

MEMORANDUM FOR THE RECORD 17 LMN 04 Juvenile Salmonid Loss

SUBJECT: Juvenile Salmonid Mortalities due to Debris in Orifice 15.

Beginning March 31st, the project increased the inspection of the gateway slots and the orifices to ensure that fish passage would occur. The operators were instructed to inspect the orifices early in their shift and again mid-shift for a total of four inspections per day which exceeds requirements of the FPP.

Orifice number 15 in gateway 3B was observed with woody debris lodged in it during the early morning (approximately 0400) operator rounds. The orifice appeared to be free of debris at 0640 and was cycled again. This action released a large collection of debris and approximately 250 fish mortalities into the collection channel and ultimately into the separator where some fish were able to be obtained and examined. Twenty fish were taken out of the separator for examination. The rest went into secondary bypass or arrived after the switch gate was cycled back to primary bypass at 0700 and were observed in the flume shortly after the change. Another inspection of the gateways and orifices immediately following this event resulted in no apparent problems/blockages.

The next inspection of the orifice gallery around 0930 revealed an additional obstruction at the same orifice (number 15). The Project Biologist responded quickly and inspected gateway 3B where he observed an additional 30 mortalities. Orifice 16 (also in 3B) was quickly opened to provide the fish a safe route of passage into the channel. A crew of mechanics were called to immediately clear the obstruction from orifice 15 and return it to normal working order.

- A. Species – Juvenile salmonids
- B. Origin – Hatchery and wild. All 20 of the fish collected out of the separator were yearling Chinook salmon. Of the 20, 11 were unclipped and 9 were clipped.
- C. Marks and tags – All 20 fish were scanned with PIT tag reader and no tagged fish were observed.
- D. Marks and Injuries found on carcass – Scrapes and injuries consistent with debris buildup in orifice was observed.
- E. Cause and Time of Death – Getting stuck in or struck by debris in a clogged orifice early in the morning 18 April, 2017.
- F. Future and Preventative Measures – Increased orifice gallery inspections by project staff will continue until debris loads lessen at Lower Monumental. Operators and fisheries

technicians will both be scheduled to inspect the orifice gallery. This will allow for 8 gallery inspections each day, one every 3 hours.

Sincerely,
Chuck Barnes
Project Fisheries

Comments received:

From: Barnes, Charles A Jr CIV USARMY CENWW (US)
Sent: Wednesday, April 19, 2017 11:04 AM
To: Setter, Ann L CIV USARMY CENWW (US) <Ann.L.Setter@usace.army.mil>
Cc: Peery, Christopher A CIV (US) <Christopher.A.Peery@usace.army.mil>; Hockersmith, Eric E CIV USARMY CENWW (US) <Eric.E.Hockersmith@usace.army.mil>
Subject: RE: [Non-DoD Source] Re: 17 LMN 04 MFR debris mortalities

Hi Ann,

We have been dipping the gatewell debris several times per week. I am also having the biotech do an extra gatewell inspection at 5am each morning so the mechanical crew can dip first if necessary when they arrive. I do not feel that lack of gatewell dipping is causing the orifice blockages. Every once in a while a larger piece of wood works its way through the trash racks and gets stuck in an orifice, causing a point of restriction for small debris to pile up. As mentioned in the MFR, I think the best we can do is keep checking orifices and clear the clogs before they have a large impact.

Thanks,
Chuck

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

From: Setter, Ann L CIV USARMY CENWW (US)
Sent: Wednesday, April 19, 2017 10:58 AM
To: Barnes, Charles A Jr CIV USARMY CENWW (US) <Charles.A.Barnes@usace.army.mil>
Cc: Peery, Christopher A CIV (US) <Christopher.A.Peery@usace.army.mil>; Hockersmith, Eric E CIV USARMY CENWW (US) <Eric.E.Hockersmith@usace.army.mil>
Subject: FW: [Non-DoD Source] Re: 17 LMN 04 MFR debris mortalities

Can you help me answer this inquiry?

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

From: Trevor Conder - NOAA Federal [mailto:trevor.conder@noaa.gov]
Sent: Wednesday, April 19, 2017 9:07 AM
To: Setter, Ann L CIV USARMY CENWW (US) <Ann.L.Setter@usace.army.mil>
Subject: [Non-DoD Source] Re: 17 LMN 04 MFR debris mortalities

Ann,

The debris loads on the Snake have been concerning, and they are starting to make me wonder if we should pull the screens. At LMN have they been using the gatewell dip basket on a regular basis, and is the contributing to the orifice clogging or not?

-Trevor

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

From: Setter, Ann L CIV USARMY CENWW (US)

Sent: Thursday, April 20, 2017 11:42 AM

To: Statler, Dave <daves@nezperce.org>; Cordie, Robert P CIV CENWP CENWD (US) Subject: RE: 17 LMN 04 MFR debris mortalities

Dave:

We always look for any fish, lamprey included, but none were found or they would have been reported in the MFR.

Ann Setter

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

From: Dave Statler [mailto:daves@nezperce.org]

Sent: Thursday, April 20, 2017 9:20 AM

To: Setter, Ann L CIV USARMY CENWW (US) <Ann.L.Setter@usace.army.mil>; Cordie, Robert P CIV Subject: [Non-DoD Source] RE: 17 LMN 04 MFR debris mortalities

Ann-

Is the debris checked for Pacific lamprey ammocoetes and macrophthalmia?

Seems to me lamprey have previously been found in debris.

Dave Statler