

## FISHWAY STATUS REPORT - JOHN DAY DAM

Date: 8/28/2021

Inspection Period: 8/22/2021 thru 8/28/2021



**US Army Corps  
of Engineers**  
Portland District

JD/WC Project-Fisheries  
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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:	70.5 F
						Secchi:	6.0 Ft.
<b>NORTH FISHWAY</b>							
Exit differential	0	≤ 0.5'					
Exit Control weirs	0	High setting	High setting is normal				
Count station differential	0	≤ 0.3'					
Entrance differential	0	1.0' - 2.0'	AVG (Ft.)	1.5			
<b>SOUTH FISHWAY</b>							
Exit differential	0	≤ 0.5'					
Exit Control weirs	0	Mid setting	Mid setting is normal				
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.)	1.5			
Entrance weir SE1	0	depth (≥ 8')	AVG (Ft.)	9.2			
Collection channel velocity	0	1.5 - 4 fps	AVG (Ft.)	2.94			
N. Entrance PH(Bay 19)differential	0	1.0' - 2.0'	AVG (Ft.)	1.8			
Entrance weir NE1	0	depth (≥ 8')	AVG (Ft.)	9.7			
Entrance weir NE2	0	depth (≥ 8')	AVG (Ft.)	9.7			
<b>JUVENILE PASSAGE</b>							
Forebay/bypass conduit differential	0	4.0' - 5.0'	AVG (Ft.)	4.6			
Submersible traveling screens	0	visual inspect	Next Visual Inspection 8/23 - 8/26				
Turbine trashrack drawdown	0	<1.5', wkly					
Vert barrier screen drawdown	0	<1.5', wkly					
Spill volume	0	per FPP	AVG (kcfs)	20.6	Avg %	15.9	
Spill pattern	0	per FPP					
Turbine Unit Priority	0	per FPP					
Turbine 1% Efficiency	0	per FPP					

## Fisheries Related Operations

### Smolt Monitoring Operations:

High temperature sampling protocols went into effect on 7/8/21 due to water temperatures exceeding 70°F. Smolt Monitoring Facility is currently conducting condition sampling on Monday and Thursday each week until daily average water temperatures drop below 69.5°F.

During sampling on 8/23 we experienced a large number of shad mortalities (>10%) which prompted USACE personnel to investigate the JBS for the source of mortalities. PSMFC staff performed additional samples on 8/25 and shad mortalities continued. On 8/25, USACE staff visually inspected STS's in MU1 and MU2 and found no damage. On 8/26, USACE staff closed all orifices to inspect for debris issues and nothing was found. PSMFC staff performed a sample on 8/26 and shad mortality was below 2%. No mortality of Chinook was present during the week. All systems are operating within criteria and shad mortality is near zero.

### Adult Ladder Operations:

North and South fish ladders are operating within criteria. Entered shad mode on 6/3/21. Returned ladders to salmon mode on 7/20/21.

### Project Operations:

Current outages: MU7, MU8, MU5-8 (8/17-9/12) BPA line 2 reconductor), MU12, MU13, MU16. Summer Spill started on June 16.

Tailwater Average Weekly TDG: 110.6

### Maintenance:

JD North Fishway's pump 4 has been pulled for maintenance (RTS to be determined). Spillway #10 will be operated manually until further notice. Calibration - All gauges within the 0.3' criteria. Spillway #3 failed on 6/5/21 at 0503, the motor for spill gate #3 will need to be replaced.

### Bird Data:

Small number of cormorants have returned mainly roosting on PHFB towers. Gull numbers increasing slightly. Pelican numbers decreasing on Preacher's Island. Few grebes in PHFB. (see 'Bird Count' tab for details). USDA Hazing ended 7/31/21.

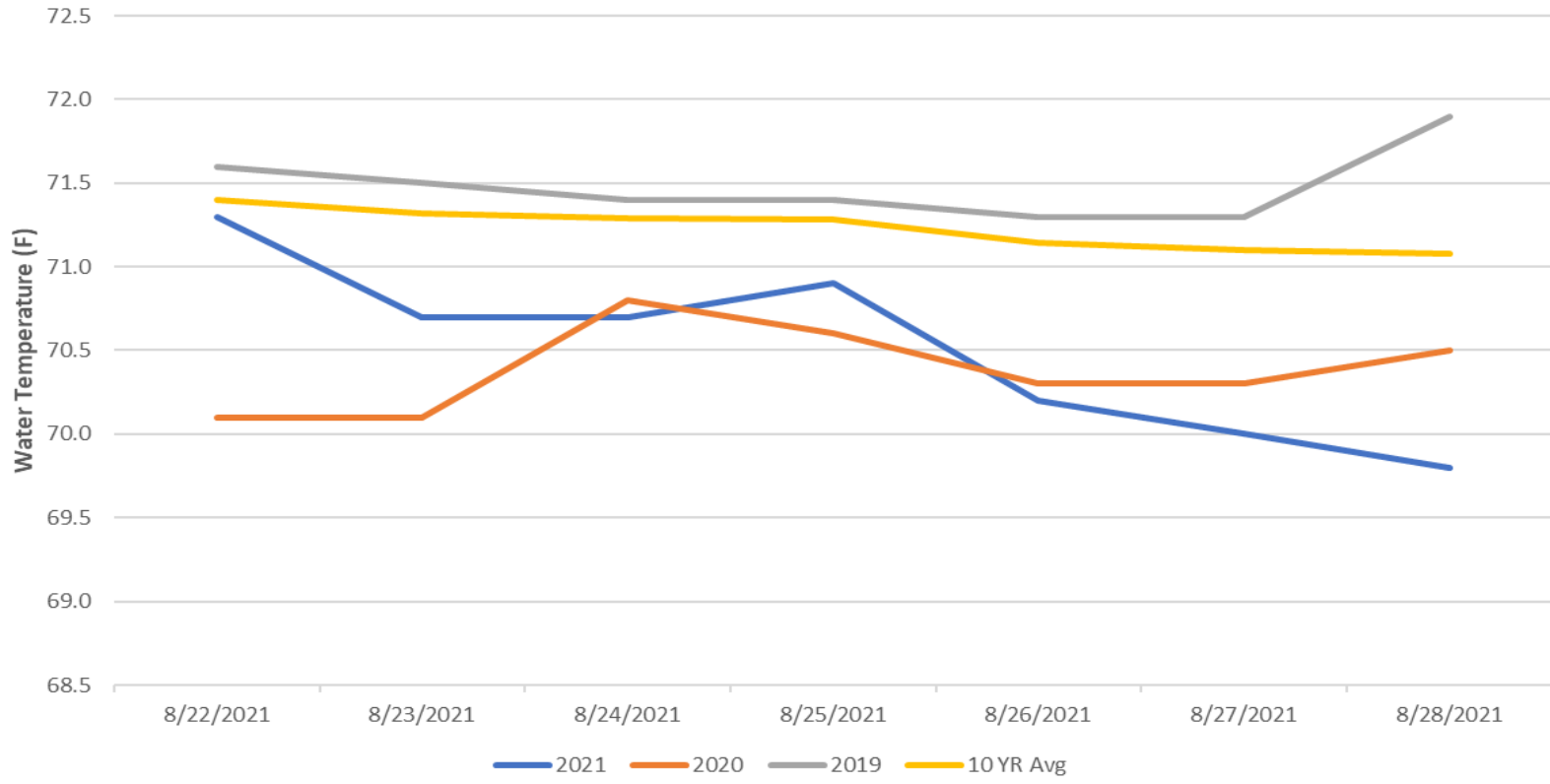
1 of 125 avian lines down, will need to be replaced

Pelicans on Preacher's Island: averaged 39 per day

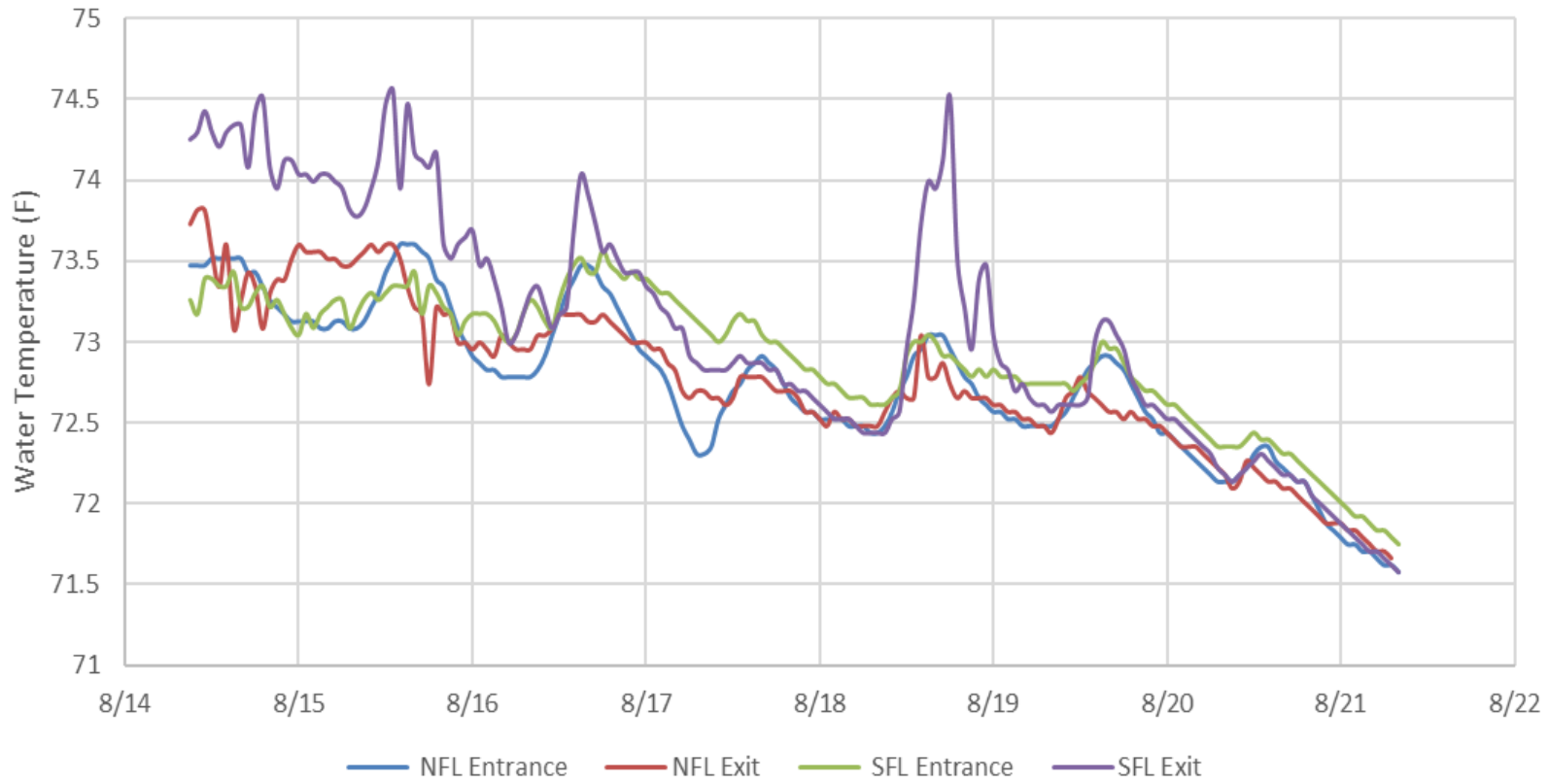
### Research:

PSMFC Juvenile lamprey genetic work continues.

John Day Dam Water Temperatures (F)



JDA Ladder Temperatures (8/15 - 8/21)



# 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)
8/23/2021	Unit 4	2.80	0,68,68	160.9
8/23/2021	Unit 12	2.95	0,68,68	160.9
8/25/2021	Unit 4	3.02	0,68,68	161.0
8/25/2021	Unit 12	2.99	0,68,68	161.0
8/27/2021	Unit 4	2.87	0,68,68	159.6
8/27/2021	Unit 12	3.01	0,68,68	159.6

Average Weekly Velocity (ft/sec)	2.94
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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	9.5	9.5	1.7	8.8	1.4	4.5	1.9	20.7	20.3	3
Sunday	10.0	10.0	1.5	9.5	1.5	4.6	1.8	20.7	18.7	3
Monday	10.2	10.1	1.2	9.7	1.4	4.6	1.9	20.8	14.3	3
Monday	9.7	9.7	1.3	9.5	1.5	4.6	2.0	20.9	14.3	3
Tuesday	10.1	10.0	1.4	8.7	1.4	4.7	1.4	20.7	15.7	3
Tuesday	9.8	9.8	1.5	10.0	1.5	4.7	1.5	20.7	15.6	3
Wednesday	9.6	9.5	1.8	8.7	1.4	4.7	1.7	19.2	14.6	3
Wednesday	10.2	10.2	1.5	10.2	1.5	4.6	1.9	20.7	15.7	3
Thursday	9.3	9.2	1.6	8.4	1.6	4.6	2.0	20.7	18.5	3
Thursday	10.1	10.1	1.3	9.4	1.4	4.7	2.0	20.7	11.9	3
Friday	8.9	8.8	1.8	8.4	1.6	4.6	2.0	20.7	20.8	3
Friday	9.4	9.4	1.4	9.3	1.4	4.6	2.0	20.8	13.8	3
Saturday	9.3	9.2	1.7	8.9	1.5	4.5	1.8	20.8	15.7	3
Saturday	9.6	9.6	1.5	9.6	1.5	4.5	1.8	20.7	12.8	3
<b>AVG:</b>	<b>9.7</b>	<b>9.7</b>	<b>1.5</b>	<b>9.2</b>	<b>1.5</b>	<b>4.6</b>	<b>1.8</b>	<b>20.6</b>	<b>15.9</b>	<b>3.0</b>

	Temp (F)	Secchi (Ft)	Fallbacks	Average # of Pelicans on Island Per Day
Sunday	71.3	6.0	N/A	60
Monday	70.7	6.0	12	30
Tuesday	70.7	6.0	N/A	47
Wednesday	70.9	6.0	27	42
Thursday	70.2	6.0	10	39
Friday	70.0	6.0	N/A	24
Saturday	69.8	6.0	N/A	32
<b>AVG</b>	<b>70.5</b>	<b>6.0</b>	<b>16</b>	<b>39</b>

John Day Dam  
Avian Zones



**JDA Bird Counts: 8/22/21 to 8/28/21**

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)	
22-Aug	PHFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7	0	0	14
22-Aug	SWFB	0	0	55	82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	137
22-Aug	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22-Aug	PH2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
22-Aug	PH3	5	3	11	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0	23
22-Aug	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22-Aug	SW2	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
22-Aug	SW3	3	5	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	10
<b>Avg/Survey</b>		<b>9</b>		<b>74</b>		<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>		<b>3</b>		<b>2</b>		<b>7</b>		<b>0</b>		<b>94</b>
23-Aug	PHFB	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	3	0	0	12
23-Aug	SWFB	0	0	73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73
23-Aug	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug	PH2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
23-Aug	PH3	67	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	70
23-Aug	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug	SW3	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3
<b>Avg/Survey</b>		<b>36</b>		<b>37</b>		<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>		<b>2</b>		<b>0</b>		<b>6</b>		<b>0</b>		<b>80</b>
24-Aug	PHFB	0	5	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
24-Aug	SWFB	0	0	44	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	89
24-Aug	PH1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
24-Aug	PH2	6	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	10
24-Aug	PH3	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5
24-Aug	SW1	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	6
24-Aug	SW2	5	0	0	0	0	0	0	0	0	0	0	0	7	5	0	0	0	0	0	0	17
24-Aug	SW3	4	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	14
<b>Avg/Survey</b>		<b>10</b>		<b>48</b>		<b>1</b>		<b>0</b>		<b>0</b>		<b>0</b>		<b>19</b>		<b>0</b>		<b>0</b>		<b>0</b>		<b>77</b>
25-Aug	PHFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	8
25-Aug	SWFB	0	0	60	74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134
25-Aug	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug	PH2	2	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	6
25-Aug	PH3	10	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	13
25-Aug	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
25-Aug	SW3	10	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	25
<b>Avg/Survey</b>		<b>11</b>		<b>67</b>		<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>		<b>13</b>		<b>0</b>		<b>4</b>		<b>0</b>		<b>95</b>



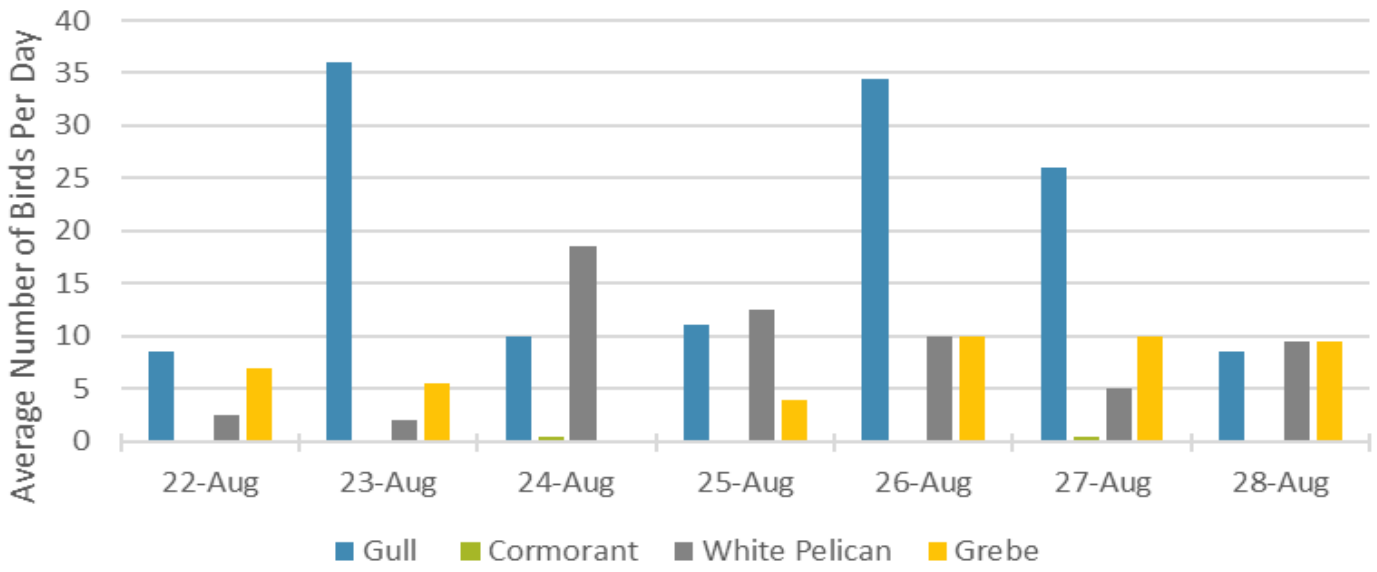
**JDA Bird Counts: 8/22/21 to 8/28/21**

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)	
26-Aug	PHFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	0	0	20
26-Aug	SWFB	0	0	0	61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61
26-Aug	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26-Aug	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26-Aug	PH3	42	9	0	0	0	0	0	0	0	0	0	0	8	3	0	0	0	0	0	0	62
26-Aug	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26-Aug	SW2	1	1	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	8
26-Aug	SW3	11	5	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	19
<b>Avg/Survey</b>		<b>35</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>85</b>	
27-Aug	PHFB	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	10	10	0	0	27
27-Aug	SWFB	0	0	0	182	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	182
27-Aug	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27-Aug	PH2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
27-Aug	PH3	28	5	0	0	0	0	0	0	0	0	0	0	6	1	0	0	0	0	0	0	40
27-Aug	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27-Aug	SW2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
27-Aug	SW3	12	4	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	19
<b>Avg/Survey</b>		<b>26</b>	<b>91</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>136</b>	
28-Aug	PHFB	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	12	7	0	0	25
28-Aug	SWFB	0	0	67	219	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	286
28-Aug	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28-Aug	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28-Aug	PH3	11	0	71	0	0	0	0	0	0	0	0	0	11	3	0	0	0	0	0	0	96
28-Aug	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28-Aug	SW2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
28-Aug	SW3	6	0	13	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	23
<b>Avg/Survey</b>		<b>9</b>	<b>185</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>216</b>	

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			
<b>Weekly Total</b>	<b>269</b>	<b>1063</b>	<b>2</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>120</b>	<b>3</b>	<b>92</b>	<b>0</b>	<b>781</b>								
<b>Avg/Survey</b>	<b>19</b>	<b>76</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>112</b>										

### Foraging Piscivorous Birds



### Non-Foraging Piscivorous Birds

