From: Hays, Steve
To: Bitterman, Deborah;
Subject: FW: Lake Chelan Project No. 637 Minimum Flow and Ramping Rate Deviation
Date: Thursday, April 21, 2011 12:27:33 PM

Something for the chelan web site

-----Original Message-----
From: Hays, Steve
Sent: Wednesday, April 20, 2011 6:20 PM
To: 'patrick.regan@ferc.gov'; 'erich.gaedeke@ferc.gov'; 'pirl461@ecy.wa.gov'; 'Charlie McKinney (cmck461@ECY.WA.GOV)'
Cc: Smith, Michelle; Sokolowski, Rosana; Truscott, Keith; Osborn, Jeff
Subject: Lake Chelan Project No. 637 Minimum Flow and Ramping Rate Deviation

This email is to provide you notification regarding a minimum flow and ramping rate deviation, which occurred in the Chelan River near Chelan Falls. A detailed report will be filed within 30 days.

Spawning flows of 320 cfs minimum have been in effect in the Reach 4 Habitat Channel since March 15. These flows were being provided using a combination of 80 cfs from the Low Level Outlet and at least 240 cfs from the tailrace pumping station. Due to high accumulations of snowpack during March and April, the runoff forcast for the Lake Chelan Basin increased substantially and the District decided to provide all the spawning flows from the Low Level Outlet rather than operating the pumping station.

The deviation occurred during the afternoon of April 18, when a control system logic problem briefly closed the Low Level Outlet gate that was providing flows to the Chelan River. This event took place during the final stages of the operation to shift provision of minimum spawning flow levels to the Low Level Outlet. The project operator had increased the set point for Low Level Outlet flows from 80 cfs to 330 cfs but the control program had only opened one of the two slide gates and flows were somewhat less than the set point with the one gate at full open. The project operator entered an additional command intended to force the control program to open the second slide gate to obtain the additional flow. The control program instead began closing the slide gate that was open rather than opening the second gate. The project operator then contacted personnel near the site of the Low Level Outlet, who were able to open the control panel at the Low Level Outlet and use manual override to reopen the gate that was closing.

The event began at about 1407 hours with Low Level Outlet flows at 320 cfs. Manual override was engaged at 1416 hours, reversing the closing of the first

slide gate. Manual opening of the second slide gate began about 1422. Flow from the Low Level Outlet changed from 320.8 cfs at 1408 to a low of 13.3 cfs at 1418, then began increasing with flow reaching 322.2 cfs at 1432. Low Level Outlet flows were stabilized and have been maintained at between 330-340 cfs since this event.

The water levels in the Reach 4 Habitat Channel dropped approximately 9 inches over a 35 minute period, then regained the previous water level within 20 minutes from the low point. No fish stranding or mortality was observed to have occurred as a result of this event. During a survey the following day, there were only a few Chinook salmon fry observed in the shoreline areas and these were the first Chinook observed since weekly spawning surveys began on March 16. Cold water temperatures, which have been prevalent this year, typically cause Chinook fry to hide in the river bed during the daytime thus there were probably few Chinook fry in areas that would have been dewatered during this brief event.

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

Thank you

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