The Dalles Dam Fishway Status Report

4/14/2018

Inspection Period: 04/08/2018-04/14/2018

THE DALLES DAM

The Dalles Project-Fisheries
P.O. Box 564
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The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: 21 Comments	Temperature: 46.6 °F Secchi: 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'	0	
EAST FISHWAY				
Exit differential	0	≤ 0.5'		
Removable weirs 154-157	3	Per forebay	Weir 156 malfunctioning	
Weir 158-159 differential	4	1.0' ± 0.1'	3x above 1.1, 1x below 0.9	
Count station differential	0	≤ 0.3'		
Weir crest depth	6	1.0' ± 0.1'	4x above 1.1, 2x below 0.9	
Junction pool weir JP6	0	0.0		
East entrance differential	0	1.0' - 2.0'	1.6	
Entrance weir E1	0	*No criteria*		
Entrance weir E2	0	depth (≥ 8')	12.4	
Entrance weir E3	0	depth (≥ 8')	12.5	
Collection channel velocity	0	1.5 - 4 fps	2.38 fps	**Range: Bay 21, 3.07 fps to SS, 1.95 fps**
Transportation channel velocity	0	1.5 - 4 fps	2.04 fps	
North channel velocity	0	1.5 - 4 fps	2.29 fps	
South channel velocity	0	1.5 - 4 fps	2.51 fps	
West entrance differential	0	1.0' - 2.0'	1.6	
Entrance weir W1	0	depth (≥ 8')	8.8	
Entrance weir W2	0	depth (≥ 8')	8.8	
Entrance weir W3	0	*No criteria*		
South entrance differential	0	1.0' - 2.0'	1.5	
Entrance weir S1	0	depth (≥ 8')	8.4	
Entrance weir S2	0	depth (≥ 8')	8.4	
JUVENILE PASSAGE				
Sluicegate operation	0	Units 1, 21	1-1,1-2, 1-3,8-1,8-3, 21-2 and endgate open, 18-2 open instead of 21-2 starting 4/11	
Turbine trashrack drawdown	0	<1.5', wkly	range: 0.1-0.8'	
Spill volume/pattern	0	None	Bays 1-8, Range: 26.4%-56%	
Turbine Unit Priority	0	per FPP		
Turbine 1% Efficiency	0	per FPP		

OTHER ISSUES:

Birds and Sea lions:
Expecting a large influx of gulls soon. Many observed at mouth of Klickitat and over Miller Island.
USDA hazers start Apr16 with 8 hours boat/6 hours shore hazing daily. Preseason training complete.

Operations
Spillway open with involuntary prior to Apr 10. Spill for fish open on Apr 10.
PUD turbine lost operation protection, forcing unit out of service Apr10 through Apr11 for repair. Bypass open. No impact to fishladder flow.
North and east fishways in full operation.
Sluiceway open with 6 sluicegate operation

Current Outages;
MU5 Forced OOS 1135 3/22/2018 - 1700 4/19/2018 for blade seal inspection .
MU9 OOS 0001 3/5/2018 - 1700 4/17/18 for Annual
MU10 OOS 0730 3/5/2018 - 1700 5/1/2018 for O/H
MU15 Forced OOS through 1700 6/29/2019 GSU transformer replacement
MU16 Forced OOS through 1700 6/29/2019 for GSU transformer, Exciter, Head Cover Upgrade & Strainer
MU11 OOS - RTS 4/26/2018 for Annual
MU12 OOS - RTS 4/26/2018 for Annual
MU19 Forced OOS 1708 2/12/2018 - 1700 5/31/2018 for transformer acetylene production
MU20 Forced OOS 1708 2/12/2018 - 1700 5/31/2018 for transformer acetylene production

Maintenance;
East exit weir 156 malfunction continues. Maintenance notified. Ladder flow maintained.
East exit weir electrical panel FCQ7 installation completed. Demo of old FCQ7 complete, but awaiting removal due to AWS contract.
East exit oil boom anchor installation with John Day boat. Date to be determined. Planning meeting next week.
Collection channel dewatering pumps 3 and 4 removed for rehab.
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.
Periodic assessment team evaluated spillway deficiencies and found trunnion pins as highest on prioirity list.

Research/Construction/Contractors:
AWS construction - Construction progress continues. Commissioning dates Apr23-27, night shifts.
PSMFC completed second weekly sampling report for the North Wasco County PUD's dewatering structure. No concerns.
PITAGS repaired defective pit tag components-not transmitting at east count station
Fish Counters - Continues without issues.
Pikeminnow dam angling - To resume with higher water temps. High walleye by-catches 2017. **Release of non native predators awaiting WDFW decision.**
ODFW resumed monthly fishway inspections.
Lamprey minor mods - Rounded entrance weir caps installed south, west and north entrances. East weirs planned for next winter.
Lamprey trap planning meeting Apr16.
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 start delayed. Date to be determined.

Approved by: Ron Twiner
Operation Project Manager The Dalles Dam
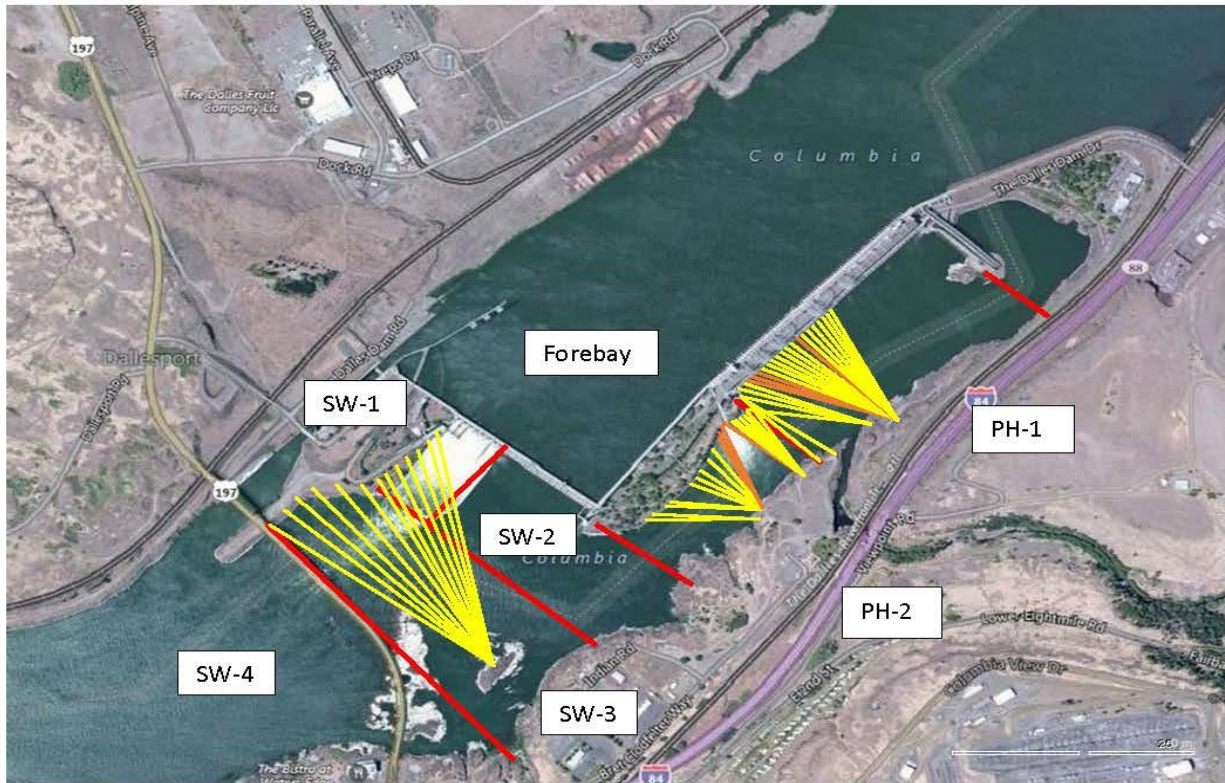
Red lines = avian zones   Yellow lines = current wires   Orange lines = down or missing wires

2018 Piscivorous Bird Counts

F=foraging, NF=non-foraging

Date	Observer	AM/PM	Zone	Gull F	Gull NF	Cormorant F	Cormorant NF	Caspian tern F	Caspian tern NF	Grebe F	Grebe NF	Pelican F	Pelican NF	Other F	Other NF	Total birds in zone	Notes
4/8	JED	AM	FB	0	0	0	0	0	0	0	0	0	0	0	0	0	Mixed sun, calm
			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	
4/9	JWR	PM	FB	0	0	2	27	0	0	0	0	0	0	0	0	29	Sun, calm
			PH1	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	
			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	1	0	0	0	0	0	0	0	0	1	
			SW4	0	0	0	0	0	0	0	0	0	0	0	0	0	
4/10	JED	AM	FB	0	1	2	56	0	0	0	0	0	0	0	1	60	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	Mixed sun, calm
			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	
4/11	JWR	PM	FB	0	2	1	16	0	0	0	0	0	0	0	0	19	
			PH1	0	0	1	3	0	0	0	0	0	0	0	0	4	
			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	25	12	0	0	0	0	0	0	0	0	0	0	37	
4/12	JWR	AM	FB	0	0	4	24	0	0	0	0	0	0	0	0	28	
			PH1	0	0	1	1	0	0	0	0	0	0	0	0	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	
			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	7	0	0	0	0	0	0	0	0	0	0	7	
4/13	CEA	PM	FB	0	0	2	40	0	0	0	0	0	0	0	0	42	COME
			PH1	0	0	2	5	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	0	0	0	0	0	0	0	0	0	0	0	Windy, cloudy
			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	
4/14	CEA	AM	FB	0	0	3	38	0	0	0	0	0	0	0	0	41	Calm, sunny
			PH1	0	0	0	3	0	0	0	0	0	0	0	0	3	57°F
			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	1	0	1	COME
			SW3	0	1	0	0	0	0	0	0	0	0	0	0	1	
			SW4	11	0	0	0	0	0	0	0	0	0	0	0	11	

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
4/8	6	5	1	9	8	1	0	0	0	0	0	0	0
4/9	7	7	0	5	4	1	0	0	0	0	0	0	0
4/10	5	4	1	8	4	4	0	0	0	0	0	0	0
4/11	4	4	0	1	1	0	0	0	0	0	0	0	0
4/12	1	1	0	2	2	0	0	0	0	0	0	0	0
4/13	6	6	0	3	2	1	0	0	0	0	0	0	0
4/14	2	2	0	5	5	0	0	0	0	0	0	0	-2
total	31	29	2	33	26	7	0	0	0	0	0	0	-2

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
4/8	1	1	0	0	0	0	0	0	0	0	0	0	0
4/9	0	0	0	1	1	0	0	0	0	0	0	0	0
4/10	0	0	0	0	0	0	0	0	0	0	0	0	0
4/11	0	0	0	0	0	0	0	0	0	0	0	0	0
4/12	0	0	0	1	1	0	0	0	0	0	0	0	0
4/13	0	0	0	1	1	0	0	0	0	0	0	0	0
4/14	0	0	0	0	0	0	0	0	0	0	0	0	0
total	1	1	0	3	3	0	0	0	0	0	0	0	0
% North	3.1	3.3	0.0	8.3	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Fish Counts

The Dalles Dam Adult Fish Ladder(s) River/Water Temperature
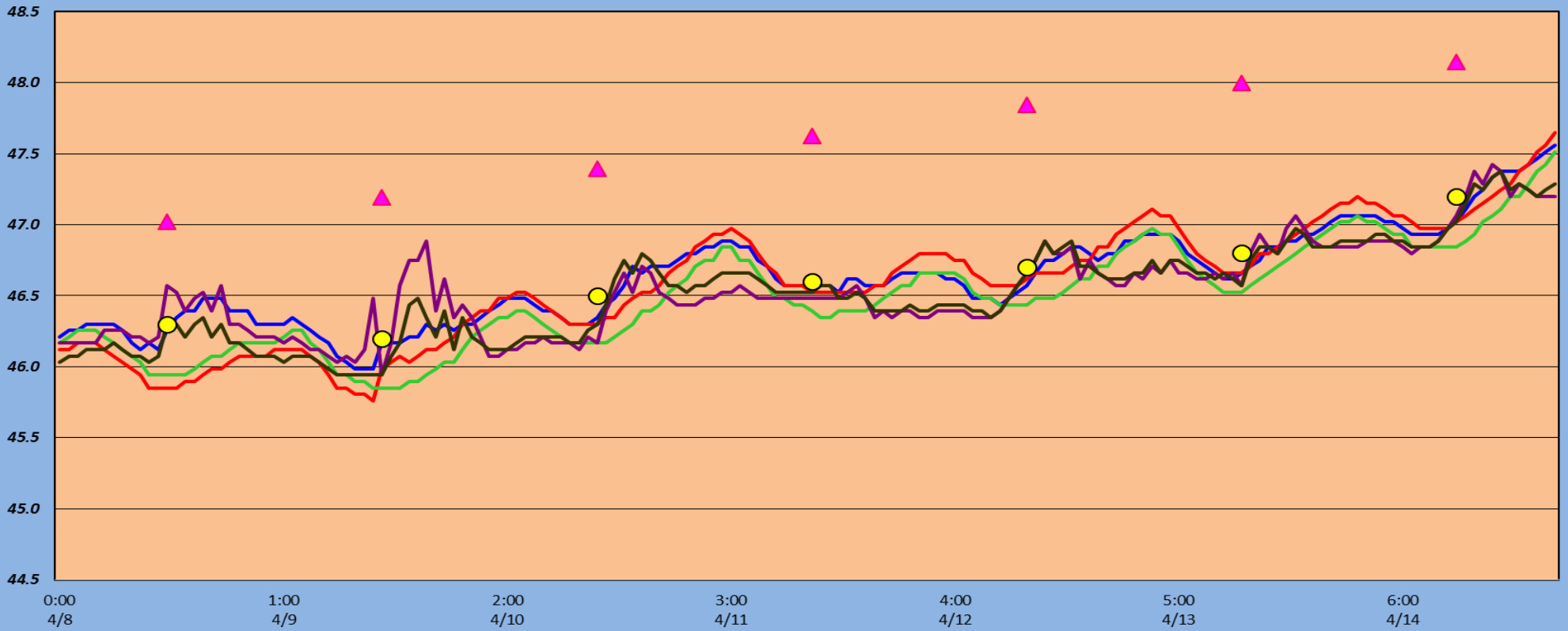
	Secchi:		Temperatures
4/8	3.0	Sun	46.3
4/9	3.5	Mon	46.2
4/10	3.0	Tue	46.5
4/11	3.5	Wed	46.6
4/12	3.5	Thurs	46.7
4/13	3.5	Fri	46.8
4/14	3.5	Sat	47.2
	3.4	AVG	46.6

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
4/8	SCADA		1.6		12.5	12.5	14.1	1.7	8.7	8.7		1.5	8.4	8.4
	1.4	9.5	1.6		12.5	12.5	14.8	1.7	8.7	8.7		1.4	8.5	8.6
	1.4	9.8	1.6		12.6	12.6	15.7	1.6	8.7	8.7		1.5	8.5	8.6
4/9	SCADA		1.7		12.4	12.4	14.4	1.5	8.9	8.9		1.4	8.6	8.6
	1.3	9.9	1.4		11.6	11.5	15.3	1.6	8.7	8.8		1.5	8.5	8.5
	1.3	9.9	1.6		12.4	12.4	14.4	1.6	8.9	8.9		1.4	8.3	8.3
4/10	SCADA		1.6		12.5	12.5	15.1	1.6	8.8	8.8		1.4	8.4	8.4
	1.7	9.9	1.6		12.4	12.4	15.4	1.6	8.8	8.8		1.6	8.2	8.2
	1.2	9.7	1.5		12.4	12.4	14.2	1.5	8.7	8.7		1.5	8.2	8.2
4/11	SCADA		1.6		12.5	12.5	14.8	1.6	8.7	8.7		1.5	8.3	8.3
	1.4	9.7	1.5		12.5	12.5	14.8	1.6	8.7	8.7		1.5	8.3	8.3
	1.4	9.7	1.5		12.4	12.4	14.3	1.6	8.7	8.7		1.4	8.3	8.3
4/12	SCADA		1.5		12.6	12.6	14.4	1.5	8.9	8.9		1.4	8.3	8.3
	1.4	9.7	1.5		12.5	12.5	13.5	1.4	8.8	8.8		1.4	8.2	8.2
	1.5	9.7	1.4		12.5	12.5	13.7	1.5	8.8	8.8		1.4	8.4	8.4
4/13	SCADA		1.6		12.5	12.5	15.4	1.6	8.9	8.9		1.5	8.4	8.4
	1.4	9.7	1.6		12.5	12.6	15.3	1.6	8.8	8.8		1.6	8.4	8.4
	1.4	9.8	1.5		12.5	12.5	15.3	1.6	8.8	8.8		1.5	8.3	8.3
4/14	SCADA		1.6		12.5	12.6	15.0	1.6	8.9	8.9		1.5	8.3	8.3
	1.5	9.9	1.6		12.5	12.6	14.8	1.6	8.9	8.9		1.5	8.3	8.3
	1.5	9.7	1.6		12.5	12.6	15.0	1.6	8.9	8.9		1.5	8.3	8.3
AVG:	1.4	9.8	1.6		12.4	12.5	14.7	1.6	8.8	8.8		1.5	8.4	8.4

Fishways are inspected twice daily plus one SCADA inspection.

Look - No AWS crane.
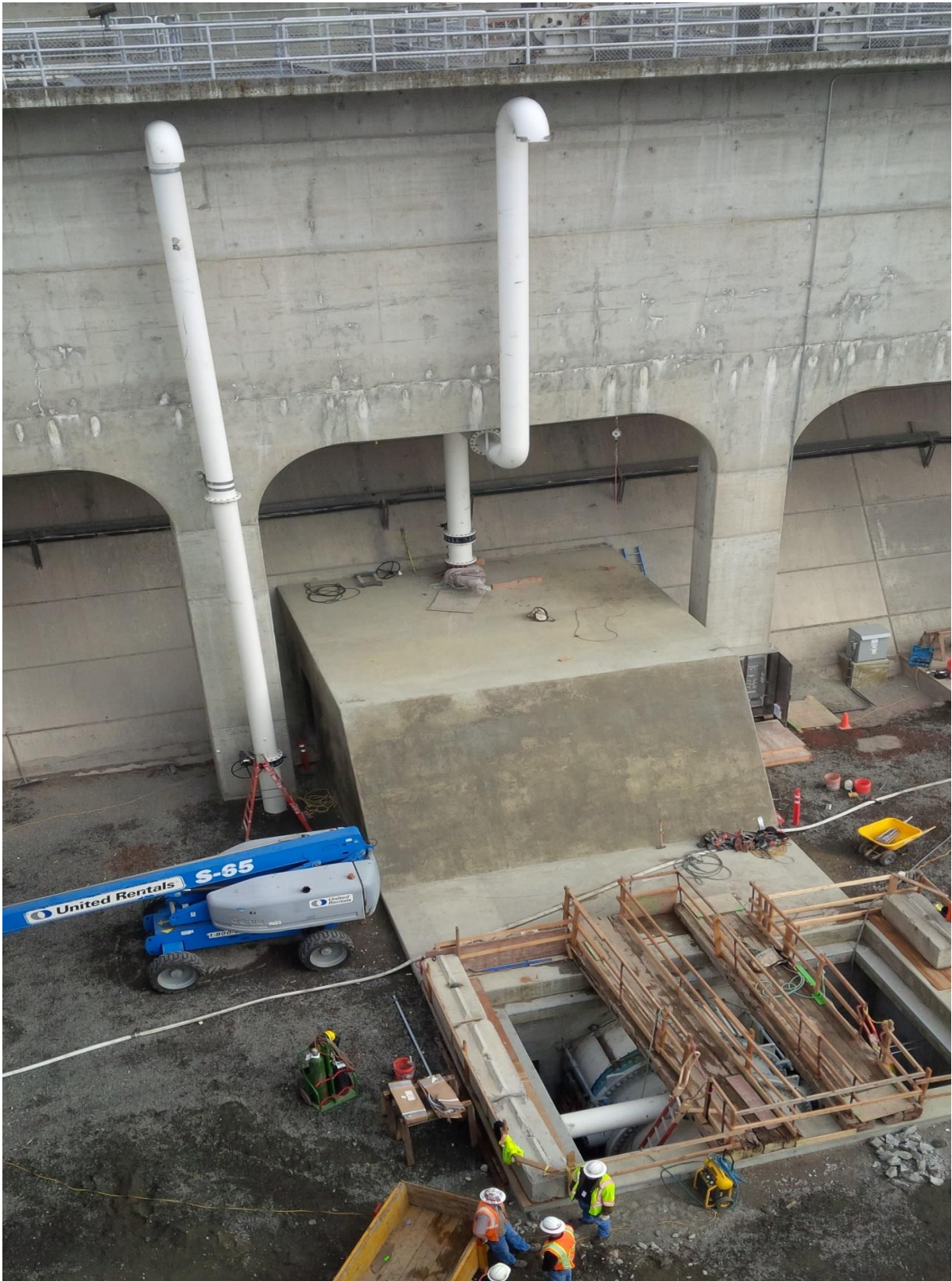
Vents installed for 10' pipe area. Securing straps installed at night.