

FISHWAY STATUS REPORT - JOHN DAY DAM

Date: 5/7/2022

Inspection Period: 5/1/2022 thru 5/7/2022



**US Army Corps
of Engineers**
Portland District

JD/WC Project-Fisheries
P.O. Box 823
Rufus, Oregon 97050
Phone: 541-506-7860

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:	51.0 F
						Secchi:	4.9 Ft.	

NORTH FISHWAY

Exit differential	0	≤ 0.5'						
Exit Control weirs	0	High setting						
Count station differential	0	≤ 0.3'						
Entrance differential	0	1.0' - 2.0'	AVG (Ft.)	1.5				

SOUTH FISHWAY

Exit differential	0	≤ 0.5'						
Exit Control weirs	0	Mid setting						
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 (Ft.)	1.3				
Entrance weir SE1	0	depth (≥ 8')	AVG (Ft.)	10.2				
Collection channel velocity	0	1.5 - 4 fps	AVG (Ft.)	2.80				
N. Entrance PH(Bay 19)differential	0	1.0' - 2.0'	AVG (Ft.)	1.8				
Entrance weir NE1	0	depth (≥ 8')	AVG (Ft.)	10.0				
Entrance weir NE2	0	depth (≥ 8')	AVG (Ft.)	9.8				

JUVENILE PASSAGE

Forebay/bypass conduit differential	0	4.0' - 5.0'	AVG (Ft.)	4.6				
Submersible traveling screens	0	visual inspect	next visual inspection 5/23 - 5/26					
Turbine trashrack drawdown	0	<1.5', wkly						
Vert barrier screen drawdown	0	<1.5', wkly						
Spill volume	0	per FPP	AVG (kcfs)	103.6	Avg %	58.5		
Spill pattern	0	per FPP						
Turbine Unit Priority	0	per FPP						
Turbine 1% Efficiency	0	per FPP						

Fisheries Related Operations

Smolt Monitoring Operations:

Smolt Monitoring Facility started the 2022 sampling season on April 1 for condition monitoring only. From April 1 - June 15 condition sampling will occur 5 days a week (Monday-Friday) from approximately 0700-1300 or until the target of 100 fish of the predominant species has been reached. From June 16 - September 15 condition sampling will occur 3 days a week (Monday, Wednesday, Friday) from approximately 0700-1300 or until the target of 100 fish of the predominant species has been reached. High water temperature protocol goes into effect when water temperatures exceed 70F.

Adult Ladder Operations:

Both ladders are operating within criteria.

Project Operations:

Current outages: MU3, MU4, MU7.

Spring spill started April 10 along with the Caspian tern forebaby operation for the Blalock islands.

USDA avian hazing started 16 April.

Tailwater average weekly TDG: 117.4

Maintenance:

South fish turbine #2 was forced out of service on 30 March with an excessive vibration issue. Pumps 1 & 3 are running.

Calibration:

All gauges within the 0.3' criteria.

Bird Data:

Cormorant numbers are minimal. Gull numbers are increasing with more foraging observed in the tailrace. Pelican numbers starting to increase on Preacher's Island, with a few seen foraging in the tailrace. Grebe numbers are steady, mainly in PHFB. (see 'Bird Count' tab for details).

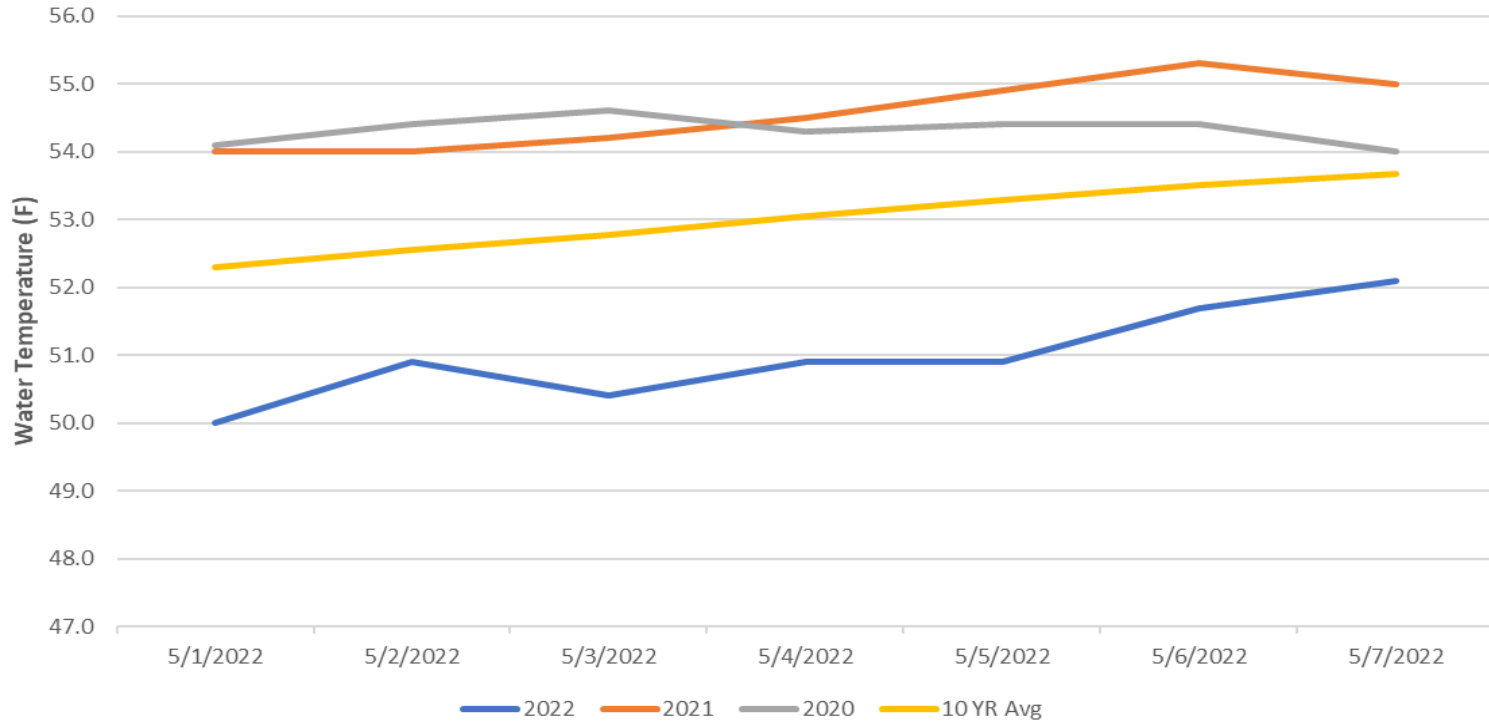
1 of 125 avian lines down.

Pelicans on Preacher's Island: averaged 9 per day

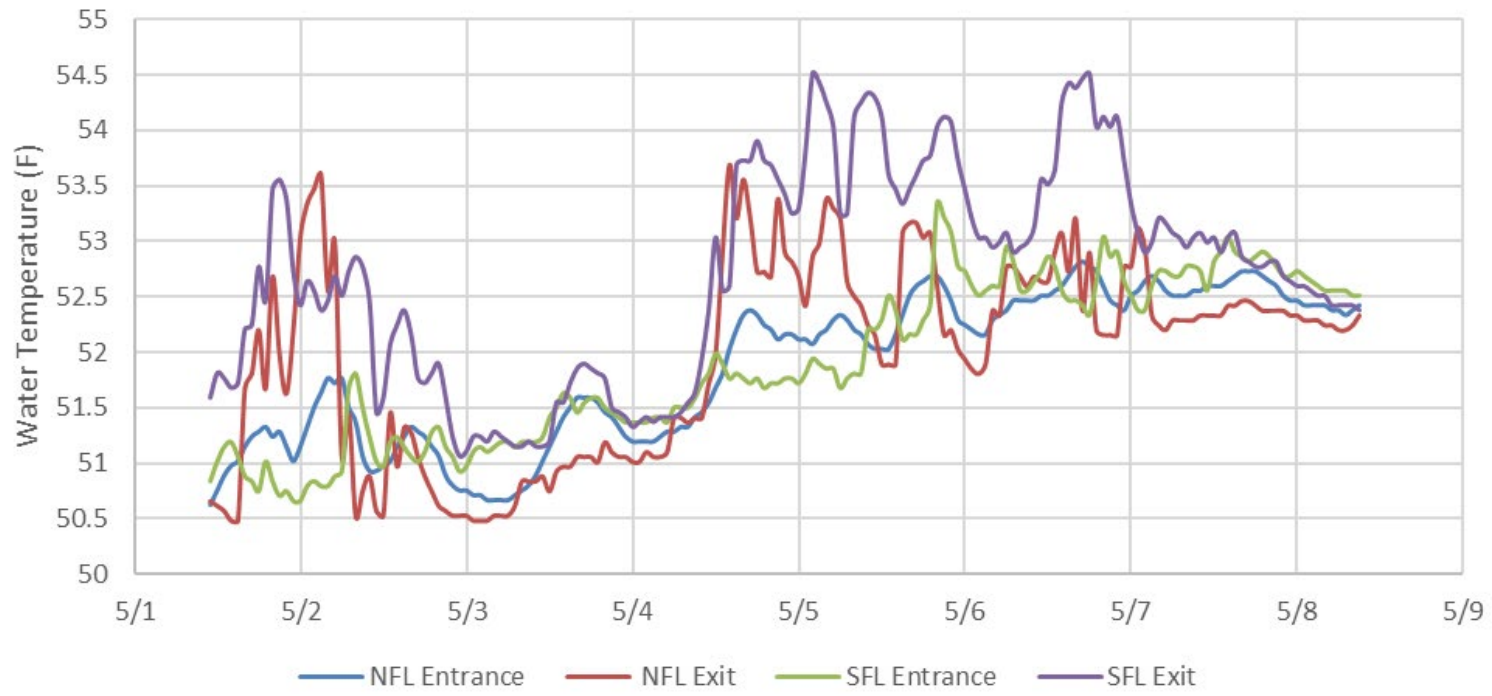
Research:

Adult fish counting started April 1. USGS temperature probes were installed in the forebay on 3/29.

John Day Dam Water Temperature (F)



JDA Ladder Temperatures



JDA Collection Channel Velocity

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

Date	Measurement Location	Speed (ft/sec)	SFL Turbine RPMs (1,2,3)	Bay 19 TW (ft)
5/2/2022	Unit 4	2.90	68,0,68	159.5
5/2/2022	Unit 12	2.82	68,0,68	159.5
5/4/2022	Unit 4	2.66	68,0,68	160.3
5/4/2022	Unit 12	2.72	68,0,68	160.3
5/7/2022	Unit 4	2.79	68,0,68	160.1
5/7/2022	Unit 12	2.89	68,0,68	160.1

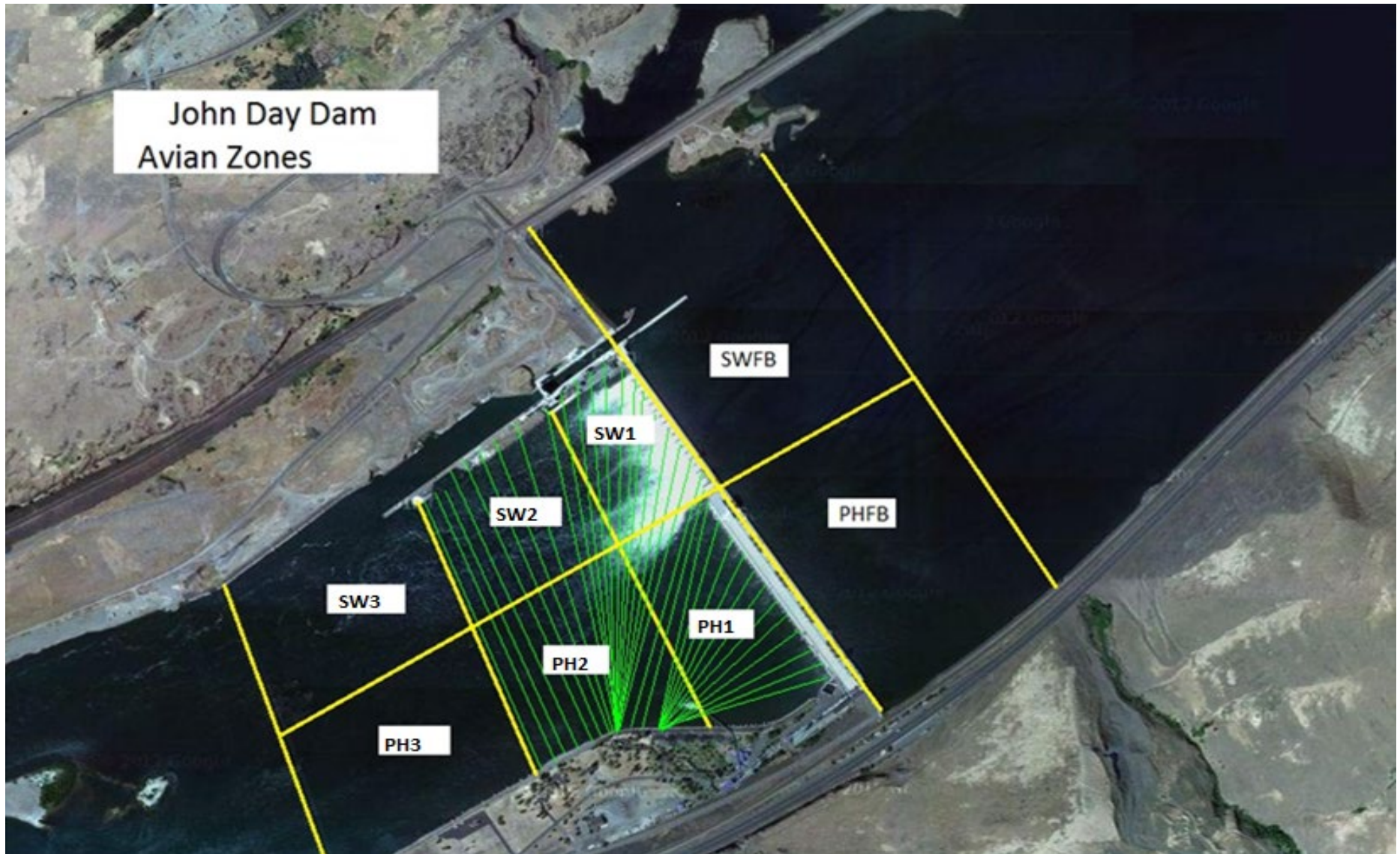
Average Weekly Velocity (ft/sec)	2.80
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JOHN DAY WEEKLY AVERAGES

	NE1 (Ft)	NE2 (Ft)	S.Ent (Ft)	SE1 (Ft)	N.Ent (Ft)	JBS Diff (Ft)	Bay19 (Ft)	Spill Vol. (kcfs)	Spill %	# Spillbays
Sunday	10.0	9.8	1.2	10.3	1.5	4.6	1.8	108.2	68.0	19
Sunday	9.4	9.2	1.3	9.6	1.5	4.5	1.8	108.4	67.8	19
Monday	10.0	9.8	1.2	10.4	1.4	4.5	1.9	89.8	63.7	19
Monday	9.7	9.5	1.3	9.9	1.7	4.5	1.7	89.9	64.1	19
Tuesday	10.1	9.9	1.2	10.6	1.4	4.6	1.9	50.9	31.9	18
Tuesday	10.1	9.9	1.3	10.3	1.7	4.6	1.6	110.1	68.2	19
Wednesday	10.4	10.2	1.2	10.6	1.5	4.8	1.5	50.3	32.0	18
Wednesday	9.7	9.5	1.2	10.0	1.7	4.5	1.6	115.1	61.1	19
Thursday	10.3	10.2	1.3	10.6	1.4	4.7	1.8	53.8	32.1	19
Thursday	9.9	9.7	1.1	10.4	1.3	4.5	1.7	117.2	70.1	19
Friday	10.6	10.4	1.1	10.9	1.3	4.7	1.7	64.2	32.0	19
Friday	10.0	9.8	1.4	9.5	1.7	4.5	1.8	158.0	75.0	19
Saturday	9.9	9.7	1.4	9.5	1.7	4.5	1.9	157.8	75.1	19
Saturday	10.0	9.8	1.4	9.6	1.7	4.5	1.9	177.1	77.4	19
AVG:	10.0	9.8	1.3	10.2	1.5	4.6	1.8	103.6	58.5	18.9

	Temp (F)	Secchi (Ft)	Fallbacks	Average # of Pelicans on Island Per Day
Sunday	50.0	5.0	N/A	4
Monday	50.9	5.0	2	6
Tuesday	50.4	5.0	0	3
Wednesday	50.9	5.0	2	10
Thursday	50.9	5.0	2	24
Friday	51.7	4.5	2	8
Saturday	52.1	4.5	N/A	7
AVG	51.0	4.9	2	9

John Day Dam
Avian Zones



JDA Bird Counts: 5/1/22 to 5/7/22

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

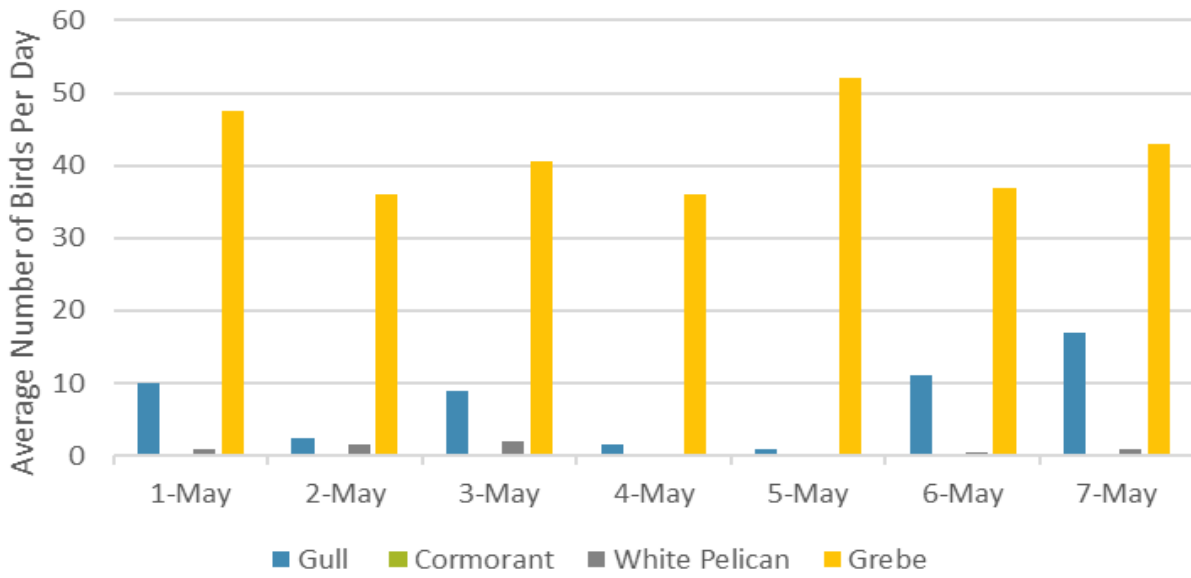
Date	Zone	Gulls				Cormorant				Caspian tern				White Pelican				Grebe				Total
		F(1)	F(2)	NF(1)	NF(2)	F(1)	F(2)	NF(1)	NF(2)	F(1)	F(2)	NF(1)	NF(2)	F(1)	F(2)	NF(1)	NF(2)	F(1)	F(2)	NF(1)	NF(2)	
1-May	PHFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56	39	0	0	95
1-May	SWFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-May	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-May	PH2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
1-May	PH3	6	12	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	19
1-May	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-May	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-May	SW3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Total/Survey		10		0		0		0		0		0		1		0		48		0		59
2-May	PHFB	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	35	37	0	0	74
2-May	SWFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-May	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-May	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-May	PH3	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
2-May	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-May	SW2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2-May	SW3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
Total/Survey		3		0		0		1		0		0		2		0		36		0		41
3-May	PHFB	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	50	31	0	0	82
3-May	SWFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-May	PH1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3-May	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-May	PH3	1	6	0	0	0	0	0	0	0	0	0	0	1	0	0	3	0	0	0	0	11
3-May	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-May	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-May	SW3	0	9	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	12
Total/Survey		9		1		0		0		0		0		2		2		41		0		54
4-May	PHFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	45	0	0	72
4-May	SWFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-May	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-May	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-May	PH3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-May	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-May	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-May	SW3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total/Survey		2		0		0		0		0		0		0		0		36		0		38

JDA Bird Counts: 5/5/22 to 5/7/22

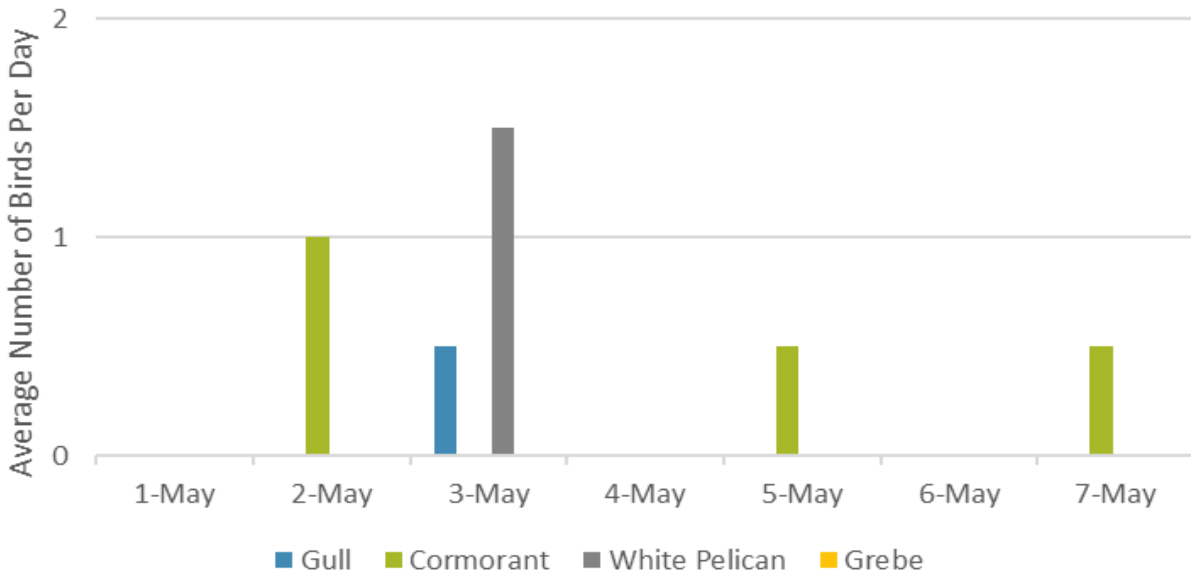
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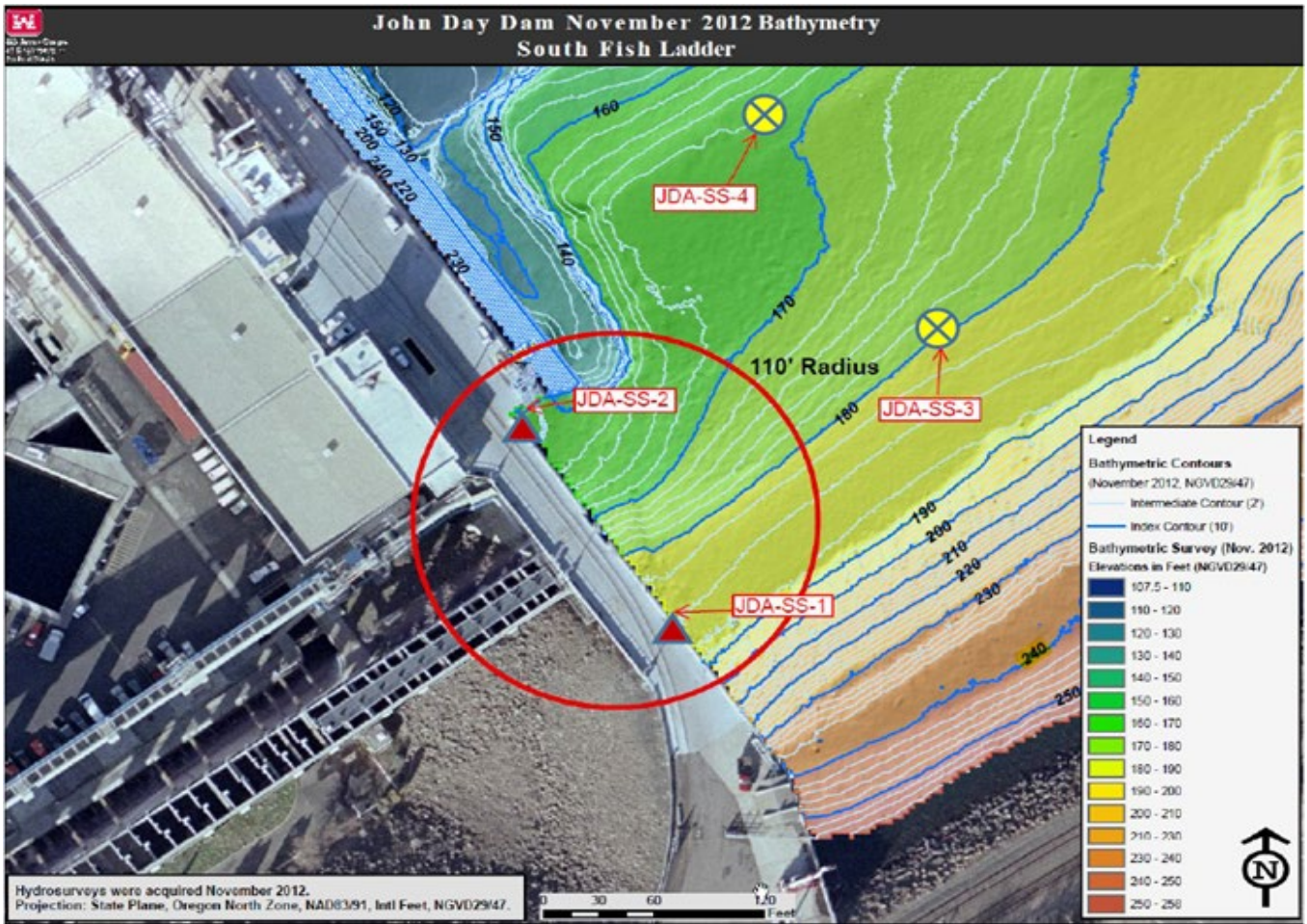
Date	Zone	Gulls				Cormorant				Caspian tern				White Pelican				Grebe				Total
		F(1)	F(2)	NF(1)	NF(2)	F(1)	F(2)	NF(1)	NF(2)	F(1)	F(2)	NF(1)	NF(2)	F(1)	F(2)	NF(1)	NF(2)	F(1)	F(2)	NF(1)	NF(2)	
5-May PHFB		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	40	64	0	0	105
5-May SWFB		0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5-May PH1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-May PH2		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-May PH3		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-May SW1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-May SW2		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-May SW3		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total/Survey		1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	52	0	0	0	54
6-May PHFB		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	7	0	0	50
6-May SWFB		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	0	24
6-May PH1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6-May PH2		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
6-May PH3		0	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
6-May SW1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6-May SW2		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6-May SW3		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total/Survey		11	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	37	0	0	0	49
7-May PHFB		3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	43	43	0	0	90
7-May SWFB		2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
7-May PH1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7-May PH2		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7-May PH3		2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
7-May SW1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7-May SW2		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7-May SW3		11	12	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	25
Total/Survey		17	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	43	0	0	0	62
Totals		Gulls				Cormorant				Caspian tern				White Pelican				Grebe				Total
		F	NF	F	NF	F	NF	F	NF	F	NF	F	NF	F	NF	F	NF	F	NF	F	NF	
Weekly Total		104	1	0	4	0	4	0	0	0	0	12	3	584	0	0	0	0	0	0	0	
Avg/Survey		7	0	0	0	0	0	0	0	0	0	1	0	42	0	0	0	0	0	0	0	51

Foraging Piscivorous Birds



Non-Foraging Piscivorous Birds





On 5/6/22 John Day Fisheries deployed a temperature array at JDA-SS-2 to gather more data about the vertical thermal profile of the forebay by the south fish ladder.