

MEMORANDUM FOR THE RECORD - 23 IHR 01

SUBJECT: Delay in returning north shore fish ladder to full operation

The north shore fish ladder was taken out of service for annual maintenance on February 6 and was scheduled to be returned to operation on February 28. While unwatering the ladder, upper diffuser valve (#10) could not be closed electrically or with the hand wheel. Diffuser #10 intake bulkhead was installed to enable unwatering of the fish ladder. The coupling of the actuator to the valve stem was damaged, with the threads stripped on the valve stem and brass nut. The diffuser chamber was unwatered to remove the damaged valve stem. Parts for the coupling were ordered, but not received until late in the day on February 27. A new valve stem was installed and connected to the actuator on February 28. However, diffuser #10 will not operate correctly electrically. The diffuser intake bulkhead is still installed so that electricians can work on the actuator and test-operate the valve to set the opened and closed limits. Repairs to diffuser #10 controls and removal of the intake bulkhead are expected to be completed by close of business on March 3. The fish ladder entrance and exit are open for fish passage.

The north shore auxiliary water supply (AWS) pumps would not start on February 28. The pumps are not building up enough hydraulic pressure. Mechanics are working on the problem, with the expectation to get them running by March 3. The AWS pumps and diffuser #10 may get fixed sooner than March 3.

The depth over the stationary weirs in the north fish ladder will be under the 1.0-1.3' criteria with diffuser 10 closed off. The channel/tailwater differential at the north fish ladder entrance (NEW-1) will be close to zero with no AWS pumps operating. There will be very little attraction flow for fish to NEW-1.

There are typically few adult fish using the fish ladders in early March. The south shore fish ladder is in full operation. The 10-year average (counts only done in March in 2013 and 2018) of the total number of adult fish counted at Ice Harbor on March 1, 2, and 3 is 36 steelhead, 2 Chinook salmon, and 1 lamprey.

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