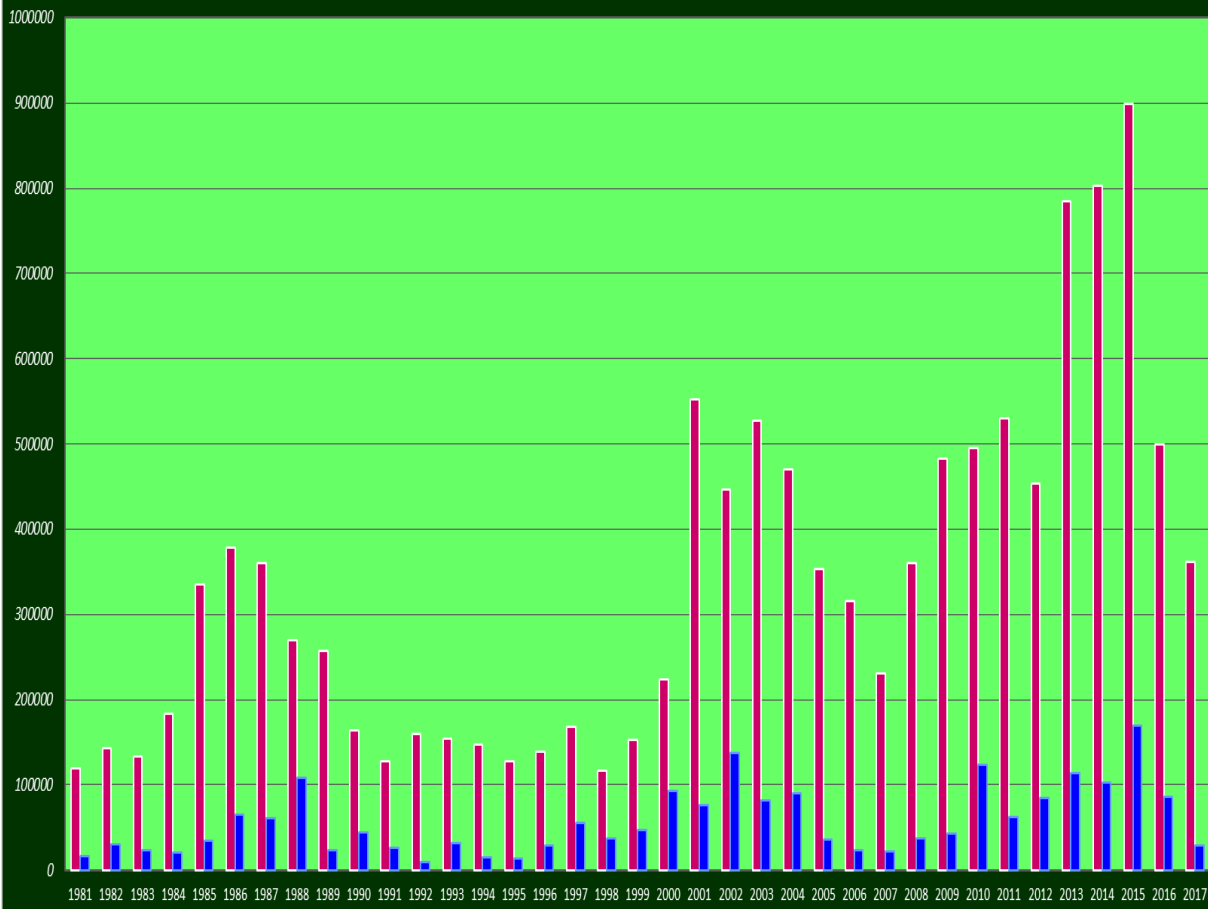
Key: BAEA = Bald Eagle; GBHE = Great Blue Heron; COME = Common Merganser

Daily Foraging Average by Zone (4/1-10/31)

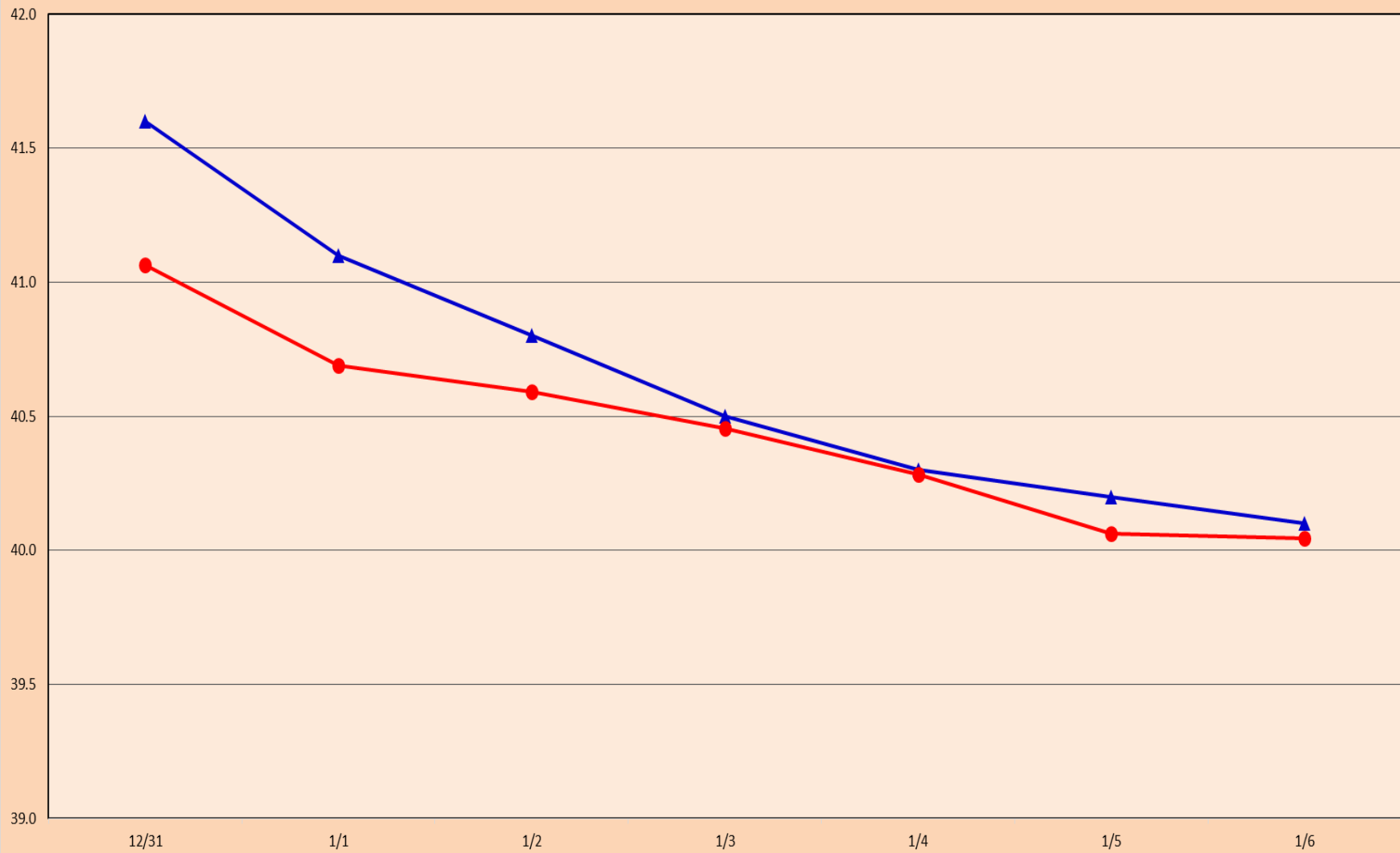


The Dalles Dam Historical Chinook Passage

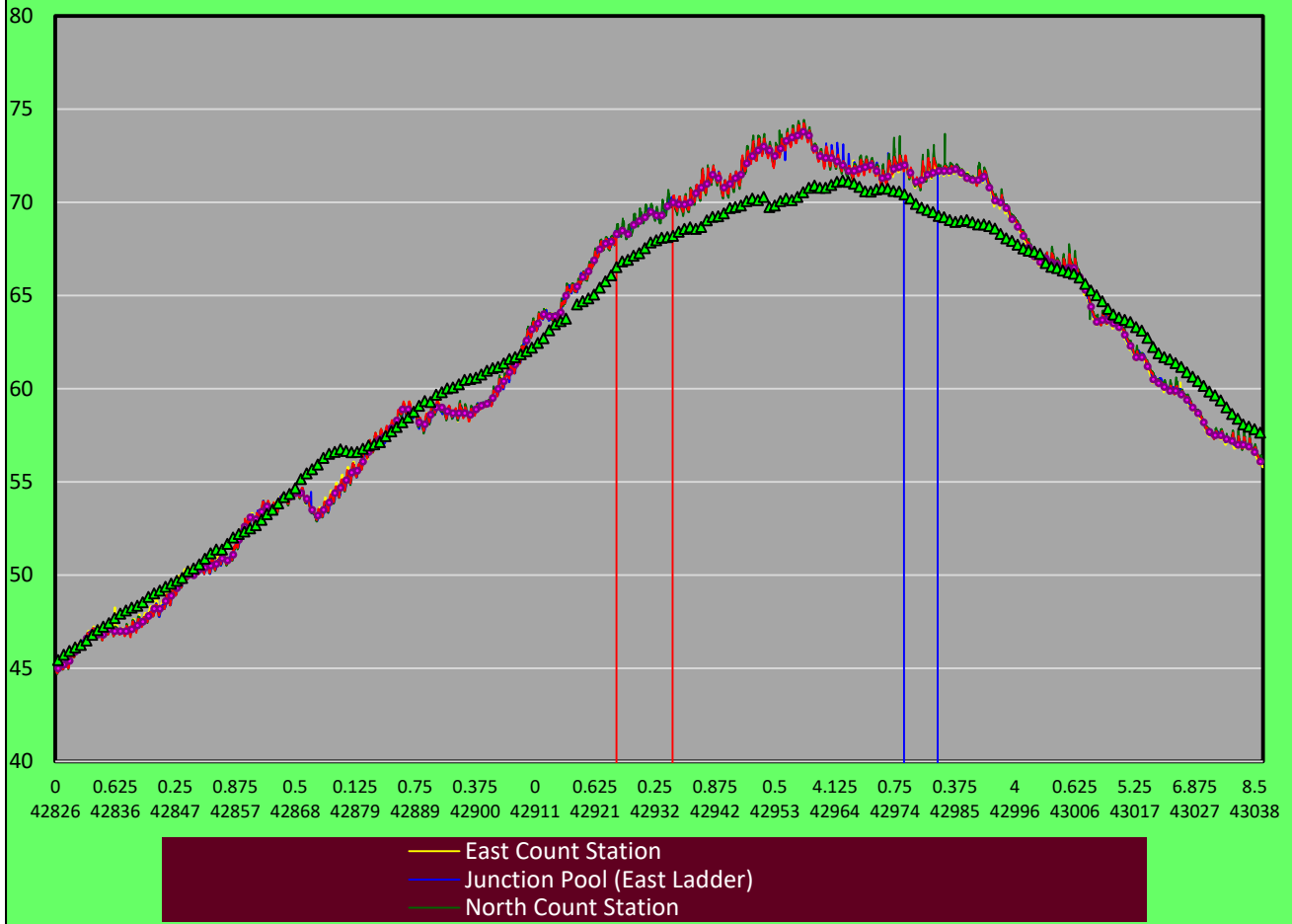
East Ladder North Ladder



▲ Current USGS daily tailwater average ● USGS daily tailwater average (2007-2016)



2017 River/Ladder Water Temperatures



USGS:

<http://rweb.crohms.org/rmt/documents/ops/temp/201801.lcol.html>

Secchi:		Temperatures
12/31	5.0	Sun 41.6
1/1	5.0	Mon 41.1
1/2	5.0	Tue 40.8
1/3	5.0	Wed 40.5
1/4	5.0	Thurs 40.3
1/5	5.0	Fri 40.2
1/6	5.0	Sat 40.1
	5.0	AVG 40.7

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

= 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
12/31	1.4	8.8	<i>East Ladder dewatered for winter</i>											
1/1	1.4	8.9												
1/2	1.2	8.6												
1/3	1.4	8.9												
1/4	1.4	9.2												
1/5	1.4	9.1												
1/6	1.4	9.3												
AVG:	1.4	9.0												

Fishways are inspected twice daily plus one SCADA inspection.



One more pair block for AWS intake