

MEMORANDUM FOR THE RECORD: 24 LGS 07 JBS Flume Adult Mortality**SUBJECT: Solitary Jack Chinook Mortality**Background

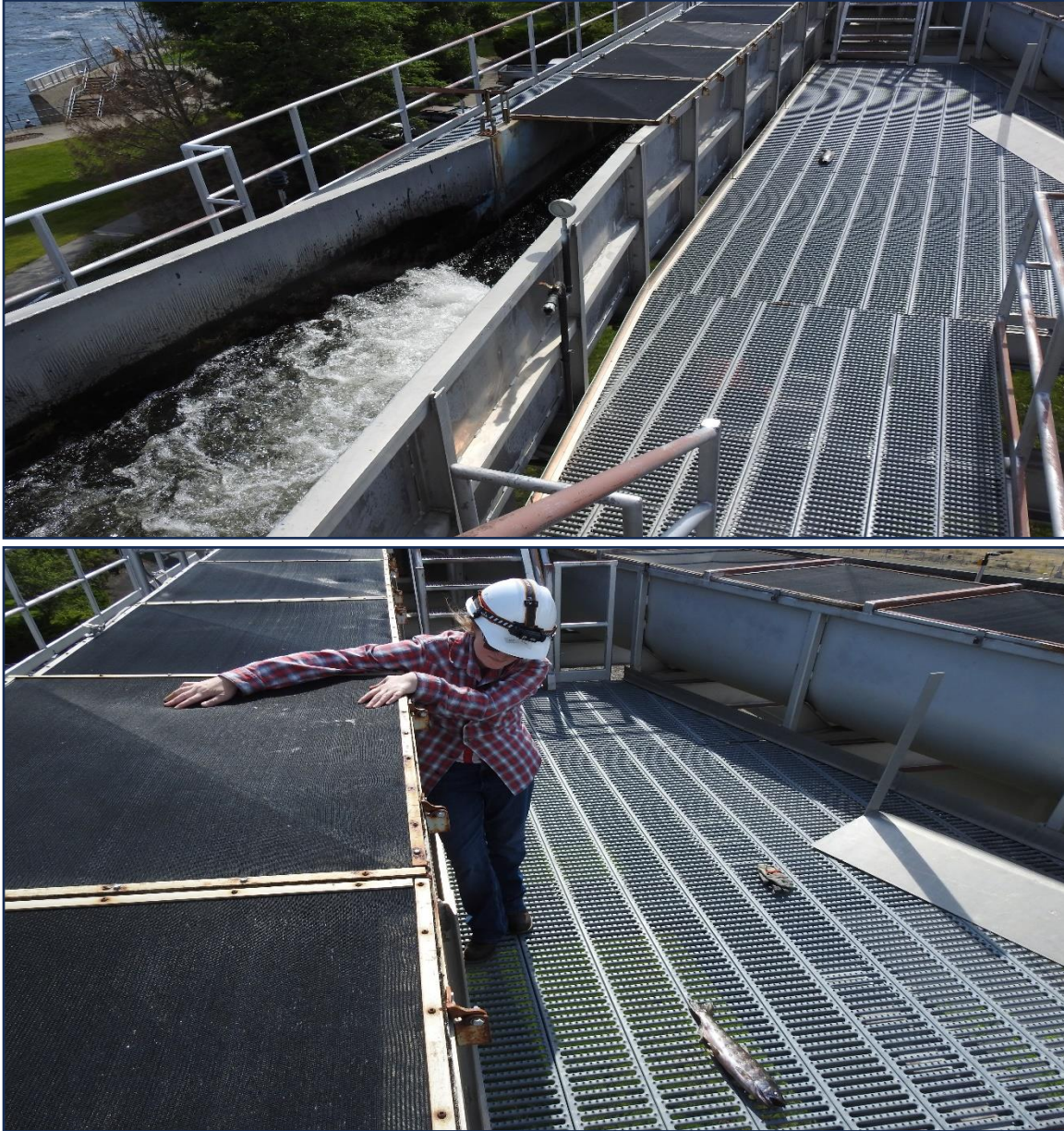
One clipped Jack Chinook mortality was observed on the catwalk grating on the navigation lock side of the Juvenile Bypass System (JBS) flume between the primary swing gate and the separator. The separator Biotech on duty made the discovery at 0900 hours on July 1, 2024. This JBS flume location is isolated from other adult passage infrastructure, ruling out all other potential fish escapement areas. The incident occurred where the JBS flume covered with shade cloth screens transitions into an uncovered flume that widens into the separator entrance. The area has no historical record of similar occurrence for at least 10 years.

Upon further investigation, it appears the fish volitionally launched out of the flume pool just upstream of the separator booth and landed on top of the 3rd segment of shade cloth covering the flume, a distance of 13.5 feet (see photos below). Evidence of dried fish slime and scales mark this location. The fish expired with a final drop to the grating below where the fish was discovered. A review of separator / flume data revealed water temperatures to be 63.7 °F on 6/29/24, 63.9 °F on 6/30/24, and 64.0 °F on 07/01/24, presenting water temperature as an inconclusive factor to the occurrence. In consultation with Smolt Monitoring Program (SMP) partner Oregon Department of Fish and Wildlife (ODFW), a more likely causal agent was determined to be aggressive adult competitive / bullying behavior in the flume.

- A. Species – Chinook salmon *Oncorhynchus tshawytscha*
- B. Origin – Hatchery
- C. Length – 21 inches
- D. Marks and tags – clipped adipose, CWT (specific ID# not known)
- E. Marks and Injuries found on carcass – Grating pattern indentations on underside where fish lay at final resting point.
- F. Cause and Time of Death – Hypoxia. Estimated time of death window within the previous 24 hours of June 30, 2024, based upon degree of rigor mortis and tissue desiccation.
- G. Future and Preventative Measures – Biotechs will be advised to open flume drains at the separator – flume transition pool to encourage voluntary adult exit into the separator on a more frequent basis. Consultation with ODFW concludes installation of a simple temporary – removable netting cover deployed over the current in the transition pool

where screen covers end to where the flume widens may be effective in preventing future occurrences.

JBS flume to separator transition zone; fish mortality location



Sincerely,
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