OFFICIAL COORDINATION REQUEST FOR
NON-ROUTINE OPERATIONS AND MAINTENANCE

COORDINATION TITLE- 15BON84 CI dewatering
COORDINATION DATE- 14 October 2015
PROJECT- Bonneville Dam
RESPONSE DATE- call held on 14 October. Additional comments welcome.

Description of the problem: On 8 October, BON attempted to take Cascades Island to orifice flow to initiate the repair of FV5-4 *(see 15BON06 CI FV5-4 repair).* FV5-3 underwent a partial failure, similar in nature to FV5-4 and FV4-4 on the B-branch. With the valve partially open, fish were still attracted into the fishway. The UMT was bulkheaded on the south end and fish were jumping at the picket leads. Washington Shore water elevations could not be controlled by closing FV6-9 and began to overtop the count station. To minimize flooding, the exit was throttled down. Forebay elevation was 75.5'msl. A lower forebay could not be coordinated.

On 9 October BON Project Fisheries determined pulling the UMT bulkhead was necessary to allow fish to exit CI.

As of 13 October, both FV5-3 and FV5-4 are bulkheaded. The UMT is still flowing and the upper section of CI is maintaining criteria. The lower section of CI is not in criteria as there are no diffusers supplying water to the entrance.

On 14 October FPOM had a call to determine how best to proceed. Dewatering CI cannot occur until the forebay drops to 73.5'msl. Until then, dewatering CI results in flooding Washington Shore.

Type of outage required: Complete dewatering of the Cascades Island ladder to gain access to FV5-4 and FV5-3 and re-anchor them to the wall. In addition, a forebay elevation of 73.5'msl or less is needed to avoid flooding the Washington Shore fishway once it is isolated from the Cascades Island fishway.

Impact on facility operation: Cascades Island will not be operating within FPP criteria. There will be a forebay restriction in place to minimize the risk of flooding the Washington Shore fishway.

Dates of impacts/repairs: Orifice flow begins on 15 October. Repairs are expected to be complete by 30 November.

Length of time for repairs: Estimated to be 6 weeks.

Expected impacts on fish passage:
Downstream Migrants – no impacts
Lamprey – no impacts since this is outside the peak lamprey passage season.

Upstream migrants – there are still over 5000 salmon passing BON, however, Bradford Island and Washington Shore will be operating within FPP criteria the entire time CI is out of service. Impacts are expected to be minimal with three other entrances operating in criteria.

Comments from agencies:
14 October FPOM call.
Attendees: Baus, Bettin, Fredricks, Hausmann, Lorz, Mackey, Morrill, Wright

Hausmann explain the sequence of events (see **Description of the problem** above). The original MOC had a dewater date of March/April 2016.

Fredricks wasn't comfortable with the outage extending into April. He said fixing the CI valves is a higher priority than repairing the still functioning BI fish valve or FV1-1 at this time. As long as CI returns before spill starts, a late winter outage would be ok.

Bettin said the forebay isn't easy to control. He needed to know how low and how long the forebay restriction needed to be. He asked if FV5-3 could be repaired beginning the week of 19 October and completed prior to the BI early outage (see 15BON76 for more details). He said BPA could get a lower forbay next week. It may be harder to get a lower forebay in March than just doing it right now.

Hausmann said both valves could be repaired prior to spill starting. He will explore using the Weir 68 bleed off valve and the UMT drain valve to help control water.

The group discussed other options and settled on repairing the valves in October and not taking BI out two weeks early.

Fredricks commented that "It doesn't make sense to us that the WA Shore ladder can't be run at full forebay levels with the UMT off. We're missing something here. Either the ladder system was incorrectly designed or something in the project mods (B2CC, PH2 bypass or the FGE mods) took away some of the control, or we are missing something in the water control plumbing that is still out there. If it turns out to be a design deficiency, we may be going to SCT for CRFM $'s. Thanks for looking further into this issue.
- And, I'll say it again, please keep a really, really close eye on that picket lead section of the CI ladder this weekend.
- Good luck with the repairs."

NOAA/BON Fisheries -

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-----Original Message-----
From: Hausmann, Ben J NWP
Sent: Monday, October 19, 2015 8:17 AM
To: Gary Fredricks - NOAA Federal; Mackey, Tammy M NWP
Subject: RE: [EXTERNAL] Re: FPOM: 15BON84 CI fish valve repairs
(UNCLASSIFIED)

Gary,
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I noticed the behavior to a very limited extent on Thursday evening. I stayed until about 6 to get the ladder level down and at that time there were very few fish up in that area and I don't think the picket leads had fully loaded up with debris yet. I think our effort to relieve pressure in the conduit and bleed water out through diffusers likely pulled more fish in overnight and in the early morning and caused the scene that you encountered.

Ben

-----Original Message-----
From: Gary Fredricks - NOAA Federal [mailto:gary.fredricks@noaa.gov]
Sent: Monday, October 19, 2015 8:07 AM
To: Mackey, Tammy M NWP
Cc: Hausmann, Ben J NWP
Subject: [EXTERNAL] Re: FPOM: 15BON84 CI fish valve repairs (UNCLASSIFIED)

Tammy, I have one additional comment regarding the "Description of the Problem" section of the MOC. The fish jumping problem wasn't discovered until mid-morning of the 9th. The description makes it sound like the project knew of this on the 8th and let it go until the 9th. To my knowledge, this wasn't true. I think I was the first to discover the situation on Friday morning. On the other hand, I'm probably the only one who pays enough attention to these things to "get" the sequence issue... Gary

CRITFC - -----Original Message-----
From: Tom Lorz [mailto:lort@critfc.org]
Sent: Friday, October 16, 2015 3:22 PM
To: Mackey, Tammy M NWP
Subject: [EXTERNAL] Re: FPOM: 15BON84 CI fish valve repairs (UNCLASSIFIED)

was on the call and talked with gary, I am fine with the plan, honestly was going to have to say something on the call but for some reason people kept making the right calls so I did not have to interject. Find anything out on why we need forebay control for the WA ladder, seems a little strange.

tom

Final results – BPA will begin lowering the forebay to reach 73.5'msl by 16:00 on 15 October. BON Project will install the south UMT bulkhead as late in the day as possible on 15 October. CI will go to orifice flow until Monday 19 October. Valve work will begin once the ladder is dewatered. FV5-3 will be the priority with the goal of completed both valves by the end of November.

The BI fishway will be dewatered beginning 1 December (as per FPP guidelines). It is likely FV1-1 maintenance will be deferred but there may be a request for a two week outage in March to accommodate that work.

Fredricks stressed that there are still high numbers of fish passing BON. He stressed the need for BON Project Fisheries to keep a close eye on the Cascades Island picket leads and any fish jumping.

Hausmann and Mackey will further investigate why Washington Shore does not seem to be able to handle normal forebay elevations.

Unintended consequences - -----Original Message-----
From: Turik, Bob [mailto:bob_turik@fws.gov]
Sent: Tuesday, October 20, 2015 7:11 AM
To: Hausmann, Ben J NWP
Cc: Ahrens, Mark; Rerecich, Jonathan G NWP; Traylor, Andrew NWP; Baus, Douglas M NWD; Mackey, Tammy M NWP; Doug Olson; Joe Skalicky; Rich Johnson; Larry Zeigenfuss; Caroline Peterschmidt; Steve Wingert
Subject: Re: [EXTERNAL] Re: Bonn-pool level very low - impacting Little White Salmon fish ladder access for current URB return

Ben thanks for the update. This is not necessarily what I was hoping to hear but we will work with it. We made some adjustments on our ladder which will assist with fish access and at this point we will deal with the low pool. Am I correct in assuming there will be no further lowering of the pool?
Thanks,
Bob Turik
Hatchery Manager

On Mon, Oct 19, 2015 at 4:41 PM, Hausmann, Ben J NWP <Ben.J.Hausmann@usace.army.mil> wrote:

Bob and Mark,
The Bonneville pool is being held between 71.5 and 73.5 msl to allow Bonneville Dam to repair two water supply valves for one of our adult fish ladders (Cascades Island ladder). The ladder is currently inoperable until they are repaired. With the high forebay we had last week, it flooded the Washington shore ladder when we tried to dewater the Cascades Island ladder and the only way to control this is by holding a low forebay. The forebay could come up sooner if the repairs are completed but it is currently not scheduled to occur until November 30th.

Ben Hausmann
Supervisory Fisheries Biologist
Bonneville Dam
US Army Corps of Engineers
Office: 541-374-4598
Blackberry: 541-399-3214

-----Original Message-----
From: Turik, Bob [mailto:bob_turik@fws.gov]
Sent: Monday, October 19, 2015 3:53 PM
To: Ahrens, Mark
Subject: [EXTERNAL] Re: Bonn-pool level very low - impacting Little White Salmon fish ladder access for current URB return

Thanks Mark,

We have been discussing this for a few days and are at the point where we feel the fish are hindered, due to water levels, from entering the trap. I was not yet sure of the proper protocol for requesting a raising of the pool so Mark has assisted me. I will copy this list for future reference as I am sure we will be in contact in the future.

Thanks,
Bob Turik
Hatchery Manager

Little White Salmon NFH
U.S. Fish and Wildlife Service
Phone (509)538-2755
Fax (509)538-2880

On Mon, Oct 19, 2015 at 3:27 PM, Ahrens, Mark <mark_ahrens@fws.gov> wrote:

Hi Army Corps Colleagues,
I'm sending a quick note to you all on behalf of Bob Turik our new manager at Little White Salmon NFH (509) 538-2755 here in the Gorge. He does not have all of your email addresses for contact in a case like this just yet so this gets that handled and also alerts you quickly to the pool level impacts he's seeing.

The current level of Bonneville pool is creating fish ladder access trouble there as we've seen a couple times here at Spring Creek in the past. The current returning upriver bright chinook are having too much trouble getting to the ladder with shallowness in the river upstream of Drano Lake, and also depth at the ladder itself.

It likely needs to be raised 2-3 feet in the near future to keep the availability of enough fish getting into the hatchery to continue efficiently taking eggs for what is a big spawning goal. These large draw-downs don't usually last too long but we thought we'd sound the alarm sooner and hope it's coming back up soon.

Any assistance getting the pool back up soon will be greatly appreciated and help us get those mitigation needs met.

Thanks,

Mark

Please email or call with questions or concerns.
Thank you,
Ben Hausmann
BON Project Fisheries
541-374-4598
Ben.j.hausmann@usace.army.mil

Tammy Mackey
NWP Operations Division Fishery Section
503-961-5733

Tammy.m.mackey@usace.army.mil