OFFICIAL MEMO of COORDINATION (MOC) FOR NON-ROUTINE OPERATIONS AND MAINTENANCE

COORDINATION TITLE- 18 IHR 03 MOC Adult Fish Trap Testing and Hours of Operation
COORDINATION DATE- March 30, 2018
PROJECT- Ice Harbor Dam
RESPONSE DATE - 3April 2018

1. **Description of problem:** Maintenance and repairs to the Ice Harbor adult trap, including jib crane re-spooling and testing, pneumatic hose and door safety soft bumper replacements, has been occurring during February and March. The trap needs to be fully installed in the ladder and operated for a wet test, proposed for 4 and 5 April 2018, to ensure its operability for the proposed start date of spring Chinook trapping on 16 April 2018. The wet test will include sort-by-code PIT antenna testing and operation by PSMFC. In addition, PNNL has requested a slight modification to the Ice Harbor adult trap protocol in FPP Appendix G. In order to complete 400 adult Chinook trapped and double-tagged with acoustic and PIT, PNNL estimates the need for about 25 days of trapping beginning 16 April, if they can trap an average of 16 Chinook salmon per day. Since trapping is typically designed to represent the passage distribution, and previously tagged fish from other studies will not be trapped without prior permission, PNNL will be attempting to trap and tag up to 20-25 Chinook per day at the peak of the run. Trapping will generally occur Monday through Thursday if water temperatures are 70-71.9˚F, but adjusting to passage distribute will require some Friday and Saturday trapping when water temperatures are below 70˚F, in order to complete tagging of the full sample before 1 June. The FPP Appendix G trapping protocol will be adhered to except for a request for 5 hours of trapping per day over the standard 4 hours for water temperatures below 70˚F. No modification to protocol is requested for water temperatures 70-72˚F or terminating trapping above 72˚F.

2. **Type of outage required:** No turbine unit or spill bay outage is required, however trap assembly, operation, and training will occur directly inside the most upper weir of the southern fish ladder near the exit.

3. **Dates of impacts/repairs:**

   a. 4 April: Install Trap components by 1000 AM with gates fully open. Gates and doors will be sequentially operated and pneumatic controls calibrated, sort-by-code PIT tested and required adjustments completed. No fish will be trapped or held in trapping "boxes" or sections. All trap components will be dis-assembled and lifted to the deck by 1400 PM for observed repairs and/or out-of-water adjustments.

   b. 16 April to 1 June: Trapping for up to 5 hours per day will occur for approximately 25 days during the proposed tagging period.

4. **Length of time for repairs:** N/A. Length of time for assembly/dis-assembly, testing, and training would be 4 hours (1000 to 1400).

5. Impact on fish facility operation: None.

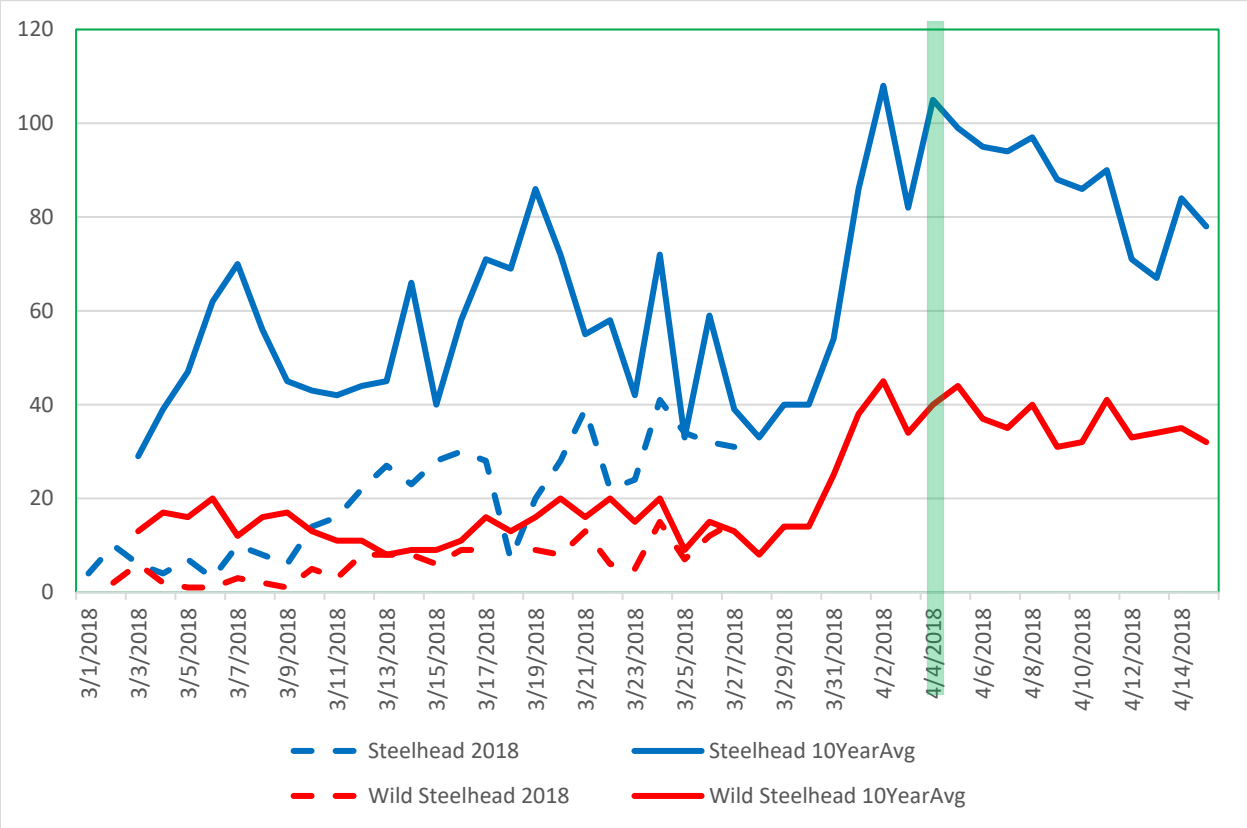
6. Impact on project operations: None.

7. Analysis of potential impacts to fish.

a. 10-year average passage of adults and juveniles of each affected listed species during dates of impact.

i. Adult counts: http://www.cbr.washington.edu/dart/query/adult_graph_text.

Table 1. Ice Harbor Dam 10 year average and 2018 adult steelhead and wild steelhead estimates. Total counts of both ladders. Green bar over 4 April day of proposed in-water trap test.



For the most recent 10 year average (2017-2008) only steelhead and wild steelhead have been counted passing Ice Harbor Dam in early April. No other stock or species has been recorded until later dates in April. The passage of overwintering steelhead appears to be nearly complete by end of March and new-year steelhead passage is likely contributing to increasing counts by the 4 April date of adult trap in-water testing. The 10 year average trend shows that nearly 100 steelhead composed of 40 wild steelhead per day could be passing through the Ice Harbor Dam fishways. Of these steelhead, 72-100% have used the south (left) ladder where the adult trap is located. To recorded date in 2018 of 28 March, both steelhead passage numbers counted

(unadjusted for fallback and likely higher overwintering proportion) vary from moderately large to slightly less in daily numbers to the 10 year average.

b. Statement about the current year's run (e.g., higher or lower than 10-year average).

i. Mid-season - current counts to-date vs. 10-year average (see section **a.**).

c. Estimated exposure to impact of adults and/or juveniles, as appropriate, by species (number or percentage of 10-year average that occurs during dates of impact).

It is probable that about 70-120 adult steelhead could be exposed to the 4 hours duration within the 1 day in-water testing of the adult trap in the south (lest) ladder of Ice Harbor Dam.

d. Type of impact to adults and/or juveniles, as appropriate, by species (e.g., increased delay, exposure to predation, exposure to a route of higher injury/mortality rate, exposure to higher TDG, etc.).

The previous experience of operating the new adult trap during April-June 2013 and this year's inspections with replacement of safety features on the gates provide high confidence that a wet test operation of 4 hours duration of a likely reduced number of the estimated daily passage of 70-120 adult steelhead of mixed stock could cause slight site specific delay in ladder exit tunnel passage. The wet water test is for function and operability of the trap components and protocol, and gates will not be operated when potential salmon or steelhead are present.

8. Final judgement on scale of expected impacts (negligible, minor, significant) on:

a. Downstream migrants.

None.

b. Upstream migrants (including Bull Trout).

Negligible or inconsequential. No Bull trout recorded passing during spring.

c. Lamprey.

None to negligible. During the last 10 years only 1 adult lamprey has been visually or video counted passing through the Ice Harbor count windows in available March and April monitoring records.

9. Comments from agencies.

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-----Original Message-----
From: Tom Lorz [mailto:lort@critfc.org]
Sent: Friday, March 30, 2018 2:10 PM
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To: Peery, Christopher A CIV (US) <Christopher.A.Peery@usace.army.mil>
Subject: [Non-DoD Source] RE: 18 IHR 03 MOC Adult Fish Trap Testing and Operation

I am fine with it. Thanks

-----Original Message-----
From: Trevor Conder - NOAA Federal [mailto:trevor.conder@noaa.gov]
Sent: Monday, April 09, 2018 9:40 AM
To: Peery, Christopher A CIV (US) <Christopher.A.Peery@usace.army.mil>; Fryer, Derek S CIV CENWW CENWD (US) <Derek.S.Fryer@usace.army.mil>
Subject: [Non-DoD Source] Re: 18 IHR 03 MOC Adult Fish Trap Testing and Operation

Chris,

I am OK with the request for five hours per day operation, however, if the adult spring Chinook return trends lower than expectations, we should consider that 300-400 fish may be sufficient in achieving the goals of this study, and a 400 fish tagging objective may not be necessary. Not saying we should necessarily switch gears now, but buffering that objective a bit is something I am willing to consider moving forward as this run forecast materializes.

-Trevor

-----Original Message-----
From: Peery, Christopher A CIV (US)
Sent: Monday, April 09, 2018 10:52 AM
To: 'Trevor Conder - NOAA Federal' <trevor.conder@noaa.gov>; Fryer, Derek S CIV CENWW CENWD (US) <Derek.S.Fryer@usace.army.mil>
Subject: RE: [Non-DoD Source] Re: 18 IHR 03 MOC Adult Fish Trap Testing and Operation

Thanks for the comments Trevor. We will track how the run is progressing and particularly if trapping operations appear to be impacting passage. The appropriate sample size for the adult passage evaluation is something Derek and you can discuss, likely a FFDRWG topic I would guess though.

Thanks,
Chris

10. Final coordination results.

Derek Fryer reported that testing of the adult fish trap was conducted 4 April. Most components worked but controls for jib crane failed during the test. A boom truck was required to remove trap components after this. A new controller has been ordered.

Derek requested that researchers be allowed to leave phone booth portion of the trap in the ladder at night for ease of operation and safety of operators. Remaining portions of the trap will be removed each night after trapping.

FPOM approved this request. MOC approved.

11. After Action update.

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

Chris Pinney
Fishery Biologist, Walla Walla District
chris.a.pinney@usace.army.mil