

OFFICIAL COORDINATION REQUEST FOR
NON-ROUTINE OPERATIONS AND MAINTENANCE

COORDINATION TITLE - 16BON108 B-branch erosion hydrosurvey and LIDAR

COORDINATION DATE – 29 August 2016

PROJECT - BON

RESPONSE DATE- 8 September 2016 (FPOM meeting)

Description of the problem – This hydrosurvey has been rescheduled to September 8th due to conflicts with the other dates. The hydrosurvey team is available September 8th or a date in October. The October date is deemed too late to ensure that the work will be completed during the next In-Water Work Period. If the work is not completed, then BON spill will have to be modified to insure the stability of the ladder.

Portland District is currently working on a plans and specifications package to conduct an emergency repair of the erosion at B-Branch, located on the south side of the spillway tailrace (Figure 1). Contract award is currently scheduled for end of November. Therefore, the PDT needs to get information to characterize the erosion as quickly as possible. The multi-beam hydrosurvey as well as the LIDAR survey will provide the latest and most accurate erosion conditions so that overall depth, width, and material quantities can be specified as best possible. The surveys will also provide the latest information on any potential undercutting of the fish ladder. Undercutting of the fish ladder would change the complexity of the repair, so the PDT needs to obtain this information as soon as possible.

Purpose for operating the spillway as requested: During the July hydrosurvey (see [16BON47](#)) we tagged out the spillway with Gates 2-18 on seal, Gate 1 open for attraction flow, and Fish Valves FV-4-3 and F-4-4 closed and tagged out. This provided optimum conditions for the hydrosurvey; the vessel could get very close to the erosion holes without risking damage to the vessel or hydrosurvey equipment. In addition, water bubbles hamper the performance of the hydrosurvey by interfering with the sonar. Therefore, minimizing turbulence below the fishladder by shutting Gate 18 and the fish valves vastly improves the survey data. Finally, operating in this fashion improves safety of the survey vessel and hydrographic gear in and around the erosion hole.

Consequences of not performing the survey: Not understanding the true extents of the erosion (and/or fishladder undercutting) will affect the success and longevity of the erosion repair or may affect the duration of the repair outage if the contract needs to be modified to address unknown fishladder undercutting.



Figure 1. Area of interest for the LIDAR and hydrosurvey of the B-branch erosion issue on the south side of the spillway.

In addition, BON will be conducting a hydrosurvey of the PH2 forebay (Figure 2) on the same day in order to measure sediment accumulation that affect the fish units (F1 and F2). However, at the time of the survey T12 will be out of service (PH2 units 15-18) and the corner collector will be shut. Therefore; no coordination for the PH2 forebay hydrosurvey is necessary, as both fish units will be allowed to run during the survey. **The PH2 forebay survey is mentioned as a notification only.**

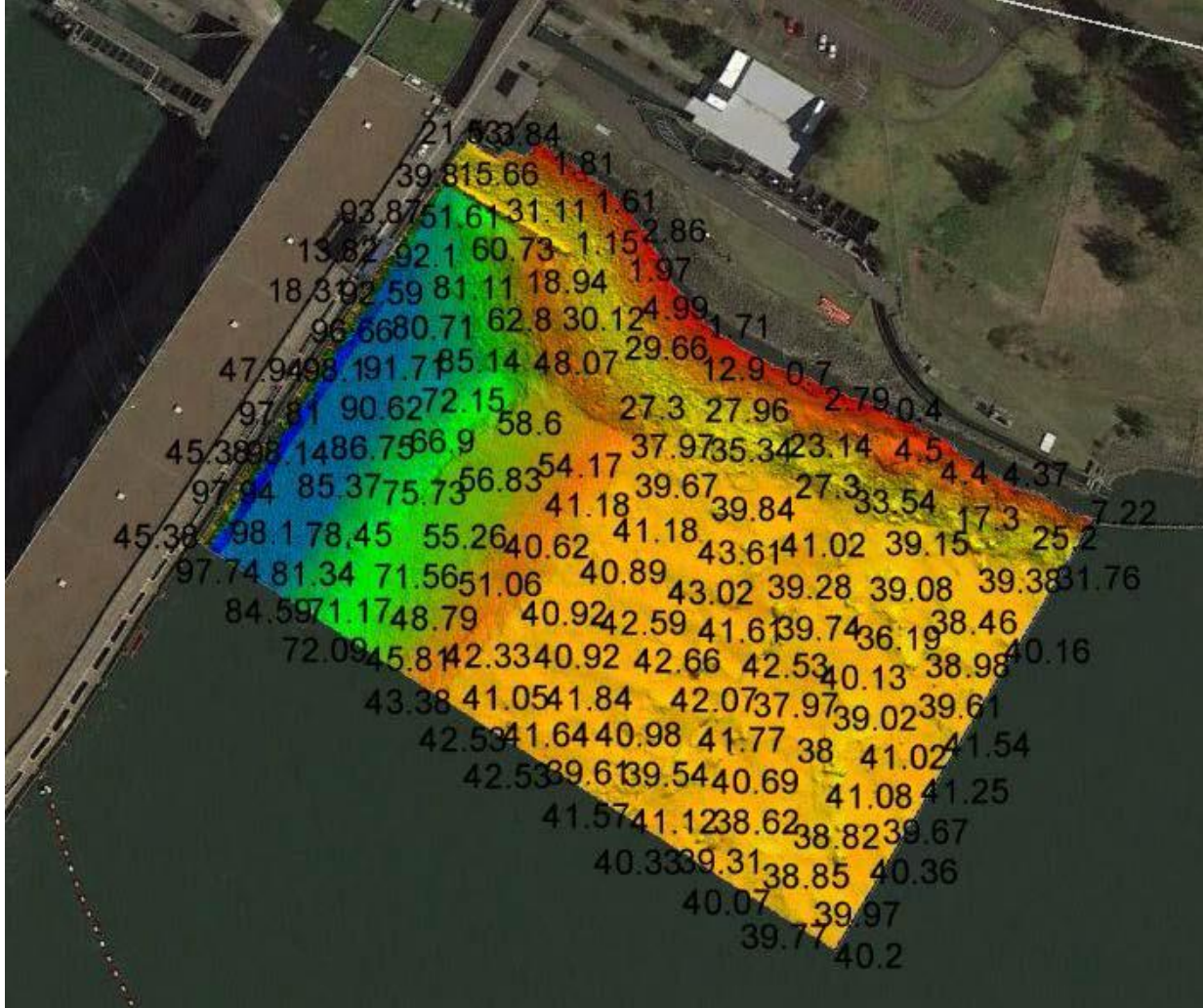


Figure 2. Area of interest for the PH2 forebay hydrosurvey.

Type of outage required – Spillway bay 18 will need to be placed on sill (closed) and fish valves 4-3 and 4-4 will be closed on 19 September for about 4 hours.

Impact on facility operation – There will be no attraction flow from the B-branch fishway entrance (south side of the spillway).

Dates of impacts/repairs – 8 September 2016. This is the latest date possible for the hydrosurvey to occur while still meeting the contracting schedule.

Length of time for repairs – About 4 hours. The spillway will be tagged out starting at 1600. Outage for the multi-beam inspection is scheduled between 16:00 and 20:00. Bonneville will attempt to return the spillway and fish valves to service earlier if possible.

Expected impacts on fish passage –

Downstream migrants - Spill ends on 31 August so no impact to juvenile salmonids is expected.

Upstream migrants (including Bull Trout) – There will be no attraction flow from Bay 18, FV4-3, and FV4-4 for the B-Branch ladder entrance. According to Table BON-4 of the 2016 FPP, this outage could impact Fall Chinook and Coho passage, however, A-Branch, Cascades Island, and Washington Shore fishways will remain in FPP criteria. In addition, B-Branch attraction flow will remain in FPP criteria during the morning hours, when most fish enter the fishways. Any fish in the fishway at noon will likely be moving up the ladder and will not be impacted by the fish valves closing. Adult counts for that date for the last five years at Bradford Island are provided in Table 1.

Table BON-4. Species	Count Period	Earliest Peak	Latest Peak
Spring Chinook	Mar 14 – May 31	Apr 15	May 27

Summer Chinook	Jun 1 – Jul 31	Jun 3	Jul 31
Fall Chinook	Aug 1 – Nov 15	Aug 30	Sep 17
Sockeye	Jun 1 – Aug 15	Jun 20	Jul 13
Steelhead	Apr 1 – Mar 31	Jul 16	Sep 22
Winter Steelhead	Nov 16 – Mar 31	Mar 1	Mar 28
Coho	Jul 15 – Nov 15	Aug 29	Oct 11
Lamprey	Mar 15 – Nov 15	Jun 20	Jul 18

Table 1. Adult salmonid counts on 19 September at Bradford Island, from 2011-2015.

Bonneville Bradford Island							
Date	All Chinook	All Steelhead	Unclipped Steelhead	All Coho	Sockeye	Chum	Pink
9/8/2015	11077	1687	372	709	2	0	0
9/8/2014	31291	2357	739	4006	0	0	0
9/8/2013	14376	780	269	453	0	0	0
9/8/2012	9476	806	253	651	0	0	0
9/8/2011	9548	2051	514	2267	0	0	0

Lamprey – minimal impact to lamprey is expected since all fishways will remain watered up and LPSs should not be impacted by the spillway outage.

Comments from agencies

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

From: Morrill, Charles (DFW) [mailto:Charles.Morrill@dfw.wa.gov]
 Sent: Wednesday, September 07, 2016 7:02 PM
 To: Kovalchuk, Erin H NWP Erin.H.Kovalchuk@usace.army.mil
 Subject: [EXTERNAL] RE: FPOM: Official Coordination RESCHEDULE 16BON108 MOC BI erosion hydrosurvey Sept 8

Hi Erin,

Disappointed that the Sept 19 date would not work ...

Charlie

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

From: Gary Fredricks - NOAA Federal [mailto:gary.fredricks@noaa.gov]
 Sent: Wednesday, September 07, 2016 4:15 PM
 To: Kovalchuk, Erin H NWP <Erin.H.Kovalchuk@usace.army.mil>
 Cc: Ritchie Graves - NOAA Federal <Ritchie.Graves@noaa.gov>; Lorz, Tom <lorz@critfc.org>; Mackey, Tammy M NWP <Tammy.M.Mackey@usace.army.mil>; Trevor Conder - NOAA Federal <Trevor.Conder@noaa.gov>
 Subject: [EXTERNAL] Re: FPOM: Official Coordination RESCHEDULE 16BON108 MOC BI erosion hydrosurvey Sept 8

Erin, We had over 40 thousand adults pass Bonneville dam yesterday and we had 30 sea lions in the tailrace. What we don't need is a ladder entrance essentially taken out of service tomorrow afternoon. I don't doubt that this is work is critical for the erosion repair work and I get the spill pattern threat, but as we said earlier, the Corps needs to figure a way to move this one out a week or more from the peak fall Chinook passage period and still get the erosion repair work done this winter. Thanks, Gary

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

From: Erick VanDyke [mailto:erick.s.vandyke@state.or.us]
 Sent: Wednesday, September 07, 2016 3:54 PM
 To: Kovalchuk, Erin H NWP <Erin.H.Kovalchuk@usace.army.mil>;
 16BON108 MOC BI erosion hydrosurvey Sept 8

Can't help but be disappointed by the timing of this notice. It is preferred that this topic be discussed in detail, especially given the recent observation of Sealion presence in the Washington Ladder, and the fluctuating

fish count over the past few weeks. Leveraging spill operations for survey time and contracting seems particularly miss applied in this case. Given the information shared to this point, it seems more appropriate to schedule survey efforts during a time when adult passage numbers are expected to lower (i.e., in mid-to late October).

Erick Van Dyke
Oregon Department of Fish and Wildlife
17330 SE Evelyn Street
Clackamas, Oregon 97015
Voice: 971-673-6068

Comments from Sept 19th date:

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

From: Tom Lorz [mailto:lorz@critfc.org]
Sent: Friday, September 02, 2016 11:27 AM
To: Kovalchuk, Erin H NWP <Erin.H.Kovalchuk@usace.army.mil>
Subject: [EXTERNAL] Re: FPOM: Official Coordination 16BON108 MOC UPDATED
BI erosion hydrosurvey on Sept 19

thanks much better

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

From: Morrill, Charles (DFW) [mailto:Charles.Morrill@dfw.wa.gov]
Sent: Friday, September 02, 2016 10:15 AM
To: Kovalchuk, Erin H NWP <Erin.H.Kovalchuk@usace.army.mil>
Cc: Tom Lorz <lorz@critfc.org>; Gary.Fredricks@noaa.gov; Morrill, Charles (DFW) <Charles.Morrill@dfw.wa.gov>
Subject: [EXTERNAL] RE: FPOM: Official Coordination 16BON108 MOC UPDATED
BI erosion hydrosurvey on Sept 19

Hi Erin,

My response that WA was ok with the survey date of Sept 8 was based on the sense of urgency to conduct the survey asap.

WA fully agree's with comments provided by Tom and Gary that delaying this survey is a better alternative than doing it on Sept 8.

Charlie

Comments from original MOC with Sept 8 survey date:

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

From: Tom Lorz [mailto:lorz@critfc.org]

rg]

Sent: Thursday, September 01, 2016 9:15

To: Kovalchuk, Erin H NWP <Erin.H.Kovalchuk@usace.army.mil>

Subject: [EXTERNAL] Re: FPOM: Official Coordination RESEND 16BON107
MOC B-branch erosion repair

So looking at the MOC I am a little confused on the actual date of the survey, is it Sept 8??? If so I would strongly suggest that we delay the work for a week at least, 2 preferred to miss the likely peak or shortly thereafter of of Fall Chinook and other salmon. The water temps are still warmer then ideal and talking with Gary there are still some sea lions prowling the area and increasing delay would be less than ideal. Is it truly critical to get this info now or could it be provided a couple weeks late given this is for work to be conducted in December?

thanks

tom

lorz

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

From: Gary Fredricks - NOAA Federal
[mailto:gary.fredricks@noaa.gov] Sent: Wednesday, August 31, 2016
4:22 PM
To: Kovalchuk, Erin H NWP <Erin.H.Kovalchuk@usace.army.mil>;
Mackey, Tammy M NWP <Tammy.M.Mackey@usace.army.mil>
Subject: [EXTERNAL] Re: FPOM: Official Coordination 16BON108 MOC BI
erosion hydro survey Sept 8

Erin/Tammy, Can't say I'm too happy with his one. I realize the importance of getting the work done, but that date is about as bad as it gets for potential adult passage impacts. We still have warm water, sea lions in the tailrace and I expect fall Chinook passage to be at its peak. The time of day (if it has to be day) is probably the best but why can't they hold off for a couple of weeks to let the numbers drop down a bit? The MOC should at least acknowledge that water temperatures, passage density and sea lions are issues. I think this one needs a bit more discussion before we can give it an ok. Thanks, Gary

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

From: Morrill, Charles (DFW) [mailto:Charles.Morrill@dfw.wa.gov]
Sent: Wednesday, August 31, 2016 12:27 PM
To: Kovalchuk, Erin H NWP <Erin.H.Kovalchuk@usace.army.mil>
Cc: Morrill, Charles (DFW) <Charles.Morrill@dfw.wa.gov>
Subject: [EXTERNAL] RE: FPOM: Official Coordination 16BON108 MOC BI
erosion hydro survey Sept 8

Hi Erin,

WA is ok with the survey

and ... I will attend the potluck lunch following FPOM ... not sure what I will contribute yet ..

thanks

Charlie

Final results- The lockout/tagout procedure started at 4:00 pm on September 8. The hydrosurvey accomplished their work in less than 3 hours so that was the duration that spillbay 18 was shut down. They did request the fish valves to be closed once they were at the erosion site and looking at images. The valves were closed less than 30 minutes. Total chinook passage was around 13K yesterday with 3/4 of those going through WA shore so hopefully the impact was minimal.

Please email or call with questions or concerns.

Thank you,

Erin

Erin Kovalchuk
NWP Operations Division Fishery Section
Columbia River Coordination Biologist
Erin.h.Kovalchuk@usace.army.mil