

Sokolowski, Rosana

From: Hays, Steve
Sent: Thursday, May 19, 2011 5:14 PM
To: 'patrick.regan@ferc.gov'; 'erich.gaedeke@ferc.gov'; 'pirl461@ecy.wa.gov'; 'Charlie McKinney (cmck461@ECY.WA.GOV)'
Cc: Smith, Michelle; Truscott, Keith; Osborn, Jeff; Sokolowski, Rosana; Lucas, Douglas; Campbell, Rob
Subject: Lake Chelan Project No. 637 Minimum Flow and Ramping Rate Deviation

Follow Up Flag: Follow up
Due By: Thursday, June 16, 2011 8:00 AM
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This email is to provide you notification regarding two minimum flow and ramping rate deviations, which occurred in the Chelan River on May 15 and May 17, 2011. A detailed report will be filed within 30 days.

Minimum flows of 320 cfs were effective May 15, as required for high runoff years. The May 15 incident resulted in a flow reduction below 320 cfs for a period of one hour, with the flow briefly dipping to approximately 285 cfs at 30 minutes following the beginning of the event. Water levels in Reach 4 of the Chelan River decreased by 3 inches over a 30 minute time period. The second incident resulted in a flow reduction lasting for approximately 3 hours, with a water level decrease of 4 inches in the first hour and about 2.5 inches during the second hour. The second incident was caused by a malfunction of the Low Level Outlet flow meter, which remains out of service. Based on the subsequent reduction in water levels in Reach 4, the flow from the Low Level Outlet likely reached a minimum of about 250 cfs. Since malfunction of the flow meter, the Low Level Outlet has been operated to maintain Reach 4 water levels at the elevations recorded when flow releases ranged from 330-340 cfs.

The first deviation on May 15 began around 9:00 on a Sunday evening. The Low Level Outlet, which was thought to be isolated for manual control, partially closed one of the gates although no commands had been given to move the gate. The cause of this incident has not been fully determined, but apparently there were more than one programmable logic controllers (PLCs) connected to the slide gate operating motors. Since this incident, the Low Level Outlet gates have been disconnected from the motors to prevent a recurrence of this problem. A larger deviation from ramping rates was prevented by operating one of the pumps in Reach 4 to supplement flows as the dip in Low Level Outlet flows arrived at Reach 4.

The second incident on May 17 took place when Project personnel were attempting to repair the Low Level Outlet gate position indicators, which were giving incorrect output. When the PLC was rebooted, the Low Level Outlet flow meter also rebooted and began to indicate that Low Level Outlet flow was exceeding 500 cfs. Plant personnel partially closed the Low Level Outlet gates based on this flow meter information, which proved to be false. Subsequently, when water levels began to decrease in Reach 4, personnel reset the Low Level Outlet slide gates to a previous setting to restore water levels in Reach 4 to those observed when flows were known to be near 330 cfs. The Low Level Outlet is currently disengaged from the PLCs and operating motors to prevent further issues. The Low Level Outlet slide gates are being manually adjusted as needed to maintain water levels in Reach 4 that are known to occur at flows between 330-350 cfs.

The reduced flows and ramping rate deviations were short term and Chinook fry observed in Reach 4 during surveys conducted May 10 and May 18 were inhabiting shoreline areas with water depths greater than 6 inches. No fish stranding or other adverse ecological effects were observed to result from these flow and ramping rate deviations.

If you have any questions or require additional information, please contact Steven Hays at (509)661-4181.

Thank you

Steven Hays

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