

**CENWW-ODL**

**5/25/2017**

**MEMORANDUM FOR RECORD: 17 LWG 08 Emergency spill and orifice plugging**

**Subject: Emergency Spill Operation and Increased Juvenile Fish Mortality Due to Debris**

Debris in the Lower Granite forebay continued to increase over the last week. On May 22 a large log jammed between the corner of the forebay debris boom and the Removable Spillway Weir (RSW), and was observed to be blocking debris passage. Initial efforts to remove the log were unsuccessful. On May 24 from 1229-1332 hours a debris spill was implemented for log and debris removal. The debris spill included closing the RSW, opening spillbay 2 fully, and incrementally reducing spill in spillbays 3 through 8 to maintain the same spill level.

High winds occurred overnight on May 24 and the increase in river flows from 123.6 kcfs May 23 to 158.6 kcfs May 25 resulted in over 800 square yards of forebay debris accumulating directly in front of the turbine units. Orifice obstructions increased the morning of May 25. At 0615 hours May 25 orifices 3BN, 3AS, 2BN, and 2CN were pugged with debris. At 0955 hours orifice 3AN was plugged with debris. Between 0600-1100 hours 134 juvenile salmonid mortalities were collected from the raceways and brought to SMP for tag scanning and identification. Lower Granite powerhouse mechanical crew began removing powerhouse forebay debris with the trash rack crane at about 1000 hours May 25. Additional debris could be seen continuing to enter the forebay.

- A. Species – Chinook, steelhead, sockeye, and Coho.
- B. Origin – 32 clipped and 55 unclipped yearling Chinook, 15 clipped and 11 unclipped sub-yearling Chinook, 6 clipped and 3 unclipped steelhead, 2 unclipped sockeye, and 3 clipped and 7 unclipped Coho.
- C. Length – N/A
- D. Marks and tags – Mortalities were identified and scanned for tags and data was submitted as part of the SMP daily sample
- E. Marks and Injuries found on carcass – NA
- F. Cause and Time of Death – May 25 collection gallery orifice blockages caused mortality between 0600-1100.
- G. Future and Preventative Measures – An extra biological tech continues to work the night shift to flush orifices hourly and assist with facility debris. Fish section maintenance staff continue to flush orifices hourly as needed and assist with debris during the day. Debris spills and trash rake debris removal will continue in addition to looking into other alternative to powerhouse debris removal methods.
- H. Photos – None taken

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