

United States Army Corps of Engineers

John Day Dam Smolt and Juvenile Lamprey Condition Monitoring

Weekly Report, #24-4

Report Period: 4/20 – 4/26, 2024

Prepared By: Gregory Kovalchuk



SECTION 1. River Flow and Sampling Results

| | Min | Max | Mean | | |
|-------------------|-------|-------|---------|-----------|-------|
| | | | Current | Last Week | 2023 |
| A. River Flow | 158.7 | 187.2 | 172.7 | 189.2 | 139.9 |
| B. Powerhouse 1 | 94.8 | 111.3 | 102.9 | 112.3 | 86.6 |
| C. Spill (kcfs) | 62.7 | 74.8 | 68.5 | 72.4 | 52.0 |
| % of River Flow | 39.5 | 40.0 | 39.6 | 38.6 | 36.9% |
| D. Water Temp * | 51.4 | 52.6 | 52.2 | 50.8 | 51.6 |
| E. % Saturation * | 109.3 | 113.3 | 112.4 | 106.2 | 109.9 |

* In sampling facility and from TMT website.

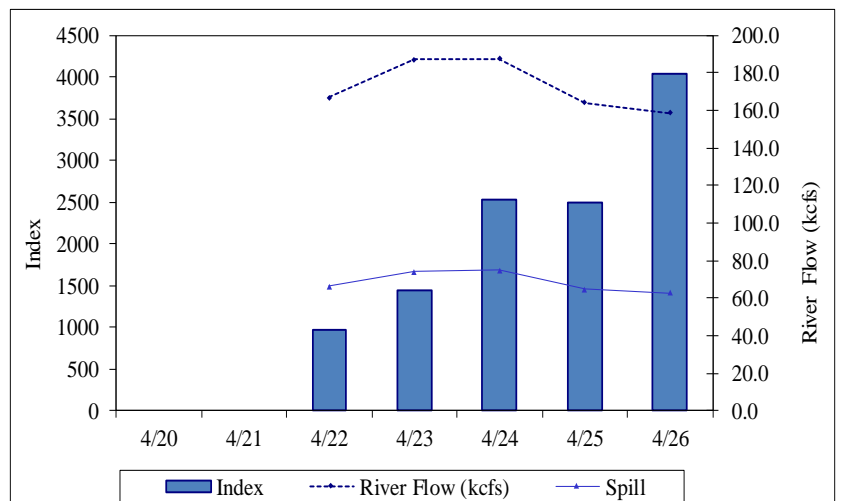
| % SAMPLE COMPOSITION | | | This Week | Last Week |
|----------------------|-------|-------|-----------|-----------|
| YEARLING CHINOOK | 75.5% | 82.9% | | |
| SUBYEARLING CHINOOK | 0.0% | 0.0% | | |
| CHINOOK FRY | 0.0% | 0.0% | | |
| UNCLIPPED STEELHEAD | 1.7% | 3.3% | | |
| CLIPPED STEELHEAD | 19.0% | 9.7% | | |
| COHO | 3.7% | 3.9% | | |
| COHO FRY | 0.0% | 0.0% | | |
| SOCKEYE | 0.0% | 0.2% | | |

| YEARLING CHINOOK | | | | | | | SUBYEARLING CHINOOK | | | | | COHO | | | | |
|------------------|-------------|---------|--------|--------|--------|--------|---------------------|--------|--------|--------|-------|---------|--------|--------|--------|-------|
| End Date | Sample Rate | # Smpld | % Desc | % Mort | # Coll | Index | # Smpld | % Desc | % Mort | # Coll | Index | # Smpld | % Desc | % Mort | # Coll | Index |
| 4/20 | | | | | | | | | | | | | | | | |
| 4/21 | | | | | | | | | | | | | | | | |
| 4/22 | 23.9% | 105 | 4.8 | 0.0 | 438 | 730 | 0 | 0.0 | 0.0 | 0 | 0 | 4 | 0.0 | 0.0 | 16 | 27 |
| 4/23 | 15.0% | 101 | 5.0 | 0.0 | 690 | 1,149 | 0 | 0.0 | 0.0 | 0 | 0 | 6 | 16.7 | 0.0 | 40 | 67 |
| 4/24 | 10.2% | 112 | 1.8 | 0.0 | 1,160 | 1,940 | 0 | 0.0 | 0.0 | 0 | 0 | 3 | 0.0 | 0.0 | 30 | 50 |
| 4/25 | 8.7% | 104 | 1.9 | 0.0 | 1,230 | 2,044 | 0 | 0.0 | 0.0 | 0 | 0 | 7 | 0.0 | 0.0 | 80 | 133 |
| 4/26 | 5.8% | 102 | 3.9 | 0.0 | 1,750 | 2,907 | 0 | 0.0 | 0.0 | 0 | 0 | 6 | 0.0 | 0.0 | 100 | 166 |
| Weekly | | 524 | 3.4 | 0.0 | 5,268 | 8,770 | 0 | 0.0 | 0.0 | 0 | 0 | 26 | 3.8 | 0.0 | 266 | 443 |
| Season to date | | 1,924 | 2.0 | 0.0 | 9,445 | 15,046 | 0 | 0.0 | 0.0 | 0 | 0 | 65 | 1.5 | 0.0 | 398 | 650 |

| End Date | Sample Rate | UNCLIPPED STEELHEAD | | | | | CLIPPED STEELHEAD | | | | | SOCKEYE | | | | |
|----------------|-------------|---------------------|--------|--------|--------|-------|-------------------|--------|--------|--------|-------|---------|--------|--------|--------|-------|
| | | # Smpld | % Desc | % Mort | # Coll | Index | # Smpld | % Desc | % Mort | # Coll | Index | # Smpld | % Desc | % Mort | # Coll | Index |
| 4/20 | | | | | | | | | | | | | | | | |
| 4/21 | | | | | | | | | | | | | | | | |
| 4/22 | 23.9% | 0 | 0.0 | 0.0 | 0 | 0 | 31 | 9.7 | 0.0 | 132 | 220 | 0 | 0.0 | 0.0 | 0 | 0 |
| 4/23 | 15.0% | 2 | 0.0 | 0.0 | 15 | 25 | 21 | 0.0 | 0.0 | 120 | 200 | 0 | 0.0 | 0.0 | 0 | 0 |
| 4/24 | 10.2% | 2 | 0.0 | 0.0 | 25 | 42 | 37 | 16.2 | 0.0 | 300 | 502 | 0 | 0.0 | 0.0 | 0 | 0 |
| 4/25 | 8.7% | 1 | 0.0 | 0.0 | 10 | 17 | 18 | 5.6 | 0.0 | 180 | 299 | 0 | 0.0 | 0.0 | 0 | 0 |
| 4/26 | 5.8% | 7 | 1.0 | 0.0 | 120 | 199 | 25 | 0.0 | 0.0 | 460 | 764 | 0 | 0.0 | 0.0 | 0 | 0 |
| Weekly | | 12 | 8.3 | 0.0 | 170 | 283 | 132 | 7.6 | 0.0 | 1,192 | 1,985 | 0 | 0.0 | 0.0 | 0 | 0 |
| Season to date | | 63 | 11.1 | 0.0 | 326 | 513 | 194 | 7.7 | 0.0 | 1,490 | 2,480 | 1 | 0.0 | 0.0 | 4 | 7 |

| TOTAL | | | | | | |
|----------------|-------------|---------|--------|--------|--------|--------|
| End Date | Sample Rate | # Smpld | % Desc | % Mort | # Coll | Index |
| 4/20 | | | | | | |
| 4/21 | | | | | | |
| 4/22 | 23.9% | 140 | 5.7 | 0.0 | 586 | 976 |
| 4/23 | 15.0% | 130 | 4.6 | 0.0 | 865 | 1,441 |
| 4/24 | 10.2% | 154 | 5.2 | 0.0 | 1,515 | 2,533 |
| 4/25 | 8.7% | 130 | 2.3 | 0.0 | 1,500 | 2,492 |
| 4/26 | 5.8% | 140 | 3.6 | 0.0 | 2,430 | 4,037 |
| Weekly | | 694 | 4.3 | 0.0 | 6,896 | 11,480 |
| Season to date | | 2,247 | 2.7 | 0.0 | 11,663 | 18,697 |

Notes: Condition percentages are calculated using sample numbers.
Subyearling Chinook and Coho include fry. All river flow, powerhouse, spill and index estimates are for the sample period only.



| | Pacific Lamprey | | | | | | Western Brook | | |
|----------------|-----------------|--------|--------|------------|--------|--------|---------------|--------|--------|
| | Macrophthalmia | | | Ammocoetes | | | Ammocoetes | | |
| End Date | # Smpld | % Mort | # Coll | # Smpld | % Mort | # Coll | # Smpld | % Mort | # Coll |
| 4/20 | | | | | | | | | |
| 4/21 | | | | | | | | | |
| 4/22 | 0 | 0.0 | 0 | 0 | 0.0 | 0 | 0 | 0 | 0 |
| 4/23 | 0 | 0.0 | 0 | 0 | 0.0 | 0 | 0 | 0 | 0 |
| 4/24 | 0 | 0.0 | 0 | 0 | 0.0 | 0 | 0 | 0 | 0 |
| 4/25 | 0 | 0.0 | 0 | 0 | 0.0 | 0 | 0 | 0 | 0 |
| 4/26 | 0 | 0.0 | 0 | 0 | 0.0 | 0 | 0 | 0 | 0 |
| Weekly | 0 | 0.0 | 0 | 0 | 0.0 | 0 | 0 | 0 | 0 |
| Season to date | 3 | 0.0 | 8 | 0 | 0.0 | 0 | 0 | 0 | 0 |

SECTION 2. Smolt and Lamprey Condition Monitoring Summary

| | | Yearling Chinook | | Subyearling Chinook | | Unclipped Steelhead | | Clipped Steelhead | | Coho | | Sockeye | |
|------------------|---------------|------------------|-----------|---------------------|-----------|---------------------|-----------|-------------------|-----------|-----------|-----------|-----------|-----------|
| | | This Week | Last Week | This Week | Last Week | This Week | Last Week | This Week | Last Week | This Week | Last Week | This Week | Last Week |
| SAMPLE # | | 524 | 530 | 0 | 0 | 12 | 21 | 132 | 62 | 26 | 25 | 0 | 1 |
| DESCALING | 3-19% | 2.9% | 2.5% | | | 8.3% | 4.8% | 1.5% | 8.1% | 3.8% | | | |
| | >20% | 0.4% | | | | | | | | | | | |
| | Pred. Desc. | 3.1% | 1.7% | | | 8.3% | 9.5% | 7.6% | 8.1% | 3.8% | | | |
| INJURY | BODY | 0.8% | 0.9% | | | | | | 1.6% | | | | |
| | EYE | 0.2% | | | | | | | | | | | |
| | HEAD | 0.4% | | | | | 4.8% | 0.8% | | | | | |
| | OPERC. | 0.8% | | | | 8.3% | | 0.8% | 1.6% | | | | |
| | FIN | 1.1% | 0.4% | | | 8.3% | | | | | | | |
| | POPEYE | | 0.2% | | | | | | | | | | |
| OTHER CONDITIONS | PINK FIN | | | | | | | | | | | | |
| | Fin Discolor. | | | | | | | | | | | | |
| | FIN HEM. | 1.0% | 0.6% | | | | | | | | | | |
| DISEASE | Columnaris | | 0.2% | | | | | | | | | | |
| | FUNGUS | 2.1% | 1.5% | | | | | 1.5% | 3.2% | 3.8% | | | |
| | BKD | 0.2% | | | | | | | | | | | |
| | PARASITES | 0.4% | 0.6% | | | | 9.5% | 0.8% | | 3.8% | 4.0% | | |
| | DEFORMITY | 0.2% | 0.2% | | | | | 0.8% | | | | | |
| | EYE HEM. | 0.4% | 0.2% | | | | | | | | | | |
| PREDATION | BIRD | 1.3% | 0.2% | | | 8.3% | 9.5% | 6.1% | 6.5% | | | | |
| | FISH | 2.3% | 2.3% | | | 8.3% | | 3.0% | 3.2% | 3.8% | | | |
| | LAMPREY | | | | | | | | | | | | |
| | OTHER | | | | | | | | | | | | |
| end dates | | 4/26 | 4/19 | | | | | | | | | | |

| | | | INJURY | | | | | DISEASE and OTHER CONDITIONS | | | | PREDATION | | |
|-----------------------|-------------|-------------|--------|-----|------|-----|--------|------------------------------|------------|--------|----------|-----------|------|------|
| MP- Macrophthalmia | End Date | SAMPLE # | BODY | EYE | HEAD | FIN | POPEYE | FIN HEM | Columnaris | FUNGUS | EFORMITE | EYE HEM | BIRD | FISH |
| This Week | 4/26 | 0 | | | | | | | | | | | | |
| Last Week | 4/19 | 0 | | | | | | | | | | | | |
| AP - Ammocoetes | | SAMPLE # | | | | | | | | | | | | |
| | This Week | 4/26 | 0 | | | | | | | | | | | |
| | Last Week | 4/19 | 0 | | | | | | | | | | | |

SECTION 3. Incidental Summary

| | Bass - Largemouth | Bass - Smallmouth | Bluegill and Pumpkinseed | Bullhead | Carp | Catfish- Channel | Chiselmouth | Crappie species |
|----------------|----------------------|----------------------|-----------------------------|----------|------|---------------------|-------------|--------------------|
| This Week | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| Season to Date | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 1 |

| | Dace - Longnose | Dace - Speckled | Chinook Jack | Kokanee | Lamprey Adult | Northern Pikeminnow | Peamouth | Perch Yellow |
|----------------|--------------------|--------------------|--------------|---------|------------------|------------------------|----------|--------------|
| This Week | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Season to Date | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 |

| | Redside Shiner | Sand Roller | Sculpin species | Stickleback 3 spine | Sucker species | Shad Adult | Shad Juvenile | Sturgeon White |
|----------------|-------------------|-------------|--------------------|------------------------|-------------------|------------|---------------|-------------------|
| This Week | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Season to Date | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |

| | Trout Bull | Trout Cutthroat | Trout Rainbow | Walleye | Whitefish Mountain | Siberian Prawn | Chum Salmon | Banded Killifish |
|----------------|------------|--------------------|------------------|---------|-----------------------|-------------------|-------------|---------------------|
| This Week | 0 | 0 | 0 | 2 | 0 | 7 | 0 | 0 |
| Season to Date | 0 | 0 | 0 | 13 | 0 | 70 | 0 | 1 |

SECTION 4. Facility Operations

Condition Monitoring at John Day Dam is scheduled to sample Monday through Friday until 15 June. Samples will be taken from the Juvenile Bypass System between 0700 and 1300 hrs. and the Condition Exams will target approximately 100 of the predominant species of out-migrant. All river flow, powerhouse, spill, and index estimates are based on the sample period only. Debris at the separator bars was moderate to heavy for the week and consisted of sticks, plastic, and pieces of terrestrial vegetation.

SECTION 5. Research

No Pacific Lamprey macrophthalmia or ammocoetes were sampled at the Smolt Facility during this report period.

SECTION 6. Pictures



Wild origin Steelhead smolt (*Oncorhynchus mykiss*), approximately 190 mm fork length, sampled at the John Day Dam Smolt Facility on 26 April, 2024.



Juvenile Smallmouth Bass (*Micropterus dolomieu*), approximately 85 mm total length, sampled at the John Day Dam Smolt Facility on 26 April, 2024.