FISHWAY STATUS REPORT

JOHN DAY DAM

JD/WC Project-Fisheries
P.O. Box 823
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Phone: 541-506-7860

US Army Corps of Engineers
Portland District

Date: 11/16/2019
Inspection Period: 11/10/2019 thru 11/16/2019

All JD Fishways are inspected twice per day during fish passage season, Mar. 1 - Nov. 30.
Additional and frequent monitoring of the PLC displays in SMF Fisheries Office as necessary.

John Day Dam	Inspection OOC	Criteria Limit	Total Number of Inspections: 14		Temperature: 50 F
					Secchi: 6.0 Ft.
NORTH FISHWAY			In service with 4 out of 6 AWS pumps available		
Exit differential	0	≤ 0.5'			
Exit Control weirs	0	High setting	High setting is normal for JDN		
Count station differential	0	≤ 0.3'			
Weir crest depth (DS gauge)	0	1.0' ± 0.1'			
Entrance differential	0	1.0' - 2.0'	AVG	1.5	
SOUTH FISHWAY			2 out of 3 AWS turbines in service		
Exit differential	0	≤ 0.5'			
Exit Control weirs	0	Mid setting	Mid setting is normal for JDS		
Count station differential	0	≤ 0.3'			
Weir crest depth (US gauge)	0	1.0' ± 0.1'			
South entrance differential	**0**	1.0' - 2.0'	AVG	1.5	
Entrance weir SE1	**0**	depth (≥ 8')	AVG	8.0	
Collection channel velocity	0	1.5 - 4 fps	AVG	2.55	
N. Entrance PH(Bay 19)differential	**0**	1.0' - 2.0'	AVG	1.6	
Entrance weir NE1	0	depth (≥ 8')	AVG	9.2	
Entrance weir NE2	0	depth (≥ 8')	AVG	9.8	
JUVENILE PASSAGE					
Forebay/bypass conduit differential	0	4.0' - 5.0'	AVG	4.6	
Submersible traveling screens	0	visual inspect	STS camera fixed by 11/13. MU16 VBS found with small tear on 11/14 and is OOS until repaired.		
Turbine trashrack drawdown	0	<1.5', wkly	N/A Trashrack raking scheduled for the last week of November. Some visible debris in FB.		
Vert barrier screen drawdown	0	<1.5', wkly	MUs 2, 4, 5, 8, 9 gatewells found with excessive debris 11/12. All debris removed 11/13.		
Spill volume	0	per FPP	1.6 Kcfs at bay 2 during daylight hours only		
Spill pattern	0	per FPP	Bay 2 open at 1.6K during daylight hours for adult attraction to North Entrance until 11/30.		
Turbine Unit Priority	0	per FPP			
Turbine 1% Efficiency	0	per FPP			

SMOLT MONITORING FACILITY

Operation:

SMF in bypass for the pit detection only since 9/15; its end-of-season dewatering is scheduled for 11/26.

Maintenance:

No maintenance issues of any kind at this time. Planning for the upcoming winter's SCADA update underway.

Research: None

ADULT FISHWAYS & TW AVIAN GRID

Birds:

Winter birds only without much impact on fish passage. See Bird Count tab for details.

All 125 avian lines in place without any deficiencies.

Operations:

MU16 VBS found with a small hole/ tear in its mesh on 11/14. MU16 will remain OOS until the damaged VBS is repaired.

October STS inspection incomplete due to the camera device hit by the new Gantry Crane on 10/28. Camera was fixed by JD Maintenance 11/13. STS inspection

restarted on 11/14 and will be completed the next week.

JD North Entrance OOC at 0.8' depth on 11/6 AM. An investigation by JD Maintenance didn't find any PLC issues.

Line 1 returned to service on 10/24. However, its high voltage bushing was not replaced due to an underestimated complexities of the job. JD Maintenance

has repaired the old bushing with a hope that it will last until its replacement is coordinated for October 2020.

MU Gatewell Drawdown All MUs trashrack differentials are 1.5' or below according to twice a week inspections.

Maintenance:

Excessive debris found at gatewells of MU 2, 4, 5, 8 & 9 on 11/12. JD Maintenance removed it on 11/13.

JD South Fishway continues operating with two AWS turbines (No. 1 & 2) since early April. AWS turbine No. 3 waiting for the replacement of its thrust

bearing which is on order/ in contracting (at approx. $ 20 K.)

JD North Fishway continues operating in criteria.   However, 2 out of 6 ASW pumps are OOS due to auto greaser and oil leaks issues since mid June.

JD Maintenance unstacked pumps 3 & 4 during the trouble shooting efforts in August - September. Both pumps are expected to be available for service, for 2020

passage season starting on 1 March.

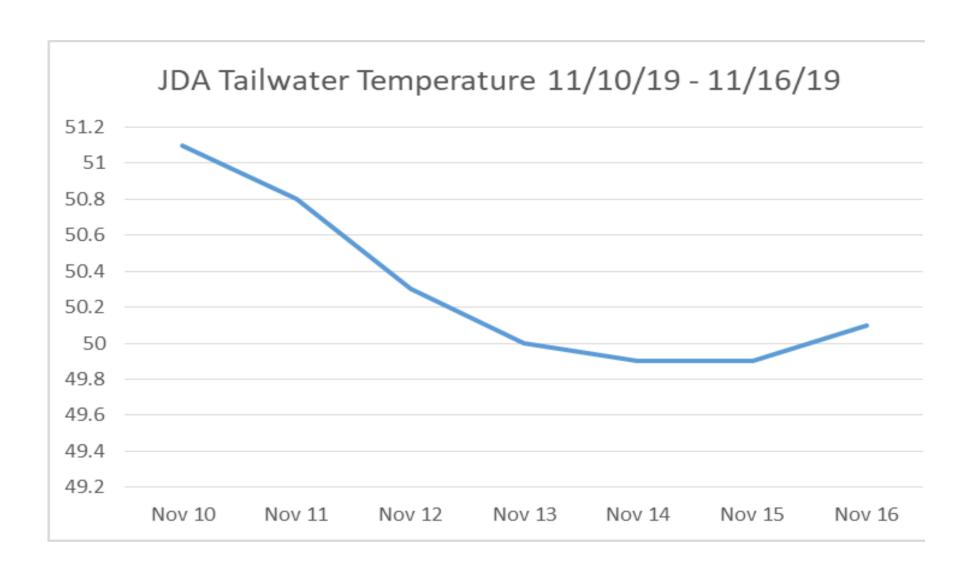Calibration: All gauges/ sensors are within the criteria of 0.3' .

Research:

Washington F &W NPM dam angling ended with the season total of 1,835 fish in mid-September.

JDS and JDN Adult PIT systems are in service and detecting PIT tags since 3/1/18.

 Uof I crew continues monitoring the RT Adult Lamprey passage at both JD Adult Fishways.

Approved by: Ron Twiner, Acting OPM

JDA Tailwater Temperature 11/10/19 - 11/16/19

JDA Collection Channel Velocity

Date	16-Nov-19
By:	*MDL*

Bay(s)	Time	Sec.	Velocity (f/s)
0-2	1:24	84	2.14
2 - 4	2:37	157	2.47
4 - 6	3:50	230	2.47
6 - 8	5:04	304	2.43
8 - 10	6:13	373	2.61
10 - 12	7:19	439	2.73
12 - 14	8:30	510	2.54
14 - 16	9:36	576	2.73
16 - 18	10:39	639	2.86
			2.55

Tail Water	Level	160.0
Turbines 1 & 2	**RPM**	68

FPP Criteria: 1.5–4.0 feet per second (2 fps optimum)

John Day Weekly Averages

	Temp:		Secchi:		Fallbacks
Sun	51		6.0		NA
Mon	51		6.0		NA
Tue	50		6.0		NA
Wed	50		6.0		NA
Thur	50		6.0		NA
Fri	50		6.0		NA
Sat	50		6.0		NA

AVG:	50.3	AVG:	6.0	AVG/Sample	#DIV/0!
				MAX	0
				MIN	0

	NE1	NE2	S.Ent	SE1	N.Ent	JBS Diff	Bay19
Sun	8.5	9.1	1.4	8.1	1.6	4.6	1.8
Sun	8.7	9.2	1.5	8.0	1.6	4.6	1.6
Mon	9.5	10.1	1.5	8.0	1.6	4.6	1.7
Mon	9.3	9.9	1.5	8.0	1.7	4.6	1.6
Tues	9.3	9.8	1.4	8.0	1.4	4.5	1.5
Tues	9.5	10.0	1.4	8.1	1.4	4.6	1.6
Wed	9.2	9.8	1.6	8.0	1.4	4.5	1.6
Wed	8.9	9.5	1.5	8.0	1.6	4.6	1.5
Thur	9.1	9.7	1.4	8.0	1.6	4.5	1.4
Thur	9.5	10.1	1.6	8.1	1.6	4.6	1.4
Fri	9.1	9.7	1.4	8.0	1.5	4.5	1.7
Fri	9.4	10.0	1.5	8.0	1.5	4.6	1.5
Sat	9.3	9.9	1.3	8.1	1.5	4.5	1.6
Sat	9.4	10.0	1.4	8.0	1.5	4.5	1.7
AVG:	9.2	9.8	1.5	8.0	1.5	4.6	1.6

JDA Bird Counts: 11/10/19 to 11/16/19

NF(1): Non-Forage AM Survey   NF(2): Non-Forage PM Survey

Date	Zone	Gulls				Cormorant				Caspian tern				White Pelican				Grebe				Total
		F(1)	F(2)	NF(1)	NF(2)	F(1)	F(2)	NF(1)	NF(2)	F(1)	F(2)	NF(1)	NF(2)	F(1)	F(2)	NF(1)	NF(2)	F(1)	F(2)	NF(1)	NF(2)	
10-Nov	PHFB	0	0	0	0	0	0	15	18	0	0	0	0	0	0	0	0	57	0	0	0	90
10-Nov	SWFB	0	0	833	867	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1700
10-Nov	PH1	0	115	0	13	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	139
10-Nov	PH2	34	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56
10-Nov	PH3	10	5	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
10-Nov	SW1	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
10-Nov	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-Nov	SW3	0	0	0	0	0	4	27	43	0	0	0	0	0	0	0	0	0	0	0	0	74
Avg/Survey		93		875		8		52		0		0		0		0		29		0		2111
11-Nov	PHFB	0	0	0	52	0	0	15	0	0	0	0	0	0	0	0	0	47	68	0	0	182
11-Nov	SWFB	0	0	856	913	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1769
11-Nov	PH1	41	67	0	12	7	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	135
11-Nov	PH2	23	23	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
11-Nov	PH3	17	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
11-Nov	SW1	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
11-Nov	SW2	0	0	0	0	0	0	37	37	0	0	0	0	0	0	0	0	0	0	0	0	74
11-Nov	SW3	0	0	0	0	0	0	45	18	0	0	0	0	0	0	0	0	0	0	0	0	63
Avg/Survey		91		917		11		76		0		0		0		0		58		0		2302
12-Nov	PHFB	0	0	0	128	0	0	0	0	0	0	0	0	0	0	0	0	73	2	0	0	203
12-Nov	SWFB	0	0	356	354	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	710
12-Nov	PH1	38	11	0	0	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59
12-Nov	PH2	7	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
12-Nov	PH3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12-Nov	SW1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12-Nov	SW2	0	0	0	0	2	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	23
12-Nov	SW3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg/Survey		36		419		7		11		0		0		0		0		38		0		1020
13-Nov	PHFB	0	0	11	0	0	0	22	11	0	0	0	0	0	0	0	0	0	47	0	0	91
13-Nov	SWFB	0	0	611	640	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1251
13-Nov	PH1	63	10	0	5	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85
13-Nov	PH2	27	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
13-Nov	PH3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13-Nov	SW1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
13-Nov	SW2	0	2	0	0	0	0	15	27	0	0	0	0	0	0	0	0	0	0	0	0	44
13-Nov	SW3	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Avg/Survey		62		634		5		41		0		0		0		0		24		0		1528

Date	Zone	Gulls F(1)	F(2)	NF(1)	NF(2)	Cormorant F(1)	F(2)	NF(1)	NF(2)	Caspian tern F(1)	F(2)	NF(1)	NF(2)	White Pelican F(1)	F(2)	NF(1)	NF(2)	Grebe F(1)	F(2)	NF(1)	NF(2)	Total
14-Nov	PHFB	0	0	5	0	0	0	24	8	0	0	0	0	0	0	0	0	11	7	0	0	55
14-Nov	SWFB	0	0	531	617	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1148
14-Nov	PH1	72	17	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	93
14-Nov	PH2	22	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
14-Nov	PH3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14-Nov	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14-Nov	SW2	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	17
14-Nov	SW3	0	0	0	0	0	0	11	14	0	0	0	0	0	0	0	0	0	0	0	0	25
Avg/Survey		61		577		2		37		0		0		0		0		9		0		1371
15-Nov	PHFB	0	0	0	45	0	0	7	5	0	0	0	0	0	0	0	0	14	7	0	0	78
15-Nov	SWFB	0	0	931	503	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1434
15-Nov	PH1	73	37	0	0	9	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	124
15-Nov	PH2	43	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58
15-Nov	PH3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15-Nov	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15-Nov	SW2	0	0	0	0	0	0	4	49	0	0	0	0	0	0	0	0	0	0	0	0	53
15-Nov	SW3	0	0	0	7	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	23
Avg/Survey		84		743		7		41		0		0		0		0		11		0		1770
16-Nov	PHFB	0	0	94	35	0	0	39	2	0	0	0	0	0	0	0	0	0	0	0	0	170
16-Nov	SWFB	0	0	489	496	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	985
16-Nov	PH1	41	23	0	0	7	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	79
16-Nov	PH2	8	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
16-Nov	PH3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
16-Nov	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16-Nov	SW2	0	0	0	0	0	0	0	46	0	0	0	0	0	0	0	0	0	0	0	0	46
16-Nov	SW3	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	17
Avg/Survey		40		557		8		52		0		0		0		0		0		0		1312

Totals	Gulls F	NF	Cormorant F	NF	Caspian tern F	NF	White Pelican F	NF	Grebe F	NF	Total
Weekly Total	931	9441	92	617	0	0	0	0	333	0	11414
Avg/Survey	67	674	7	44	0	0	0	0	24	0	815

John Day Dam
Avian Zones