

**OFFICIAL COORDINATION REQUEST FOR
NON-ROUTINE OPERATIONS AND MAINTENANCE**

COORDINATION TITLE- 17BON49 Spillway Hydro Survey

COORDINATION DATE- July 17, 2017

PROJECT- BON

RESPONSE DATE- July 31, 2017

Description of the problem –Repairs to the Bonneville stilling basin were completed in winter 2017. With the high flows during the winter and spring it is important to conduct a post spill hydro survey to:

1. Ensure the repairs are still in place.
2. Whenever spill hits or exceeds 200 Kcfs, the need for a hydro-survey is triggered. This occurred in 2017. The primary need for the survey is to determine if rocks moved into the stilling basin like they did in 2011. The stilling basin can be surveyed without reducing ladder flow, however spill bays 1 and 18 will need to be on sill while the boat is in those vicinities. The survey along the Bradford Island Repair will require FV4-4 and FV4-5 be closed to reduce turbulence along the shoreline. The hydro survey location is shown in the following picture.



Type of outage required - Spill bays 1 and 18 will be closed for 5 hours. FV4-3, FV4-4, FV5-3 and FV5-4 will be closed once the boat enters the BRZ for 2-3 hours for the B-branch erosion repair survey.

Impact on facility operation (FPP deviations) – Spill bay 1 and 18 attraction flow will be off for 5 hours during the stilling basin survey. Spill bay 18 and B-Branch AWS (FV4-4 and FV4-5) will be off during the erosion repair survey.

Impact on unit priority - No impact on unit priority

Impact on forebay/tailwater operation - No impact on forebay/tailwater operations.

Impact on spill – Spill bays 1 and 18 will be closed for 5 hours at a time when they would normally be open to provide adult attraction flow.

Dates of impacts/repairs – 26 September 2017.

Length of time for repairs – ~5 hours, 12:00pm – 5:00pm. The work needs to be completed during daylight hours for safety.

Analysis of potential impacts to fish

1. 10-year average passage by run during the period of impact for adults and juvenile listed species, as appropriate for the proposed action and time of year. The tables below show the 10 year average fish counts for the date range 24- 28 September. The proposed date (26 September) is highlighted yellow.

Table 1. Bradford Island 10 year averages for 24 - 28 September

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink
24-Sep	2818	2259	559	483	361	123	608	563	45	0	0	1
25-Sep	1831	1396	435	487	360	127	539	500	39	0	0	1
26-Sep	1522	1187	335	536	405	131	491	450	40	0	0	1
27-Sep	1512	1172	340	452	343	108	483	429	54	0	0	1
28-Sep	1094	843	251	311	233	78	431	394	36	0	0	0

Table 2. Washington Shore 10 year average fish counts for 24-28 September

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	All Coho	Adult Coho	Jack Coho	Sockeye	Chum	Pink
24-Sep	6295	5127	1167	999	758	241	923	850	73	0	0	13
25-Sep	5791	4622	1168	992	758	235	990	909	82	0	0	6
26-Sep	5523	4336	1188	991	746	245	1007	928	80	0	0	8
27-Sep	4498	3530.7	967.3	839.9	634.1	205.8	937.3	850.3	87	0	0	5
28-Sep	5094	4102	992	848	635	213	1323	1223	100	0	0	6

2. Statement about the current year’s run (e.g., higher or lower than 10-year average) The NOAA forecast for the 2017 Coho and Fall Chinook run is expected to be lower than the 10 year average.
3. Although the peak of the Fall Chinook run will have passed, there will still be a fair number of Fall Chinook, steelhead and Coho passing.
4. Delaying adult salmon during this time of year will likely increase predation rates by sealions that are historically present in the tailrace at that time of year. Water temperatures and passage density are two other factors that could increase the impacts to adult salmon at this time of year.

Summary statement - expected impacts on:

Downstream migrants – No impacts expected due to the end of spill season on 31 August.

Upstream migrants (including Bull Trout) - There will be no attraction flow from Bay 1, Bay 18, FV4-3, and FV4-4 for the B-Branch ladder entrance. According to Table BON-4 of the 2017 FPP, this outage could impact Fall Chinook and Coho passage, however, A-Branch 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. Sealions will be present in the tailrace and increased predation is more likely to occur from fish that are delayed.

The team recognizes that waiting until winter would be more beneficial for minimizing adult fish impacts however, any issues discovered from the hydro survey results could delay the start of spill season and have a greater impact on juvenile fish in the spring.

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: Chase, Matthew T CIV USARMY CENWP (US)

Sent: Friday, July 28, 2017 7:36 AM

To: Kovalchuk, Erin H CIV USARMY CENWP (US)

<Erin.H.Kovalchuk@usace.army.mil>

Subject: RE: [Non-DoD Source] Re: FPOM: Official Coordination 17BON49 MOC Spillway Hydro Survey and 17TDA21 MOC Spillway Hydro Survey

Hi Erin,

Apologies for the delay. My understanding is that closing the fish valves for the survey is not a safety requirement since the survey is from the surface and not using an ROV. We close the valves to improve the survey conditions (reduces bubbles which hampers the sensors). I think last time we did this we just requested to have the Control Room close fish valves once the survey vessel entered the BRZ, and then have the valves reopened upon leaving the BRZ. By just closing the valves instead of tagging them out, we can keep the valves open ~ 2-4 hrs longer since they are not part of the lockout/clearing process. I will verify with OPS if this is OK. Let's assume it is for now and I will let you know if I find out differently. I am not onsite today.

Since we are surveying the entire stilling basin I would prefer to have fish valves on each side (FV4-3, 4-4, 5-3, 5-4) closed during the survey. My recollection is that the survey will take 2-4 hours, but I will check with Channels and Harbors. It is difficult to say exactly because things happen, and I would rather finish earlier than expected than run longer than expected.

Bonneville OPS would like to tack on another survey this same day at B2 forebay in front of the fish units since we have the vessel. This is for future dredge work. This would only involve tagging out the B2CC, which will already be shut down in September. Should not affect PH operations and should not affect Fisheries.

However, the Spillway survey has priority so I can try to work the B2 survey around the spillway survey. Is there a preferred time for the spillway survey from a fisheries perspective keeping in mind we will want the boat out of the water by 5:00 pm if possible for safety reasons.

Thanks - Matt

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

From: Gary Fredricks - NOAA Federal [mailto:gary.fredricks@noaa.gov]

Sent: Monday, July 24, 2017 12:24 PM

To: Kovalchuk, Erin H CIV USARMY CENWP (US)

<Erin.H.Kovalchuk@usace.army.mil>

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

<Benjamin.J.Hausmann@usace.army.mil>

Subject: [Non-DoD Source] Re: FPOM: Official Coordination 17BON49 MOC Spillway Hydro Survey and 17TDA21 MOC Spillway Hydro Survey

Erin, No issues with 17TDA21 but I have a couple of questions on 17BON49. Will the spill basin and repair surveys be done at the same time? If not, how long will FV 4-4 and 4-5 (or is it 4-3 and 4-4?) be down for the repair survey? The MOC should clarify these points. Thanks, Gary

Final coordination results – The action will go forward as documented.

After Action update – The survey was completed on 26 September as planned.

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