CENWP-OD-B

14 June 2017

MEMORANDUM FOR THE RECORD

SUBJECT: 17BON17 MFR – Mortalities in PH1 tail log slots.

Around 01 June 2017, project biologists discovered fish swimming in the PH1 tail log slots. Upon closer inspection, juvenile and adult salmonids, and juvenile and adult sturgeon were found in slots of numerous turbine units. The most highly populated slots are those that are OOS, but units that are in service hold some fish as well. Project biologists have observed before and after units have been taken OOS and found no observable change. As of this writing, the number of fish in the slots seems to be increasing, although this is only anecdotal, visual, surface observation. Two adult salmonid mortalities were observed in slot 8B on 12 June, but no usable pictures were taken due to poor access and light. The morts could not be recovered. If more mortalities are discovered, they will be added to this MFR.

28 June update: Deck slabs were lifted over unit 8 for observation. Photos were taken and morts counted. Cooling water discharge into this slot has been shifted to the unit 9 tail log slot. Unit 9 is running, while unit 8 has not run in ~ 1 year. The unit 7 tail log slot was also inspected. Three live and seemingly healthy sturgeon were observed, with no mortalities. Due to poor lighting, photographs did not come out.

Bonneville is considering restricting light penetration into the tail log slots in order to reduce fish attraction. The cooling water has been routed to a running unit (unit 9). As it was only turned on 20 June, we do not believe it played a role in attracting fish to the area. However, it may have played a role in holding fish in the area and possibly increasing the water temperature.

Date	Slot	Mortality	Response
6/12/17	8B	2 adult salmonids	
6/17/17	8B	2 adult salmonids	
6/28/17	8B	88 salmonids	A deck slab was lifted for closer inspection and observation. Photos were taken and morts counted. Cooling water discharge into this slot has been shifted to unit 9 tail log slot. Unit 9 is running, while unit has not run in ~ 1 year.

Figure 1. Unit 8 tail log slot from above, looking south.

Figure 1. Unit 8 tail log slot mortalities from above.

Figure 1. Unit 8 tail log slot cooling water discharge from above, looking north. This discharge has only been running since 20 June.

Sincerely,
Bonneville Fisheries

Comments:
-----Original Message-----
From: Gary Fredricks - NOAA Federal [mailto:gary.fredricks@noaa.gov]
Sent: Monday, June 19, 2017 1:27 PM
To: Kovalchuk, Erin H CIV USARMY CENWP (US) <Erin.H.Kovalchuk@usace.army.mil>
Subject: [Non-DoD Source] Re: FPOM: Official Coordination 17BON17 MFR Mortalities in PH1 tail log slots updated

There may be a ton more moralities if we can't do something to get these fish out of there. From what I saw on Friday, there are dozens if not hundreds of adults in these slots. The problem is, I'm not sure what we can do. One thought I had was deploying lights down the slots to the draft tubes in the non-running units. This might entice fish to sound to the draft tubes and out to the tailrace. You would have to keep light away from the top of the slots. Another idea was to build a dip basket and actively salvage or just push the fish out. Dangerous and would take time to fabricate something. I'm not sure these slots are configured in a way that would even allow this. Any other ideas out there?