**MEMORANDUM FOR THE RECORD 13 October 2022**

Kelt Trigger Task Group meeting held 13 October 2022 via WebEx

**In attendance:**

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| --- | --- | --- | --- |
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**Action Items**:

Conder – Will write a suggestion on a revenue neutral operation.

Lorz – Will write a suggestion for trading water at night.

Wertheimer – Will look at PIT tag data for timing of passage.

Morell – Will investigate what information is available for Wind River overshoots.

1. **The need for a new trigger:**

Lorz – What are the book ends for coming up with a trigger?

Wertheimer – The reasons for the need for a new trigger are that behavior and modernization have altered the system.

1. **Establishing evidence for a new trigger:**

Ebel – What the bounds are according to BPA and how do we know fish are there? Biologically tailored operations to temperatures are a good idea. What portion of kelts are passing the CC?

Wertheimer – During cold weather fish are not spawning and thus not passing. Increasing temperatures in the Columbia now have increased early season kelt passage.

Lorz - The majority of kelts are found at Bonneville powerhouse two. RT work showed that the passage was largely daytime and surface orated, which is the best knowledge we have to go forward with.

Wertheimer – Detailed RT studies showed 80% of kelts passing through the CC and forebay residence time is reduced when it is open. PNNL data verified the behaviors. By focusing on getting fish out early, those fish have the greatest return rates.

Van Dyke – Knowledge of how fish behave is useful, but we don’t have all the details, we should lean towards operations that provide a broad-spectrum benefit. We should build toward a more compressive operation for all passage.

1. **Implementing a new trigger in the hydro system:**

Bettin – Looking for a cost neutral solution and a biological justification. The ice trash slues way is always open.

Van Dyke – What can we do as a group now that ideas from last year that did not go through? Should we expect to have more detail on the issues that make it difficult to implement changes?

Lorz – If the agreements can be included in the FFP and FOP then these will serve as the guiding documents.

Van Dyke – How is head influencing neutral?

Bettin – There is only a 4 foot per day range in the tailrace. Water through the CC does not make much of a difference in forebay elevation.

Lorz – Head change is not going to be the big driver?

Bettin – Any time fuel (water) is routed away from turbines there will be a loss.

Ebel – There are two things for the group, start date and operations. Maximize the surface passage of kelts and remain revenue neutral.

Lorz – The current trigger is two fish for two days in a row and twenty fish over the CC. using the historical date for opening to start and then use W’s temp data.

Bettin – We can deal with a 3-to-5-day timeline, normal schedule is 3 days advance.

1. **Trigger initiators:**

Ebel – Lower-river steelhead are showing up first. At what temp do they start showing up? Is the temp at BON or in a tributary more important?

Wertheimer – Temps around 40°F in tributaries are when fish start spawning. Once the lower passage rout is being used if it hits the trigger, benefits could be seen for upper runs as well.

Ebel – Temps outside the mainstem could be driving when the best date is.

Wertheimer – The middle of March is typically the best date, but it depends on the environmental conditions for the year.

1. **Trading August flow for March flow:**

Conder – The is a desire from the group for a more protective point to open the CC. There is reason to hedge toward a more protective stance. Looking at August the number of fish passing is very low, could we trade august CC use to march? CC also provides a benefit to Juveniles that should not be traded; however, August numbers are low and would not affect many fish at little as 10 juveniles during an 8-hour period.

Ebel - To get increased protections for early fish could push burdens to later stocks. What is the trade off in august? Conder – the CC could be shut off at night if we had to trade.

Wertheimer – Working toward the exchange of water flow is important, the first time it happened was at The Dalles two years ago.

Lorz – Conder please write up you suggestion for what the revenue neutral suggestion should be.

Morell – There is a graph for passage of sub-yearling Chinook that others can look at, it shows a low abundance in August. Lorz – this could be helpful for finding the least impactful period.

Bettin – There is a study that shows that fish hang in the forebay until given a surface rout.

Lorz – There is little passage at night, the greatest passage is when there is a surface passage available in the morning.

Wertheimer – LWG LGW MCN and TDA were collected and used in the study of passage of kelts at dams.

Conder – Temps likely affect migration, some evidence of this is that we do hit the trigger.

Ebel – Part of the goal is not to delay passage.

Conder – We need an average of the current opening day that can tell us when the best day is to open.

Van Dyke – Can we get a summarization of temps?

Ebel – Determining temp will take some digging.

Wertheimer – Will be sharing dates when the CC opened, and passage with the temp profiles.

Conder – Shutting off CC at night in March could impact fall chinook juveniles.

1. **What would an end-product look like:**

Lorz – Likely a change form that would go in the FPP.

1. **Additional comments and do outs:**

Van Dyke – Is there information of Wind River overshoots?

Morell - Will investigate it.

Ebel – Should we put this on the FPAC agenda?

Lorz – We will add it to the agenda.

Morell – Yakima should be added to the group. Looking at the first years of fallback at LWG, some fish still had eggs.

Documents:

[Documents / FPOM / 2013 / FPOM Task Groups (crohms.org)](https://pweb.crohms.org/tmt/documents/FPOM/2010/Task%20Groups/Task%20Group%20TDA%20ITS%20operations/)

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