CENWW-OD-MCN ***05/19/2016***

MEMORANDUM FOR THE RECORD 16 MCN 07 Fish loss in B-side flume. Amended May 19, 2016.

SUBJECT: At about 0500 hours this morning, the technician on duty while doing rounds noted the B side flume over flowing at the junction of the B side secondary bypass gate and raceway flume line. The technician called the project biologist. With low light levels, the description of the problem was incomplete. The biologist asked the technician if there were fish on the ground. A few minutes later, the technician called back saying there were fish on the ground. The biologist told the technician to switch to primary bypass, which reduced the flow and fish numbers in the flume. The switch occurred at 0520 hours. The switch was scheduled to occur at 0700 hours. No further fish loss occurred. At about 0530 hours, the biologist arrived to help the technician with the fish salvage. At about 0610 hours, the B side sample tank was segregated and the B sample gate was left open to sample. This allowed the fish remaining in the separator a sanctuary location if they exited the separator by way of the B side flume.

A. Species – 4 clipped yearling Chinook, 1 non-clipped yearling Chinook, 1 Chinook fry, 1 clipped steelhead smolt, 2 non-clipped steelhead smolts, 10 non-clipped coho and 9 non-clipped sockeye. All mortalities. 1 clipped subyearling Chinook and 1 non-clipped steelhead were returned to the river alive. Fish were examined by PSMFC biologist.
B. Origin – assume hatchery and wild.
C. Length – clipped yearling Chinook 140.3 mm, non-clipped yearling Chinook 136.65 mm, Chinook fry 50.0 mm, clipped steelhead 213.3 mm, non-clipped steelhead 186.1 mm, non-clipped coho 138.2 mm and non-clipped sockeye 97.83 mm (from PSMFC data on May 17).
D. Marks and tags – none noted on fish. Two PIT tags were detected.
E. Marks and Injuries found on carcass – some descaling. No other injuries noted.
F. Cause and Time of Death – fish out of water resulting in lack of oxygen. About 0500 to 0520 hours.
G. Future and Preventative Measures – Fisheries staff will examine the B side secondary bypass line with a camera to determine what caused the water to back up the bypass line and over flow out a small opening at the junction of the bypass line and gate. If an obstruction is found it will be removed. Any joints that need repair will be dealt with. The small opening at the junction will be covered. (This is the first time fish have been lost out this opening.) Fish rescue buckets will be scatter about the facility and the staff will be reminded where the water sources are. Finally, if possible, lighting in the area will be improved.
H. we opened and installed hatches at the A and B secondary bypass wye, the upstream and downstream joints were the direct barge loading gate use to be. We found the clog at the downstream direct barge loading joint at about 1630 and had it removed at about 1645 hours. Our original impression of the clog location was off. We ran two ice block checks after and seen all ice blocks at the wye of the secondary bypass line and the sample raceway return to river line (the wye that got fish our second season with new bypass lines). We reset the system and I turned the sample gates to off.
~~G.~~I. PSMFC will remove the fish from the A and B sample tanks tomorrow morning. The counters show a total of 221 fish.
J. We will try to smooth this joint if possible the next working day. In any case, we now have more access point for the technicians to check in their rounds, which should reduce the possibly of this happening again.
K. See attached photo. The stick in my hand caught debris and then fish later. The sticks on the ground are part of the blockage.
L. 1 non-clipped steelhead smolt
M. 2 non-clipped sockeye smolts

N. 1 clipped subyearling Chinook
O. And 4 non-clipped yearling Chinook were in the debris wad.

Sincerely,
Bobby Johnson
Project Fisheries