

The Dalles Dam Fishway Status Report

6/30/2018

Inspection Period: 06/24/2018-06/30/2018

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: Comments	21 conditions ok	Temperature: Secchi:	66.3 °F 4.8 feet
NORTH FISHWAY						
Exit differential	0	≤ 0.5'				
Count station differential	0	≤ 0.3'				
Weir crest depth	0	1.3' ± 0.1'				Increased from 1' to 1.3' to allow shad passage.
Entrance differential	0	1.0' - 2.0'		1.4		
Entrance weir N1	0	depth (≥ 8')		10.4		
Entrance weir N2	0	Closed				
PUD Intake differential	0	≤ 0.5'		0		
EAST FISHWAY						
Exit differential	0	≤ 0.5'				
Removable weirs 154-157	0	Per forebay				
Weir 158-159 differential	0	1.0' ± 0.1'				
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')		12.7		
Entrance weir E3	0	depth (≥ 8')		12.6		
Collection channel velocity	0	1.5 - 4 fps	2.26 fps	Range: Bay FU1, 2.26 fps to MU22, 1.91 fps		
Transportation channel velocity	0	1.5 - 4 fps	NA fps			
North channel velocity	0	1.5 - 4 fps	2.74 fps			
South channel velocity	0	1.5 - 4 fps	3.35 fps			
West entrance differential	0	1.0' - 2.0'		1.4		
Entrance weir W1	0	depth (≥ 8')		8.6		
Entrance weir W2	0	depth (≥ 8')		8.6		
Entrance weir W3	0	No criteria				
South entrance differential	0	1.0' - 2.0'		1.3		
Entrance weir S1	0	depth (≥ 8')		8.5		
Entrance weir S2	0	depth (≥ 8')		8.5		
JUVENILE PASSAGE						
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', biwklly	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 boat and shore hazing continues. Moderate gull numbers and steady flocks of pelicans.
No sea lion sightings this week.

Operations

North and east adult fishways in full operation. North and 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. Nine 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
MU15 forced OOS transformer replacement. RTS 8/6/2018
MU16 forced OOS transformer replacement. RTS 6/29/2018,

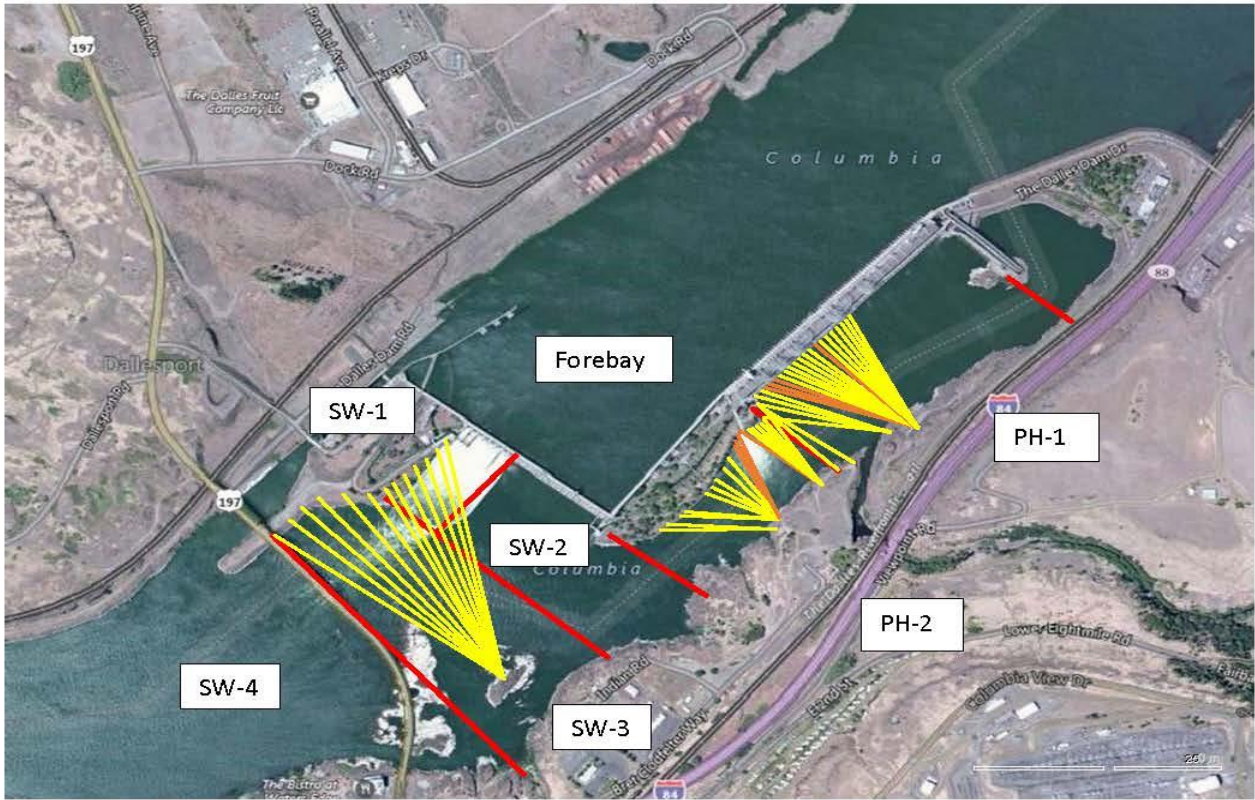
Maintenance

Rebuilding spare gearboxes for entrance and exit weirs.
East exit oil boom - Fabricate in July. Install Aug7. Low forebay requested.
Collection channel dewatering pumps 3 and 4 rehab in progress. Pump 4 requires pump/motor replacement. Maintenance 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. Wheel material ordered.
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 – Underway
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 25: 6/18-6/24 219 caught, 602 YTD
Non native (bass and walleye) bycatch release by WDFW continues. FPOM discussion continues.
ODFW monthly fishway inspections continue. 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 in review.
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				
7/1	CEA	AM	FB	0	0	1	62	0	0	0	0	0	0	0	0	0	63	all PH1a windy, sunny	
			PH1	0	0	2	0	0	0	0	0	0	1	0	0	0	0		3
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW1	10	0	0	0	0	0	0	0	0	0	0	0	0	0		10
			SW2	0	0	1	0	0	0	0	0	0	0	0	0	0	0		1
			SW3	85	0	0	0	0	0	0	0	0	9	0	0	0	0		94
			SW4	35	0	0	0	0	0	0	0	0	70	45	0	0	0		150
7/2	CEA	PM	FB	0	0	0	38	0	0	0	2	0	0	0	0	0	40	PH1b windy, sunny	
			PH1	0	0	1	0	0	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		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
			SW3	5	0	0	0	0	0	0	0	0	0	0	0	0	0		5
			SW4	9	45	0	0	0	0	0	0	0	0	60	0	0	0		114
7/3	JWR	AM	FB	4	0	0	59	0	0	0	0	0	0	0	0	0	63	warm sun	
			PH1	0	0	0	0	0	0	0	0	0	2	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	6	0	0	0	0	0	0	0	0	1	0	0	0	0		7
			SW3	0	0	0	0	0	0	0	0	0	45	3	0	0	0		48
			SW4	13	299	0	0	0	0	0	0	0	56	82	0	0	0		450
7/4	JWR	PM	FB	0	2	1	38	0	0	0	0	0	0	0	0	0	41	Hot sun	
			PH1	0	0	0	2	0	0	0	0	0	2	0	0	0	0		4
			PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW1	0	0	1	0	0	0	0	0	0	0	3	0	0	0		4
			SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			SW3	2	23	1	0	0	0	0	0	0	28	0	0	0	0		54
			SW4	11	94	0	0	0	0	0	0	0	46	47	0	0	0		198
7/5	JWR	AM	FB	0	0	1	43	0	0	0	0	0	0	0	0	0	44		
			PH1	0	0	0	0	0	0	0	0	0	1	0	0	0	0		1
			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	17	37	0	0	0	0	0	0	0	52	0	0	0	0		106
			SW4	0	0	0	0	0	0	0	0	0	26	74	0	0	0		100
7/6	JED	PM	FB	0	0	1	54	0	0	0	0	0	0	0	0	0	55	west end Hot sun, windy	
			PH1	0	0	1	0	0	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		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	5	0	0	0	0	0	0	0	0	5	8	0	0	0		18
			SW4	5	0	0	0	0	0	0	0	0	4	5	0	0	0		14
7/7	JED	AM	FB	10	4	1	95	0	0	0	0	0	0	0	0	0	110	hot sun, wind 10mph COME	
			PH1	0	0	1	0	0	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		0
			SW1	4	0	0	0	0	0	0	0	0	0	0	0	0	0		4
			SW2	5	0	0	0	0	0	0	0	0	0	0	0	0	0		5
			SW3	40	30	0	0	0	0	0	0	0	24	0	2	0	0		96
			SW4	20	60	0	0	0	0	0	0	0	30	40	0	0	0		150

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

The Dalles East

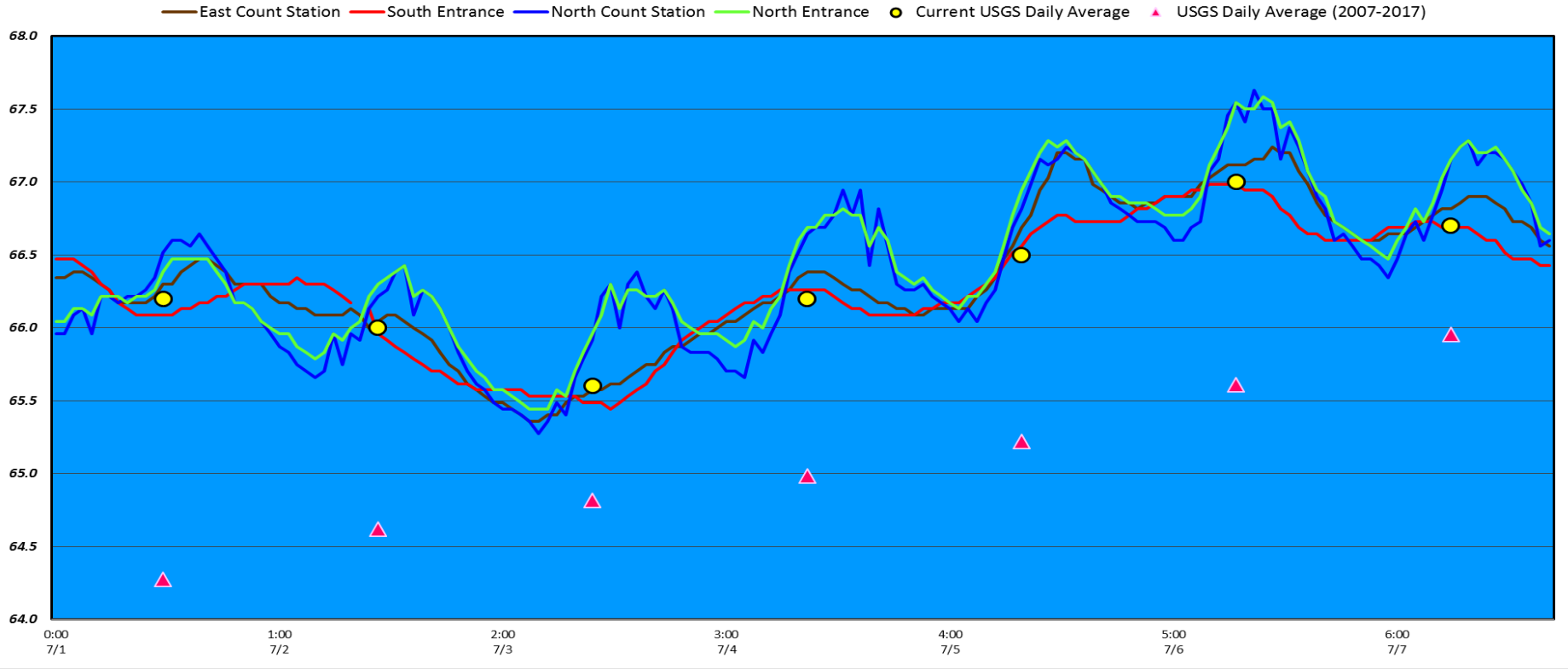
Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink	Lamprey
7/1	801	718	83	168	102	66	0	0	0	4686	0	0	217
7/2	602	550	52	191	91	100	0	0	0	2358	0	0	258
7/3	497	433	64	189	118	71	0	0	0	2653	0	0	122
7/4	473	431	42	129	68	61	0	0	0	2537	0	0	130
7/5	448	380	68	125	66	59	0	0	0	1973	0	0	176
7/6	802	731	71	242	142	100	0	0	0	2791	0	0	215
7/7	654	600	54	202	100	102	0	0	0	1478	0	0	121
total	4277	3843	434	1246	687	559	0	0	0	18476	0	0	1239

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
7/1	284	276	8	37	17	20	0	0	0	2357	0	0	74
7/2	224	210	14	56	20	36	0	0	0	2411	0	0	62
7/3	83	82	1	30	12	18	0	0	0	724	0	0	83
7/4	84	74	10	24	12	12	0	0	0	1254	0	0	25
7/5	239	221	18	67	38	29	0	0	0	2770	0	0	67
7/6	202	197	5	55	17	38	0	0	0	1991	0	0	124
7/7	250	242	8	75	31	44	0	0	0	2130	0	0	36
total	1366	1302	64	344	147	197	0	0	0	13637	0	0	471
% North	24.2	25.3	12.9	21.6	17.6	26.1	0.0	0.0	0.0	42.5	0.0	0.0	27.5

Fish Counts

The Dalles Dam Adult Fish Ladder(s) River Temperatures



USGS:

USGS river temp July

	Secchi:		Temperatures
7/1	4.5	Sun	66.2
7/2	5.0	Mon	66.0
7/3	5.0	Tue	65.6
7/4	5.0	Wed	66.2
7/5	5.0	Thurs	66.5
7/6	4.5	Fri	67.0
7/7	4.5	Sat	66.7
	4.8	AVG	66.3

Lamprey study= reduced velocity overnight

SCADA INSPECTION

= Out of criteria

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

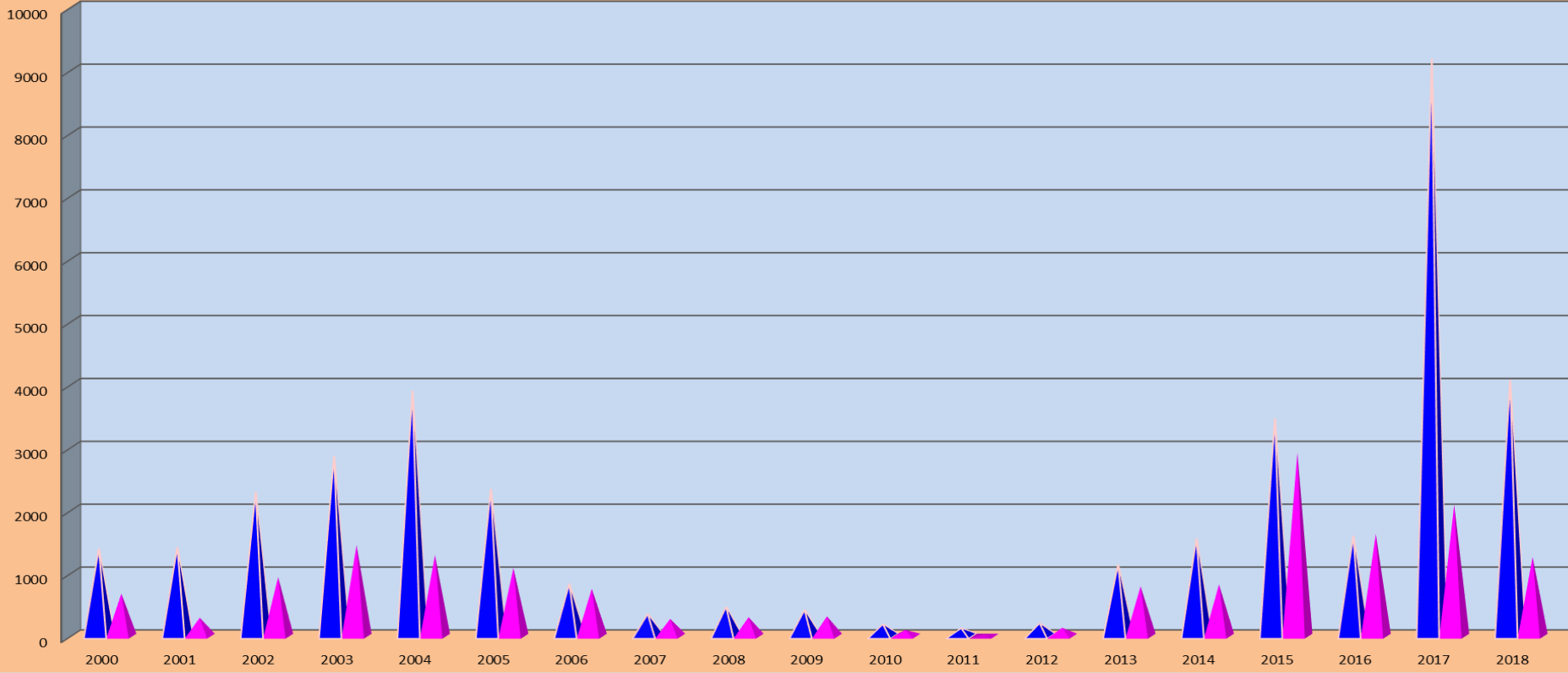
Date:	North Ladder			East Ladder										
	North Entrance		Differential	East Entrance				West Entrance			South Entrance			
	Differential	N1 Depth		E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth
7/1			1.4		13.1	13.1	12.7	1.5	8.8	8.8		1.4	8.5	8.6
	1.5	9.6	1.4		12.6	12.5	12.3	1.5	8.9	8.9		1.5	8.4	8.4
	1.4	10.5	1.5		12.2	12.2	11.0	1.4	8.5	8.5		1.4	8.3	8.3
7/2			1.2		11.9	12.1	10.0	1.4	8.6	8.6		1.3	8.3	8.3
	1.4	10.4	1.4		13.4	13.4	10.0	1.5	8.5	8.5		1.4	8.3	8.3
	1.4	10.4	1.3		13.6	13.6	11.6	1.4	8.6	8.6		1.4	8.3	8.3
7/3			0.7		13.4	13.5	10.1	0.8	8.9	8.9		0.9	9.8	9.7
	1.3	10.3	1.5		13.5	13.5	11.2	1.5	8.5	8.5		1.4	8.3	8.3
	1.3	10.2	1.6		13.6	13.6	12.5	1.6	8.6	8.6		1.5	8.4	8.3
7/4			1.3		12.5	12.5	9.4	1.4	8.4	8.4		1.3	8.3	8.3
	1.3	10.3	1.5		12.5	12.5	9.4	1.3	8.5	8.5		1.3	8.3	8.3
	1.5	9.7	1.6		12.5	12.5	11.0	1.5	8.4	8.4		1.4	8.3	8.3
7/5			1.9	12.6	10.3	9.2	1.4	8.5	8.5	1.4	8.2	8.2		
	1.4	10.3	1.5	10.5	10.5	9.7	1.4	8.4	8.4	1.3	8.4	8.4		
	1.4	11.2	1.7	10.6	10.6	10.2	1.4	8.4	8.4	1.3	9.4	9.4		
7/6			0.9	13.5	13.5	9.7	0.8	10.0	10.0	0.7	11.0	11.0		
	1.4	10.6	1.5	12.9	12.9	9.7	1.4	8.3	8.3	1.5	8.1	8.1		
	1.5	10.6	1.5	13.0	12.9	10.6	1.5	8.3	8.3	1.4	8.3	8.3		
7/7			1.4	13.0	12.9	9.3	1.3	8.4	8.9	1.2	8.4	8.3		
	1.3	10.5	1.5	13.0	13.0	9.5	1.4	8.3	8.2	1.6	7.5	7.5		
	1.5	10.5	1.5	13.0	13.0	10.1	1.5	8.3	8.3	1.6	8.5	8.5		
AVG:	1.4	10.4	1.4	13	13	10.4	1.4	8.6	8.6	1.3	8.5	8.5		

Fishways are inspected twice daily plus one SCADA inspection.

Lamprey Passage YTD

■ East Ladder

■ North Ladder





Pelicans still hanging on spillway eddy line off end of spillwall.