

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

COORDINATION TITLE- 23BON020 BI Exit Dredging Survey Close-in Follow up

COORDINATION DATE- 5/17/2023

PROJECT- Bonneville

RESPONSE DATE- ASAP

Description of the problem – Bradford Island Fishway exit dredging is tentatively scheduled for the winter of 2023-24. A hydrosurvey via motorized boat was conducted earlier this year, but due to equipment and site limitations data was unable to be captured at a key area along the face of the forebay fishway structure over a concrete sill. Historically, this lack of data has not been an issue as the sill has not been included in past dredging operations. However, observations by the by Project Biologists indicate an increasing buildup of sediment on top of the sill, directly adjacent to the fishway structure. This sedimentation contributes to a reduction in water velocities and heavy growth of Eurasian Milfoil in front of the fishway exit. The Eurasian Milfoil growth in turn further reduces water velocities resulting in additional sediment to fall out of suspension and accrete. The impacts of this cycle result in more frequent dredging and near constant trash raking with associated AWS valve outages throughout fish passage season.

Due to the seasonality of the work and the sensitivity of the BI exit during fish passage season, the project would like this additional survey data to be collected with an unmanned, unmotorized survey craft. This craft sits atop the water and is similar to a kayak. It has no motor and would be pulled using handlines across the front of the fishway structure, causing minimal disturbance. The survey would collect bathymetry data directly in front of the fishway exit while it remains operational. This data is vital to understanding the best path forward for addressing the impacts to the fish ladder flows. The work is expected to take ~20 min, and would be completed during routine trash raking AWS intake outages in order to optimize conditions and minimize impact of fish passage.

The survey team is available 5/18. The team is not available again until after July, at which point the contract deadline will have passed, and the Eurasian Milfoil will have bloomed. This impacts both the survey data that is collected and the maneuverability of any craft.

The contract deadline is 6/15. This is the deadline to have all contract documents completed in order to review, solicit, and award with adequate time to use the in-water work window.

Per FPP Overview Section 2.3.1., " For planned O&M, the MOC should be provided to FPOM for review at least two weeks in advance. For unplanned, non-emergency O&M (e.g., equipment failure), the MOC should be provided to FPOM at least three workdays in advance. Emergency O&M may be performed immediately, and a Memo for the Record (MFR) submitted to FPOM as soon as possible, either before or after the activity"

Type of outage required - Standard BI AWS trash racking outage, lasting ~20-30 min.

Impact on facility operation - None

Dates of impacts/repairs - May 18 at 1300

Length of time for repairs - ~20 min

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;

Table 1: 10-year average totals for 18 May vs 10-year average run totals. (Obtained from Columbia Basin Research, DART)

	05/18 10-Year Average	10-Year Total Run Average (2013-2022)	Percentage of Run Affected
Chinook	1779	730210.9	0.24%
Jack Chinook	499	99433.3	0.45%
Steelhead	38	162783.6	0%
Lamprey	40	48936	0.1%

2. Statement about the current year’s run (e.g., higher or lower than 10-year average);
The current run of Spring Chinook is below average, but quickly catching up to the 10-year average.
3. Estimated exposure to impact by species and age class (i.e., number or percentage of run exposed to an impact by the action);
Refer to Table 1 and Figures 1 and 2. Minimal impact expected to all species.

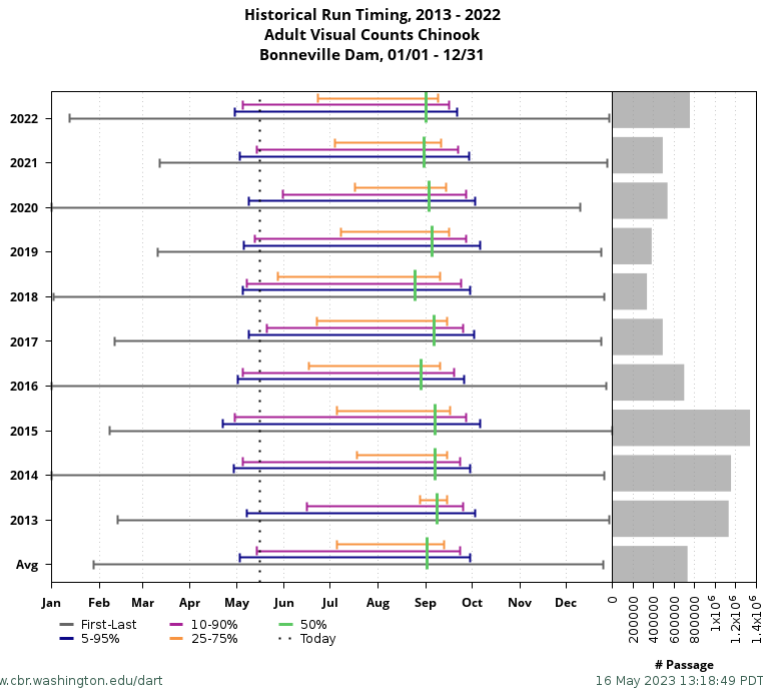


Figure 1. Historical run timing for adult Chinook passage at Bonneville.

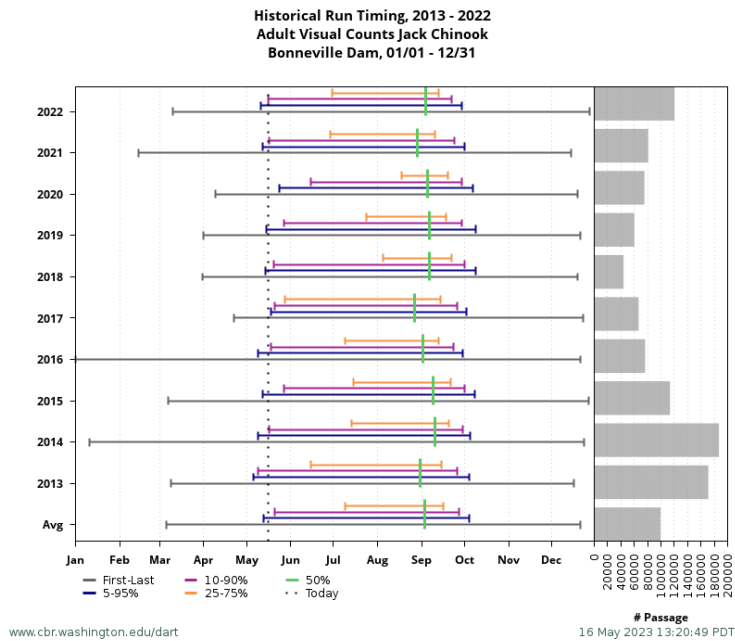


Figure 2. Historical run timing for Jack Chinook passage at Bonneville.

4. Type of impact by species and age class (increased delay, exposure to predation, exposure to a route of higher injury/mortality rate, exposure to higher TDG, etc.);

Delayed exit times for those fish that encounter the craft at the exit.

Summary statement - expected impacts on:

Impacts from this work are expected to be very minimal. It would be conducted at mid-day, when passage is lowest. The craft would pass over the fishway exit, and while it could spook some fish, that area draws overhead debris regularly, so this may not be extraordinarily different. Lamprey and Bull trout are expected to have no exposure to this work. Spring Chinook and Steelhead could see several fish hesitate at the fishway exit until the craft has passed.



Figure 3. The area at Bradford Island Fishway Exit to be surveyed.



Figure 4. An example of a similar survey craft that will be used for the survey.

Comments from agencies:

CRITFC-----Original Message-----

From: Tom Lorz <lort@critfc.org>

Sent: Wednesday, May 17, 2023 10:38 AM

To: Mackey, Tammy M CIV USARMY CENWP (USA)

Subject: [URL Verdict: Neutral][Non-DoD Source] Re: FPOM: Official Coordination - 23BON020 MOC BI exit dredging survey

Thanks for the notification even though it is not meeting the timelines outlined for notification. ie 2 weeks.

We agree this work needs to get done and while the hydro drone is not likely to cause much of an issue we need to minimize any activity in front of the ladders. This years return has been lower than expected and anything we can to reduce impacts should be done. Fish protection needs to be a priority.

With that in mind, I am wondering why we need this information to this detail. We have previous years estimates of amount of material that were removed it seems that we could use that as a baseline and use ground based estimates to determine if the amount is more or less than previous years. I am hoping that the COE is exhausting all options prior to putting a drone in front of the ladder. I would strongly suggest the COE make an estimate and add a safety margin to insure that all the dredging is completed. While it is nice to have all the information prior to work is it not necessary. And we have already seen that estimates, such as amounts of rock, are not always accurate so I am unclear why not just get the best estimate possible with minimal impacts and add a safety margin.

Lastly if all options have been exhausted we would want this work done as early as possible since it takes time fish time to traverse the entire ladder and the earlier it is done the fewer fish that are impacted. IF that is not an option do it as late as possible, or find a time when the fewest adults would be impacted.

WDFW - -----Original Message-----

From: Morrill, Charles (DFW) <Charles.Morrill@dfw.wa.gov>
Sent: Wednesday, May 17, 2023 3:39 PM
To: Tom Lorz <lort@critfc.org>; Mackey, Tammy M CIV USARMY CENWP (USA)
Subject: [URL Verdict: Neutral][Non-DoD Source] RE: FPOM: Official
Coordination - 23BON020 MOC BI exit dredging surveyry

All,

I concur with Tom's points and concerns.
Charlie

BON Fish - -----Original Message-----

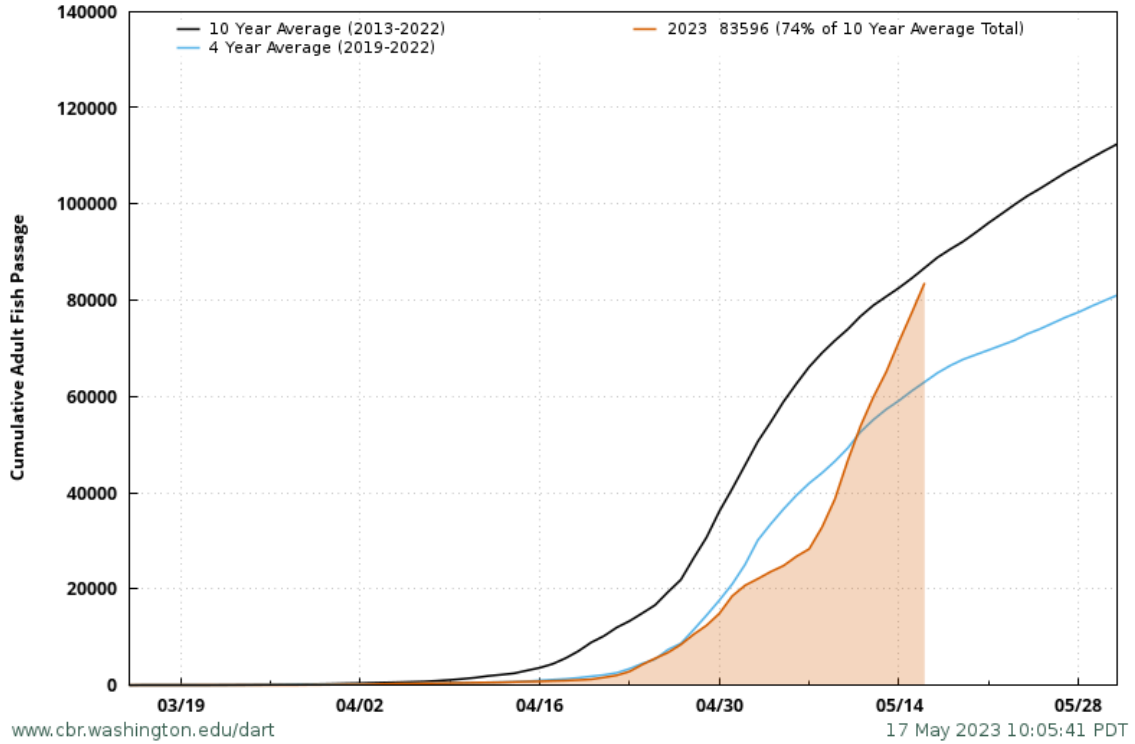
From: Derugin, Andrew G CIV (USA) <Andrew.G.Derugin@usace.army.mil>
Sent: Wednesday, May 17, 2023 5:26 PM
To: Mackey, Tammy M CIV USARMY CENWP (USA)
<Tammy.M.Mackey@usace.army.mil>
Subject: RE: FPOM: Official Coordination - 23BON020 MOC BI exit
dredging surveyry

The timeline for notification in the FPP is as follows: "For unplanned, non-emergency O&M (e.g., equipment failure), the MOC should be provided to FPOM at least three workdays in Advance" FPP, Overview, section 2.3.1. This is not an emergency, but the date could not be pushed out two weeks due to survey crew availability and the contracting deadline. The idea was only hatched ~8 days out, then taking several days to plan with the work group. Several more days were spent getting the MOC out.

To protect fish: The original request was for a vessel to survey the area. It took several days to talk the survey crew into using this craft to minimize impact and to address all of the concerns with using it. Only once we knew we could handle all of the requirements did we decide to move forward. While the current year's run has been behind average, this could be due to unique temp and flow conditions instead of poor returns. Fish numbers are on track to catch up to the average very soon and we believe the minimal temporary effect of this work is far outweighed by the long term protections to fish passage at the BI exit if this dredging is done well. Please see the attached graph.

The need for detail: This portion of the dredge work is much smaller and finer scale than past iterations. Past dredging was done with a large, barge mounted crane and stayed out from the concrete structure. That will still be done again, but at least some of the close-in work will likely be conducted by a diver with a suction hose. There are concrete structures there that we believe are buried, supporting milfoil growth that blocks the exit. Initial checks with a rope and weight indicated anywhere from 1' to 4'+ of mud buildup, so in order to get the right contractor with the right tools, we need to know what else is there and how dense it might be. We would indeed still proceed without this information, but then we risk a partially completed job.

2023 Adult Cumulative Passage at Bonneville
Spring Chinook with 10 Year Average
2023 Adult Cumulative Passage 74% of 10 Year Average Total, 103% of 4 Year Average Total
Date Range 3/15-5/31



Final coordination results:

On 22 May, Project Fisheries reported - Due to equipment failure, the survey was not completed and the Project will proceed with the data collected in previous years.

Please email or call with questions or concerns.
Thank you,

Tammy Mackey
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