

FISHWAY STATUS REPORT

Date: 5/11/2019
Inspection Period: 5/5/2019 thru 5/11/2019

JOHN DAY DAM



**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.
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: 54 F |
|-------------------------------------|-------------------|-------------------|--|-------------------|
| | | | | Secchi: 3.4 Ft. |
| NORTH FISHWAY | | | | |
| 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 | 0 | | Turbine 3 oos. 2 turbine operation as of 1200 on 25 April. | |
| 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' | Set to Shad setting to provide more flow to SE1 | |
| South entrance differential | 0 | 1.0' - 2.0' | AVG 1.5 | |
| Entrance weir SE1 | 0 | depth (≥ 8') | AVG 9.7 | |
| Collection channel velocity | 0 | 1.5 - 4 fps | AVG 3.08 | |
| N. Entrance PH(Bay 19)differential | 3 | 1.0' - 2.0' | AVG 1.8 | |
| Entrance weir NE1 | 0 | depth (≥ 8') | AVG 10.7 | |
| Entrance weir NE2 | 0 | depth (≥ 8') | AVG 9.2 | |
| JUVENILE PASSAGE | 0 | | | |
| Forebay/bypass conduit differential | 0 | 4.0' - 5.0' | AVG 4.6 | |
| Submersible traveling screens | 0 | visual inspect | | |
| Turbine trashrack drawdown | 0 | <1.5', wkly | N/A | |
| Vert barrier screen drawdown | 0 | <1.5', wkly | N/A | |
| Spill volume | 0 | per FPP | Spill season started 10 April | |
| Spill pattern | 0 | per FPP | None | |
| Turbine Unit Priority | 0 | per FPP | | |
| Turbine 1% Efficiency | 0 | per FPP | | |

SMOLT MONITORING FACILITY

Operation:

SMOLT MONITORING FACILITY began sampling on 3/13 at 1400. A broken pipe flange that supplies flume and rotating gate water was cracked preventing start up on 3/11.

Maintenance:

SMF SCADA update by JD Electrical/ Portland District's engineers is underway but its completion is delayed by one year to February 2020. Due to complexity of electronic components and incomplete as-builts which are pending at this time.

Research:

CRITFC genetic samples were collected by PSMFC.

ADULT FISHWAYS & TW AVIAN GRID

Birds:

USDA Bird Hazing began on 15 April. 20 Pelicans observed on island below project in tailrace
All 125 avian lines in place without any deficiencies.

Operations:

Turbine 1 rts on 25 April. The heat exchanger had broken and needed repair. Awaiting clutch on turbine 3.

Trash raking of units began on 3/21.

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

Maintenance:

JD North AWS pump 2 returned to service on 3/27.

JD North AWS pumps frequent SKF alarms (auto greasing issues) continue and are cleared by JD Maintenance & Ops immediately. Planning for a long term fix underway.

JD South fish turbine's anti-ratchet gear was damaged beyond repair on 9 Apr. A spare is being assessed as a possible repair part.

JD North Fishway's LPS: Installation of the old pump assembly and electric controls will proceed at the end of April for start of trapping season.

JD South AWS turbine 3 is OOS, Part are to arrive on 26 April.

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

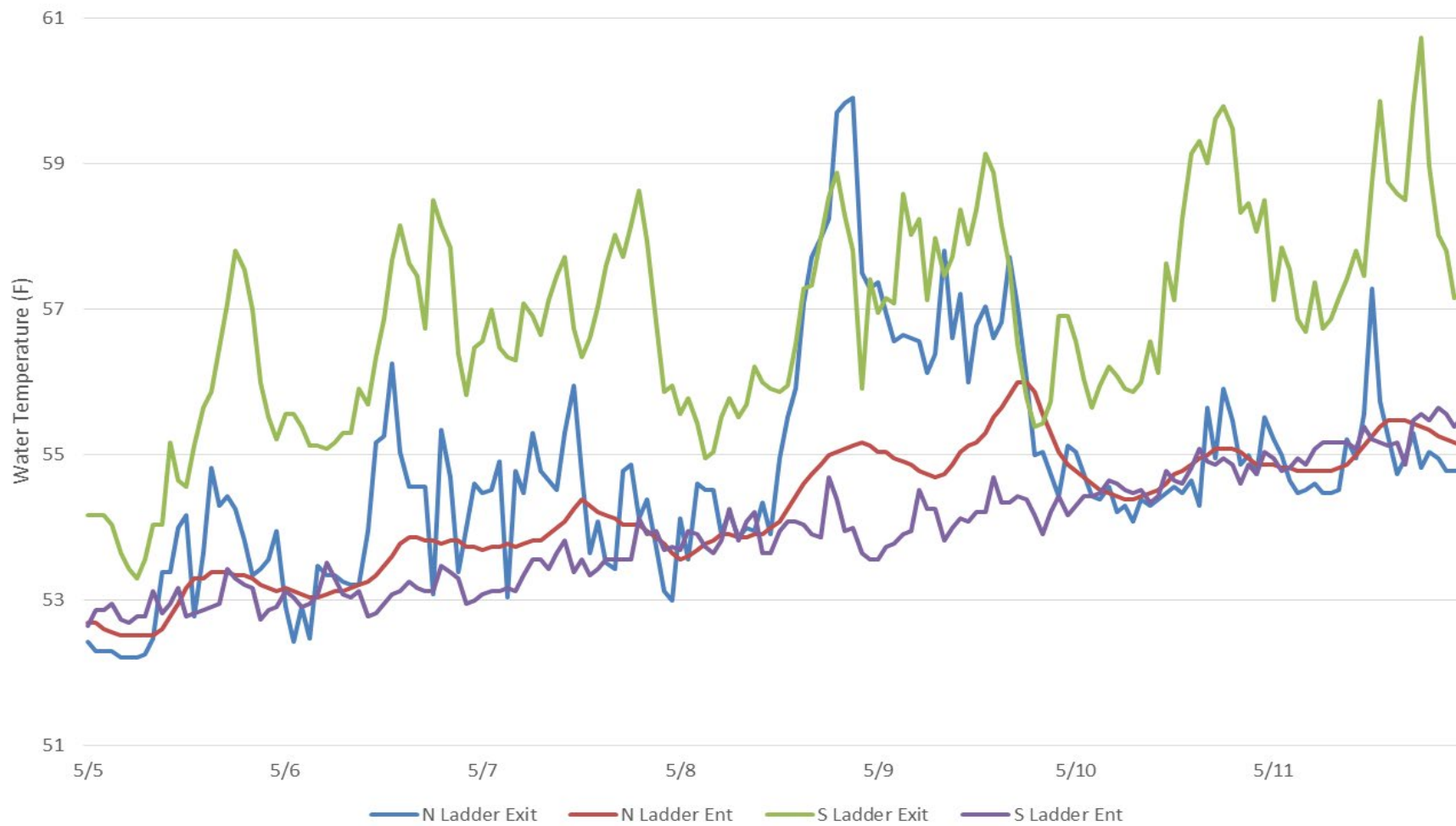
Research:

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 Fishladder Water Temperatures (5-5-19 - 5-11-19)



JDA Collection Channel Velocity

Date 5-May-19

By: pete

| Bay(s) | Time | Sec. | Velocity (f/s) |
|---------|------|------|----------------|
| 0-2 | 1:25 | 85 | 2.12 |
| 2 - 4 | 2:25 | 145 | 3.00 |
| 4 - 6 | 3:12 | 192 | 3.83 |
| 6 - 8 | 4:12 | 252 | 3.00 |
| 8 - 10 | 5:10 | 310 | 3.10 |
| 10 - 12 | 6:08 | 368 | 3.10 |
| 12 - 14 | 7:14 | 434 | 2.73 |
| 14 - 16 | 8:23 | 503 | 2.61 |
| 16 - 18 | 9:06 | 546 | 4.19 |
| | | | 3.08 |

tw=165.5

turbine 2-3=68rpm

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

John Day Weekly Averages

| | Temp: | Secchi: | Fallbacks | |
|-------------|-----------|--|---|--------|
| Sun | 53 | 2.5 | 10 | Bypass |
| Mon | 53 | 2.5 | 12 | Sample |
| Tue | 53 | 3.5 | 2 | Bypass |
| Wed | 53 | 4.0 | 6 | Sample |
| Thur | 54 | 3.5 | 6 | Bypass |
| Fri | 55 | 4.0 | 31 | Sample |
| Sat | 55 | 4.0 | 60 | Bypass |
| AVG: | 54 | AVG: style="border: 1px solid black; text-align: center;"> 3.4 | AVG/Sample style="border: 1px solid black; text-align: center;"> 27 | |
| | | | MAX style="border: 1px solid black; text-align: center;"> 60 | |
| | | | MIN style="border: 1px solid black; text-align: center;"> 2 | |

| | NE1 | NE2 | S.Ent | SE1 | N.Ent | JBS Diff | Bay19 |
|-------------|-------------|------------|------------|------------|------------|------------|------------|
| Sun | 9.7 | 8.3 | 1.8 | 8.9 | 1.5 | 4.6 | 2.2 |
| Sun | 9.6 | 8.2 | 1.9 | 8.6 | 1.4 | 4.6 | 2.2 |
| Mon | 11.0 | 9.6 | 1.6 | 10.0 | 1.4 | 4.6 | 1.9 |
| Mon | 10.1 | 8.7 | 1.5 | 9.0 | 1.5 | 4.7 | 1.8 |
| Tues | 10.9 | 9.5 | 1.3 | 9.9 | 1.4 | 4.5 | 1.8 |
| Tues | 11.3 | 9.4 | 1.4 | 10.7 | 1.5 | 4.5 | 1.5 |
| Wed | 10.8 | 9.4 | 1.4 | 10.2 | 1.4 | 4.6 | 1.9 |
| Wed | 10.1 | 8.8 | 1.5 | 9.0 | 1.6 | 4.5 | 1.6 |
| Thur | 11.2 | 9.8 | 1.4 | 10.2 | 1.4 | 4.6 | 1.6 |
| Thur | 11.4 | 9.7 | 1.5 | 9.3 | 1.4 | 4.6 | 1.6 |
| Fri | 10.7 | 9.4 | 1.4 | 10.1 | 1.4 | 4.6 | 1.8 |
| Fri | 10.2 | 8.8 | 1.4 | 9.6 | 1.5 | 4.7 | 1.9 |
| Sat | 10.7 | 9.3 | 1.5 | 9.6 | 1.3 | 4.7 | 1.6 |
| Sat | 11.6 | 10.2 | 1.1 | 11.2 | 1.5 | 4.7 | 1.5 |
| AVG: | 10.7 | 9.2 | 1.5 | 9.7 | 1.4 | 4.6 | 1.8 |

JDA Bird Counts: 5/5/19 to 5/11/19

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) | |
| 5-May | PHFB | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 39 | 19 | 0 | 79 |
| 5-May | SWFB | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 8 |
| 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 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 5-May | SW3 | 9 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 44 |
| Avg/Survey | | 21 | | 4 | | 0 | | 0 | | 0 | | 0 | | 5 | | 0 | | 31 | | 10 | | 137 |
| 6-May | PHFB | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 41 |
| 6-May | SWFB | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 10 |
| 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6-May | PH3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 6-May | SW3 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| Avg/Survey | | 8 | | 4 | | 0 | | 1 | | 0 | | 0 | | 0 | | 0 | | 22 | | 0 | | 67 |
| 7-May | PHFB | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 0 | 39 |
| 7-May | SWFB | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| Avg/Survey | | 2 | | 1 | | 0 | | 0 | | 0 | | 0 | | 2 | | 0 | | 19 | | 0 | | 46 |
| 8-May | PHFB | 0 | 0 | 2 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 | 1 | 0 | 0 | 47 |
| 8-May | SWFB | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 8-May | PH1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8-May | PH2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8-May | PH3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8-May | SW1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8-May | SW2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8-May | SW3 | 10 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| Avg/Survey | | 13 | | 3 | | 0 | | 3 | | 0 | | 0 | | 2 | | 0 | | 20 | | 0 | | 80 |

JDA Bird Counts: 5/5/19 to 5/11/19

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) | |
| 9-May | PHFB | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 14 | 0 | 0 | 34 |
| 9-May | SWFB | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 9-May | PH1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9-May | PH2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 9-May | PH3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 9-May | SW1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 9-May | SW2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9-May | SW3 | 8 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 |
| Avg/Survey | | 21 | | 0 | | 0 | | 2 | | 0 | | 0 | | 1 | | 1 | | 15 | | 0 | | 78 |
| 10-May | PHFB | 0 | 0 | 2 | 3 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 19 | 0 | 0 | 64 |
| 10-May | SWFB | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 |
| 10-May | PH1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10-May | PH2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10-May | PH3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 10-May | SW1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10-May | SW2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10-May | SW3 | 5 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| Avg/Survey | | 11 | | 4 | | 0 | | 3 | | 0 | | 0 | | 1 | | 0 | | 27 | | 0 | | 90 |
| 11-May | PHFB | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 0 | 0 | 0 | 37 |
| 11-May | SWFB | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 11-May | PH1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11-May | PH2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11-May | PH3 | 9 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| 11-May | SW1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11-May | SW2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11-May | SW3 | 9 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| Avg/Survey | | 22 | | 1 | | 0 | | 1 | | 0 | | 0 | | 1 | | 0 | | 18 | | 0 | | 82 |
| Totals | | Gulls | | | | Cormorant | | | | Caspian tern | | | | White Pelican | | | | Grebe | | | | Total |
| | | F | | NF | | F | | NF | | F | | NF | | F | | NF | | F | | NF | | |
| Weekly Total | | 191 | | 30 | | 0 | | 18 | | 0 | | 0 | | 21 | | 1 | | 300 | | 19 | | 580 |
| Avg/Survey | | 14 | | 2 | | 0 | | 1 | | 0 | | 0 | | 2 | | 0 | | 21 | | 1 | | 41 |

John Day Dam
Avian Zones

