

MEMORANDUM FOR THE RECORD**SUBJECT: Juvenile sockeye mortality at Smolt Monitoring Facility.**

Two days of high sockeye mortality were recorded at Bonneville's Smolt Monitoring Facility (sample end-dates of 5/14 and 5/15). The mortality rate on 5/14 was 28% (36 dead of 128 sampled). On 5/15, a mortality rate of 21 % was observed (71 dead of 336 sampled). Sockeye smolts were either arriving in the sample tank dead or dying shortly after arrival. Condition monitoring indicated no excess injuries in sample from May 15th and descaling levels were normal for both dates.

It should be noted that the sockeye mortality rate for sample end-date of 5/16 decreased to just under 5%.

- A. Species – Sockeye (*Onchorynchus nerka*) juveniles
- B. Origin – Unknown
- C. Length – Range: 90mm – 120mm
- D. Marks and tags – All unclipped
- E. Marks and Injuries found on carcass – Descaling rates were within the normal, expected range and injuries were negligible.
- F. Cause and Time of Death – Time of Death: The vast majority of sockeye morts were recovered between 6pm and 6am.

Cause: Tailrace Total Dissolved Gas (TDG) levels at mid-Columbia projects were near or above 130% from May 12 to May 15. Bonneville forebay TDG was 128% during the days in question. The GBT sample conducted on May 15 revealed 17% of Chinook and steelhead examined had GBT symptoms, far in excess of the 0% – 3% observed on any given exam date this season. Suspect that elevated TDG levels in river and holding times in shallow water may have manifested in acute GBT symptoms causing high mortality in sockeye on May 14 and 15.

- G. Future and Preventative Measures – N/A. Current spill levels in the Mid-Columbia are well-above spring Fish Operations Plan (FOP) spill levels due to flows in excess of hydraulic capacity.

Sincerely,
Project Fisheries

Comments:

-----Original Message-----

From: Hausmann, Benjamin J CIV USARMY CENWP (US)

Sent: Monday, May 21, 2018 10:40 AM

To: Jeff Fryer <fryj@critfc.org>
Cc: Kovalchuk, Erin H CIV USARMY CENWP (US) <Erin.H.Kovalchuk@usace.army.mil>
Subject: RE: FPOM: Official Coordination 18BON09 MFR JMF Juvenile Sockeye Mortality

Jeff,

Yes. While they don't normally look at sockeye when they do their GBT subsample, chinook showed elevated rates (17%) so they also looked at some of the sockeye morts and saw GBT symptoms.

Ben

-----Original Message-----

From: Jeff Fryer [mailto:fryj@critfc.org]
Sent: Thursday, May 17, 2018 3:14 PM
To: Kovalchuk, Erin H CIV USARMY CENWP (US) <Erin.H.Kovalchuk@usace.army.mil>;
Subject: [Non-DoD Source] RE: FPOM: Official Coordination 18BON09 MFR JMF Juvenile Sockeye Mortality

Erin,

Were any symptoms of GBT observed in the sockeye mortalities seen at the SMF?

Jeff