

## FISHWAY STATUS REPORT - JOHN DAY DAM

Date: 4/23/2022

Inspection Period: 4/17/2022 thru 4/23/2022



**US Army Corps  
of Engineers**  
Portland District

JD/WC Project-Fisheries  
P.O. Box 823  
Rufus, Oregon 97050  
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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.

<b>John Day Dam</b>	Inspection OOC	Criteria Limit	Total Number of Inspections: 14		Temperature: 47.4 F	Secchi: 5.0 Ft.
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### 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	0	depth (≥ 8')	AVG (Ft.)	9.4		
Collection channel velocity	0	1.5 - 4 fps	AVG (Ft.)	2.78		
N. Entrance PH(Bay 19)differential	0	1.0' - 2.0'	AVG (Ft.)	1.7		
Entrance weir NE1	0	depth (≥ 8')	AVG (Ft.)	9.5		
Entrance weir NE2	0	depth (≥ 8')	AVG (Ft.)	9.3		

### JUVENILE PASSAGE

Forebay/bypass conduit differential	1	4.0' - 5.0'	AVG (Ft.)	4.6	momentary OOC due to trash raking	
Submersible traveling screens	0	visual inspect	next visual inspection 4/25 - 4/28			
Turbine trashrack drawdown	0	<1.5', wkly				
Vert barrier screen drawdown	0	<1.5', wkly				
Spill volume	0	per FPP	AVG (kcfs)	64.6	Avg %	48.4
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: 114.7

### **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 continue to decrease, mainly roosting on rocks in SW2 or PHFB towers. Gull numbers remain minimal. Pelican numbers starting to increase on Preacher's Island. Grebe numbers are increasing, mainly in PHFB. (see 'Bird Count' tab for details).

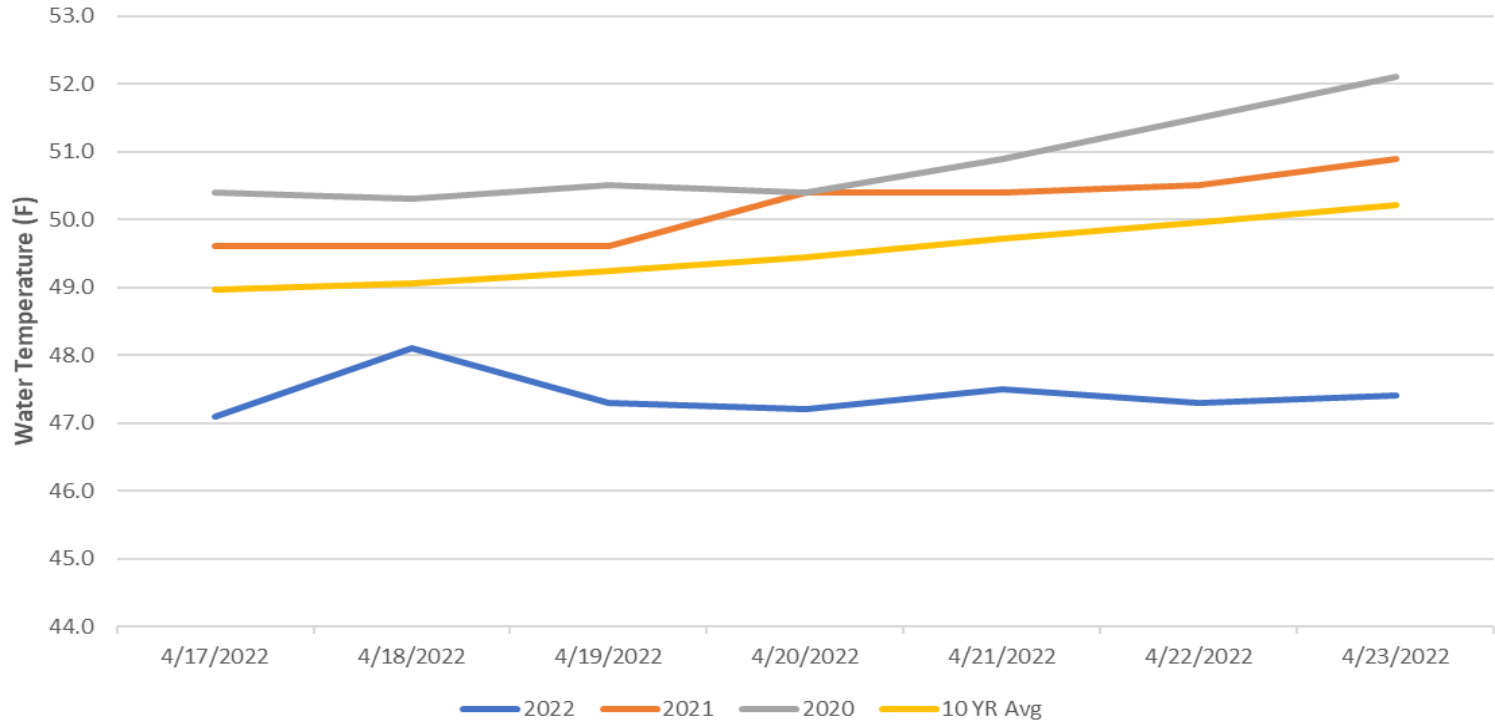
1 of 125 avian lines down. The 7 lines that were broken by the BPA line repair were replaced on 3/29. USDA hazing started 4/16.

Pelicans on Preacher's Island: averaged 6 per day

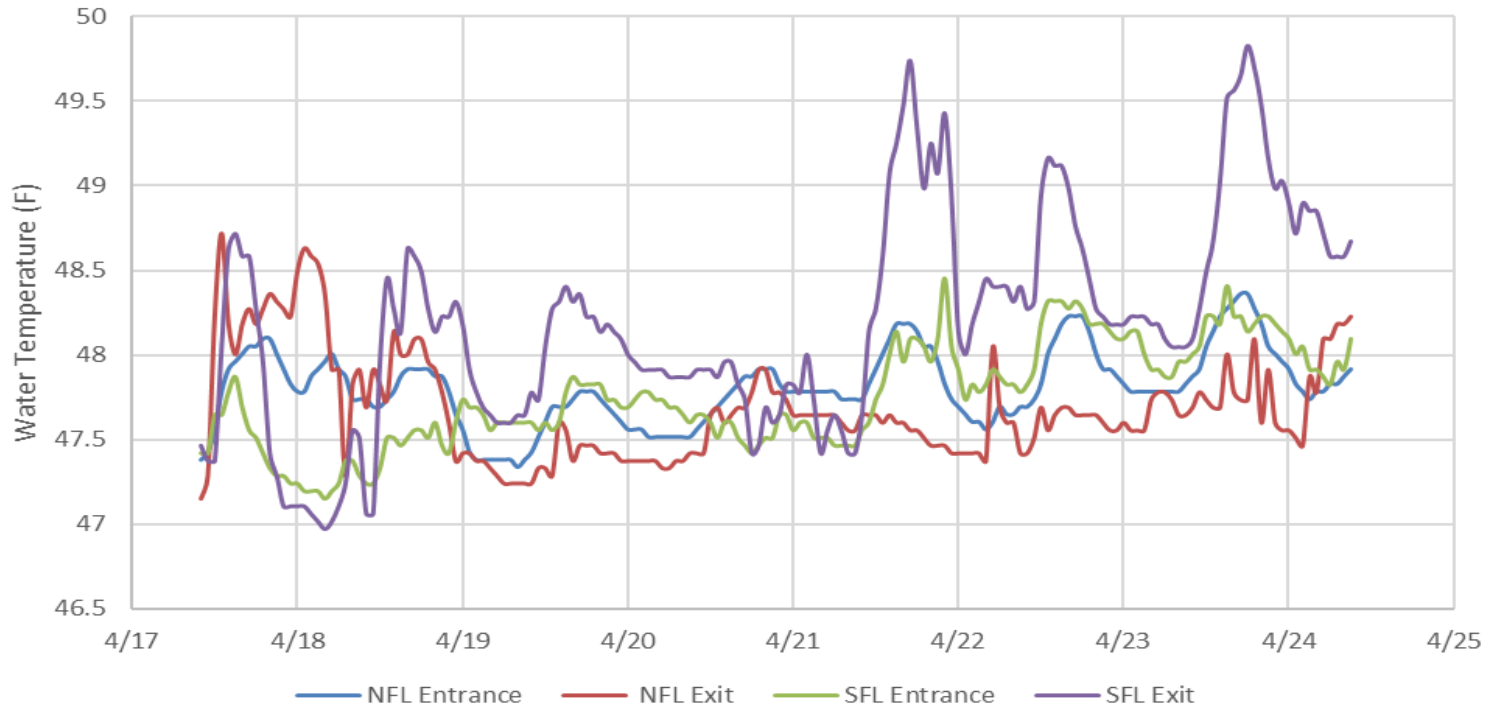
### **Research:**

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)
4/18/2022	Unit 4	2.77	68,0,68	159.1
4/18/2022	Unit 12	2.78	68,0,68	159.1
4/21/2022	Unit 4	2.74	68,0,68	159.1
4/21/2022	Unit 12	2.77	68,0,68	159.1
4/23/2022	Unit 4	2.79	68,0,68	159.8
4/23/2022	Unit 12	2.81	68,0,68	159.8

Average Weekly Velocity (ft/sec)	2.78
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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	9.4	9.2	1.5	8.9	1.4	4.7	1.9	70.4	57.9	18
Sunday	9.5	9.3	1.5	9.0	1.6	4.6	1.7	70.0	57.9	18
Monday	9.3	9.1	1.6	8.8	1.5	5.2	1.8	37.9	31.6	12
Monday	9.1	8.8	1.5	8.7	1.6	4.5	1.8	68.2	57.5	18
Tuesday	9.1	8.9	1.4	9.0	1.5	4.5	1.9	38.0	31.8	13
Tuesday	9.3	9.1	1.4	9.3	1.6	4.6	1.8	68.2	56.7	18
Wednesday	9.9	9.8	1.3	9.7	1.4	4.6	1.4	43.2	32.1	16
Wednesday	9.4	9.2	1.5	9.4	1.8	4.5	1.7	94.4	64.3	19
Thursday	8.6	8.4	1.4	9.0	1.5	4.6	1.1	45.8	32.1	17
Thursday	8.9	8.7	1.6	9.2	1.6	4.5	1.6	95.0	65.0	19
Friday	10.2	10.1	1.7	10.6	1.5	4.6	1.8	50.3	31.2	17
Friday	10.4	10.3	1.2	10.5	1.4	4.5	1.5	101.9	66.2	19
Saturday	9.6	9.5	1.3	9.7	1.4	4.6	1.8	41.6	32.2	14
Saturday	9.6	9.4	1.3	9.9	1.8	4.6	1.8	80.0	60.5	19
<b>AVG:</b>	<b>9.5</b>	<b>9.3</b>	<b>1.4</b>	<b>9.4</b>	<b>1.5</b>	<b>4.6</b>	<b>1.7</b>	<b>64.6</b>	<b>48.4</b>	<b>16.9</b>

	Temp (F)	Secchi (Ft)	Fallbacks	Average # of Pelicans on Island Per Day
Sunday	47.1	5.0	N/A	1
Monday	48.1	5.0	0	15
Tuesday	47.3	5.0	2	4
Wednesday	47.2	5.0	0	
Thursday	47.5	5.0	0	7
Friday	47.3	5.0	0	
Saturday	47.4	5.0	N/A	4
<b>AVG</b>	<b>47.4</b>	<b>5.0</b>	<b>0</b>	<b>6</b>

John Day Dam  
Avian Zones





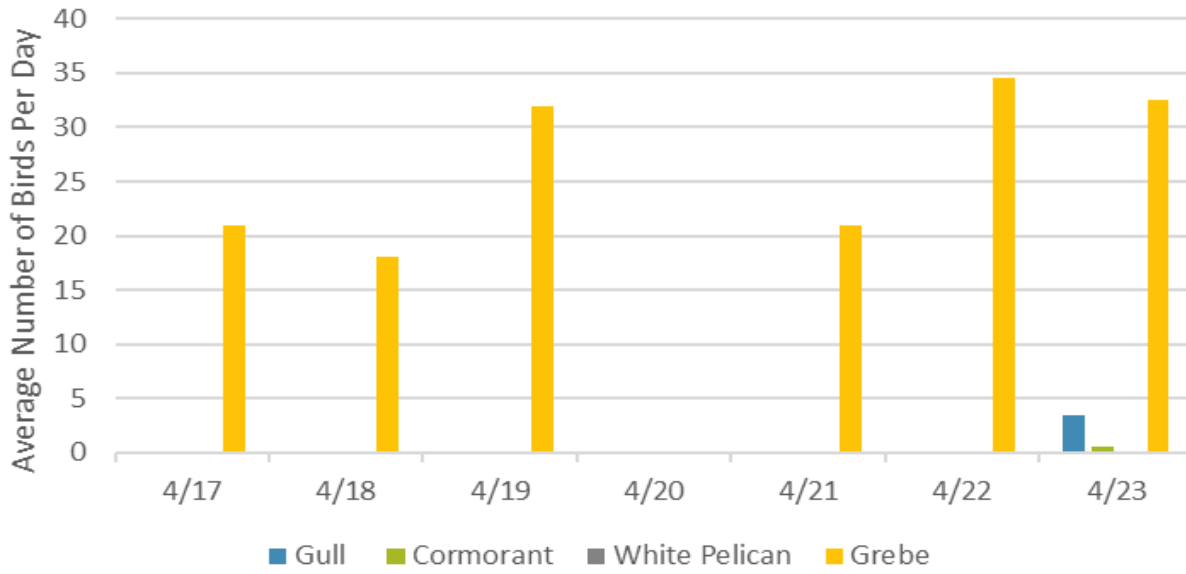


**JDA Bird Counts: 4/21/22 to 4/23/22**

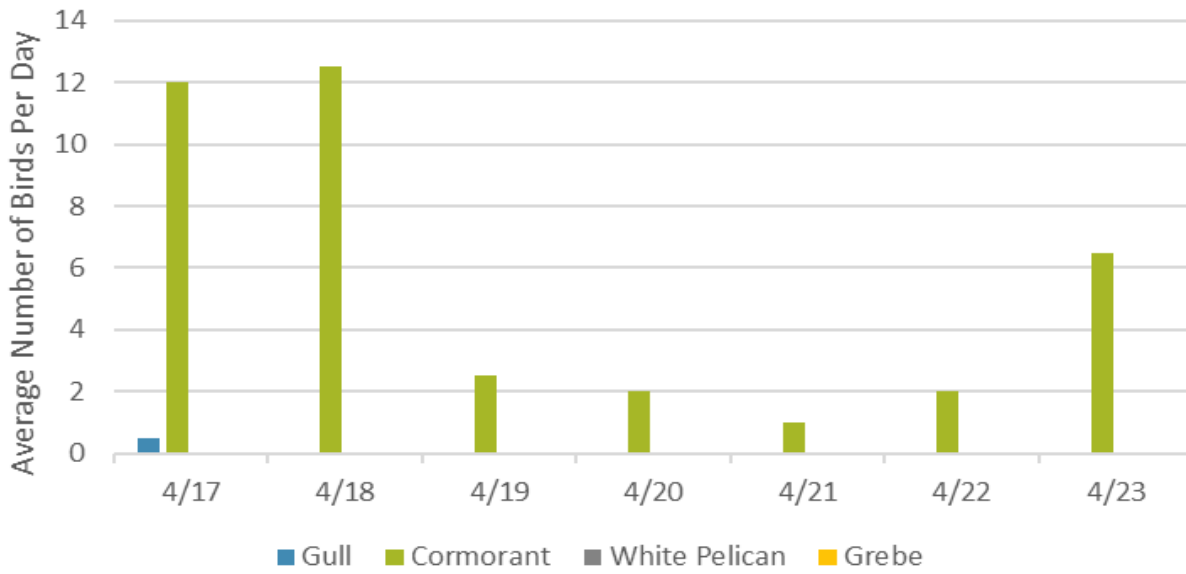
F(1): Forage AM survey   F(2): Forage PM Survey   NF(1): Non-Forage AM Survey   NF(2): Non-Forage PM Survey

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)	
21-Apr	PHFB	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	21	21	0	0	44
21-Apr	SWFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21-Apr	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21-Apr	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21-Apr	PH3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21-Apr	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21-Apr	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21-Apr	SW3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total/Survey</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</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>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22</b>
22-Apr	PHFB	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	40	29	0	0	73
22-Apr	SWFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22-Apr	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22-Apr	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22-Apr	PH3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22-Apr	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22-Apr	SW2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22-Apr	SW3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total/Survey</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</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>35</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>37</b>
23-Apr	PHFB	0	0	0	0	1	0	9	0	0	0	0	0	0	0	0	0	43	22	0	0	75
23-Apr	SWFB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Apr	PH1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Apr	PH2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Apr	PH3	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
23-Apr	SW1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Apr	SW2	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
23-Apr	SW3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total/Survey</b>		<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>7</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>33</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>43</b>
<b>Totals</b>		<b>Gulls</b>				<b>Cormorant</b>				<b>Caspian tern</b>				<b>White Pelican</b>				<b>Grebe</b>				<b>Total</b>
		<b>F</b>	<b>NF</b>	<b>F</b>	<b>NF</b>	<b>F</b>	<b>NF</b>	<b>F</b>	<b>NF</b>	<b>F</b>	<b>NF</b>	<b>F</b>	<b>NF</b>	<b>F</b>	<b>NF</b>	<b>F</b>	<b>NF</b>	<b>F</b>	<b>NF</b>	<b>F</b>	<b>NF</b>	
<b>Weekly Total</b>		<b>7</b>	<b>1</b>	<b>1</b>	<b>77</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>0</b>	<b>318</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>202</b>
<b>Avg/Survey</b>		<b>1</b>	<b>0</b>	<b>0</b>	<b>6</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>0</b>	<b>23</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29</b>

### Foraging Piscivorous Birds



### Non-Foraging Piscivorous Birds





Western Grebes in PHFB zone, most numerous piscivorous bird at JDA for the week