

MEMORANDUM FOR THE RECORD

TITLE - 17BCL06 minimum flow ramp rate

DATE - 25 July 2017

PROJECT - Big Cliff Dam

RESPONSE DATE - 08 August 2017

Description of the problem

Flows below Big Cliff Dam in the North Santiam River decreased below minimum criteria (1,200 cfs) on July 2, 2017, for less than an hour due to equipment malfunction causing a down ramp rate (-0.6 feet/hour) outside BiOp criteria (-0.2 feet/hour). Further, the auto-gate function used to maintain outflow in the event of a malfunction failed. Flows were as low as 682 cfs.

Dates of impacts/repairs

02 July 2017

Expected impacts on fish

The minimum flow criteria of 1,200 cfs is to provide adequate flows for incubating steelhead eggs in redds. The stage change equated to a decrease of approximately 0.6 feet. Potential redd dewatering may have occurred but would have been brief.

Comments from agencies

Comments from NMFS: Attachment 1

Summary from Operators:

“During a unit shutdown, the auto-gate is disabled since the unit is deliberately shut down and all flow is manually regulated from the Big Cliff spillway gates. Coming out of the annual maintenance outage at Big Cliff, an error was made in the startup sequence and the autogate was not re-enabled. In the event such an error occurs, the control system has an alarm that is supposed to come in when the unit is running with the auto gate disabled. In troubleshooting this incident it was discovered that the alarm was not functioning. Wiring, PLC logic, the alarm database, and HMI systems are being reviewed to determine what part of the system did not function correctly.”

Final results

Flows below Big Cliff Dam were increased back to the BiOp minimum of approximately 1,200 cfs. Systems are being reviewed to determine what part of the system did not function correctly.

Please email or call with questions or concerns.

Thank you,

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