

FISHWAY STATUS REPORT - JOHN DAY DAM

Date: 6/3/2023

Inspection Period: 5/28/2023 thru 6/3/2023



**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:	59.5 F
						Secchi:	3.9 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.)	1.4					
Entrance weir SE1	1	depth (≥ 8')	AVG (Ft.)	8.4					
Collection channel velocity	0	1.5 - 4 fps	AVG (Ft.)	2.47					
N. Entrance PH(Bay 19)differential	0	1.0' - 2.0'	AVG (Ft.)	1.7					
Entrance weir NE1	1	depth (≥ 8')	AVG (Ft.)	8.7					
Entrance weir NE2	1	depth (≥ 8')	AVG (Ft.)	8.6					

JUVENILE PASSAGE

Forebay/bypass conduit differential	0	4.0' - 5.0'	AVG (Ft.)	4.5					
Submersible traveling screens	0	visual inspect	next inspection 6/05-6/08						
Turbine trashrack drawdown	0	<1.5', wkly							
Vert barrier screen drawdown	0	<1.2', wkly							
Spill volume	0	per FPP	Avg (kcfs)	167.9	Avg (%)	65.7			
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 2023 sampling season on April 3rd for condition monitoring only. From April 3 - June 15 condition sampling occurs 5-days/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/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:

NFL is operating in criteria.

SFL turbine #2 RTS 3/20 @ reduced RPMs (55 RPMs) to prolong the repairs. SFL turbine #3 OOS (Philadelphia gear inspected on 2/22 and recommended FOOS - See 23JDA03) - Funding awarded (RTS-Unknown). FOG's removed

Project Operations:

Current outages: MU4 (ETR: 11/2/23), MU6 (ETR: 6/15/23), MU7 (ETR: 7/31/28), MU8 (ETR: 1/10/24), MU10 (ETR: 11/15/23), MU13 (ETR: 6/14/23)

Spillbay Outages: #1-missing brake/motor (ETR Unknown), #6 and #10-operates in manual/local mode only (ETR: Unknown),

Weekly Average Tailwater TDG: 112.40

Maintenance:

NFL AWS pump #4 is OOS with an unknown RTS date (see 21JDA02). NFL AWS pump #2 has a failed RTD sensor that keeps it from reading an accurate temperature on the lower bearing (occurred 4/22/23). Therefore, there is no overheat fail safe and it is being run as a last on first off pump (the pump will need to be unstacked to repair the sensor). NFL AWS pump #3 is being troubleshoot and gives a gearbox oil low flow alarm (occurred 5/26/23). It is believed the alarm occurs on either startup or shutdown. Once the alarm is acknowledged it can run without issue until it is shutdown again.

Calibration: All gauges within the 0.3' criteria.

Bird Data:

Pelicans are foraging in low numbers within the tailrace (average ~5/inspection), Grebe numbers are holding steady in the forebay (~10), Gull numbers decreased this week with most foraging activity located in PH3 and SW3 zones (from ~40/inspection to ~25).

There are ~70 pelicans hanging around Preacher's Island

11 of 125 avian lines down, in contracting phase for replacement of 9 lines from powerhouse roof.

Research:

Four Peaks started ladder counts on 3/1/23 and will be performing year-round counts for 2023 (Day video 11/1/23 - 2/29/24)

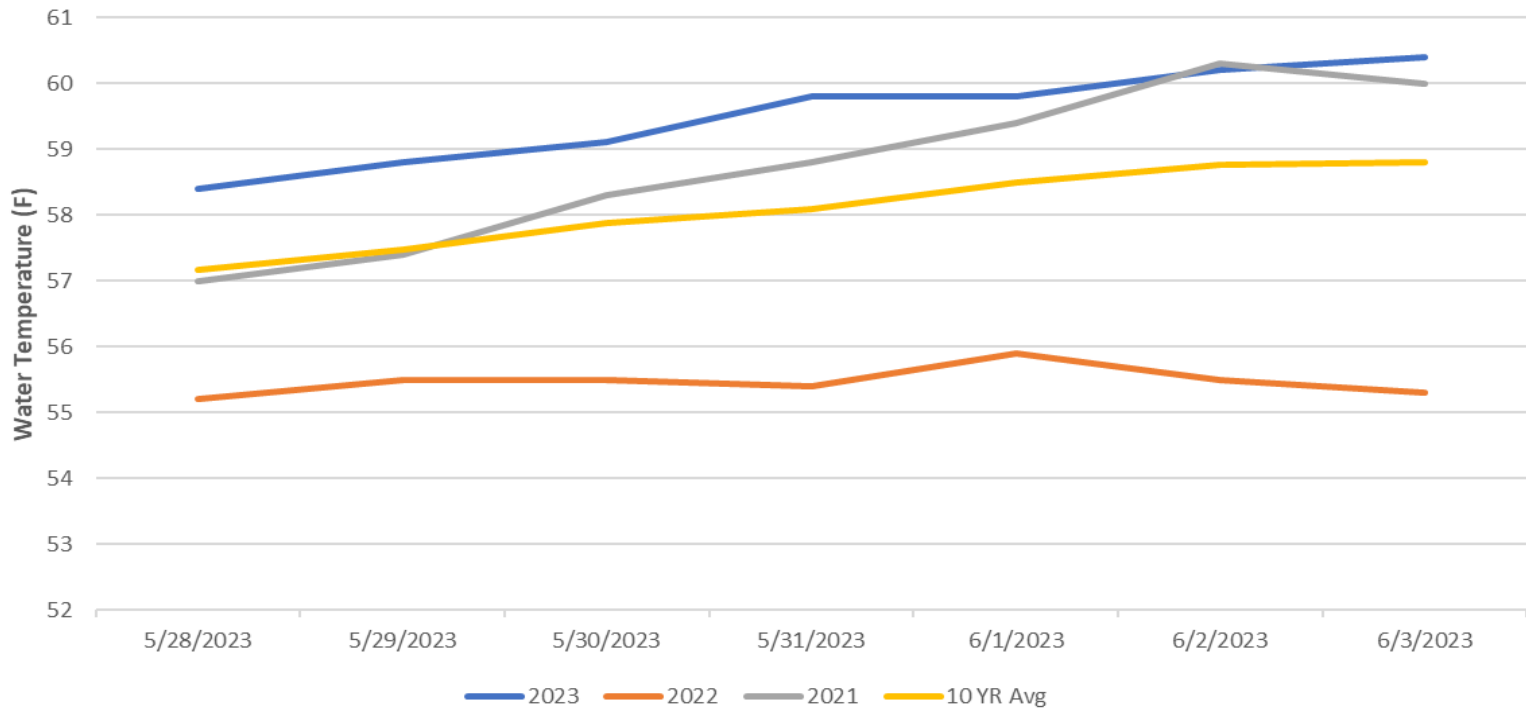
PSMFC smolt condition monitoring began 4/3/23 (currently 5-days/week)

USDA began hazing on 4/16/23 for 7-days/week, as crew availability and weather conditions permit

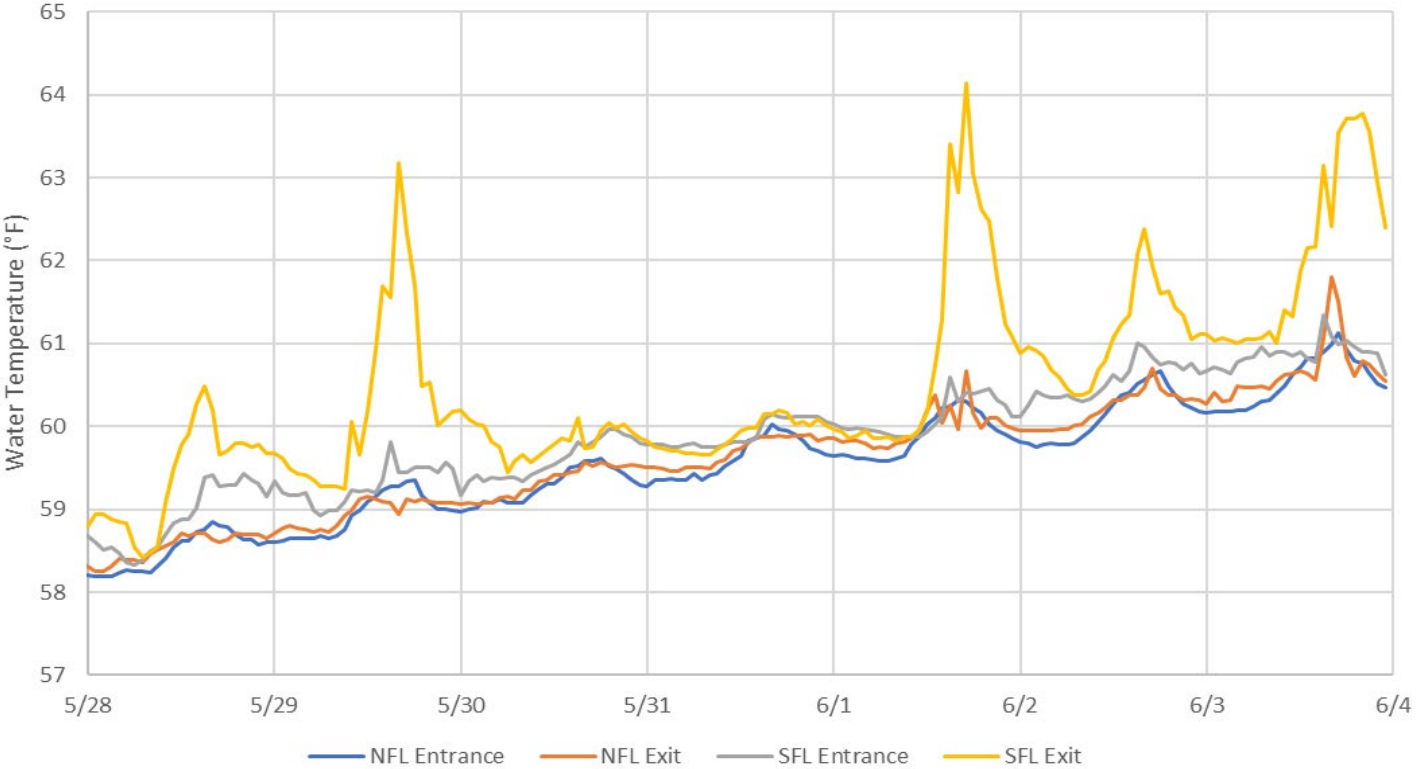
WDFW currently performing NPMP dam angling (started 5/8/23)

CRITFC translocation is upcoming and TBD

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)
5/29/2023	Unit 4	2.48	55,55,0	162.6
5/29/2023	Unit 12	2.34	55,55,0	162.6
5/31/2023	Unit 4	2.42	55,55,0	161.5
5/31/2023	Unit 12	2.38	55,55,0	161.5
6/3/2023	Unit 4	2.62	55,55,0	161.1
6/3/2023	Unit 12	2.59	55,55,0	161.1

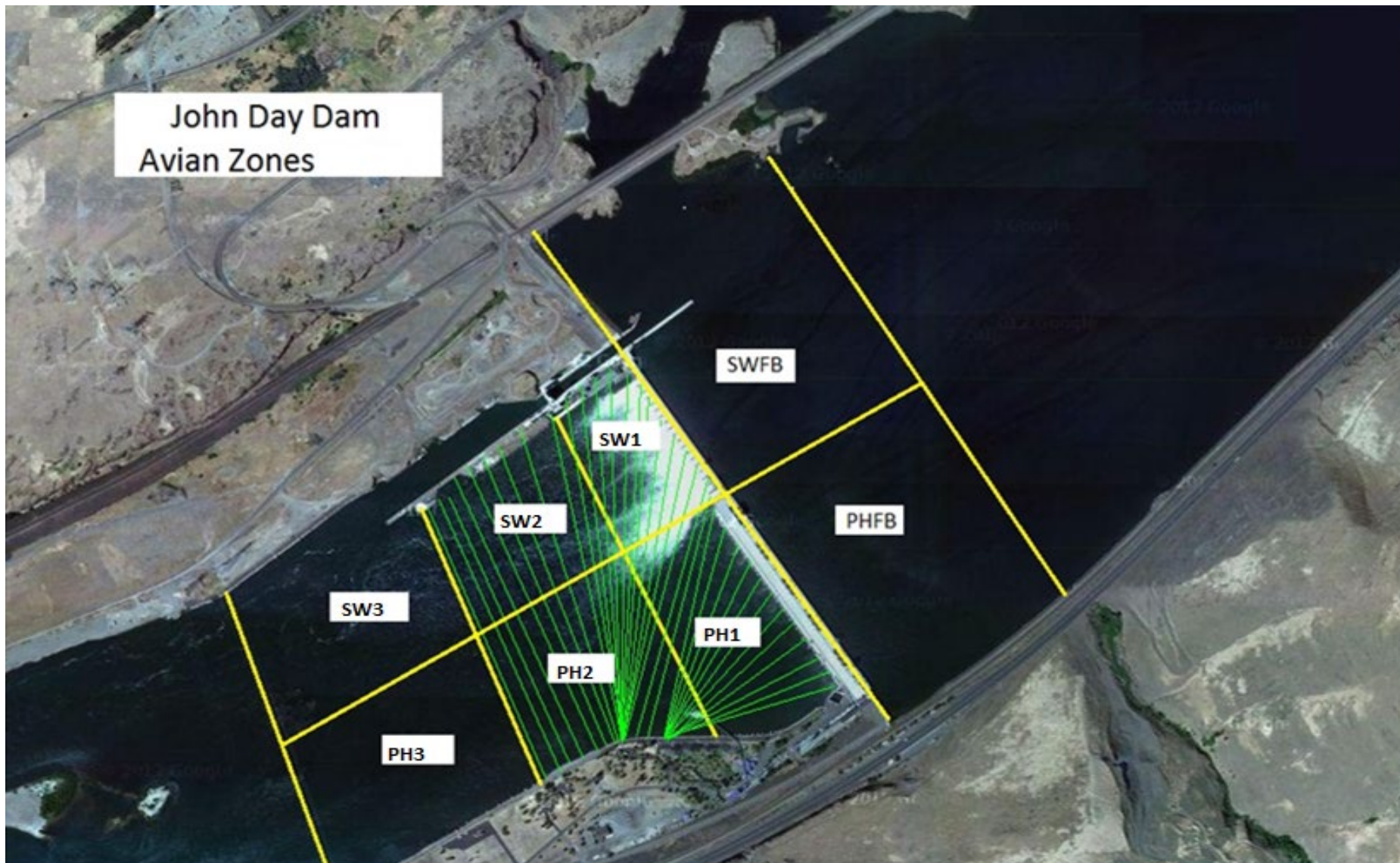
Average Weekly Velocity (ft/sec)	2.47
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JOHN DAY WEEKLY AVERAGES

	South Fish Ladder					NFL	JBS	Spill		
	SE1 (Ft)	S.Ent (Ft)	NE1 (Ft)	NE2 (Ft)	Bay19 (Ft)	N.Ent (Ft)	JBS Diff (Ft)	Spill Vol. (kcfs)	Spill (%)	# Spillbays
Sunday	7.5	1.4	8.5	8.0	1.5	1.3	4.5	210.2	78.3	19.0
Sunday	8.0	1.8	8.3	8.3	1.9	1.5	4.5	93.2	31.9	19.0
Monday	8.5	1.5	8.6	8.6	1.6	1.4	4.5	209.9	75.0	19.0
Monday	8.9	1.4	8.8	8.9	1.7	1.8	4.5	90.5	31.7	19.0
Tuesday	8.8	1.2	8.6	8.7	1.6	1.5	4.2	214.8	77.9	19.0
Tuesday	8.6	1.3	8.6	8.6	1.6	1.7	4.5	215.1	78.5	19.0
Wednesday	8.3	1.4	8.1	8.0	2.0	1.4	4.5	219.2	80.0	19.0
Wednesday	8.7	1.2	9.0	9.0	1.3	1.5	4.7	97.3	46.9	19.0
Thursday	8.0	1.5	7.9	7.8	2.0	1.4	4.6	207.7	80.0	19.0
Thursday	8.7	1.2	9.8	9.7	1.4	1.6	4.6	83.4	31.4	19.0
Friday	8.6	1.0	9.2	9.1	1.4	1.5	4.5	175.0	76.7	19.0
Friday	8.1	1.2	8.7	8.6	1.4	1.6	4.5	174.8	76.5	19.0
Saturday	8.2	1.5	8.9	8.8	1.9	1.5	4.6	179.8	77.7	19.0
Saturday	8.1	1.4	8.9	8.8	1.8	1.4	4.6	179.9	77.4	19.0
AVG:	8.4	1.4	8.7	8.6	1.7	1.5	4.5	167.9	65.7	19.0

	Temp (F)	Secchi (Ft)	Notes
Sunday	58.4	3.5	SFL entance weirs have to be operated in manual due to fluctuating tailrace elevations. This time of year when water levels are high it can be difficult to balance the depth of the weir with the entrance differentials
Monday	58.8	3.5	
Tuesday	59.1	4.0	
Wednesday	59.8	4.0	
Thursday	59.8	4.0	
Friday	60.2	4.0	
Saturday	60.4	4.0	
AVG	59.5	3.9	

John Day Dam
Avian Zones



JDA Bird Counts: 5/28/23 to 6/3/23

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

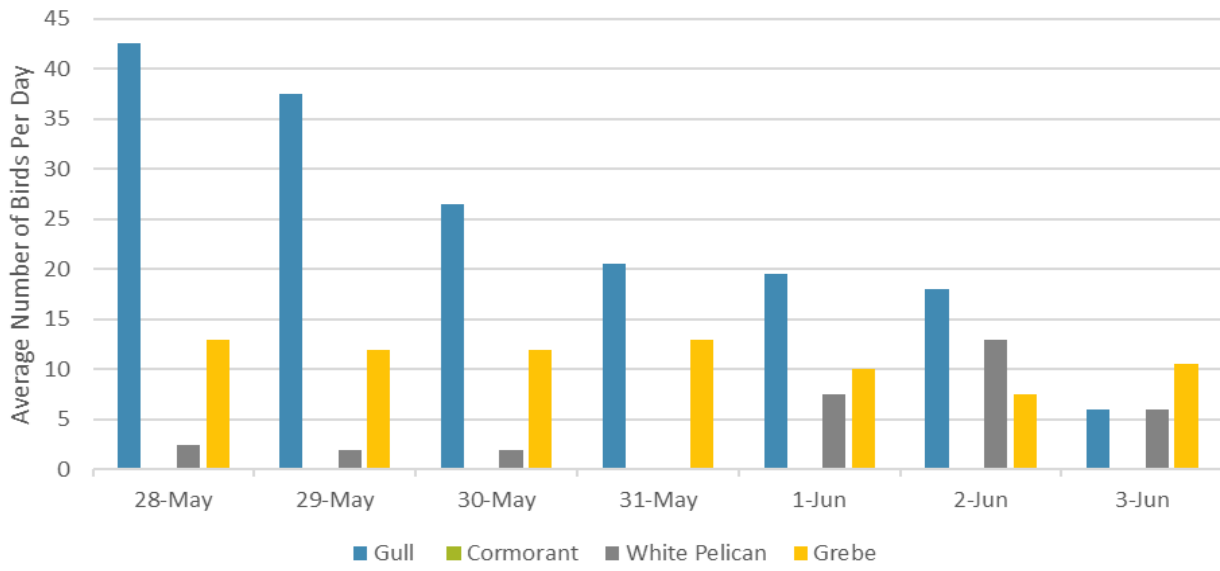
Date	Zone	Gulls				Cormorant				Caspian tern				White Pelican				Grebe				Total
		F(1)	F(2)	NF(1)	NF(2)	F(1)	F(2)	NF(1)	NF(2)	F(1)	F(2)	NF(1)	NF(2)	F(1)	F(2)	NF(1)	NF(2)	F(1)	F(2)	NF(1)	NF(2)	
28-May	PHFB	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	14	12	0	0	30	
28-May	SWFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
28-May	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
28-May	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
28-May	PH3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
28-May	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
28-May	SW2	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	
28-May	SW3	0	35	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	40	
Avg/Survey		43		2		0		0		0		0		3		0		13		0	60	
29-May	PHFB	0	0	6	4	0	0	0	0	0	0	0	0	0	0	0	12	12	0	0	34	
29-May	SWFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
29-May	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
29-May	PH2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
29-May	PH3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
29-May	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
29-May	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
29-May	SW3	25	50	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	78	
Avg/Survey		38		5		0		0		0		0		2		0		12		0	57	
30-May	PHFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	12	0	0	24	
30-May	SWFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
30-May	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
30-May	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
30-May	PH3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
30-May	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
30-May	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
30-May	SW3	25	28	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	57	
Avg/Survey		27		0		0		0		0		0		2		0		12		0	41	
31-May	PHFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	12	0	0	26	
31-May	SWFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
31-May	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
31-May	PH2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
31-May	PH3	21	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	
31-May	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
31-May	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
31-May	SW3	10	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	
Avg/Survey		21		0		0		0		0		0		0		0		13		0	34	

JDA Bird Counts: 5/28/23 to 6/3/23

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-Jun	PHFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	0	0	20	
1-Jun	SWFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1-Jun	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1-Jun	PH2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
1-Jun	PH3	19	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	
1-Jun	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1-Jun	SW2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
1-Jun	SW3	8	2	0	0	0	0	0	0	0	0	0	0	5	10	0	0	0	0	0	25	
Avg/Survey		20		0		0		0		0		0		8		0		10		0	37	
2-Jun	PHFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	7	0	0	15	
2-Jun	SWFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2-Jun	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2-Jun	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2-Jun	PH3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2-Jun	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2-Jun	SW2	7	0	0	0	0	0	0	0	0	0	0	0	2	9	0	0	0	0	0	18	
2-Jun	SW3	20	9	0	0	0	0	0	0	0	0	0	0	6	9	0	0	0	0	0	44	
Avg/Survey		18		0		0		0		0		0		13		0		8		0	39	
3-Jun	PHFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	12	0	0	21	
3-Jun	SWFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3-Jun	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3-Jun	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3-Jun	PH3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3-Jun	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	
3-Jun	SW2	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10	
3-Jun	SW3	10	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	
Avg/Survey		6		0		0		0		0		0		6		0		11		0	23	
Totals		Gulls				Cormorant				Caspian tern				White Pelican				Grebe				Total
		F		NF		F		NF		F		NF		F		NF		F		NF		
Weekly Total		341		14		0		0		0		0		66		0		156		0	577	
Avg/Survey		24		1		0		0		0		0		5		0		11		0	41	

Foraging Piscivorous Birds



Non-Foraging Piscivorous Birds

