

MEMORANDUM FOR THE RECORD – 21 LMN 01 MFR Open Orifice During Winter Maintenance**SUBJECT:**

The orifice gallery is normally inspected by JFF crew and operators several days each week until December 16th when the orifices are closed and locked out for the winter. On 21 January, an orifice was found to be open and the juvenile channel was partially watered up. The current configuration routes water in the juvenile channel through the emergency bypass prior to the primary dewaterer, however, there is a grating at the top of the emergency bypass to walk across for winter maintenance. As we approached the primary dewaterer, we saw some fish that had entered the channel through the open orifice were impinged on the grating. Biologist counted 15 juvenile Chinook salmon on the grating but was not able to get them in hand because the water continued to flow. It appeared most of the fish entering the open orifice were able to get through the grating and return to the tailrace.

It was determined the open orifice, 1B4, was located in the gatewell that was recently dewatered for a VBS inspection via the maintenance bulkhead. Since the gatewell was dry when the orifices were closed for the season, it appeared orifice 1B4 was also closed. When the maintenance bulkhead was removed, the gatewell was refilled resulting in an open orifice running into the channel. During winter maintenance, when the channel is dry and everything is locked out, there is no need to inspect the orifice gallery so the open orifice was not located for approximately one week after the gatewell was refilled.

- A. Species – Chinook salmon *Oncorhynchus tshawytscha*,
- B. Origin – N/A
- C. Length – N/A
- D. Marks and tags – N/A
- E. Marks and Injuries found on carcasses –N/A
- F. Cause and Time of Death – Impingement on winter maintenance grating over emergency bypass between Jan 13 and Jan 21, 2021.
- G. Future and Preventative Measures – Project staff will ensure that orifices are closed prior to the installation of maintenance bulkhead when completing VBS inspections.

Sincerely,
Chuck Barnes
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